FEBRUARY 2023

STOXX® INDEX METHODOLOGY GUIDE (PORTFOLIO BASED INDICES)

Creating an Investment Intelligence Advantage

Qontigo.com

STOXX | QONTIGO

Part of DEUTSCHE BÖRSE GROUP

CONTENTS

1. INTRODUCTION TO THE STOXX INDEX GUIDES 9

2. CHANGES TO THE GUIDE BOOK 10

2.1. HISTORY OF CHANGES TO THE STOXX EQUITY METHODOLOGY GUIDE 10

3. GENERAL PRINCIPLES 18

3.1. INDEX RATIONALE 18

3.2. METHODOLOGY REVIEW POLICIES 18

3.3. INDEX TERMINATION POLICY 18

4. COVERAGE 19

4.1. STOXX GLOBAL EQUITY STOCK UNIVERSE 19

4.2. STOXX INVESTABLE UNIVERSE 19

4.3. COUNTRY AND REGIONAL CLASSIFICATIONS 20
4.3.1. OVERVIEW 20
4.3.2. COUNTRY SELECTION CRITERIA 20
4.3.3. REGIONAL SPECIFICS 22

5. INDEX CHARACTERISTICS 23

5.1. MARKET CAPITALIZATION-WEIGHTED INDICES AND PRICE-WEIGHTED INDICES 23

5.2. SELECTION LISTS 23

5.3. BUFFERS 23

5.4. INDEX REVIEW 23

5.5. LIQUIDITY 24

5.6. STOCK CHARACTERISTICS 25

5.7. COUNTRY ASSIGNMENT OF SECURITIES 25

5.8. CURRENCY 26

5.9. INDUSTRY CLASSIFICATION BENCHMARK (ICB) CODE 26

5.10. CORPORATE ACTIONS 27

5.11. NUMBER OF SHARES 27

5.12. FREE-FLOAT FACTORS 27

5.13. FOREIGN HEADROOM AND FREE FLOAT ADJUSTEMENT FOR FOREIGN RESTRICTIONS 28
5.13.1. FOREIGN HOLDINGS 28
5.13.2. FOREIGN OWNERSHIP LIMIT 28
5.13.3. FREE FLOAT ADJUSTED FOR FOREIGN RESTRICTIONS 28
5.13.4. FOREIGN HEADROOM 29

5.14. WEIGHTING FACTOR 29

5.15. FREE-FLOAT MARKET CAPITALIZATION 29

5.16. CAPPING FACTORS 29
5.16.1. WEIGHTING CAP FACTORS 29
5.16.2. LIQUIDITY SCALING FACTORS 30
5.16.3. CAPPING FACTORS THAT IMPLEMENT FOREIGN OWNERSHIP RESTRICTIONS 30

5.17. REPLACEMENT OF INDICES WITH FIXED NUMBER OF CONSTITUENTS 31

6. STOXX TOTAL MARKET INDICES (TMI) 32

6.1. TOTAL MARKET COUNTRY INDICES 32
6.1.1. OVERVIEW 32
6.1.2. INDEX REVIEW 32
6.1.3. ONGOING MAINTENANCE 34

6.2. TOTAL MARKET REGIONAL INDICES 35
6.2.1. OVERVIEW 35
6.2.2. INDEX REVIEW 35
6.2.3. ONGOING MAINTENANCE 36

6.3. TOTAL MARKET SIZE INDICES 37
6.3.1. OVERVIEW 37
6.3.2. INDEX REVIEW 37
6.3.3. ONGOING MAINTENANCE 38

6.4. STOXX GCC TOTAL MARKET INDEX 39
6.4.1. OVERVIEW 39
6.4.2. INDEX REVIEW 39
6.4.3. ONGOING MAINTENANCE 41

7. STOXX BENCHMARK INDICES (BMI) 42

7.1. STOXX GLOBAL INDICES 42
7.1.1. OVERVIEW 42

7.1.2. INDEX REVIEW 43
7.1.3. ONGOING MAINTENANCE 45

7.2. STOXX GLOBAL 1800 AND DERIVED INDICES 46
7.2.1. OVERVIEW 46
7.2.2. INDEX REVIEW 46
7.2.3. ONGOING MAINTENANCE 48

7.3. SIZE INDICES BASED ON THE STOXX GLOBAL INDICES 50
7.3.1. OVERVIEW 50
7.3.2. INDEX REVIEW 50
7.3.3. ONGOING MAINTENANCE 52

7.4. SECTOR INDICES BASED ON THE STOXX GLOBAL INDICES 53
7.4.1. OVERVIEW 53
7.4.2. INDEX REVIEW 53
7.4.3. ONGOING MAINTENANCE 54

7.5. STOXX EUROPE 600 AND EURO STOXX SUPERSECTOR INDICES: 30% / 15% CAPS 55
7.5.1. OVERVIEW 55
7.5.2. INDEX REVIEW 55
7.5.3. ONGOING MAINTENANCE 56

7.6. STOXX REGIONAL REAL ESTATE INDICES: 20% CAPS 57
7.6.1. OVERVIEW 57
7.6.2. INDEX REVIEW 57
7.6.3. ONGOING MAINTENANCE 57

7.7. STOXX EMERGING MARKETS 800 LO 58
7.7.1. OVERVIEW 58
7.7.2. INDEX REVIEW 58
7.7.3. ONGOING MAINTENANCE 58

7.8. STOXX INDUSTRY AND SUPERSECTOR LEGACY INDICES 60
7.8.1. OVERVIEW 60
7.8.2. INDEX REVIEW 61
7.8.3. ONGOING MAINTENANCE 61

7.9. EURO STOXX SUPERSECTOR 5/10/40 INDICES 62
7.9.1. OVERVIEW 62
7.9.2. INDEX REVIEW 62
7.9.3. ONGOING MAINTENANCE 63

7.10. STOXX EUROPE 600 INDUSTRY 30-15 INDICES 64
7.10.1. OVERVIEW 64
7.10.2. INDEX REVIEW 64
7.10.3. ONGOING MAINTENANCE 65

8. STOXX EQUAL WEIGHT INDICES 66

8.1. STOXX EQUAL WEIGHT INDICES 66
8.1.1. OVERVIEW 66
8.1.2. INDEX REVIEW 66
8.1.3. ONGOING MAINTENANCE 66

9. STOXX BLUE-CHIP INDICES 68

9.1. STOXX GLOBAL AND COUNTRY BLUE-CHIP INDICES 68
9.1.1. OVERVIEW 68
9.1.2. INDEX REVIEW 69
9.1.3. ONGOING MAINTENANCE 72

9.2. EURO STOXX 50 73
9.2.1. OVERVIEW 73
9.2.2. INDEX REVIEW 73
9.2.3. ONGOING MAINTENANCE 74

9.3. STOXX REGIONAL BLUE-CHIP INDICES 76
9.3.1. OVERVIEW 76
9.3.2. INDEX REVIEW 76
9.3.3. ONGOING MAINTENANCE 77

9.4. STOXX GLOBAL 150 79
9.4.1. OVERVIEW 79
9.4.2. INDEX REVIEW 79
9.4.3. ONGOING MAINTENANCE 79

9.5. STOXX BALKAN 50 EQUAL WEIGHT 80
9.5.1. OVERVIEW 80
9.5.2. INDEX REVIEW 80
9.5.3. ONGOING MAINTENANCE 81

9.6. STOXX CANADA 60 82
9.6.1. OVERVIEW 82
9.6.2. INDEX REVIEW 82
9.6.3. ONGOING MAINTENANCE 83

10. STOXX DIVIDEND INDICES 84

10.1. STOXX SELECT DIVIDEND INDICES 84
10.1.1. OVERVIEW 84
10.1.2. INDEX REVIEW 84
10.1.3. ONGOING MAINTENANCE 88

10.2. STOXX ASEAN-FIVE SELECT DIVIDEND 50 90
10.2.1. OVERVIEW 90
10.2.2. INDEX REVIEW 90
10.2.3. ONGOING MAINTENANCE 91

10.3. STOXX ASEAN SELECT DIVIDEND 30 92

10.3.1. OVERVIEW 92
10.3.2. INDEX REVIEW 92
10.3.3. ONGOING MAINTENANCE 93

10.4. STOXX MAXIMUM DIVIDEND INDICES 94
10.4.1. OVERVIEW 94
10.4.2. INDEX REVIEW 94
10.4.1. ONGOING MAINTENANCE 96

10.5. EURO STOXX QUALITY DIVIDEND 50 97
10.5.1. OVERVIEW 97
10.5.2. INDEX REVIEW 97
10.5.3. ONGOING MAINTENANCE 100

11. STOXX OPTIMISED INDICES 101

11.1. STOXX OPTIMISED INDICES BASED ON STOXX EUROPE 600 101
11.1.1. OVERVIEW 101
11.1.2. INDEX REVIEW 101
11.1.3. ONGOING MAINTENANCE 102

12. STOXX STYLE INDICES 103

12.1. STOXX TM STYLE INDICES 103
12.1.1. OVERVIEW 103
12.1.2. INDEX REVIEW 103
12.1.3. ONGOING MAINTENANCE 105

12.2. STOXX STRONG STYLE INDICES 106
12.2.1. OVERVIEW 106
12.2.2. INDEX REVIEW 106
12.2.3. ONGOING MAINTENANCE 108

13. STOXX THEME INDICES 109

13.1. STOXX GLOBAL INFRASTRUCTURE INDICES 109
13.1.1. OVERVIEW 109
13.1.2. INDEX REVIEW 109
13.1.3. ONGOING MAINTENANCE 110

13.2. STOXX GLOBAL BROAD INFRASTRUCTURE 112
13.2.1. OVERVIEW 112
13.2.2. INDEX REVIEW 112
13.2.3. CAPPING PROCEDURE 113
13.2.4. ONGOING MAINTENANCE 114

13.3. STOXX GLOBAL 3D PRINTING INDEX FAMILY 115
13.3.1. OVERVIEW 115
13.3.2. INDEX REVIEW 115
13.3.3. ONGOING MAINTENANCE 116

13.4. STOXX LOW CARBON 117
13.4.1. OVERVIEW 117
13.4.2. INDEX REVIEW 117
13.4.3. ONGOING MAINTENANCE 121

13.5. STOXX CLIMATE IMPACT AND CLIMATE AWARENESS 122
13.5.1. OVERVIEW 122
13.5.2. INDEX REVIEW 123
13.5.3. ONGOING MAINTENANCE 125

13.6. STOXX USA ETF INDUSTRY INDEX 126
13.6.1. OVERVIEW 126
13.6.2. INDEX REVIEW 126
13.6.3. ONGOING MAINTENANCE 127

13.7. STOXX EUROPE LUXURY 10 INDEX 129
13.7.1. OVERVIEW 129
13.7.2. INDEX REVIEW 129
13.7.3. ONGOING MAINTENANCE 132

14. STOXX SUSTAINABILITY INDICES 133

14.1. STOXX EUROPE SUSTAINABILITY INDICES 133
14.1.1. OVERVIEW 133
14.1.2. INDEX REVIEW 133
14.1.3. ONGOING MAINTENANCE 134

14.2. STOXX EUROPE SUSTAINABILITY EX AGTAF/ EX AGTAFA 135
14.2.1. OVERVIEW 135
14.2.2. INDEX REVIEW 135
14.2.3. ONGOING MAINTENANCE 135

14.3. STOXX SUSTAINABILITY BLUE-CHIPS 136
14.3.1. OVERVIEW 136
14.3.2. INDEX REVIEW 136
14.3.3. ONGOING MAINTENANCE 136

14.4. STOXX ESG SELECT KPIS INDICES 137
14.4.1. OVERVIEW 137
14.4.2. INDEX REVIEW 137
14.4.3. ONGOING MAINTENANCE 140

14.5. STOXX REGIONAL INDUSTRY NEUTRAL ESG AND STOXX REGIONAL EXCLUDING TOBACCO INDUSTRY NEUTRAL ESG INDICES 141
14.5.1. OVERVIEW 141
14.5.2. INDEX REVIEW 141
14.5.3. ONGOING MAINTENANCE 144

14.6. STOXX EUROPE 600 ESG-X INDEX 145
14.6.1. OVERVIEW 145
14.6.2. INDEX REVIEW 145
14.6.3. ONGOING MAINTENANCE 146

14.7. STOXX BENCHMARK ESG-X INDICES 147
14.7.1. OVERVIEW 147
14.7.2. INDEX REVIEW 148
14.7.3. ONGOING MAINTENANCE 150

14.8. EURO STOXX 50 ESG INDEX 151
14.8.1. OVERVIEW 151
14.8.2. INDEX REVIEW 151
14.8.3. ONGOING MAINTENANCE 155

14.9. STOXX BENCHMARK ESG-X EX NUCLEAR POWER INDICES 156
14.9.1. OVERVIEW 156
14.9.2. INDEX REVIEW 156
14.9.3. ONGOING MAINTENANCE 157

14.10. STOXX ESG-X SELECT DIVIDEND INDICES 158
14.10.1. OVERVIEW 158
14.10.2. INDEX REVIEW 158
14.10.3. ONGOING MAINTENANCE 161

14.11. STOXX ESG BROAD MARKET INDICES 164
14.11.1. OVERVIEW 164
14.11.2. INDEX REVIEW 164
14.11.3. ONGOING MAINTENANCE 167

14.12. STOXX SRI INDICES 169
14.12.1. OVERVIEW 169
14.12.2. INDEX REVIEW 169
14.12.3. ONGOING MAINTENANCE 173

14.13. STOXX ESG TARGET TE INDICES 174
14.13.1. OVERVIEW 174
14.13.2. INDEX REVIEW 174
14.13.3. ONGOING MAINTENANCE 178

14.14. STOXX ESG TARGET INDICES 179
14.14.1. OVERVIEW 179
14.14.2. INDEX REVIEW 179
14.14.3. ONGOING MAINTENANCE 183

14.15. EURO STOXX 50 ESG TARGET INDEX 184
14.15.1. OVERVIEW 184
14.15.2. INDEX REVIEW 184
14.15.3. ONGOING MAINTENANCE 187

14.16. STOXX WILLIS TOWERS WATSON CLIMATE TRANSITION INDICES 189
14.16.1. OVERVIEW 189
14.16.2. INDEX REVIEW 189
14.16.3. ONGOING MAINTENANCE 192

14.17. STOXX EUROPE 600 ESG BROAD MARKET EQUAL WEIGHT INDEX 193
14.17.1. OVERVIEW 193
14.17.2. INDEX REVIEW 193
14.17.3. ONGOING MAINTENANCE 193

14.18. STOXX PSBC CHINA A ESG INDEX 195
14.18.1. OVERVIEW 195
14.18.2. INDEX REVIEW 195
14.18.3. ONGOING MAINTENANCE 198

14.19. STOXX EUROPE 600 ESG+ INDEX 199
14.19.1. OVERVIEW 199
14.19.2. INDEX REVIEW 199
14.19.3. ONGOING MAINTENANCE 202

14.20. EURO STOXX 50 ESG FILTERED INDEX 203
14.20.1. OVERVIEW 203
14.20.2. INDEX REVIEW 203
14.20.3. ONGOING MAINTENANCE 206

14.21. STOXX EUROPE 600 ENERGY ESG+ INDEX 208
14.21.1. OVERVIEW 208
14.21.2. INDEX REVIEW 208
14.21.3. ONGOING MAINTENANCE 210

14.22. STOXX EUROPE 50 ESG+ INDEX 212
14.22.1. OVERVIEW 212
14.22.2. INDEX REVIEW 212
14.22.3. ONGOING MAINTENANCE 216

14.23. EURO STOXX 50 ESG+ INDEX 217
14.23.1. OVERVIEW 217
14.23.2. INDEX REVIEW 217
14.23.3. ONGOING MAINTENANCE 221

14.24. STOXX CHINA A 900 LARGE ESG INDEX 222
14.24.1. OVERVIEW 222
14.24.2. INDEX REVIEW 222
14.24.3. ONGOING MAINTENANCE 224

15. STOXX FAITH-BASED INDICES 225

15.1. STOXX EUROPE CHRISTIAN INDEX 225
15.1.1. OVERVIEW 225

15.1.2. INDEX REVIEW 225
15.1.3. ONGOING MAINTENANCE 226

16. STOXX RISK BASED INDICES 227

16.1. STOXX MINIMUM VARIANCE AND MINIMUM VARIANCE UNCONSTRAINED INDICES 227
16.1.1. OVERVIEW 227
16.1.2. INDEX REVIEW 227
16.1.3. ONGOING MAINTENANCE 230

16.2. STOXX CHINA A 900 MINIMUM VARIANCE UNCONSTRAINED AM 231
16.2.1. OVERVIEW 231
16.2.2. INDEX REVIEW 231
16.2.3. ONGOING MAINTENANCE 231

16.3. STOXX LOW RISK WEIGHTED 233
16.3.1. OVERVIEW 233
16.3.2. INDEX REVIEW 233
16.3.3. ONGOING MAINTENANCE 233

16.4. STOXX EUROPE LOW BETA HIGH DIVIDEND 50 235
16.4.1. OVERVIEW 235
16.4.2. INDEX REVIEW 235
16.4.3. ONGOING MAINTENANCE 236

16.5. STOXX SHARPE RATIO INDICES 237
16.5.1. OVERVIEW 237
16.5.2. INDEX REVIEW 237
16.5.3. ONGOING MAINTENANCE 238

16.6. STOXX SELECT INDICES 239
16.6.1. STANDARD STOXX SELECT INDICES 239
16.6.1.1. OVERVIEW 239
16.6.1.2. INDEX REVIEW 240
16.6.1.3. ONGOING MAINTENANCE 242
16.6.2. STOXX LOW CARBON SELECT INDICES 243
16.6.2.1. OVERVIEW 243
16.6.2.2. INDEX REVIEW 243
16.6.2.3. ONGOING MAINTENANCE 245

16.7. STOXX DIVERSIFICATION SELECT INDICES 246
16.7.1. STANDARD STOXX DIVERSIFICATION SELECT INDICES 246
16.7.1.1. OVERVIEW 246
16.7.1.2. INDEX REVIEW 247
16.7.1.3. ONGOING MAINTENANCE 248
16.7.2. STOXX LOW CARBON DIVERSIFICATION SELECT INDICES 249
16.7.2.1. OVERVIEW 249
16.7.2.1. INDEX REVIEW 249
16.7.2.1. ONGOING MAINTENANCE 251

16.8. EURO STOXX ESG-X & EX NUCLEAR POWER SINGLE FACTOR INDICES 252
16.8.1. OVERVIEW 252
16.8.2. INDEX REVIEW 252
16.8.3. ONGOING MAINTENANCE 258

16.9. EURO STOXX ESG-X & EX NUCLEAR POWER MINIMUM VARIANCE UNCONSTRAINED INDEX 259
16.9.1. OVERVIEW 259
16.9.2. INDEX REVIEW 259
16.9.3. ONGOING MAINTENANCE 262

16.10. STOXX GLOBAL LOW RISK WEIGHTED DIVERSIFIED 200 INDEX 263
16.10.1. OVERVIEW 263
16.10.2. INDEX REVIEW 263
16.10.3. ONGOING MAINTENANCE 265

17. STOXX EXPOSURE INDICES 267

17.1. STOXX TRUE EXPOSURE INDICES 267
17.1.1. OVERVIEW 267
17.1.2. INDEX REVIEW 267
17.1.3. ONGOING MAINTENANCE 268
17.1.4. EXPOSURE PARAMETER 268

17.2. STOXX INTERNATIONAL EXPOSURE INDICES 272
17.2.1. OVERVIEW 272
17.2.2. INDEX REVIEW 272
17.2.3. ONGOING MAINTENANCE 273
17.2.4. EXPOSURE PARAMETER 273

18. STOXX THEMATIC INDICES 276

18.1. STOXX GLOBAL ARTIFICIAL INTELLIGENCE INDEX 276
18.1.1. OVERVIEW 276
18.1.2. INDEX REVIEW 276
18.1.3. ONGOING MAINTENANCE 277

18.2. STOXX GLOBAL DIGITAL SECURITY INDEX 279
18.2.1. OVERVIEW 279
18.2.2. INDEX REVIEW 279
18.2.3. ONGOING MAINTENANCE 286

18.3. STOXX GLOBAL FINTECH INDEX 287
18.3.1. OVERVIEW 287

18.3.2. INDEX REVIEW 287
18.3.3. ONGOING MAINTENANCE 289

18.4. STOXX GLOBAL ELECTRIC VEHICLES & DRIVING TECHNOLOGY INDEX 290
18.4.1. OVERVIEW 290
18.4.2. INDEX REVIEW 290
18.4.3. ONGOING MAINTENANCE 298

18.5. STOXX GLOBAL SHARING ECONOMY DRIVERS INDEX 299
18.5.1. OVERVIEW 299
18.5.2. INDEX REVIEW 299
18.5.3. ONGOING MAINTENANCE 301

18.6. STOXX GLOBAL REVENUES-BASED THEMATIC INDICES 302
18.6.1. OVERVIEW 302
18.6.2. INDEX REVIEW 302
18.6.3. ONGOING MAINTENANCE 307

18.7. STOXX GLOBAL SMART CITY INFRASTRUCTURE INDEX 308
18.7.1. OVERVIEW 308
18.7.2. INDEX REVIEW 308
18.7.3. ONGOING MAINTENANCE 315

18.8. STOXX GLOBAL PET CARE INDEX 316
18.8.1. OVERVIEW 316
18.8.2. INDEX REVIEW 316
18.8.3. ONGOING MAINTENANCE 318

18.9. STOXX HEALTH & WEIGHT LOSS INDICES 319
18.9.1. OVERVIEW 319
18.9.2. INDEX REVIEW 319
18.9.3. ONGOING MAINTENANCE 321

18.10. STOXX VIDEO GAMING & ESPORTS INDICES 322
18.10.1. OVERVIEW 322
18.10.2. INDEX REVIEW 322
18.10.3. ONGOING MAINTENANCE 324

18.11. STOXX GLOBAL THEMATIC INDICES 325
18.11.1. OVERVIEW 325
18.11.2. INDEX REVIEW 325
18.11.3. ONGOING MAINTENANCE 333

18.12. STOXX GLOBAL AUTOMATION & ROBOTICS (TTM) JPY INDEX 334
18.12.1. OVERVIEW 334
18.12.2. CALCULATIONS 334

18.13. STOXX GLOBAL DIGITAL ENTERTAINMENT AND EDUCATION INDEX 335
18.13.1. OVERVIEW 335
18.13.2. INDEX REVIEW 335
18.13.3. ONGOING MAINTENANCE 342

18.14. STOXX ASIA TECHNOLOGY 100 INDEX 343
18.14.1. OVERVIEW 343
18.14.2. INDEX REVIEW 343
18.14.3. ONGOING MAINTENANCE 347

18.15. STOXX GLOBAL METAVERSE INDEX 348
18.15.1. OVERVIEW 348
18.15.2. INDEX REVIEW 348
18.15.3. ONGOING MAINTENANCE 354

18.16. STOXX GLOBAL COPPER UNIVERSE INDEX 356
18.16.1. OVERVIEW 356
18.16.2. INDEX REVIEW 356
18.16.3. ONGOING MAINTENANCE 356

18.17. STOXX GLOBAL COPPER AND METALS MINING INDEX 358
18.17.1. OVERVIEW 358
18.17.2. INDEX REVIEW 358
18.17.3. ONGOING MAINTENANCE 360

18.18. STOXX GLOBAL LITHIUM UNIVERSE INDEX 361
18.18.1. OVERVIEW 361
18.18.2. INDEX REVIEW 361
18.18.3. ONGOING MAINTENANCE 361

18.19. STOXX GLOBAL LITHIUM MINERS AND PRODUCERS INDEX 363
18.19.1. OVERVIEW 363
18.19.2. INDEX REVIEW 363
18.19.3. ONGOING MAINTENANCE 366

19. STOXX AI THEMATIC INDICES 367

19.1. STOXX AI GLOBAL ARTIFICIAL INTELLIGENCE INDICES 367
19.1.1. OVERVIEW 367
19.1.2. INDEX REVIEW 368
19.1.3. ONGOING MAINTENANCE 369

20. STOXX PREMIA INDICES 370

20.1. EURO STOXX SINGLE PREMIUM INDICES 370
20.1.1. OVERVIEW 370
20.1.2. INDEX REVIEW 370
20.1.3. ONGOING MAINTENANCE 375

CONTENTS

21. STOXX FACTOR INDICES 376

21.1. STOXX FACTOR INDICES 376
- 21.1.1. OVERVIEW 376
- 21.1.2. INDEX REVIEW 377
- 21.1.3. ONGOING MAINTENANCE 380

21.2. STOXX ESG-X FACTOR INDICES 381
- 21.2.1. OVERVIEW 381
- 21.2.2. INDEX REVIEW 382
- 21.2.3. ONGOING MAINTENANCE 384

21.3. STOXX INDUSTRY NEUTRAL FACTOR INDICES 386
- 21.3.1. OVERVIEW 386
- 21.3.2. INDEX REVIEW 386
- 21.3.3. ONGOING MAINTENANCE 389

21.4. STOXX EQUITY FACTOR INDEX FAMILY 390
- 21.4.1. OVERVIEW 390
- 21.4.2. FACTOR DEFINITIONS 390
- 21.4.3. INDEX REVIEW 393
- 21.4.4. ONGOING MAINTENANCE 396

22. STOXX CTB AND STOXX PAB INDICES 397

22.1. STOXX CLIMATE TRANSITION BENCHMARK INDICES 397
- 22.1.1. OVERVIEW 397
- 22.1.2. INDEX REVIEW 399
- 22.1.3. ONGOING MAINTENANCE 405
- 22.1.4. SUMMARY 406

22.2. STOXX PARIS-ALIGNED BENCHMARK INDICES 409
- 22.2.1. OVERVIEW 409
- 22.2.2. INDEX REVIEW 411
- 22.2.3. ONGOING MAINTENANCE 418
- 22.2.4. SUMMARY 419

1. INTRODUCTION TO THE STOXX INDEX GUIDES

The STOXX index guides are separated into the following sub-sets:

- The **STOXX Calculation guide** provides a general overview of the calculation of the STOXX equity indices, the dissemination, the index formulas and adjustments due to corporate actions
- The **STOXX Index Methodology guide** contains the equity index specific rules regarding the construction and derivation of the portfolio based indices, the individual component selection process and weighting schemes
- The **STOXX World Equity Index Methodology guide** contains the index specific rules regarding the construction and derivation of the STOXX World portfolio based indices, the individual component selection process and weighting schemes
- The **STOXX Strategy Index guide** contains the formulas and description of all strategy indices
- The **STOXX DVP Calculation guide** describes the dividend points products
- The **STOXX Distribution Points Calculation guide** describes the distribution points products
- The **STOXX ESG Index Methodology guide** contains the index specific rules regarding the construction and derivation of the ESG indices, the individual component selection process and weighting schemes
- The **iSTOXX Methodology guide** contains the index specific rules regarding the construction and derivation of the iSTOXX indices, the individual component selection process and weighting schemes
- The **STOXX Reference Rates guide** contains the rules and methodologies of the reference rate indices
- The **STOXX Reference Calculations guide** provides a detailed view of definitions and formulas of the calculations as utilized in the reports, factsheets, indices and presentations produced by STOXX
- The **STOXX Bond Index guide** contains the bond index specific rules regarding the construction of the bond indices, the individual component selection process, weighting schemes and overview of the index and bond analytics formulas
- The **STOXX Currency Rates Indices Methodology guide** contains the index specific rules regarding the construction and calculation of the derivation of the STOXX FX Rolling Spot Mid Rate and STOXX FX Rolling Spot Tomorrow Next Open Rate indices
- The **Guide to Industry Classifications Used By STOXX** contains general information pertaining to industry classifications used in STOXX indices, together with any references and links to third-parties that create the data.
- The **STOXX Eligible Market Segments guide** contains the list of stock exchanges and market segments.

All rule books are available for download on http://www.stoxx.com/indices/rulebooks.html

2. CHANGES TO THE GUIDE BOOK

2.1. HISTORY OF CHANGES TO THE STOXX EQUITY METHODOLOGY GUIDE

February 2011: Publication of a complete new rule book series
February 2011: Addition of the STOXX Islamic index family
March 2011: Methodology changes of the STOXX Sustainability index family
April 2011: Modification and addition of further indices to the STOXX Equal Weight section.
May 2011: Addition of the STOXX Infrastructure Index family
July 2011: Addition of the STOXX Rare Earth Index family
August 2011: Modification of 5.3 Index Review procedures and 9.3.3 Fast entry
November 2011: Addition of STOXX ex-Financials and ex-Banks indices, rule change for STOXX Optimized Country indices.
December 2011: Addition of the STOXX Europe Maximum Dividend 40, restructuring of the document and spin-off sections, restructuring of chapter 10
March 2012: Addition of country TMIs and regional expansion
April 2012: Addition of STOXX Benchmark and STOXX regional Total Market indices
June 2012: Reclassification of Red-Chip companies; addition of China into the Asia/Pacific region
July 2012: Amend of 4.3 COUNTRY and REGIONAL CLASSIFICATIONS
November 2012: Addition of STOXX Minimum Variance indices
December 2012: Addition of STOXX EM exposed indices
February 2013: Amendment of chapter 4 COVERAGE, 5 INDEX CHARACTERISTICS and clarification of the index methodologies
April 2013: Addition of STOXX Global 3D Printing indices
June 2013: Change of weighting scheme to Free Float Market Capitalization for STOXX Optimised Country indices
August 2013: Additional subchapters in section 7 to describe the various derived indices based on the STOXX Benchmark indices: regional, size and sector indices.
August 2013: As a result of the review of the country classifications Red Chips are no longer eligible for the Developed Market indices. Therefore, Red Chips are excluded from STOXX Global 1800 and derived indices. August 2013: Clarification of the process to determine Emerging and Developed Markets in chapter 4.3.
September 2013: Addition of the STOXX Global Broad Infrastructure index.
September 2013: Addition of the STOXX ASEAN-Five Select Dividend 50 index
September 2013: Amendments if the Fast Entry rule in chapters 9
October 2013: Addition of STOXX Strong Quality indices
March 2014: Addition of STOXX Nordic Strong Quality indices
March 2014: Addition of the STOXX Europe Low Beta High Dividend 50 index
March 2014: Addition of the STOXX Strong Balance Sheet indices
March 2014: Addition of the EURO STOXX Supersectors 30-15
April 2014: Rule change STOXX Country Classification in chapter 4.3
July 2014: Addition of chapter 3 GENERAL PRINCIPLES
August 2014: Amendment of STOXX MINIMUM VARIANCE AND MINIMUM VARIANCE UNCONSTRAINED in chapter 16.1.2
December 2014: Clarification of review dates of the STOXX Europe Low Beta High Dividend 50 in chapter 16.4, universe definition of the STOXX Europe Private 20 and weighting scheme of the STOXX Global Broad Infrastructure in chapter 13
February 2015: Addition of the STOXX Share Ratio indices

2. CHANGES TO THE GUIDE BOOK

March 2015: Addition of STOXX ASEAN Select Dividend 30
March 2015: Addition of STOXX International Exposure Indices
June 2015: Addition of STOXX True Exposure Indices
July 2015: Addition of STOXX Activist Indices
October 2015: Addition of STOXX Select & Diversification Select Indices
November 2015: Clarification of STOXX Select Dividend liquidity screening in chapter 10.1.2
February 2016: Addition of STOXX Low Carbon indices in chapter 13.11
March 2016: Clarification of methodology of chapter 4.3 COUNTRY and REGIONAL CLASSIFICATIONS and 6 STOXX TOTAL MARKET INDICES (TMI)
May 2016: Addition of STOXX Select & Diversification Select Indices
June 2016: Decommission of STOXX Islamic indices
June 2016: Addition of STOXX ESG Impact indices
July 2016: Clarification of rules of STOXX Select & Diversification Select Indices
September 2016: Implementation of changes to country classification
September 2016 (2): Change of the exposure calculation for the Emerging Markets Exposed indices
October 2016: Addition of STOXX USA 900 Equal Weight Index and STOXX Japan 600 Equal Weight Index in Chapter 8.1, STOXX Equal Weight Indices
October 2016 (2): Addition of STOXX USA Low Risk Weighted 300 Index and STOXX Japan Low Risk Weighted 300 Index in Chapter 16.2, STOXX Low Risk Weighted
October 2016 (3): Addition of STOXX USA Select Dividend 30 Index in chapter 10.1, STOXX Select Dividend Indices
October 2016 (4): Addition of Index types and currencies in chapter 10.4, STOXX Maximum Dividend Indices
October 2016 (5): Addition of revised Minimum Variance methodology in chapter 16.1, STOXX Minimum Variance and Minimum Variance Unconstrained
October 2016 (6): Addition of STOXX China A 900 Minimum Variance Indices in chapter 16.1.
November 2016: Addition of STOXX Regional Industry Neutral ESG and STOXX Regional Excluding Tobacco Industry Neutral ESG indices in chapter 14.5
November 2016 (2): Addition of STOXX South Korea 200 in chapter 7
January 2017: Addition of EURO STOXX Quality Dividend 50
January 2017 (2): Addition of the STOXX Global Infrastructure Select 30 Indices into the STOXX Standard Select methodology chapter.
February 2017: improvement of wording and addition of details to the STOXX Europe Football, STOXX Global Extended Infrastructure 100, STOXX Global Infrastructure Suppliers 50, STOXX Global Broad Infrastructure, STOXX Regional Industry Neutral ESG and STOXX Regional Excluding Tobacco Industry indices. All modifications are intended to better describe the existing processes and no changes have been made to the existing index methodologies.
February 2017 (2): Addition of STOXX China A 900 Minimum Variance Unconstrained AM Index in chapter 16
March 2017: Addition of STOXX Climate Impact and Climate Awareness Indices in chapter 13.12
March 2017 (2): Addition of STOXX North America, Asia/Pacific Size Indices in chapter 7.3.2
August 2017: Addition of STOXX Emerging Markets ex PK Select 100, STOXX Global Health Care Select 30 and STOXX Global Technology Select 30 indices in chapter 16.6.1, Addition of STOXX USA 500 in Chapter 7.1
August 2017 (2): Addition of STOXX Emerging Markets 800 LO index in chapter 7.7

2. CHANGES TO THE GUIDE BOOK

October 2017: addition of index-specific dissemination calendars in line with definition of Dissemination Calendar in the STOXX Calculation Guide for the following indices: STOXX® Global Broad Infrastructure Index, STOXX® Global ESG Impact Index, STOXX® USA ESG Impact Index
November 2017: Termination of calculation and dissemination of STOXX Optimised Asia Select, STOXX Europe Private Equity 20, STOXX Global Rare Earth Extended and STOXX Global Max Traded 200 indices
November 2017 (2): change of dissemination calendar in line with definition of Dissemination Calendar in the STOXX Calculation Guide for the STOXX USA 500 Index
November 2017 (3): Addition of index STOXX Canada 60 in Chapter 9
November 2017 (4): Termination of calculation and dissemination of STOXX Global Grand Prix Index
December 2017: Clarification of 14.4.2 Index Review of the STOXX ESG Impact Indices
December 2017 (2): Clarification of index-specific dissemination calendars in line with definition of Dissemination Calendar in the STOXX Calculation Guide for the following indices: STOXX® Global Broad Infrastructure Index, STOXX® Global ESG Impact Index, STOXX® USA ESG Impact Index
January 2018: Addition of indices STOXX AI Global Artificial Intelligence Index and STOXX Global Artificial Intelligence Index.
January 2018 (2): Methodology change: COUNTRY and REGIONAL CLASSIFICATIONS and change in free-float market capitalization coverage to at least 95% for the STOXX TOTAL MARKET INDICES (TMI).
January 2018 (3): Addition of indices Euro Stoxx 50 Subindex Germany and Euro Stoxx 50 Subindex Netherlands (Euro Stoxx 50 subindices) in section 9.2.2.
February 2018: Clarification of COUNTRY and REGIONAL CLASSIFICATIONS, STOXX TOTAL MARKET INDICES (TMI) and TOTAL MARKET SIZE INDICES. No conceptual changes, only simplification and clarification of wording.
March 2018: Rewording of Country Classification: the description of the conditions for the classification as Emerging Market has been simplified. The applied logic remains unaltered.
Clarification of methodology of STOXX TM Style indices and STOXX Strong Style indices: parts of the methodologies have been rewritten and enriched with additional details to better and more transparently represent the actual review process.The methodology implementation remains unaltered.
March 2018 (2): Change of component announcement dates for major blue-chip and major benchmark indices in section 5.3; change of review cut-off dates in section 7.1 and section 7.2.
March 2018 (3): Addition of STOXX Global Digital Security Index.
April 2018: The simplification applied to the rewording of Emerging Market in the Country Classification during March, did not accurately reflect the desired logic.
April 2018 (2): Country classification: addition of sub-sections, removal of country classification table, reference to STOXX website containing the country classification and STOXX Watch List.
May 2018: Addition of EURO STOXX Single Premium and EURO STOXX Multi Premia indices in section 20.1 and 20.2
May 2018 (2): Addition of STOXX Emerging Markets 800 LO Minimum Variance Index in section 16.1.
May 2018 (3): Addition of STOXX AI Global Artificial Intelligence ADTV5 Index in section 19.1
May 2018 (4): Change in data provider name: South Pole changed to ISS-Ethix Climate Solutions

2. CHANGES TO THE GUIDE BOOK

June 2018: Amendment of STOXX Global Aritificial Intelligence Index methodology as per the OC determination in June 2018: change in minimum liquidity filter from ADTV to MDTV
June 2018 (2): Addition of STOXX AI Global Artificial Intelligence ADTV5 USD currency versions in section 19.1
June 2018 (3): Amendment of incorrect weighting cap factor calculation date for the EURO STOXX Single Premium and Multi Premia indices
August 2018: Addition of STOXX Yewno Developed Markets Blockchain Index
August 2018 (2): Change in name resulted to iSTOXX Yewno Developed Markets Blockchain Index being moved to the iSTOXX Index Methodology Guide (previously named STOXX Yewno Developed Markets Blockchain Index)
August 2018 (3): Addition of STOXX Global Fintech Index
September 2018: Removal of ICB Industry and Supersector subindices derived from the following indices due to decommissioning (announced via press release on 19.06.2018): STOXX All Europe 800, STOXX Americas 1200, STOXX Asia 1200, STOXX BRIC 400, STOXX East Asia 1800, STOXX Europe 600 NC, STOXX Europe ex UK Total Market, STOXX Global 1800 ex Asia/Pacific, STOXX Global 1800 ex North America, STOXX Global 3000 ex East Asia, STOXX Nordic Total Market, STOXX Pacific 100. Impacted sections are: 7.1.2, 7.2.2, 7.4.2, 7.5.2.
November 2018: Addition of STOXX Global Electric Vehicles & Driving Technology Index
November 2018 (2): Addition of STOXX Europe 600 ESG-X Index
November 2018 (3): Addition of STOXX China P Chips Total Market and STOXX China ADR Total Market
January 2019: Improvement of wording regarding derived indices in 14.1 STOXX Europe Sustainability Indices
January 2019 (2): Addition of: EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices, EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance Unconstrained Index and STOXX Global Sharing Economy Drivers Index
February 2019: Addition of STOXX Global Silver Economy, STOXX Global Millennials, STOXX Global Housing Construction, STOXX Global Sharing Economy, STOXX Global Industry 4.0, STOXX Global Smart Factory, STOXX Global Smart Cities indices
March 2019: Change of review timing for STOXX China A 900 Minimum Variance Unconstrained AM
May 2019: Addition of STOXX Benchmark ESG-X Indices
July 2019: Addition of EURO STOXX 50 ESG Index
July 2019 (2): Clarification of treatment of changes in country classification or listing in section 5.7
July 2019 (3): Methodology update – Universe change for the STOXX Sub Balkan 30 Index
August 2019: Addition of STOXX Global 1800 ex Eurozone Index
August 2019 (2): Switch from DVFA/EFFAS KPI's to standard Sustainalytics KPI's. Affected indices: STOXX Industry Neutral ESG indices, STOXX ESG Leaders indices and derived indices
August 2019 (3): Methodology change to STOXX Europe Christian Index
August 2019 (4): Methodology change to STOXX Activist Indices: Change of liquidity screen from USD 1 million to EUR 1 million
August 2019 (5): Methodology change to STOXX Optimised Country Indices: Removal of the quarterly applied fast exit rule with respect to share availability to foreign institutional investors
August 2019 (6): Methodology change to STOXX Optimised India: Removal of the selection screen with respect to share availability to foreign institutional investors for STOXX Optimised India Index
October 2019: Addition of STOXX Global Smart City Infrastructure Index
October 2019 (2): Addition of STOXX Global Next Generation Telecoms Index

2. CHANGES TO THE GUIDE BOOK

October 2019 (3): Clarification of selection list creation for STOXX Benchmark Indices and STOXX Global and Country Blue-chip Indices
November 2019: Addition of STOXX Germany Total Market ESG-X and STOXX Benchmark ESG-X ex Nuclear Power Indices
November 2019 (2): Addition of STOXX Global Low Risk Weighted Diversified 200 Index
January 2020: Clarification of Rebalancing frequency for STOXX Optimized Country indices. The section was missing, therefore not representing adequately the actual index maintenance process.
January 2020 (2): Clarification of availability of Size Indices based on the STOXX Global Indices.
January 2020 (3): Addition of STOXX Factor Indices
March 2020: Addition of STOXX Global Pet Care Index
March 2020 (2): Clarification on UN Global Compact with Sustainalytics Global Standards Screening and ESG Controversy Rating
March 2020 (3): Change the weight factor notional for the STOXX Low Risk Weighted Indices
March 2020 (4): Clarification on the fast exit rules of Select Dividend and Maximum Dividend indices
April 2020: Addition of STOXX Health & Weight Loss and STOXX Video Gaming & eSports indices
April 2020 (2): Amendment of capping rule of STOXX Europe 600 and EURO STOXX Supersector Indices with 30% / 15% Caps
April 2020 (3): Methodology change in the STOXX Global Digital Security, STOXX Global Electric Vehicles & Driving Technology and STOXX Global Smart City Infrastructure indices, as per the IOC determination
May 2020: Addition of STOXX ESG-X Factor Indices and addition to family of STOXX Factor Indices
May 2020 (2): Clarification added to Chapter 13.7, selection of STOXX Low Carbon blue-chip indices to reflect the changes in ICB Industries
June 2020: Addition of STOXX Global Thematic indices and STOXX Global Automation & Robotics (TTM) JPY index, following index name change (previously named iSTOXX FactSet Thematic indices)
June 2020 (2): Decommissioning of the STOXX Emerging Markets 50 ex BRIC index
June 2020 (3): Addition of STOXX Climate Transition Benchmark and STOXX Paris-Aligned Benchmark Indices
July 2020: Decommissioning of the STOXX Europe IPO (12 months) and STOXX Europe IPO (60 months) indices
July 2020 (2): Addition of ICB treatment effective on September 18 2020 for STOXX Climate Impact and Awareness Indices
July 2020 (3): Addition of ICB treatment effective on September 18 2020 for EURO STOXX 50, STOXX Europe 50, EURO STOXX 50 ex Financials, EURO STOXX ex Banks
July 2020 (4): Addition of ICB treatment effective on September 18 2020 for STOXX ASEAN Select Dividend 30, STOXX ASEAN-Five Select Dividend 50, STOXX Canada 60, STOXX Eastern Europe 50, STOXX Low Carbon Indices, STOXX Europe Football, STOXX Regional Industry Neutral ESG and STOXX Regional Excluding Tobacco Industry Neutral ESG indices, STOXX Strong Balance Sheet Indices, STOXX ESG Impact Indices, STOXX Sub Balkan 30, STOXX Global Low Risk Weighted Diversified 200
July 2020 (5): Addition of ICB treatment effective on September 18 2020 for EURO STOXX Large ex Financials, EURO STOXX Large ex Banks, STOXX Europe Large 200 ex Financials, STOXX Europe Large 200 ex Banks, EURO STOXX 50 ex Banks, STOXX Europe 50 ex Financials, EURO STOXX ex Banks, EURO STOXX ex Financials, STOXX Europe 600 ex

2. CHANGES TO THE GUIDE BOOK

Banks, STOXX Europe 600 ex Financials, STOXX Europe Low Carbon Diversification Select 50, STOXX Global Low Carbon Diversification Select 100, STOXX USA Low Carbon Diversification Select 50, EURO STOXX Low Carbon Diversification Select 50, STOXX Europe Low Carbon Select 50, STOXX Global Low Carbon Select 100, STOXX USA Low Carbon Select 50, EURO STOXX Low Carbon Select 50, STOXX Europe 600 Optimised Consumer Discretionary, STOXX Europe 600 Optimised Consumer Staples, STOXX Europe 600 Optimised Cyclicals, STOXX Europe 600 Optimised Defensives
July 2020 (5): Addition of STOXX Supersector and Industry Legacy indices and updation of Appendix for ICB 5 classification.
August 2020: Decommissioning of the EURO STOXX 50 Subindex Italy, STOXX Europe Total Market Tobacco, STOXX Europe Total Market Renewable Energy Equipment, STOXX Eastern Europe 300 Media, STOXX Canada 240 Automobiles & Parts, STOXX Canada 240 Chemicals, STOXX Canada 240 Construction & Materials, STOXX Canada 240 Food & Beverage, STOXX Canada 240 Telecommunications indices
August 2020 (2): Addition of ICB treatment effective on September 18, 2020 for STOXX Regional Real Estate Indices
August 2020 (3): Addition of ICB treatment effective on September 18, 2020 for STOXX Europe 600 and Euro STOXX 30%-15% capped indices
August 2020 (4): Clarification of wording of buffer rule for STOXX Blue-Chip Indices
September 2020: Decommissioning of the STOXX Ukraine Total Market, STOXX Optimised Country, STOXX Activist, STOXX Europe Football and BRIC-related STOXX equity indices
September 2020 (1): Amendment of ICB treatment effective on September 18, 2020 for STOXX Strong Balance Sheet Indices and addition of ICB treatment effective on September 18, 2020 for EURO STOXX Quality Dividend 50 Index.
September 2020 (2): Addition of ICB treatment effective on September 18, 2020 for ICB subsector Equity and Non-Equity Investment Instruments.
October 2020: Addition of STOXX Europe 400 and STOXX Europe 400 Supersector Indices
October 2020 (2): Removal of STOXX Europe IPO (12 months) and STOXX Europe IPO (60 months)
November 2020: Addition of EURO STOXX ESG-X Select Dividend 30 Index
November 2020 (2): Rule clarification for STOXX Global 3D Printing Indices
December 2020: Removal of STOXX Europe IPO (3 months) and STOXX True Exposure (25%, 100%, Developed Markets, Developed Markets ex Europe, Developed Markets ex USA, Emerging Markets)
January 2021: Clarification of rules for STOXX Minimum Variance and STOXX Factor indices regarding weight capping constraints
February 2021: Change of review cut-off date for STOXX Global Infrastructure indices.
February 2021 (2): Addition of STOXX Industry Neutral Factor Indices
February 2021 (3): Addition of STOXX Europe ESG-X Select Dividend 30, STOXX North America ESG-X Select Dividend 40, STOXX Asia/Pacific ESG-X Select Dividend 30 and STOXX Global ESG-X Select Dividend 100 Indices in section 14.10
March 2021: Clarification of country limits for STOXX Developed Markets 150 and STOXX Emerging Markets 50 Indices
April 2021: Addition of STOXX ESG Broad Market Indices
April 2021 (2): Amendment of the methodology of the EURO STOXX 50 ESG index following the announcement of results of the market consultation. Changes to be effective with the June 2021 review.
April 2021 (3): Addition of STOXX SRI Indices

2. CHANGES TO THE GUIDE BOOK

April 2021 (4): Addition of STOXX ESG Target and STOXX ESG Target TE Indices
April 2021 (5): Removal of country exclusion screens from STOXX East Asia 80 and STOXX East Asia 80 ex Japan. Update of Exchanges' names in section 4.2
May 2021: correction of reference to wrong committee in section 4.3.2
May 2021 (2): Change in the name of the STOXX ESG Impact indices. Renamed to STOXX ESG Select KPIs
June 2021: Addition of EURO STOXX Supersector 5/10/40 Indices
July 2021: Text update to the EURO STOXX 50 ESG Index
August 2021: Removal of STOXX East Asia 80 and STOXX East Asia 80 ex Japan
August 2021 (2): Addition of STOXX Willis Towers Watson Climate Transition Indices and EURO STOXX 50 ESG Target Index
August 2021 (3): Removal of STOXX Optimised Country DR Indices and STOXX Strong Balance Sheet Indices
September 2021: Removal of STOXX EM Exposed Indices
September 2021 (2): Addition of STOXX Europe 600 ESG Broad Market Equal Weight Index
October 2021: Addition of STOXX Global Digital Entertainment and Education Index
October 2021 (2): Renaming of Borsa Italiana to EURONEXT Milan
January 2022: Addition of STOXX USA ETF Industry Index
January 2022 (2): Methodology change to STOXX ASEAN Select Dividend 30 Index
January 2022 (3): Addition of STOXX PSBC China A ESG Index
February 2022: Clarification in Section 5.9 that most recent ICB data as known to STOXX at the cutoff date are used in the Selection Lists
February 2022 (2): Methodology change to the STOXX Climate Transition Benchmark and STOXX Paris-Aligned Benchmark Indices
February 2022 (3): Addition of the methodology for foreign headroom calculation and free float adjustment for foreign restrictions, section 5.13. Addition of capping factors that implement foreign ownership restrictions, section 5.16.3.
February 2022 (4): Addition of STOXX Asia Technology 100 Index
March 2022: Addition of STOXX U.S. Equity Factor Index and STOXX International Equity Factor Index
March 2022(2): Decommissioning of the STOXX Asia/Pacific Maximum Dividend 40, STOXX Japan Maximum Dividend 40, STOXX North America Maximum Dividend 40 indices
March 2022(3): Removal of Moscow Exchange from section 4.2
April 2022: Change in Underlying Data Announcement date to five days for the Blue-Chip Indices and the Global Infrastructure Suppliers 50 Index
May 2022: Addition of STOXX Europe Luxury 10 Index
May 2022(2): Methodology change to the STOXX Global Ageing Population, STOXX Global Automation & Robotics, STOXX Global Breakthrough Healthcare, STOXX Global Digitalisation, STOXX Global Digital Security, STOXX Global Electric Vehicles & Driving Technology, STOXX Global Smart City Infrastructure, and STOXX Global Digital Entertainment and Education
May 2022(3): Changing the calendar name STOXX Asia calendar to STOXX Global calendar and changing the dissemination calendar name to STOXX US calendar for STOXX U.S. Equity Factor, STOXX USA 900 Minimum Variance, STOXX USA 900 Minimum Variance Unconstrained, STOXX USA ESG Select KPIs
May 2022(4): Addition of STOXX Europe 600 ESG+ Index
June 2022: Decommissioning of Strong Quality Indices and EURO STOXX Multi Premia Index
June 2022 (2): Methodology update to the STOXX Global Digital Entertainment and Education Index

2. CHANGES TO THE GUIDE BOOK

June 2022(3): Addition of EURO STOXX 50 ESG Filtered Index
June 2022(4): Addition of STOXX Europe 600 Financials ex Banks Index
July 2022: Section 1 updated with new guides
July 2022(2): Addition of STOXX Europe 600 Energy ESG+ Index
July 2022(3): Update to Section 5.9 and Section 11.1.2
July 2022(4): Addition of STOXX Europe 50 ESG+ Index and EURO STOXX 50 ESG+ Index
August 2022: Minor edits to STOXX Europe 600 Energy ESG+ Index
August 2022 (2): Addition of GCC Total Market Index
August 2022 (3): Addition of STOXX Global Metaverse Index
August 2022 (4): Change in the base date and value of STOXX USA 900 Index
August 2022 (5): Update to Section 6.4.1
August 2022 (6): Addition of STOXX Europe 600 Industry 30-15 Indices.
August 2022 (7): Updates in Section 12.2
September 2022: Methodology update to the STOXX U.S. Equity Factor and the STOXX International Equity Factor Indices
September 2022(2): Methodology update to the STOXX Global Ageing Population, STOXX Global Automation & Robotics, STOXX Global Breakthrough Healthcare, STOXX Global Digitalisation, STOXX Global Digital Entertainment and Education, STOXX Global Digital Security, STOXX Global Electric Vehicles & Driving Technology and STOXX Global Smart City Infrastructure Indices
October 2022: Updates to section 14.16.
November 2022: Methodology update to the STOXX Climate Transition Benchmark and STOXX Paris-Aligned Benchmark Indices
November 2022(2): Rule clarification of selection lists during review month, free float factors rule clarification,country classification criteria Source change, updates in RBICS sectors of STOXX Asia Technology 100 Index and updates in ICB inclusion and RBICS list in STOXX USA ETF Industry Index.
November 2022(3): Addition of STOXX China A 900 Large ESG Index
November 2022(4): Added reference of STOXX Eligible Market Segments Guide.
December 2022: Addition of STOXX U.S. Small-Cap Equity Factor Index, STOXX Emerging Markets Equity Factor Index, STOXX International Small-Cap Equity Factor Index and STOXX Global Equity Factor Index.
December 2022(2): Amendment of the methodology of the STOXX Global Metaverse Index. Changes to be effective with March 2023 review.
December 2022(3): Rule clarification of selection lists during review month. This is a correction to the November 2022(2): Rule clarification of selection lists during review month published on 25.11.2022.
January 2023: Added reference of STOXX Bond Index guide.
February 2023: Addition of the STOXX Global Copper Universe index, STOXX Global Copper and Metals Mining Index, STOXX Global Lithium Universe index and STOXX Global Lithium Miners and producers index.
February 2023(2): Added the clarification in the methodology under Step 3 Weight factors calculation.
February 2023(3): Methodology update of the STOXX ESG Broad Market Indices, STOXX ESG Select KPIs Indices and EURO STOXX 50 ESG Index.

3. GENERAL PRINCIPLES

3.1. INDEX RATIONALE

STOXX defines the index rationale as the basis for applying a certain methodology in order to achieve the index objective. STOXX performs intensive research and may conduct conversations with market participants and third parties for this purpose. STOXX discloses the index objective in every case.

3.2. METHODOLOGY REVIEW POLICIES

STOXX constantly monitors the execution of the index calculation rules in order to ensure the validity of the index methodology. STOXX also conducts general methodology reviews in a periodic and ad-hoc basis, to reflect economic and political changes and developments in the investment industry. As result of these activities, STOXX introduces changes to the methodology books. Material changes are notified to subscribers and the media through the usual communication channels. Clarifications of the methodology are updated in the rulebook. All changes are tracked in the section 2.1 HISTORY OF CHANGES TO THE STOXX EQUITY METHODOLOGY GUIDE.

3.3. INDEX TERMINATION POLICY

For the termination of an index or index family for which outstanding products are present in the market to the knowledge of STOXX, a market consultation with the involved clients will be initiated by STOXX to take into account their views and concerns related to the termination or transition. A consultation period will be opened. Its duration depends on the specific issue. After the consultation period and in case of further action needed, a notification will be issued and the process defined above will be followed. In the case of a transition, STOXX will launch the alternative index and will notify of its character as a suitable replacement for an existing index whose calculation should be discontinued in the future. This notification advices clients on the alternative recommended by STOXX as replacement. The timeframe in which both indices will be calculated in parallel will be disclosed in the notification's text and will be no shorter than three months.

For the termination of an index or index family for which, to the knowledge of STOXX, no listed financial products are issued in the market, a press release notification or e-mail notification to subscribers will be communicated at least three months before coming into force. Clients or third parties with interest in the index or index family are urged to communicate as soon as possible their concerns to STOXX. Based on the feedback collected, STOXX may alter the index termination decision. For the termination of an index without financial product issued on there will be no market consultation. Changes to the original notification will be communicated in the same manner.

4. COVERAGE

4.1. STOXX GLOBAL EQUITY STOCK UNIVERSE

All common stocks and equities with similar characteristics from financial markets that provide real-time and historical component and currency pricing form the STOXX global equity universe. This universe and the following framework described in chapter 4 and 5 is used for all STOXX, iSTOXX and customized indices calculated by STOXX.

4.2. STOXX INVESTABLE UNIVERSE

The STOXX investable universe is the fraction of the STOXX global equity universe listed on the following stock exchanges and countries:

Western Europe		
Athens Stock Exchange (GR)	NASDAQ Helsinki (F)	EURONEXT Lisbon (PT)
Bolsa De Madrid (ES)	NASDAQ Iceland (IS)	EURONEXT Paris (FR)
EURONEXT Milan (IT)	NASDAQ Stockholm AB (SE)	Oslo Stock Exchange (NO)
Deutsche Boerse (DE)	EURONEXT Amsterdam (NL)	SIX Swiss Exchange (CH)
London Stock Exchange (GB)	EURONEXT Brussels (BE)	Vienna Stock Exchange (AT)
NASDAQ Copenhagen (DK)	EURONEXT Dublin (IE)	
Eastern Europe		
Belgrade Stock Exchange (RS)	Istanbul Stock Exchange (TR)	NASDAQ Vilnius (LT)
Bratislava Stock Exchange (SK)	Ljubljana Stock Exchange (SI)	Prague Stock Exchange (CZ)
Bucharest Stock Exchange (RO)	Macedonian Stock Exchange (MK)	Warsaw Stock Exchange (PL)
Budapest Stock Exchange (HU)	Malta Stock Exchange (MT)	Zagreb Stock Exchange (HR)
Bulgarian Stock Exchange (BG)	NASDAQ Riga (LV)	
Cyprus Stock Exchange (CY)	NASDAQ Tallinn AS (EE)	
Americas		
B3 S.A. - Brasil, Bolsa, Balcao (BR)	Lima Stock Exchange (PE)	NYSE (US)
Bolsa de Valores de Colombia (CO)	Mexican Stock Exchange (MX)	Santiago Stock Exchange (CL)
Buenos Aires Stock Exchange (AR)	NASDAQ (US)	Toronto Stock Exchange (CA)
Asia/Pacific		
Australian Securities Exchange (AU)	New Zealand Exchange (NZ)	Stock Exchange of Thailand (TH)
Bombay Stock Exchange (IN)	Pakistan Stock Exchange (PK)	Stock Exchange of Hong Kong (HK)
Bursa Malaysia (MY)	Philippine Stock Exchange (PH)	Taiwan Stock Exchange (TW)
Ho Chi Minh Stock Exchange (VN)	Shanghai Stock Exchange (CN)	Tokyo Stock Exchange (JP)
Korea Exchange (KR)	Shenzhen Stock Exchange (CN)	
Indonesia Stock Exchange (ID)	Singapore Exchange (SG)	
Africa		
Casablanca Stock Exchange (MA)	Johannesburg Stock Exchange (ZA)	Tunis Stock Exchange (TN)
Egyptian Exchange (EG)	Nigerian Stock Exchange (NI)	Tel Aviv Stock Exchange (IL)

The detailed disclosure of market segments per eligible exchanges is available in the STOXX Eligible Market Segments Guide available on www.stoxx.com

4.3. COUNTRY AND REGIONAL CLASSIFICATIONS

4.3.1. OVERVIEW

The STOXX country classification model relies on a rules-based methodology. The six criteria for the classification of a country as a developed or emerging market include macroeconomic data, market capitalization, market liquidity, free currency convertibility on on-shore and off-shore markets, restrictions on capital flows and governance based on political stability, control of corruption and regulatory quality.

A formal reassessment of all country classifications is done annually in Q1, when a final classification assignment decision is made for each country. A public announcement [1] of any classification changes resulting from the annual reassessment is released latest by April of each year. Implementation of the classification changes occurs with the quarterly index review in Q3 of the same year.

4.3.2. COUNTRY SELECTION CRITERIA

The selection criteria are the following:
1: World Bank GNI per capita (Source: World Bank)
Definition: Only countries that are classified as Advanced by the World Bank in terms of GNI per capita (GNI/n), are considered as eligible for Developed Market status by STOXX. Advanced countries are those that have a GNI/n equal to or greater than the maximum cut-off value (e.g. $12 476 for 2016), as published by the World Bank on an annual basis.

2a: Market Capitalization Screening (Source: Thomson Reuters QAD / STOXX internal data)
Definition: Countries must have a market capitalization that is equal to or greater than the 20th percentile, as calculated in terms of the market capitalization of the countries covered by STOXX, to be eligible as either a Developed or Emerging Market. Countries that do not meet this criterion, will be Not Classified.

2b: Liquidity Screening (Source: Thomson Reuters QAD / STOXX internal data)
Definition: The total value of shares traded must be equal to or greater than the 40th percentile, as calculated in terms of the value of shares traded of the countries covered by STOXX, for a country to be eligible for Developed Market status. All countries that have a total value of shares traded of less than the 40th percentile, but equal to or greater than the 30th percentile, will only be eligible for Emerging Market status. All countries that have a total value of shares traded of below the 30th percentile, will be Not Classified.

For criteria 2a and 2b, the average data of the last three consecutive years are used in order to avoid short-term fluctuations, i.e. 2017 decisions are based on average data from 2014 to 2016.

3a: Free Currency Convertibility on On-Shore and Off-Shore Markets (Source: STOXX internal research / IMF)
Definition: The remaining countries must have free currency convertibility and availability of developed on-shore and off-shore markets. To get into and out of their positions, foreign investors should be able to freely buy and sell the local currency.

[1] http://www.stoxx.com/indices/country_classification.html

This criterion is only considered at the time of classification. Extraordinary events will be assessed by the STOXX Index Governance Committee.

3b: No Restrictions on Capital Flows (Source: STOXX internal research / IMF)
Definition: Additionally, international investors have to be able to move funds freely in and out of the country.

3c: Governance Score (Source: World Bank)
Definition: Each country is assigned a governance score based on Political Stability, Control of Corruption and Regulatory Quality as contained within the Worldwide Governance Indicators report of the World Bank.

This criterion is only considered at the time of classification. Extraordinary events will be assessed by the STOXX Index Governance Committee.

Only those countries that meet the all criteria as set in steps 1, 2a, considered as eligible for Developed Market status in 2b, as well as all criteria in steps 3a, 3b and 3c, will be classified as a STOXX Developed Market.

Countries that do not meet all the criteria in steps 3a to 3c, but meet the criterion in step 2a and are considered as eligible for Emerging Market status in 2b, are classified as a STOXX Emerging Market.

Countries that cannot be classified as Developed or Emerging Markets are considered Not Classified. Specifically, countries are considered Not Classified and are entirely excluded when they are Not Classified according to either of the minimum criteria in steps 2a or 2b.

STOXX Watch List [2]:

The general spirit in which the watch list is managed would follow the principles of maintaining market integrity while striving to minimize unnecessary client impact.

All countries that would have a different classification from the previous year, would be flagged and captured in a watch list. Countries will stay on this watch list for a period of at least 1 year, and in some circumstances may stay on the watch list for many years, in order to avoid countries being classified and reclassified because of a certain data point at a particular point in time.

Countries that oscillate between classification levels will maintain their last classification and remain on the watch list, unless decided otherwise by the STOXX Index Governance Committee, within the framework provided by the STOXX Governance Process. The watch list would allow countries to be reclassified should the STOXX Index Governance Committee deem in to be in the interest of market participants to expedite a new classification, within the framework provided by the STOXX Governance Process.

Countries may only change classification by a single level at a time, as compared to their current classification. STOXX may consider certain countries as borderline (countries that are either just below or just above the set thresholds) and may include these in the watch list to be observed and possibly reclassified by the STOXX Index Governance Committee, within the framework provided by the STOXX Governance Process.

[2] http://www.stoxx.com/indices/country_classification.html

STOXX will review the regional classifications and index compositions in case a country announces changes to its currency and its companies adopt a new local currency at a future date. Changes will be implemented with two trading days' notice provided that orderly trading in the original currency is possible following the announcement.

In addition, STOXX generally reviews a country's eligibility to any index at short notice in case of major market disruptions in that country.

4.3.3. REGIONAL SPECIFICS

STOXX classifies EU Enlarged as the current EU region and will be extend in line with the extension of the European union to cover the new EU member states.

The Eurozone contains companies that are allocated to one of the defined Eurozone countries according to the rules set out in chapter 5.7 (COUNTRY and LISTING), and that are traded in Euro. Companies allocated to Eurozone countries and not trading in EUR are not eligible for the Eurozone indices.

In case of formal regional membership changes (e.g. countries leaving or entering the European Union, the Eurozone or the ASEAN) with respect to the respective regional indices:
• Countries entering: the changes would usually be effective on the Monday after the 3rd Friday in the next quarter in March, June, September, or December, after the effective date of the formal membership change, and announced in a timely manner subject to market conditions
• Countries leaving: the changes would usually be effective on the Monday after the 3rd Friday in the previous quarter in March, June, September, or December, preceding the effective date of the formal membership change, and announced in a timely manner subject to market conditions

To cover the different share classes of companies from China, Taiwan and Hong Kong, the following STOXX index universe and regions exist:

Index family	Shares classes covered	Region
STOXX China	B, H and Red chips	As defined in table above
STOXX China A	A shares	Separate family outside of the STOXX Global index universe
STOXX China B	B shares	Derived from STOXX China universe
STOXX China H	H shares	Derived from STOXX China universe
STOXX China Red Chips	Red chip	Derived from STOXX China universe
STOXX China P Chips	P chip	Separate family outside of the STOXX Global index universe
STOXX China ADR	ADR	Separate family outside of the STOXX Global index universe
STOXX Greater China	B, H, Red chip, Hong Kong, Taiwan	Derived from STOXX China, HK, TW universe
STOXX Hong Kong All Shares	Hong Kong, H, Red Chips	Derived from STOXX HK and China universe

5. INDEX CHARACTERISTICS

The following framework described in chapter 5 is used for all STOXX, iSTOXX and customized indices calculated by STOXX.

5.1. MARKET CAPITALIZATION-WEIGHTED INDICES AND PRICE- WEIGHTED INDICES

The Free-Float Market Capitalization determines the weights of each constituent in Free-Float Market Capitalization weighted indices. Price-weighted indices are weighted by the price and another appropriate weighting factor. For details on the calculation formula please consult the STOXX Calculation Guide and the weighting factor definition in chapter 5.14 of this document.

5.2. SELECTION LISTS

The selection lists are produced for indices with a fixed number of constituents in order to determine replacements for any stock deleted from the indices due to a corporate actions.

The selection lists are calculated based on the most recent data as known to STOXX at the cut-off date, which corresponds to the last trading day of the previous month.
The most recent free-float data is applicable to selection lists published in March, June, September and December.

Selection lists can also indicate possible changes in the composition of the index at the next review.

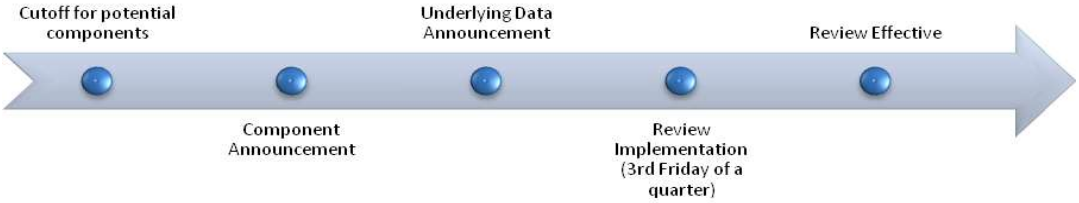
5.3. BUFFERS

Buffers are used in the periodic reviews to reduce turnover. Based on an index-specific characteristic, an upper and a lower limit is set around the index target coverage. Stocks ranked at and above the upper limit are selected for the index. The remaining stocks necessary to achieve the target coverage (fixed number of stocks or market capitalization threshold) are selected from the highest-ranked remaining current stocks between the upper and lower limit. If the target coverage is still not achieved, the highest remaining stocks are selected until the target coverage is achieved.

5.4. INDEX REVIEW

To keep up with the latest development of the stock markets, all indices are reviewed on a regular basis to ensure a transparent and up-to-date index basket. The implementation (“the rebalancing”) is usually conducted quarterly after the close every third Friday in March, June, September and December and effective the next trading day.
If the implementation day is a non-trading day then all dates will be preponed by one trading day accordingly. The review effective day remains the next trading day following the implementation day.

5. INDEX CHARACTERISTICS



Component changes are announced:

- on the first trading day of the review month for major blue-chip indices and major benchmark indices. This excludes the STOXX Benchmark ESG-X, STOXX Benchmark ESG-X ex Nuclear Power, STOXX Climate Transition Benchmark, STOXX Paris-Aligned Benchmark, STOXX ESG Broad Market and STOXX SRI Indices

- on the fifth trading day of the review month for price weighted indices

- on the second Friday of the review month for all other indices, including the STOXX Benchmark ESG-X, STOXX Benchmark ESG-X ex Nuclear Power, STOXX Climate Transition Benchmark, STOXX Paris-Aligned Benchmark, STOXX ESG Broad Market and STOXX SRI Indices.

The most recent free-float data as known to STOXX are used for the component selection. The detailed cut off dates are available in the STOXX Calculation Guide.

The underlying data (i.e. shares, free-floats, weighting factors and weighting cap factors) are announced five trading days prior to the review implementation.

For the calculation of weighting and capping factors, the closing prices on the trading day before the announcements are used.

Diverging component announcement or underlying announcement schedules may occur and are defined in the specific index methodology and communicated in advance. The detailed review schedule is published on the STOXX website.[3]

5.5. LIQUIDITY

During the period review processes liquidity screenings are applied as defined in the specific index methodology sections (e.g. companies must have a minimum Average Daily Traded Value over a given time period). A company's ADTV is based on the trading volumes of the specific listing used for the index calculation. In case the determined ADTV level does not allow a selection of the

[3] http://www.stoxx.com/news/review_dates.html

defined number of constituents in a fixed component index, the liquidity threshold is adjusted downwards accordingly.

In case of market events that negatively influence the aggregated liquidity and market capitalization of entire markets, the liquidity requirements can be lowered or the period index review can be postponed to the next quarterly review date. In such cases, the composition remains unchanged, but new weighting factors will be implemented. Changes will communicated in advance.

5.6. STOCK CHARACTERISTICS

Index values are calculated within the STOXX framework based on, but not limited to, one or more of the following characteristics. These characteristics are screened during the quarterly review process (ordinary adjustment) and extraordinarily outside of the review period in case of corporate actions . Please refer to the STOXX Calculation Guide for further details about extraordinary adjustments and corporate actions treatment. To access the latest information about extraordinary adjustments subscribe to the STOXX E-Mail distribution list and download regularly the Corporate Action forecast[4].

5.7. COUNTRY ASSIGNMENT OF SECURITIES

Each stock is uniquely assigned to a specific country and listing within the STOXX investable universe. The country classification and listing are generally based on the country of incorporation and the primary listing of the security.

If a company`s country of incorporation differs from the country of its primary listing, further factors are considered in the process of country assignment.

To be eligible for the STOXX universe, a company`s country of listing and country of incorporation must be in the same region (Americas, Europe, Asia / Pacific, Middle East and Africa). The regions are split further into Developed and Emerging Markets:

- Companies solely listed in Emerging Markets are in general not assigned to Developed Markets
- Companies incorporated in Emerging Markets having their sole listing in Developed Markets are not eligible for the STOXX universe
- Companies assigned to one of the Eurozone countries (according to STOXX Country Classification) must have a listing in one of those countries and trading in EUR. Companies allocated to the Eurozone countries and not trading in EUR are not eligible for the Eurozone indices.

In case of changes to the STOXX country classification effective annually with the index review in Q3, the country assignment of current constituents of the STOXX universe is reassessed.

[4] http://www.stoxx.com/mystoxx/activation.html
http://www.stoxx.com/data/corporate_actions.html, updated daily

Companies incorporated in offshore jurisdictions such as Bahamas, Bermuda, British Virgin Islands, Cayman Islands, Channel Islands, Guernsey, Isle of Man, Jersey, Marshall Islands, Netherlands Antilles, Panama are generally classified based on the country of the primary listing.

American and depositary receipts (e.g., ADRs/GDRs) are assigned to the same country as the stock on which the receipt is issued.

In all other circumstances, STOXX will base its decision following additional analysis that is performed to determine the company`s nationality. The following factors are considered in the assessment:

- The company´s eligible listings (stock exchange within the STOXX investable Universe)
- The country in which the company is domiciled for tax purposes
- The location of its headquarters
- The geographical distribution of its operations
- The structure of its shareholder base
- The perception of investors

In order to ensure the country representation in the STOXX universe, the domestic listing can be selected over the more liquid one located in recognized financial centers. As an example, this applies to Canadian companies trading in Canada (Toronto SE) and US (New York SE or Nasdaq), Irish companies trading in Ireland (Euronext Dublin) and United Kingdom (London SE) or New Zealand companies trading in New Zealand (New Zealand SE) and Australia (Australian SE).

STOXX periodically reviews the country classification of companies in its universe. Companies might be re-classified in case of changes in incorporation or listing if the re-classification is justified by the country assignment criteria. Changes to country assignment are effective as of the next quarterly review. At that time, all indices are adjusted accordingly to remain consistent with their respective country membership rules by deleting the company where necessary.

Intra-quarterly changes triggered by a cessation of the assigned listing may lead to exclusion of the company from the universe and termination of its coverage in case the new listing is no longer in the same region (Americas, Europe, Asia / Pacific, Africa, Middle East) as the country assignment. The deletion of the company would be implemented in line with the discontinuation of the eligible listing. Such company would be eligible for inclusion in the following quarter if it passed the screening process.

5.8. CURRENCY

Each stock is uniquely assigned a specific currency depending on the selected listing.

In case of currency change for a given security or for a country, the new currency is applied on the effective date of the currency change for the given security or for the concerned country.

5.9. INDUSTRY CLASSIFICATION BENCHMARK (ICB) CODE

Each stock is assigned a specific and unique ICB Code. The Industry Classification Benchmark (ICB) groups together companies that have similar sources of primary revenue. The detailed hierarchy of the Industry Classification Benchmark is shown in the Guide to Industry Classification Used By STOXX.
Sector changes are implemented immediately subsequent to corporate actions. Otherwise they are published at the next component announcement and applied at the quarterly review. Quarterly ICB Classification Changes announced before the cutoff date and effective on the quarterly review effective date are reflected in the Selection Lists published in March, June, September and December as defined in Section 5.2.
Effective up until September 2020 review, unless, stated explicitly in the individual index methodologies differently all companies classified into the ICB categories 8985 (Equity Investment Instruments) and 8995 (Non-equity Investment Instruments) are not eligible for inclusion into the indices. Effective with September 2020 review, unless, stated explicitly in the individual index methodologies differently all companies classified into the ICB categories 30204000 (Equity Investment Instruments) and 30205000 (Non-equity Investment Instruments) are not eligible for inclusion into the indices.

5.10. CORPORATE ACTIONS

All index components are adjusted for corporate actions. Any event is treated in the same way in all indices. Please consult to the STOXX Calculation Guide for the detailed treatments.

5.11. NUMBER OF SHARES

A number of shares including treasure stock held by the company itself is assigned uniquely to each stock within the STOXX universe. The number of shares are reviewed on a quarterly basis. They are published on the quarterly underlying data announcement and implemented on the quarterly review implementation.

5.12. FREE-FLOAT FACTORS

Each stock is assigned a unique free-float factor within the STOXX universe. The free-float factor reduces the number of shares to the actual amount available on the market. All fractions of the total number of shares that are larger than or equal to 5% and whose holding is of a long-term nature are excluded from the index calculation. This includes:

Cross-ownership: stock owned either by the company itself, in the form of treasury shares, or owned by other companies;
Government ownership: stock owned by either governments or their agencies;
Private ownership: stock owned by either individuals or families;
Restricted shares that cannot be traded during a certain period or have a foreign ownership restriction.

Block ownership is not applied for holdings of custodian nominees, trustee companies, mutual funds, investment companies with short-term investment strategies, pension funds and similar entities.

The free-float factors are reviewed on a quarterly basis. They are published on the quarterly underlying data announcement and implemented on the quarterly review implementation.

5.13. FOREIGN HEADROOM AND FREE FLOAT ADJUSTEMENT FOR FOREIGN RESTRICTIONS

5.13.1. FOREIGN HOLDINGS

A foreign investor is an investor whose country is different from the country of the security. Foreign holdings are defined as the sum of all eligible holdings of foreign investors. To be eligible, a holding of a foreign investor should be greater than, or equal to, 5% of the total number of shares. (This is consistent with the STOXX methodology for free float calculation). For example, if each foreign investor holds less than 5% of the total number of shares, then the foreign holdings shall be zero. Foreign holdings are expressed as a percentage of the total number of shares.

The foreign holdings are calculated quarterly. All public data, which is available to STOXX prior to the last business day of the pre-review month, is considered for the determination of the foreign holdings. If data is missing, STOXX may consult with analysts or make a decision on a case by case basis. As a last resort, if data is missing, and no decision can be reached otherwise, foreign holdings are set equal to zero.

5.13.2. FOREIGN OWNERSHIP LIMIT

Foreign ownwership limits (FOL's) are imposed by local governments and are expressed as a cap on the percentage of the total number of shares that may be held by foreign investors. FOL's can be either company specific, or sector specific and apply to all companies from the specific sector. When determining FOL's, STOXX firstly checks for company specific FOL's, and if no such FOL's apply, STOXX checks for sector specific FOL's.

For companies that impose FOL's only for non-European Union investors, such FOL's are fully taken into account in the calculation of the foreign ownership limit. In other words, the foreign ownership limit would apply for both EU and non-EU foreign investors.

In some legislation there can be legal exceptions from the FOL for some specific cases or companies. In these cases, the foreign holdings can be higher than the FOL.

The foreign ownership limits are updated quarterly. All public data, which is available to STOXX prior to the last business day of the pre-review month, is considered for the determination of the foreign ownership limits. If data is missing, STOXX may consult with analysts or make a decision on a case by case basis. As a last resort, if data is missing, and no decision can be reached otherwise, foreign ownership limits are set equal to one.

5.13.3. FREE FLOAT ADJUSTED FOR FOREIGN RESTRICTIONS

If required by the methodology of a specific index, the free float is adjusted for foreign restriction as follows

If a foreign ownership limit is available and it is smaller than 1 (100%)

adjusted free float = min[free float, max(0, (foreign ownership limit – foreign holdings))];

Otherwise
adjusted free float = free float

where free float, adjusted free float, foreign ownership limit, and foreign holdings are all expressed as a percentage of the total number of shares.

5.13.4. FOREIGN HEADROOM

Foreign headroom (FHR) is defined as

FHR = (foreign ownership limit – foreign holdings) / foreign ownership limit

The use of FHR makes sense only for securities whose FOL's are known and smaller than 1 (100%).

Some indices can impose FHR-related requirements for component selection.

5.14. WEIGHTING FACTOR

Weighting factors are applied in price-weighted indices instead of the factor "shares times free-float". Weighting factors are calculated on the basis of other criteria like for example dividend data. Weighting factors are adjusted for corporate actions. Please consult the STOXX Calculation Guide for further details.

5.15. FREE-FLOAT MARKET CAPITALIZATION

The free-float market capitalization is the share of a stocks' total market capitalization that is available for trading:
Free-float market capitalization = free-float factor × full market capitalization
The weighting factor multiplied by the price of the share determines the weight of a company within a price-weighted index.

5.16. CAPPING FACTORS

5.16.1. WEIGHTING CAP FACTORS

The factor limits the maximum weighting for a stock at the time of the review. Weighting cap factors are updated during the regular quarterly index reviews and not adjusted for corporate actions. The weighting cap factors are used to achieve a diversification and avoid a dominance of a single stock, region, country or sector in an index.
Depending on the objective of the index different maximum weights are sets. Blue-chip indices are capped at 10% per component while some benchmark indices have a capping at 20%. For other indices, especially the STOXX capped Supersector indices, due to a narrow underlying universe and to reflect the market appropriately the indices are capped at 30% for largest and 15% for the second largest constituent.
Further details can be found in the individual index methodologies of this rule book.

5.16.2. LIQUIDITY SCALING FACTORS

Liquidity scaling factors are used in the STOXX Optimised indices. The factor is based on the average daily turnover (ADTV) of the stock over the most recent three-month period, measured one day before the underlying data announcement date. The factor is kept constant between reviews and is calculated as follows:

1. Determination of free-float market capitalization weights:

$$w_{it} = \frac{p_{it} \cdot n_{it} \cdot ff_{it}}{\sum_{i=1}^{n} p_{it} \cdot n_{it} \cdot ff_{it}}$$

p_{it} = Price of company (i) at time (t)
n_{it} = Number of shares of company (i) at time (t)
ff_{it} = Free-float factor of company (i) at time (t)
n = Number of shares

2. Calculation of liquidity value:

$$lv_{it} = \frac{w_{it}}{ADTV3m_{it}}$$

w_{it} = Free-float market capitalization weight (i) at time (t) in the specific index basket
$ADTV3m_{it}$ = Average Daily Traded Value (i) at time (t)

Calculation of sum of weighted liquidity values:

$$wlv_t = \sum_{i=1}^{n} w_{it} \cdot lv_{it}$$

3. Calculation of liquidity scaling cap factor:

$$cf_{it} = \begin{cases} \frac{wlv_t}{lv_{it}} & \text{if}(lv_{it} > wlv_t) \\ 1 & \text{if}(lv_{it} \leq wlv_t) \end{cases}$$

The factor therefore reduces the liquidity value to the weighted average, if it is larger than that average.

5.16.3. CAPPING FACTORS THAT IMPLEMENT FOREIGN OWNERSHIP RESTRICTIONS

5. INDEX CHARACTERISTICS

The foreign restrictions adjusted free float is implemented via a capping factor in the sense of Section 4.1 General Definitions of the STOXX Reference Calculations Guide. The capping factor is defined as

Capping factor = foreign restrictions adjusted free float / free float.

By construction capping factor = 1 for securities without a foreign ownership limit, or with foreign ownership limit equal to 1 (100%).

5.17. REPLACEMENT OF INDICES WITH FIXED NUMBER OF CONSTITUENTS

When referred to this section the below applies only during review implementation month:

During review implementation month, the published review report in combination with the selection list will be used to select a replacement. With the public announcement of the review report in the review implementation month, the highest ranked non-component from the selection list, which is not announced an addition to the affected index from the review report at the review effective date, will replace the deleted stock (“next viable replacement”).
For certain replacements occurring during review month and before the rebalancing date:

- If a deleted stock was scheduled for a deletion in an (size) index at the review effective date to a lower size index or entirely, the afore-mentioned process of adding the next viable replacement applies. However, to balance the number of additions and deletions at the review effective date, the lowest ranked index component on the selection list, within the same (size) index and which was not announced a deletion from the review report, will be deleted at the review effective date.
- If a deleted stock was scheduled for an addition in an (size) index at the review effective date, the afore-mentioned process of adding the next viable replacement applies. However, to balance the number of additions and deletions at the review effective date, the highest ranked index component on the selection list, within the same (size) index and which was not announced an addition from the review report, will replace the deleted addition at the review effective date.

6. STOXX TOTAL MARKET INDICES (TMI)

6.1. TOTAL MARKET COUNTRY INDICES

6.1.1. OVERVIEW

The STOXX Country Total Market indices are the basis for all regional STOXX Total Market indices. Each country index aims to represent a broad market and covers at least 95% of the free-float market capitalization of the respective country. The individual country coverage thresholds are published on a quarterly basis on Qontigo - Financial Intelligence Innovator | Qontigo. The STOXX Total Market country indices serve as basis for the component selection of the regional Total Market indices.

Universe: All stocks in the investable universe selected by their unique country code.

6.1.2. INDEX REVIEW

Selection list: For all companies available in the global stock universe pricing, volume and reference data are obtained from Thomson Reuters. For current index constituent the data are enriched by STOXX data. Each company is assigned a unique country code, listing and ICB code valid for all STOXX indices.

For all companies the following screenings and filters are applied to determine eligibility:

Exclusion criteria

- Only common stocks and equities with similar characteristics from financial markets that provide reliable real-time, historical component and currency pricing, and reference and corporate actions data are eligible according to chapter 4.1
- Only listed companies on a regulated market on an exchange defined in the STOXX Investable Universe are eligible according to chapter 4.2
- Effective up until September 2020 review, Equity or Non-Equity Investment Instruments according to the Industry Classification Benchmark (ICB: 8985 or 8995) are not eligible. Effective with September 2020 review, Equity or Non-Equity Investment Instruments according to the Industry Classification Benchmark (ICB: 30204000 or 30205000) are not eligible.
- Companies that were recently removed from the indices due to mergers and acquisition are not eligible

China specific rules

- P Chips are securities of companies not incorporated in the PRC, headquartered either in China or Hong Kong, listed in the Hong Kong stock exchange and not defined as belonging to any of the other China share classes (as per STOXX classification). For P Chips, the following revenue filters then are applied to determine eligibility to be classified as a P Chip and form part of the investable stock universe: for companies headquartered in China, revenues derived from the PRC should be more than 70% and for companies headquartered in Hong Kong, revenues derived from the PRC should be more than 80%. For existing companies in the index that are headquartered in China, revenues derived from mainland China should be more than 60% and for existing companies in the index headquartered in Hong Kong, revenues derived from mainland China should be more than 70%.

6. STOXX TOTAL MARKET INDICES (TMI)

» ADRs are depositary receipts of companies not incorporated in the PRC, headquartered either in China or Hong Kong and listed in the New York or Nasdaq stock exchanges. For ADRs, the following filters then are applied to determine eligibility: revenues derived from mainland China should be more than 60%. For existing companies in the index, revenues derived from mainland China should be more than 50%.

Determination of most liquid market

» For all companies the most liquid market is identified out of all listing and country combinations. The company's listing must be in the same region (Americas, Europe, Asia / Pacific) as the country assignment to be eligible

Country and regional assignments in STOXX universe

» According to chapters 4.3 and 5.7

Non-trading day screenings

» Companies are screened for their non-trading days in the three-month period preceding the review cut-off date date and treated as not eligible if they exceed 10 non-trading days. The screening is applicable to current constituents and potential additions to the index.
» Spin-offs and companies that were suspended due to corporate actions are considered as eligible
» Companies with an IPO date in the three-month period preceding the review cut-off date are considered as eligible

Component selection: Target coverage is at least 95% of the free-float market capitalization of the investable stock universe at the cut-off date in the regarding country.

Review procedure: All stocks in the investable stock universe of the country in question are ranked in terms of their free-float market capitalization at the cut-off date to produce the review list. A 93-99% buffer is applied as follows:

1. The largest companies in the investible universe with a cumulative free-float market capitalization up to and including 93% of the investible universe, qualify for selection.
2. The stocks covering the next two percent of cumulative free-float market capitalization are selected among the largest remaining current TMI components representing the portion of capitalization above 93% and up to and including 99%.
3. If the country coverage is still below the defined threshold, then the largest remaining stocks are selected until the country coverage is reached, as stated in section 6.1.1.

Review frequency: The reviews are conducted on a quarterly basis. The review cut-off date is the last trading day of the month following the last quarterly index review.

Weighting cap factors: The components are not subject to component weight restrictions and capping.

Derived indices: All STOXX Regional Total Market indices.

6. STOXX TOTAL MARKET INDICES (TMI)

6.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are added permanently if qualifying for the STOXX TMI indices as of the latest quarterly review list in terms of free-float market capitalization.

6. STOXX TOTAL MARKET INDICES (TMI)

6.2. TOTAL MARKET REGIONAL INDICES

6.2.1. OVERVIEW

The STOXX Regional Total Market indices are aggregates of the STOXX Total Market country indices. They aim to provide a broad representation of the respective region.

Universe: at least 95% of the free-float market capitalization of the investable stock universe by country.

Regional aggregates exist for several regions as defined in section 4.3:
Global, Developed Markets, Emerging Markets, Americas, North America, Latin America, Asia, East Asia, Pacific, Asia Pacific, Africa, All Europe, Europe, Nordic, Eurozone, Eastern Europe, EU Enlarged, Balkan

For a complete list please consult the data vendor code sheet on the website[5]. Customized solutions can be provided upon request.

Weighting scheme: The indices are weighted according to free-float market capitalization: No weighting cap factors are applied. All derived indices can be rolled-up to form the parent index.

Base values and dates: The following base values and dates apply:

STOXX Global Total Market Index: 100 on January 31, 2011
STOXX Americas Total Market Index: 100 on January 31, 2011
STOXX All Europe Total Market Index: 100 on January 31, 2011
STOXX Asia Total Market Index: 100 on January 31, 2011
STOXX Pacific Total Market Index: 100 on January 31, 2011
STOXX Latin America Total Market Index: 100 on January 31, 2011
STOXX Europe Total Market Index: 100 on December 31, 1991
STOXX Nordic Total Market Index: 100 on December 31, 1991
STOXX EU Enlarged TMI: 100 on December 31, 2002
STOXX Eastern Europe Total Market Index: 100 on December 31, 2002
STOXX Balkan Total Market Index: 100 on December 31, 2004
STOXX Emerging Market Total Market Index: 100 on January 31, 2011
STOXX Africa Total Market Index: 100 on January 31, 2011
STOXX East Asia Total Market: 100 on January 31, 2011
STOXX Developed Markets Total Market: 100 on January 31, 2011
STOXX Developed and Emerging Markets Total Market 100 on January 31

Index types and currencies: Price, gross return and net return in EUR and USD

6.2.2. INDEX REVIEW

Component selection: The indices consist of the components of the relevant Total Market Country indices.

---

[5] http://www.STOXX.com/download/indices/vendor_codes.xls

6. STOXX TOTAL MARKET INDICES (TMI)

Review frequency: The reviews are conducted on a quarterly basis together with the STOXX Total Market Country indices.

Derived indices:

Sector and Size Indices*	
STOXX {Region}	<Index> ‹ICB Industry›
STOXX {Region}	<Index> ‹ ICB Supersector›
STOXX {Region}	<Index> ‹ ICB Sector›*
STOXX {Region}	<Index> ‹ ICB Subsector›*
STOXX {Region}	<Index> Large
STOXX {Region}	<Index> Mid
STOXX {Region}	<Index> Small

*As some of these indices would not have enough components, not all indices are disseminated.

Ex Regions: A number of regions are calculated with the exclusion of certain countries.
Furthermore all fixed component benchmark indices are derived from the TMI indices. Please see chapter 7 for details

6.2.3. ONGOING MAINTENANCE

Replacements: In line with the STOXX Total Market country indices, deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are added permanently if qualifying for the STOXX TMI indices as of the latest quarterly review list in terms of free-float market capitalization.

6. STOXX TOTAL MARKET INDICES (TMI)

6.3. TOTAL MARKET SIZE INDICES

6.3.1. OVERVIEW

The size indices are derived from the STOXX Global Total Market indices. They aim in grouping large, mid and small companies by their total market capitalization in their specific regions.

Universe: Sizes are derived for selected countries and the regions Europe, EU-Enlarged and Eastern Europe.

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and dates: The following base values and dates apply:
Europe TMI Size indices : 100 on December 31, 1991
Nordic TMI Size: 100 on December 31, 1991
EU Enlarged TMI Size indices: 100 on December 31, 2002
Eastern Europe TMI Size indices: 100 on December 31, 2002

6.3.2. INDEX REVIEW

Component selection: On a quarterly basis, the companies in the given STOXX TMI are ranked in terms of their total market capitalization in descending order. For each company, the total market capitalization based on all its stock classes is used to produce the investible universe. Prices, exchange rates and shares as of the review cut-off date are used. For companies which have been selected for a TMI, sizes will be assigned as follows in order to produce the relevant review selection lists:

STOXX TMI Large Index (67.5 - 75 buffer rule)
Target coverage: The largest companies representing the portion of cumulative total market capitalization up to and including 70% in the investible universe. The companies representing a cumulative capitalization of 67.5% are selected; additionally, current Large companies representing the portion of the cumulative capitalization above 67.5% and up to and including 75%, are also included.

STOXX TMI Mid Index (85 - 92.5 buffer rule)
Target coverage: Companies representing the portion of cumulative total market capitalization in the investible universe above 70% and up to and including 90% in the investible universe. Companies representing the portion of cumulative capitalization up to and including 85% and which have not already been assigned to the Large segment qualify for selection. Current Mid companies representing the portion of cumulative capitalization above 85% and up to and including 92.5%, are also included.

STOXX TMI Small Index
Target coverage: Companies representing the portion of cumulative total market capitalization in the investible universe above 90%. Companies not already assigned to the Large or Mid segments are assigned to the Small segment.

6. STOXX TOTAL MARKET INDICES (TMI)

Review frequency: The reviews are conducted on a quarterly basis together with the STOXX Global Total Market indices.

Weighting cap factors: The components are not subject to component weight restrictions and capping.

Derived indices:

Region	Index
Europe	STOXX Europe Total Market <Size>
Eurozone	EURO STOXX Total Market <Size>
Europe ex UK	STOXX Europe ex UK Total Market <Size>
Europe ex Euro	STOXX Europe ex Eurozone Total Market <Size>
Nordic	STOXX Nordic Total Market <Size>
Eastern Europe	STOXX Eastern Europe Total Market <Size>

6.3.3. ONGOING MAINTENANCE

Replacements: In line with the respective STOXX country TMI index; deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are added permanently if qualifying for the STOXX TMI indices as of the latest quarterly review list in terms of free-float market capitalization. A spin-off is added to same size category as the parent company.

6. STOXX TOTAL MARKET INDICES (TMI)

6.4. STOXX GCC TOTAL MARKET INDEX

6.4.1. OVERVIEW

The STOXX GCC Total Market Index aims to represent the Gulf Cooperation Council countries market, that consists of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. It covers at least 95% of the free-float market capitalization of each country. The individual country coverage thresholds are published on a quarterly basis on https://www.stoxx.com/methodology

Universe:
The investable universe is the fraction of the STOXX Global equity stock universe listed on the following stock exchanges and countries:

Middle East		
Dubai Financial Market (AE)	NASDAQ Dubai (AE)	Qatar Stock Exchange (QA)
Abu Dhabi Securities Exchange (AE)	Bahrain Stock exchange (BH)	Saudi Stock Exchange (SA)
Kuwait Stock Exchange (KW)	Muscat Securities (OM)	

Weighting scheme: The index is weighted according to free-float market capitalization. The free float is not adjusted for foreign ownership restrictions.

Base values and dates: The following base values and dates apply: 1000 on August 25th, 2022.

Index types and currencies: Price, Gross return, Net return, in USD and EUR.

Dissemination calendar: STOXX Global calendar.

6.4.2. INDEX REVIEW

Review frequency:

The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last trading day of the month following the last quarterly index review.

Selection list:

For all companies available in the investable universe, pricing, volume and reference data are obtained from Thomson Reuters. For current index constituent the data are enriched by STOXX data. Each company is assigned a unique country code, listing and ICB code valid for all STOXX indices.

For all companies the following screenings and filters are applied to determine eligibility:
Exclusion criteria

6. STOXX TOTAL MARKET INDICES (TMI)

» Only common stocks and equities with similar characteristics from financial markets that provide reliable real-time, historical component and currency pricing, and reference and corporate actions data are eligible.
» Only listed companies on a regulated market on an exchange defined in section 6.3.1. are eligible.
» Effective with September 2020 review, Equity or Non-Equity Investment Instruments according to the Industry Classification Benchmark (ICB: 30204000 or 30205000) are not eligible.
» Companies that were recently removed from the indices due to mergers and acquisition are not eligible.

Country and regional assignments

» Each stock is uniquely assigned to a specific country and listing within the Middle East investable universe, and according to section 5.7.

Determination of the most liquid market

» Companies are screened for their Average Daily Traded Value (ADTV[6]) in the three-month period preceding the review cut-off date. For all companies the most liquid market in terms of ADTV is identified out of all listing and country combinations. The company's listing must be in the same region (Middle East) as the country assignment to be eligible.

Exchange segment

» For those exchanges defined in the investable universe that have different segments, only securities traded on the regular market will be eligible.

Non-trading day screenings

» Companies are screened for their non-trading days in the three-month period preceding the review cut-off date. Companies are not eligible if they exceed 10 non-trading days.
» Spin-offs and companies that were suspended due to corporate actions are considered as eligible.
» Companies with an IPO date in the three-month period preceding the review cut-off date are considered as eligible.

Component selection: For each country, all stocks in the investable universe related to that country are first ranked in terms of their free-float market capitalization, then the cumulative coverage of the free float market capitalization is calculated at each company. For each country, the target coverage is at least 95% of the free-float market capitalization of the investable universe at the review cut-off date in the regarding country.

[6] For details on the ADTV please see the STOXX Reference Calculation Guide at: https://www.stoxx.com/rulebooks

6. STOXX TOTAL MARKET INDICES (TMI)

Review procedure: For each country, all stocks in the investable universe of the country in question are ranked in terms of their free-float market capitalization at the review cut-off date to produce the review list. For each country a 93-99% buffer is applied as follows:

1. The largest companies in the investible universe with a cumulative free-float market capitalization up to and including 93% of the investible universe, qualify for selection.

2. The stocks covering the next two percent of cumulative free-float market capitalization are selected among the largest remaining current components representing the portion of capitalization above 93% and up to and including 99%.

3. If the country coverage is still below the defined threshold, then the largest remaining stocks are selected until the country coverage is reached, as stated in section 6.3.1.

Once the coverage for each country is achieved, the components of each country are aggregated to form the STOXX GCC Total Market Index.

Weighting cap factors: The components are not subject to component weight restrictions and capping.

6.4.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are added permanently if qualifying for the STOXX GCC Total Market Index as of the latest quarterly review list in terms of free-float market capitalization.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com.

7. STOXX BENCHMARK INDICES (BMI)

7.1. STOXX GLOBAL INDICES

7.1.1. OVERVIEW

In contrast to the STOXX Total Market family the STOXX Benchmarks are indices with a fixed number of constituents. They can be distinguished into the STOXX Global family covering all markets and a family covering only the three developed regional markets (Americas, Asia/Pacific, Europe). The latter one is represented by the STOXX Global 1800 and its sub-indices.
The STOXX Global indices are fixed-number indices which cover the largest stocks of the respective regional or country Total Market index in terms of free-float market capitalization. The basis for all indices is the STOXX Global Total Market index.

The following regional indices are calculated:

- STOXX Global 3000
- STOXX Africa 90
- STOXX All Europe 800
- STOXX Americas 1200
- STOXX Asia 1200
- STOXX Developed Markets 2400
- STOXX East Asia 1800
- STOXX Eastern Europe 300
- STOXX Emerging Markets 1500
- STOXX Greater China 480
- STOXX Hong Kong All Shares 180
- STOXX Latin America 200
- STOXX Pacific 100

Note: The STOXX Global 3000 is <u>not</u> an aggregate of the regional benchmark indices Americas, All Europe, Asia and Pacific.

The following country indices are calculated:

- STOXX Australia 150
- STOXX Canada 240
- STOXX China A-900
- STOXX France 90
- STOXX Hong Kong 210
- STOXX Italy 45
- STOXX Japan 600
- STOXX Singapore 75
- STOXX South Korea 200
- STOXX Spain 30
- STOXX UK 180
- STOXX USA 500
- STOXX USA 900

Universe: The universe is defined by the Total Market indices of the specific region or country.

Weighting scheme: The indices are weighted according to free-float market capitalization.

7. STOXX BENCHMARK INDICES (BMI)

Base values and dates: The following base values and dates apply: 100 on January 31, 2011, except for STOXX USA 900, which has a base date of 15.03.2002 and base value as per the vendor code sheet.

For a complete list please consult the data vendor code sheet on the website[7].

Index types and currencies: Price, gross return and net return in EUR and USD.

Dissemination calendar: STOXX Europe calendar except STOXX USA 500 (STOXX Americas calendar)

7.1.2. INDEX REVIEW

Component Selection: Target coverage: Largest companies in the respective TMI in terms of Free-Float Market capitalization; for each company only the most liquid stock is considered. The parent of the STOXX USA 500 is the STOXX USA 900.

A liquidity filter is applied for the STOXX Japan 600 selection. It filters out all companies where the 3 months Average Daily Traded Value (ADTV) is smaller than the maximum of (75% percentile of the 3 months ADTVs in STOXX Japan TMI or 0.5m EUR).

Review procedures: On the quarterly review date the eligible stocks are ranked in terms of free-float market capitalization to produce the index selection list.

Buffer Rule: A 10% buffer rule applies to select the constituents (except for Eastern Europe) for the regional indices and country benchmark indices.

Index Name	Components	Upper buffer	Lower buffer
STOXX Africa 90	90	81	99
STOXX All Europe 800	800	720	880
STOXX Americas 1200	1200	1080	1320
STOXX Asia 1200	1200	1080	1320
STOXX Developed Markets 2400	2400	2160	2640
STOXX East Asia 1800	1800	1620	1980
STOXX Eastern Europe 300	300	275	375
STOXX Emerging Markets 1500	1500	1350	1650
STOXX Global 3000	3000	2700	3300
STOXX Greater China 480	480	432	528
STOXX Hong Kong All Shares 180	180	162	198
STOXX Latin America 200	200	180	220
STOXX Pacific 100	100	90	110

[7] http://www.STOXX.com/download/indices/vendor_codes.xls

7. STOXX BENCHMARK INDICES (BMI)

Country indices:

Index Name	Components	Upper buffer	Lower buffer
STOXX Australia 150	150	135	165
STOXX Canada 240	240	216	264
STOXX China A-900	900	810	990
STOXX France 90	90	81	99
STOXX Greater China 480	480	432	528
STOXX Hong Kong 210	210	189	231
STOXX Hong Kong All Shares 180	180	162	198
STOXX Italy 45	45	40	50
STOXX Japan 600	600	540	660
STOXX Singapore 75	75	68	83
STOXX South Korea 200	200	180	220
STOXX Spain 30	30	27	33
STOXX UK 180	180	162	198
STOXX USA 500	500	450	550
STOXX USA 900	900	810	990

The table reads the following:
For the STOXX Global 3000 the largest 2700 stocks (upper buffer) on the selection list qualify for selection. The remaining 300 stocks (components needed minus the upper buffer) are selected from the largest remaining current components ranked between 2701 and 3300 (lower buffer). If the number of stocks selected is still below 3000, the largest remaining stocks are selected until there are enough stocks.

Review Frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last trading day of the month preceding the review month.

Weighting Cap Factors: The indices are uncapped except for the STOXX Eastern Europe 300 which is capped at 20% and the STOXX USA 500 which is capped at 10% on a component level.

Derived Indices: Sector sub-sets exist according to the ICB classification for STOXX Global 3000. A number of regions are calculated under exclusion of certain countries. For a complete list please consult the data vendor code sheet on the website[7].

Type	Index
Supersector	<Index> ‹ICB Supersector›
Sector	<Index> ‹ICB Sector›
Ex-Country indices	<Index> ex Country

7. STOXX BENCHMARK INDICES (BMI)

7.1.3. ONGOING MAINTENANCE

Selection list: The selection list is updated on a monthly basis according to the review component selection process and Selection list definition in section 5.2 of STOXX Index Methodology Guide.

Replacements: To maintain the number of components constant, a deleted stock is replaced by the highest ranked non-component on the selection list. During review implementation month the process laid out in section 5.17 of the STOXX Index Methodology Guide will be applied.

Fast Exit: Not applicable.
Fast entry: Not applicable.

Spin-offs: Each spin-off stock qualifies for addition, if it lies within the upper buffer on the latest selection list for the specific index. The spin-off replaces the lowest ranked stock in that index, as determined by the selection list.
Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

7. STOXX BENCHMARK INDICES (BMI)

7.2. STOXX GLOBAL 1800 AND DERIVED INDICES

7.2.1. OVERVIEW

These indices are fixed component Benchmark indices covering the largest developed market stocks of the relevant regional Total Market Indices in terms of free-float market capitalization.

The parent component benchmark indices are:
STOXX North America 600
STOXX Asia/Pacific 600
STOXX Europe 600
STOXX Global 1800 (an aggregate of the regional 600s of Europe, the North America and Asia/Pacific)

Universe: The following regional aggregates as defined in section 4.3 are calculated: Global (developed), North America, Asia/Pacific and Europe

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and date: 100 on December 31, 1991.

Index types and currencies: Price, net return and gross return in EUR and USD.

For a complete list please consult the data vendor code sheet on the website.[8].

7.2.2. INDEX REVIEW

Selection list: The STOXX <Region> 600 Benchmark indices are reviewed on a quarterly basis. The target coverage are the largest 600 companies in the relevant regional Total Market Index. The following criteria are applied:

- for each company only the most liquid stock is considered
- Stocks must have a minimum liquidity of greater than one million EUR measured over 3-month average daily trading volume (ADTV)

All eligible stocks are ranked in terms of free-float market capitalization to produce the selection list.

Component Selection: The largest 550 stocks on the selection list qualify for selection. The remaining 50 stocks are selected from the largest remaining current components ranked between 551 and 750.
If the number of stocks selected is still below 600, the largest remaining stocks are selected until there are enough stocks.

[8] http://www.STOXX.com/download/indices/vendor_codes.xls

7. STOXX BENCHMARK INDICES (BMI)

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last trading day of the month preceding the review month.

Weighting cap factors: 20% on a component level for the following regional indices: Global, Europe, Asia/Pacific, North Americas and the Eurozone subset.

Derived indices and regional subsets: Further regional subsets are derived from STOXX <Region> 600 Benchmark indices by including only selected countries according to the definitions in section 4.3 of this rule book. The sub-indices do not have a fixed number of constituents. Their constituent numbers depends on how their region is represented in the parent index.
E.g. for the Eurozone the index is derived in the following way: The STOXX Europe 600 is created as specified in this chapter. To obtain the EURO STOXX subset only the stocks with countries eligible for the Eurozone as defined in section 4.3 are chosen from the STOXX Europe 600.

Size and Sector indices: Size indices and sector indices are derived according to the ICB industry classification for various regions. Further, for the STOXX Europe 600 and the EURO STOXX the following set of Supersector index families exists.

» The STOXX Europe 600 Supersectors and EURO STOXX Supersectors 30-15 (please refer to chapter 7.5) cap the weight of the largest and second largest company in each Supersector at 30% and 15%.

Please refer to the following sections 7.3 to 7.6 for further details on the sizes and sector indices. For a complete list please consult the data vendor code sheet on the website[9].

Region	Index
Global (developed)	STOXX Global 1800
Europe	STOXX Europe 600
Eurozone	EURO STOXX
Europe ex UK	STOXX Europe ex UK
Europe ex Euro	STOXX Europe ex Eurozone
Nordic	STOXX Nordic
Americas	STOXX North America 600
Asia/Pacific	STOXX Asia/Pacific 600
Asia/Pacific ex Japan	STOXX Asia/Pacific 600 ex Japan
Global ex Eurozone	STOXX Global 1800 ex Eurozone

Sector and Size Indices	Index
STOXX <Region>	<Index> ‹ICB Industry›
STOXX <Region>	<Index> ‹Supersector› (with 30% / 15% capping)
STOXX <Region>	<Index> ‹ICB Sector›*
STOXX <Region>	<Index> ‹ICB Subsector›*
STOXX <Region>	<Index> Large

[9] http://www.STOXX.com/download/indices/vendor_codes.xls

7. STOXX BENCHMARK INDICES (BMI)

STOXX <Region>	<Index> Mid
STOXX <Region>	<Index> Small

*As some of these indices would not have enough components, not all indices are disseminated.

Effective up until September 2020 review,

Ex-Sector Indices	Index
Ex- Financials (excluding ICB 8000)	STOXX Europe 600 ex- Financials
	EURO STOXX ex-Financials
Ex-Banks (excluding ICB 8300)	STOXX Europe 600 ex- Banks
	EURO STOXX ex-Banks
Ex-Country indices	<Index> ex Country

Effective with September 2020 review,

Ex-Sector Indices	Index
Ex- Financials (excluding ICB 30)	STOXX Europe 600 ex- Financials
	EURO STOXX ex-Financials
Ex-Banks (excluding ICB 3010)	STOXX Europe 600 ex- Banks
	EURO STOXX ex-Banks
Ex-Country indices	<Index> ex Country

The ex-Banks and ex-Financial indices use cap factors of the parent indices.

7.2.3. ONGOING MAINTENANCE

Selection list: The selection list is updated on a monthly basis according to the review component selection process and Selection list definition in section 5.2 of STOXX Index Methodology Guide.

Replacements: To maintain the number of components constant, a deleted stock is replaced by the highest ranked non-component on the selection list in the parent index. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Each spin-off stock qualifies for addition, if it lies within the upper buffer on the latest selection list for the specific index. The spin-off replaces the lowest ranked stock in that index, as determined by the selection list.
Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the

selection list, which is not announced a deletion from the review report at the review effective date.

7. STOXX BENCHMARK INDICES (BMI)

7.3. SIZE INDICES BASED ON THE STOXX GLOBAL INDICES

7.3.1. OVERVIEW

The Size indices are fixed component indices that divide their benchmark index into three size categories by free-float market capitalization: Large, Mid and Small. They also exist for various sub-regions and countries, e.g. the STOXX Europe 600, the EURO STOXX and STOXX Eastern Europe 300.

Universe: The following regional aggregates as defined in section 4.3 are calculated: Global, Europe, Eastern Europe, Eurozone, Europe ex UK, Europe ex Eurozone, Emerging Markets, Nordics, North America, Asia/Pacific, USA, Japan.

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and date: 100 on December 31, 1991.

Index types and currencies: Price, net return and gross return in EUR and USD.

For a complete list please consult the data vendor code sheet on the website.[10].

7.3.2. INDEX REVIEW

The components of the Size indices are derived from their respective STOXX <Region> Benchmark index. E.g. the STOXX Global 1800 serves as basis for the STOXX Global 1800 Size indices and the STOXX Europe 600 accordingly for the STOXX Europe 600 Size indices.

Selection list: After the review of the STOXX regional Benchmark Index has been conducted according to chapters 7.1 and 7.2, all components are ranked by the free-float market capitalization to produce the review selection list for the size indices.

Composition list:
Large-Size indices (28⅓% - 38⅓% buffer rule)
Target coverage: Largest ⅓ (33⅓%) of the companies from the relevant fixed component index:

1. The largest 28⅓% stocks on the selection list are selected.
2. The remaining 5% stocks are selected from the largest remaining current components of the according fixed component index, ranked between 28⅓% and 38⅓%.
3. If the number of stocks selected is still below 33⅓%, the largest remaining stocks are selected until there are sufficient stocks in the index.

Mid-Size indices (58⅓% – 75% buffer rule)
Target coverage: The medium ⅓ (33⅓%) of the companies from the relevant fixed component index:

[10] http://www.STOXX.com/download/indices/vendor_codes.xls

7. STOXX BENCHMARK INDICES (BMI)

1. The largest 58⅓% stocks on the selection list qualify for selection. Out of these 58⅓% stocks, 33⅓% are already selected in the previous step for the Large-Size index, thus only the remaining 25% are selected for the relevant Mid index.
2. To achieve the full coverage of the Mid-Size Index the missing 8⅓% stocks are selected from the largest remaining current Large and Mid-components ranked between 58⅓% and 75%.
3. If the number of stocks selected is still below 33⅓%, the largest remaining stocks from the selection list are selected.

Small-Size indices
The remainder 1/3 (33⅓%) of stocks of the selection list is considered a Small component.

Table for the applied buffer rules of selected indices:

Size /Buffer	STOXX Europe 600	STOXX Eastern Europe 300	STOXX USA 900
Target coverage per Size Index	200	100	300
Large (upper buffer)	170	85	255
Large (lower buffer)	230	115	345
Mid (upper buffer)	350	175	525
Mid (lower buffer)	450	225	675
Small (lower buffer)	600	300	900

Review frequency: The indices are reviewed on a quarterly basis together with the fixed component benchmark indices.

Weighting cap factors: 20% on a component level for the Europe, North America, Asia/Pacific, Eurozone and Eastern Europe regions.

Derived indices and regional subsets: Further regional subsets are derived from the Size indices by including only selected countries according to the definitions in section 4.3 of this rule book. The sub-indices do not have a fixed number of constituents. Their constituent numbers depends on how their region is represented in the parent index.
E.g. for the Eurozone the size indices are derived in the following way: The STOXX Europe 600 is created as specified in chapter 7.2. The STOXX Europe Large 200 is derived as specified in this chapter based on the previously created STOXX Europe 600. To obtain the EURO STOXX Large only the stocks with countries eligible for the Eurozone as defined in section 4.3 are chosen from the STOXX Europe Large 200. All EURO STOXX size indices sum-up again to the parent index, the EURO STOXX.

Region	Index Name
Global	STOXX Global 3000 <Size>
Europe	STOXX Europe <Size> 200 STOXX Europe 400 (Large & Mid)
Eastern Europe	STOXX Eastern Europe <Size> 100
Eurozone	EURO STOXX <Size>
Europe ex UK	STOXX Europe ex UK <Size>
Europe ex Euro	STOXX Europe ex Eurozone <Size>

7. STOXX BENCHMARK INDICES (BMI)

Emerging Markets	STOXX Emerging Markets 500 <Size>
Nordic	STOXX Nordic <Size>
North America	STOXX North America <Size> 200
Asia/Pacific	STOXX Asia/Pacific <Size> 200
USA	STOXX USA <Size> 300
Japan	STOXX Japan <Size> 200

Effective up until September 2020 review:-

Ex-Sector Indices	Index
Ex- Financials (excluding ICB 8000)	STOXX Europe Large 200 ex- Financials
	EURO STOXX Large ex-Financials
Ex-Banks (excluding ICB 8300)	STOXX Europe Large 200 ex- Banks
	EURO STOXX Large ex-Banks

Effective with September 2020 review:-

Ex-Sector Indices	Index
Ex- Financials (excluding ICB 30)	STOXX Europe Large 200 ex- Financials
	EURO STOXX Large ex-Financials
Ex-Banks (excluding ICB 3010)	STOXX Europe Large 200 ex- Banks
	EURO STOXX Large ex-Banks

The ex-Banks and ex-Financial indices use cap factors of the parent indices.

7.3.3. ONGOING MAINTENANCE

Selection list: The selection list is updated on a monthly basis according to the review component selection process and Selection list definition in section 5.2 of STOXX Index Methodology Guide.

Replacements: To maintain the number of components constant, a deleted stock is replaced by the highest ranked non-component on the selection list. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: All changes affecting the parent index also apply for the size indices.

7. STOXX BENCHMARK INDICES (BMI)

7.4. SECTOR INDICES BASED ON THE STOXX GLOBAL INDICES

7.4.1. OVERVIEW

The STOXX Global indices are divided into sector indices according to the ICB industry classification into Industry, Supersectors, Sectors and Subsectors and reflect the exposure to a certain sector in terms of free-float market capitalization. Regional sub-indices exist which then again are divided into sector indices according to the ICB industry classification and reflect the exposure to a certain sector in the specific region in terms of free-float market capitalization.

Universe: The following regional aggregates as defined in section 4.3 are calculated: Global (developed), America, Asia/Pacific, Europe, Eurozone, Eastern Europe and Nordic

Weighting scheme: The indices are free-float market capitalization-weighted.

Base value and date: 100 on December 31, 1991.

Index types and currencies: Price, net return and gross return in EUR and USD.

For a complete list please consult the data vendor code sheet on the website.[11].

7.4.2. INDEX REVIEW

Component selection: The components of the STOXX <Region> Sector Index are derived from their respective STOXX <Region> Benchmark according to the ICB standard. E.g. the STOXX Global 1800 serves as basis for the STOXX Global 1800 Sector indices, the STOXX Europe 600 for the STOXX Europe 600 Sector indices and the EURO STOXX accordingly for the EURO STOXX Sector indices.

Please note for the STOXX Europe 600 and EURO STOXX the following set of Supersector index families exists.
The STOXX Europe 600 Supersectors and EURO STOXX 30-15 Supersectors (please refer to chapter 7.5) cap the weight of the largest and second largest company in each Supersector at 30% and 15%.

Review frequency: The indices are reviewed on a quarterly basis together with the STOXX Total Market indices.

Weighting cap factors: The components are not subject to component weight restrictions and capping.

Derived indices:

Region	Supersector Index
Global (developed)	STOXX Global 1800 <ICB Supersector>

[11] http://www.STOXX.com/download/indices/vendor_codes.xls

7. STOXX BENCHMARK INDICES (BMI)

Europe	STOXX Europe 600 <ICB Supersector> STOXX Europe 400 <ICB Supersector>**
Eurozone	EURO STOXX <ICB Supersector>
Europe ex Euro	STOXX Europe ex Eurozone <ICB Supersector>
Americas	STOXX North America 600 <ICB Supersector>
Asia/Pacific	STOXX Asia/Pacific 600 <ICB Supersector>
Asia/Pacific ex Japan	STOXX Asia/Pacific 600 ex Japan <ICB Supersector>
Eastern Europe (parent index)	STOXX Eastern Europe Total Market <ICB Supersector>
Eastern Europe	STOXX Eastern Europe 300 <ICB Supersector>

Sector Indices	**Index**
STOXX <Region>	<Index> ‹ICB Industry›
STOXX <Region>	<Index> ‹ICB Supersector›
STOXX <Region>	<Index> ‹ICB Sector›*
STOXX <Region>	<Index> ‹ICB Subsector›*

* As some of these indices would not have enough components, not all indices are disseminated.

** For the indices tracking Oil & Gas, Food & Beverage, Personal & Household Goods the legacy logic is applied that pursues the exposure to the ICB Supersector definitions that were valid until September 2020 (see chapter 7.8).

7.4.3. ONGOING MAINTENANCE

Replacements: All changes affecting the STOXX regional Benchmark index also apply for the STOXX sector indices.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: All changes affecting the STOXX Benchmark index also apply for the STOXX sector indices.

7. STOXX BENCHMARK INDICES (BMI)

7.5. STOXX EUROPE 600 AND EURO STOXX SUPERSECTOR INDICES: 30% / 15% CAPS

7.5.1. OVERVIEW

Effective up until September 2020 review, the STOXX Europe 600 Index, covering the 600 largest companies in Europe, is divided into 19 Supersectors according to the ICB industry classification and reflects the exposure to a certain sector in terms of free-float market capitalization. Effective with September 2020 review, the STOXX Europe 600 Index, covering the 600 largest companies in Europe, is divided into 20 Supersectors according to the ICB industry classification and reflects the exposure to a certain sector in terms of free-float market capitalization. Due to narrow underlying universe per Supersector index, but also to reflect the market appropriately the indices are capped at 30% for largest and 15% for the second largest constituent.

Universe: The following regional aggregates as defined in section 4.3 are calculated: Europe, Eurozone

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and date: For STOXX Europe 600 Financials ex Banks : 100 on March 19, 2012. For all others: defined by the Parent index and ICB Classification. Please consult the data vendor code sheet for further details..

Index types and currencies: Price, net return and gross return in EUR and USD.

7.5.2. INDEX REVIEW

Component selection: The STOXX Europe 600 Supersectors are derived from the STOXX Europe 600 Index and the EURO STOXX Supersectors 30-15 from the EURO STOXX according to the ICB classification.

Review frequency: The indices are reviewed on a quarterly basis together with the STOXX Total Market indices.

Weighting cap factors: All components of each supersector index are subject to a 30% capping for the largest company and a 15% capping for the second-largest company. The weighting cap factors are published on the second Friday of the quarter, one week prior to quarterly review implementation, and calculated using Thursday's closing prices.
An intra-quarter capping will be triggered if the largest company exceeds 35% or the second-largest exceeds 20%. The process is as follows:

Date t: Weight exceeds 35% / 20% at the close of market
Date t+1: Announcement of the new weighting cap factors (30% / 15%) after close of market
Date t+3: Implementation of the new capping factors after close of market.
Date t+4: Effective date
Note: Violations of the 35 /20 threshold between dates t+1 and t+3 do not trigger another capping.

Please note for the STOXX Europe 600 and the EURO STOXX the following set of Supersector index families exists. In addition to the index family described in this chapter the EURO STOXX

7. STOXX BENCHMARK INDICES (BMI)

Supersectors (please refer to chapter 7.4) reflects the pure exposure of the Free-Float Market capitalization of each company in their Supersector without capping restrictions.

If there are fewer than 6 components the largest component's weight is capped at 30% and the remaining components' weights are equal-weighted. In case of 3 or fewer components the components are equal-weighted.

Derived indices: Not applicable. The indices are separate indices and not related to any other regional or sector indices due to their special capping procedure on the individual constituents.

7.5.3. ONGOING MAINTENANCE

Replacements: All changes affecting the STOXX Europe 600 and subindices also apply for the capped indices.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: All changes affecting the STOXX Europe 600 and subindices indices also apply for the capped indices.

7. STOXX BENCHMARK INDICES (BMI)

7.6. STOXX REGIONAL REAL ESTATE INDICES: 20% CAPS

7.6.1. OVERVIEW

STOXX Global Benchmark Real Estate indices cover the real estate supersectors for Europe, Americas and Asia / Pacific in terms of free-float market capitalization. Compared to the normal supersector indices they have a cap of 20% imposed on a component level.

Universe:
Europe: STOXX 600 Europe companies with ICB supersector code 8600(Effective with September 2020 review, ICB supersector code 3510)
Americas: STOXX 600 Americas companies with ICB supersector code 8600(Effective with September 2020 review, ICB supersector code 3510)
Asia Pacific: STOXX 600 Asia Pacific companies with ICB supersector code 8600(Effective with September 2020 review, ICB supersector code 3510)
Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and dates: 100 on December 31, 1991.

Index types and currencies: Price, net return and gross return in EUR and USD.

7.6.2. INDEX REVIEW

Component selection: The Real Estate Capped indices are derived from the STOXX <Regional> 600 index according to the ICB standard.

Review frequency: The indices are reviewed on a quarterly basis together with the STOXX Total Market indices.

Weighting cap factors: A component capping of 20% is applied.

Derived indices: Not applicable.

7.6.3. ONGOING MAINTENANCE

Replacements: All changes affecting the STOXX Regional 600 Index apply for the Real Estate indices.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: All changes affecting the STOXX Regional 600 Index apply for the Real Estate indices.

7. STOXX BENCHMARK INDICES (BMI)

7.7. STOXX EMERGING MARKETS 800 LO

7.7.1. OVERVIEW

The STOXX Emerging Markets 800 LO (Liquidity Optimized) index is derived from the STOXX Emerging Markets 1500 index, covering the largest 800 companies in the emerging markets.

Universe: The universe is defined by the STOXX Emerging Markets 1500 index.

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 as of Dec. 21, 2012.

Index types and currencies: Price, net return, gross return in EUR and USD.

7.7.2. INDEX REVIEW

Selection list: On the quarterly review date the eligible stocks are ranked in terms of free-float market capitalization and companies with a three-month average daily traded value (ADTV) less than EUR 0.5m are excluded to produce the index selection list.

Composition list: A 10% buffer rule applies to select the constituents

Index Name	Components	Upper buffer	Lower buffer
STOXX Emerging Markets 800 LO	800	720	880

Review frequency: The index is reviewed on a quarterly basis together with the STOXX Emerging Markets 1500 index.

Weighting cap factors: The following capping procedure is applied:
1. If the weighting of a component is above the weighted average ADTV it is reduced to that value by introducing a liquidity scaling factor (see chapter 5.15.2 Liquidity Scaling Factors in for calculation).
2. A cap factor of 10% is applied.

Both factors are multiplied and applied as one cap factor.

7.7.3. ONGOING MAINTENANCE

Selection list: The selection list is updated on a monthly basis according to the review component selection process and Selection list definition in section 5.2 of STOXX Index Methodology Guide.

Replacements: To maintain the number of components constant, a deleted stock is replaced by the highest ranked non-component on the selection list. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

7. STOXX BENCHMARK INDICES (BMI)

Spin-offs: Each spin-off stock qualifies for addition, if it lies within the upper buffer on the latest selection list for the specific index. The spin-off replaces the lowest ranked stock in that index, as determined by the selection list.
Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

7. STOXX BENCHMARK INDICES (BMI)

7.8. STOXX INDUSTRY AND SUPERSECTOR LEGACY INDICES

7.8.1. OVERVIEW

Effective with September 2020 review, ICB 2 will be replaced by ICB 5 consisting of 11 Industries, 20 Supersectors, 45 Sectors, 173 subsectors. Three Supersectors indices namely Food and Beverage, Personal and Household Goods and Oil and Gas for EURO STOXX and STOXX Europe 600 and STOXX Global 1800 Industry Consumer Goods would be maintained as legacy indices to continue to capture the economy reality of the indices. These indices would be maintained with the same name and identifiers.

Following table shows the legacy logics for the 3 Supersectors and one industry:-

Supersector/Industry Name	Legacy Logic
Food and Beverage	Legacy logic: 45101010+45101015+45101020+45102010+45102020+45102030+45102035-45103010
Personal and Household Goods	Legacy logic: 40204020+40204025+40204030+40204035+40203010+40203040+40203045+40203050+40203055+40203060+40202010+40202015+40202020+40202025+45103010+45201020+45201030+45201040+55101020+20103020
Oil and Gas	Legacy logic: 60101000+60101010+60101015+60101020+60101030+60101035+60102010+60102020-60101040
Consumer Goods	Legacy Logic: 20103020 + 40101015 + 40101020 + 40101025 + 40202010 + 40202015 + 40202020 + 40202025 + 40203010 + 40203040 + 40203045 + 40203050 + 40203055 + 40203060 + 40204020 + 40204025 + 40204030 + 40204035 + 45101010 + 45101015 + 45101020 + 45102010 + 45102020 + 45102030 + 45102035 + 45103010 + 45201020 + 45201030 + 45201040 + 55101020

Universe: The universe is defined by the STOXX Emerging Markets 1500 index.

7. STOXX BENCHMARK INDICES (BMI)

Weighting scheme: The index is weighted together with the other STOXX Supersector/Industry Indices

Base values and dates: As per the other STOXX Supersector/Industry Indices

Index types and currencies: As per the other STOXX Supersector/Industry Indices

7.8.2. INDEX REVIEW

Selection list: As per the other STOXX Supersector/Industry Indices

Review frequency: The index is reviewed on a quarterly basis together with the other STOXX Supersector/Industry Indices

Weighting cap factors: As per the other STOXX Supersector/Industry Indices

7.8.3. ONGOING MAINTENANCE

Selection list: As per the other STOXX Supersector/Industry Indices

Replacements: As per the other STOXX Supersector/Industry Indices

Fast exit: As per the other STOXX Supersector/Industry Indices

Fast entry: As per the other STOXX Supersector/Industry Indices

Spin-offs: As per the other STOXX Supersector/Industry Indices

7. STOXX BENCHMARK INDICES (BMI)

7.9. EURO STOXX SUPERSECTOR 5/10/40 INDICES

7.9.1. OVERVIEW

The EURO STOXX Supersector 5/10/40 indices are more strictly capped versions of EURO STOXX Supersector Indices that apply a weight capping on a quarterly basis such that the sum of all constituents' weights above 4.5% doesn't exceed 35%, and no single weight exceeds 8%. This makes the indices less concentrated and therefore more suitable to underlie products with stricter diversification requirements.

Universe: The indices are derived from the corresponding EURO STOXX Supersector indices.

Weighting scheme: The index is weighted according to free-float market capitalization with a capping such that the sum of all weights above 4.5% doesn't exceed 35%, and no single weight exceeds 8%.

Base value and date: 10000 on March 20, 2008 for the EURO STOXX Banks 5/10/40 index. Please consult the data vendor code sheet for further details.

Index types and currencies: Price, net return and gross return in EUR and USD.

7.9.2. INDEX REVIEW

Component selection: Each EURO STOXX Supersector 5/10/40 index has the same composition as the EURO STOXX Supersector index it is derived from.

Review frequency: The indices are reviewed on a quarterly basis together with the STOXX Total Market indices.

Weighting cap factors: The weighting cap factors are published on the second Friday of the quarter, one week prior to quarterly review implementation, and calculated using Thursday's closing prices.

The initial weights are defined based on free-float market capitalization. The capped weights (cw_i) are derived from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their free-float capitalization.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

Derived indices: Not applicable. The indices are separate indices and not related to any other regional or sector indices due to their special capping procedure on the individual constituents.

7. STOXX BENCHMARK INDICES (BMI)

7.9.3. ONGOING MAINTENANCE

Replacements: All changes affecting the EURO STOXX and subindices also apply for the capped indices.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: All changes affecting the EURO STOXX and subindices also apply for the capped indices.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

7. STOXX BENCHMARK INDICES (BMI)

7.10. STOXX EUROPE 600 INDUSTRY 30-15 INDICES

7.10.1. OVERVIEW

The STOXX Europe 600 Industry 30-15 Indices are market cap weighted indices designed to represent the performance of securities from the STOXX Europe 600 Index that belong to a certain Industry.

All securities are classified in a certain Industry as per the Industry Classification Benchmark (ICB). Companies are subject to quarterly 30-15 capping, whereas the largest company is capped at 30% and the remaining companies are capped at 15%.

Universe: STOXX Europe 600 (SXXP)

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and date: 100 on 19 March 2012.

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar

7.10.2. INDEX REVIEW

Component selection: The STOXX Europe 600 Industry indices are derived from the STOXX Europe 600 Index according to their ICB classification.

Review frequency The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: All components of each industry index are subject to a 30% capping for the largest company and a 15% capping for the other remaining companies. An intra-quarter capping will be triggered if the largest company exceeds 35% or any other company exceeds 20%.

The process is as follows:

Date t: Weight exceeds 35% / 20% at the close of market.
Date t+1: Announcement of the new weighting cap factors (30% / 15%) after close of market.
Date t+3: Implementation of the new capping factors after close of market.
Date t+4: Effective date

Note: Violations of the 35/20 threshold between dates t+1 and t+3 do not trigger another capping.

7. STOXX BENCHMARK INDICES (BMI)

If there are fewer than 6 components, the largest component's weight is capped at 30% and the remaining components' weights are equal-weighted. In case of 3 or fewer components the components are equal-weighted.

The weighting cap factors are published on the second Friday of the quarter, one week prior to quarterly review implementation, and calculated using Thursday's closing prices.

7.10.3. ONGOING MAINTENANCE

Replacements: All changes affecting the STOXX Europe 600 also apply for the STOXX Europe 600 Industry 30-15 indices.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: All changes affecting the STOXX Europe 600 also apply for the STOXX Europe 600 Industry 30-15 indices.

Mergers and takeovers: Standard STOXX process.

Corporate Actions All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com.

8. STOXX EQUAL WEIGHT INDICES

8.1. STOXX EQUAL WEIGHT INDICES

8.1.1. OVERVIEW

The STOXX Equal Weight indices consists of the same stocks as the standard free-float market capitalization weighted indices, but use a different weighting scheme. All stocks are equal-weighted at the periodic index review.

Universe: The index universe is defined by the parent index.

Weighting scheme: The index is price-weighted with a weighting factor to achieve an equal-weighting

Base value and date: For STOXX USA 900 Equal Weight and STOXX Japan 600 Equal Weight: 100 on March 18, 2002. For all others: defined by the parent index. Please consult the data vendor code sheet for further details.

Index types and currencies: For STOXX Japan 600 Equal Weight: price, net return and gross return in EUR and JPY. For all others: defined by the parent index. For a complete list please consult the data vendor code sheet on the website [12].

8.1.2. INDEX REVIEW

Component selection: Identical as the parent index.
The following indices are available as equal weight version:

- STOXX Europe 600 (please refer to chapter 7.2 for details)
- STOXX USA 900 (please refer to chapter 7.1 for details)
- STOXX Japan 600 (please refer to chapter 7.1 for details)
- EURO STOXX 50 (please refer to chapter 9.2 for details)
- STOXX China A 50 (please refer to chapter 9.1 for details)

Review frequency: The index is reviewed in line with the parent index.

Weighting cap factors: All components are equal-weighted on a quarterly basis. The weightings are published on the second Friday of each quarter, one week prior to quarterly review implementation using Thursday's closing prices.
Weighting cap factor = (100,000,000,000 / closing price of the stock in EUR) and rounded to integers.

Derived indices: Not applicable.

8.1.3. ONGOING MAINTENANCE

Replacements: All changes affecting the parent index, e.g. the STOXX Europe 600, also apply to the respective STOXX Equal Weight index. The newly added component has the same weight as the deleted one.

---

[12] http://www.STOXX.com/download/indices/vendor_codes.xls

8. STOXX EQUAL WEIGHT INDICES

$$wf_{it} = \frac{wf_{jt} \cdot p_{jt}}{p_{it}}$$

wf_{it} = new weighting factor of replacement at time (t)
T = date of closing price for weighting factor calculation
wf_{jt} = weighting factor of index component (j) at time (t)
p_{jt} = price in EUR of index component (j) at time (t)
p_{it} = price in EUR of replacement company (i) at time (t)
Fast exit: Same as the parent index.
Fast entry: Same as the parent index

Spin-offs: Same as the parent index.

9. STOXX BLUE-CHIP INDICES

9.1. STOXX GLOBAL AND COUNTRY BLUE-CHIP INDICES

9.1.1. OVERVIEW

The STOXX Global and Country Blue-chip indices are fixed-number indices, whose components are the largest companies by free-float market capitalization of their geographic region defined by the respective benchmark indices.

Global / regional blue-chip indices are:

- STOXX Global 200
- STOXX Developed Markets 150
- STOXX Emerging Markets 50
- STOXX Americas 100
- STOXX Latin America 50
- STOXX Asia 100
- STOXX Greater China 80
- STOXX Hong Kong All Shares 50
- STOXX Pacific 50
- STOXX All Europe 100
- STOXX EU Enlarged 15
- STOXX Eastern Europe 50
- STOXX Sub Balkan 30

Country blue-chip indices are:

- STOXX Australia 50
- STOXX Canada 50
- STOXX China A 50
- STOXX France 50
- STOXX Hong Kong 50
- STOXX Italy 20
- STOXX Japan 50
- STOXX Singapore 20
- STOXX Spain 20
- STOXX UK 50
- STOXX USA 50

Note: the STOXX Global 200 is not an aggregate of the regional blue-chip indices Americas, All Europe, Asia and Pacific, all regions are reviewed independently.

Universe: The universe is defined by the Benchmark or Total Market indices of the specific region or country.

Weighting scheme: The indices are free-float market capitalization weighted.

Base value and date: 1000 on January 31, 2011.

9. STOXX BLUE-CHIP INDICES

For a complete list please consult the data vendor code sheet on the website[13].

Index types and currencies: Price, net return and gross return in EUR, USD other versions. For a complete list please consult the data vendor code sheet on the website[14].

9.1.2. INDEX REVIEW

Component selection: There is a minimum liquidity requirement for components: to be eligible, the 3-month average daily trading volume has to be at least EUR 1 million. Components are selected based on the free-float market capitalization and a 10% buffer rule applies for the ranking. If the number of stocks selected is still below required component count after applying the buffer rules the largest remaining stocks are selected until there are enough stocks.

The particular blue-chips index components are selected as follows:

STOXX Global 200
20 largest components of the regions (North America, Latin America, Asia, Pacific and All Europe) in terms of free-float market capitalization
100 largest remaining components (taking into account a 10% buffer rule; current components are eligible if ranked within 110) of the corresponding benchmark Index.

STOXX Americas 100 (90 – 110 buffer rule)
20 largest components of North America (in terms of free-float market capitalization)
20 largest components of Latin America (in terms of free-float market capitalization)
60 largest remaining components (taking into account the 10% buffer rule) of the STOXX Americas benchmark Index (in terms of free-float market capitalization)

STOXX Eastern Europe 50 Index (40 – 60 buffer rule)
Target coverage: 50 Supersector leaders from the STOXX Eastern Europe 300 Index:

1. Effective up until September 2020 review, for each of the 19 STOXX Eastern Europe 300 Supersector indices, the stocks are ranked in terms of free-float market capitalization. Effective with 2020 review, for each of the 20 STOXX Eastern Europe 300 Supersector indices, the stocks are ranked in terms of free-float market capitalization. The largest stocks are added to the selection list until the coverage is close to, but still less than, 80% of the free-float market capitalization of the corresponding ICB Supersector in the STOXX Eastern Europe TMI Index. If the next highest-ranked stock brings the coverage closer to 80% in absolute terms, then it is also added to the selection list; all remaining STOXX Eastern Europe 50 stocks are then added to the selection list.
2. All the stocks on the selection list are then ranked in terms of free-float market capitalization and are screened for a minimum level of liquidity to produce the STOXX Eastern Europe 50 Index selection list, of which only the largest 15 stocks per country are selected.
3. The largest 40 stocks on the selection list are selected; the remaining 10 stocks are selected from the largest remaining current stocks ranked between 41 and 60; if the number of stocks selected is still below 50, then the largest remaining stocks are selected until there are 50 stocks.

[13] http://www.STOXX.com/download/indices/vendor_codes.xls
[14] http://www.STOXX.com/download/indices/vendor_codes.xls

4. The minimum liquidity criteria of the parent indices apply.

STOXX EU Enlarged 15 Index (10 – 20 buffer rule)
Target coverage: The largest stocks in the STOXX EU Enlarged TMI. Only the most liquid stock class for each company in the STOXX EU Enlarged TMI is included.

1. All of the stocks on the selection list are ranked separately in terms of free-float market capitalization, gross revenue, and net income. The final ranking is calculated by weighting the free-float market capitalization rank at 60%, the gross revenue rank at 20% and the net income rank at 20%. In case two companies have the same rank the company with larger free float market capitalization is preferred.
2. The top 10 ranked stocks are selected. The remaining five stocks are selected from the highest remaining current stocks ranked between 11 and 20. If the number of stocks selected is still below 15, then the highest remaining stocks are selected until there are 15 stocks.
3. The minimum liquidity criteria of the parent indices apply.

STOXX Sub Balkan 30 Index (20 – 40 buffer rule)
Target coverage: 30 Supersector leaders of the STOXX Eastern Europe TMI that belong to the Sub Balkan region. Only the most liquid stock class for each company is included.

1. Effective up until September 2020 review, for each of the 19 ICB Supersectors in the selection universe, the stocks are ranked in terms of free-float market capitalization. Effective with September 2020 review, for each of the 20 ICB Supersectors in the selection universe, the stocks are ranked in terms of free-float market capitalization. The largest stocks are added to the selection list until the coverage is close to, but still less than, 80% of the free-float market capitalization of the securities in the corresponding ICB Supersector of the selection universe. If the next ranked stock brings the coverage closer to 80% in absolute terms, then it is also added to the selection list; all remaining STOXX Sub Balkan 30 stocks are then added to the selection list.
2. All the stocks on the selection list are then ranked in terms of free-float market capitalization to produce the STOXX Sub Balkan 30 index selection list.
3. The largest 20 stocks on the selection list are selected, and the remaining 10 stocks are selected from the largest remaining current stocks ranked between 21 and 40. If the number of stocks selected is still below 30, the largest remaining stocks are selected until there are 30 stocks.
4. The minimum liquidity criteria of the parent indices apply.

STOXX Developed Markets 150
A maximum of 20 components per country can be selected. Once this number is reached stocks from that country are blocked from being selected.

STOXX Emerging Markets 50
A maximum of 8 components per country can be selected. Once this number is reached stocks from that country are blocked from being selected.

For all other indices the following 10% buffer rules are applied:
E.g. for the STOXX All Europe 100 the largest 90 stocks (upper buffer) in terms of free-float market capitalization on the selection list qualify for selection. The remaining 10 stocks (components needed minus the upper buffer) are selected from the largest remaining current components

9. STOXX BLUE-CHIP INDICES

ranked between 91 and 110 (lower buffer). If the number of stocks selected is still below 100, the largest remaining stocks are selected until there are enough stocks.

Index Name	Universe	Upper buffer	Lower buffer
STOXX Global 200	See above	n/a	n/a
STOXX Developed Markets 150	Developed Markets 2400	135	165
STOXX Emerging Markets 50	Emerging Markets 1500	45	55
STOXX Americas 100	See above	90	110
STOXX Latin America 50	Latin America 200	45	55
STOXX Asia 100	Asia 1200	90	110
STOXX Greater China 80	Greater China 480	72	88
STOXX Hong Kong All Shares 50	Hong Kong All Shares 180	45	55
STOXX Pacific 50	Pacific 100	45	55
STOXX All Europe 100	All Europe 800	90	110
STOXX EU Enlarged 15	EU Enlarged TMI	10	20
STOXX Eastern Europe 50	Eastern Europe 300	40	60
STOXX Sub Balkan 30	Eastern Europe TMI	20	40

Index Name	Universe	Upper buffer	Lower buffer
STOXX Australia 50	Australia TMI	45	55
STOXX Canada 50	Canada TMI	45	55
STOXX China A-50	China A TMI	45	55
STOXX France 50	France TMI	45	55
STOXX Hong Kong 50	Hong Kong TMI	45	55
STOXX Italy 20	Italy TMI	18	22
STOXX Japan 50	Japan TMI	45	55
STOXX Singapore 20	Singapore TMI	18	22
STOXX Spain 20	Spain TMI	18	22
STOXX UK 50	UK TMI	45	55
STOXX USA 50	USA TMI	45	55

Review frequency: The index is reviewed annually in September. The review cut-off date is the last trading day of August. The STOXX Eastern Europe 50 Index is reviewed semi-annually in March and September based on the last trading day of the previous month.

Weighting cap factors: Components are capped at a maximum weight of 10% quarterly.
For the STOXX EU Enlarged 15 Index a cap factor of 15% is applied.
For the STOXX Eastern Europe 50 Index, the weight of each country is capped at 50% and if the weighting of a stock is greater than 10%, its weighting cap factor is adjusted to reduce the weighting to 10% and the weight is reallocated within the remaining stocks of that country.

Derived indices: not applicable

9.1.3. ONGOING MAINTENANCE

Selection list: The selection list is updated on a monthly basis according to the review component selection process and Selection list definition in section 5.2 of STOXX Index Methodology Guide.

Replacements: A deleted stock is replaced immediately to maintain the fixed number of stocks. Usually, the replacement is based on the latest selection list that is updated monthly. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied. In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock.

If a stock is deleted from the corresponding STOXX Regional Benchmark Index in between the regular review dates, but is still a component of the STOXX Regional TMI, this stock will remain in the STOXX Blue-Chip Index until the next regular review.
For the STOXX Developed Markets 150 and STOXX Emerging Markets 50 indices the replacement has to be selected to not violate the respective per-country limits. If the new addition would breache this rule the next stock that doesn't violate it will be selected as a replacement.

Fast exit: Not applicable.

Fast entry: An initial public offering (IPO) stock is reviewed for fast-track addition to the blue-chip indices at the next quarterly review.

The IPO stock is added if it:
Qualifies for the latest blue-chip selection list, i.e. the February, May, August or November blue-chip selection lists;
ranked within the lower buffer on this selection list, and
was the largest non-component on this selection list.
If added, the IPO stock replaces the smallest stock in the Blue-Chip Index.

Spin-offs
Each spin-off stock qualifies for addition, if it lies within the upper buffer on the latest selection list for the specific index. The spin-off replaces the lowest ranked stock in that index, as determined by the selection list.
Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

9. STOXX BLUE-CHIP INDICES

9.2. EURO STOXX 50

9.2.1. OVERVIEW

The EURO STOXX 50 is derived from the EURO STOXX index and represents the largest Supersector leaders in the Eurozone in terms of free-float market capitalization.

Universe: The index universe are stocks in the Eurozone region defined by the EURO STOXX index.

Weighting scheme: The index is weighted according to free-float market capitalization.
Base value and dates: 1000 on December 31, 1991.
Index types and currencies: Price, gross return and net return in EUR, USD, CAD, GBP and JPY.
For a complete list please consult the data vendor code sheet on the website[15].

9.2.2. INDEX REVIEW

Component selection

EURO STOXX 50 index (40 – 60 buffer rule)
Target coverage: 50 Supersector leaders from the EURO STOXX index:

1. Effective up until September 2020 review, for each of the 19 EURO STOXX Supersector indices, the stocks are ranked in terms of free-float market capitalization.Effective with September 2020 review, for each of the 20 EURO STOXX Supersector indices, the stocks are ranked in terms of free-float market capitalization. The largest stocks are added to the selection list until the coverage is close to, but still less than, 60% of the free-float market capitalization of the corresponding EURO STOXX TMI Supersector Index. If the next highest-ranked stock brings the coverage closer to 60% in absolute terms, then it is also added to the selection list. All current EURO STOXX 50 Index stocks are added to the selection list.
2. All the stocks on the selection list are then ranked in terms of free-float market capitalization to produce the final index selection list.
3. The largest 40 stocks on the selection list are selected; the remaining 10 stocks are selected from the largest remaining current stocks ranked between 41 and 60; if the number of stocks selected is still below 50, then the largest remaining stocks are selected until there are 50 stocks.

The minimum liquidity criteria of the parent index, EURO STOXX index applies.

Review frequency: The index is reviewed annually in September. The review cut-off date is the last trading day of August.

[15] http://www.STOXX.com/download/indices/vendor_codes.xls

9. STOXX BLUE-CHIP INDICES

Weighting cap factors: Components are capped at a maximum weight of 10% quarterly.

Derived indices:

Effective up until September 2020 review,

Category	Index
Ex- Financials (excluding ICB 8000)	EURO STOXX 50 ex- Financials
Ex-Banks (excluding ICB 8300)	EURO STOXX 50 ex- Banks
Country sub-indices	EURO STOXX 50 France, Spain, Germany and Netherlands
Ex-Country indices	EURO STOXX 50 ex Country (e.g. France, Italy, Germany, Spain…)

Effective with September 2020 review,

Category	Index
Ex- Financials (excluding ICB 30)	EURO STOXX 50 ex- Financials
Ex-Banks (excluding ICB 3010)	EURO STOXX 50 ex- Banks
Country sub-indices	EURO STOXX 50 France, Spain, Germany and Netherlands
Ex-Country indices	EURO STOXX 50 ex Country (e.g. France, Italy, Germany, Spain…)

The ex-Banks and ex-Financial indices use cap factors of the parent index.

9.2.3. ONGOING MAINTENANCE

Replacements: A deleted stock is replaced immediately to maintain the fixed number of stocks. The replacement is based on the latest selection list that is updated monthly. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the EURO STOXX in between the regular review dates but is still a component of the STOXX Regional TMI, then this stock will remain in the EURO STOXX 50 Index until the next regular review..

Fast exit: The components are monitored for any changes based on the monthly selection list ranking, i.e. on an ongoing monthly basis.

A component is deleted if:

- it ranks 75 or below on the monthly selection list; and
- it ranked 75 or below or below on the selection list of the previous month

The announcement will be on the first trading day of the month after close of markets.

The addition will be announced based on the monthly selection list, i.e. the highest-ranked non-component will be selected. Changes will be implemented on the close of the fifth trading day and are effective the next trading day.

9. STOXX BLUE-CHIP INDICES

Fast entry: All stocks on the latest selection lists and initial public offering (IPO) stocks are reviewed for a fast-track addition on a quarterly basis. A stock is added, if

- » it qualifies for the latest blue-chip selection list generated end of February, May, August or November; and
- » it ranks within the lower buffer (ranks 1 - 25) on this selection list

If it is added, the stock replaces the smallest stock in the Blue-Chip Index. The announcement will be on the first trading day of the month after close of markets. The implementation is together with the STOXX Total Market indices.

Spin-offs: Each spin-off stock qualifies for addition if it lies within the upper buffer (ranks 1 – 40) on the latest selection list for the index. The spin-off replaces the lowest ranked stock in that index as determined by the selection list.

Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

9. STOXX BLUE-CHIP INDICES

9.3. STOXX REGIONAL BLUE-CHIP INDICES

9.3.1. OVERVIEW

The Blue-chip indices are derived from regional subsets of the STOXX Global 1800. The indices cover the largest Supersector leaders of their region in terms of free-float market capitalization.

STOXX Europe 50, selected from the STOXX Europe 600 Index
STOXX Nordic 30, selected from STOXX Nordic Total Market Index
STOXX Asia/Pacific 50, selected from the STOXX Asia/Pacific 600 Index
STOXX North America 50, selected from the STOXX North America 600 Index

For the EURO STOXX 50 please refer to chapter 9.2.

Universe: The index universe is defined as all stocks from regional aggregates as defined in section 4.3: Europe, Nordic, North America and Asia/Pacific.

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base value and dates: 1000 on December 31, 1991.

Index types and currencies: Price, gross return and net return in EUR, USD and other versions. For a complete list please consult the data vendor code sheet on the website[16].

9.3.2. INDEX REVIEW

Component selection

For all indices the minimum liquidity criteria of the parent indices apply.

STOXX Europe 50 index (40 – 60 buffer rule)
Target coverage: 50 Supersector leaders from the STOXX Europe 600 index:

1. Effective up until September 2020 review, for each of the 19 STOXX regional 600 Supersector indices, the stocks are ranked in terms of free-float market capitalization.Effective with September 2020 review, for each of the 20 STOXX regional 600 Supersector indices, the stocks are ranked in terms of free-float market capitalization. The largest stocks are added to the selection list until the coverage is close to, but still less than, 60% of the free-float market capitalization of the corresponding STOXX Regional TMI Supersector Index. If the next highest-ranked stock brings the coverage closer to 60% in absolute terms, then it is also added to the selection list. All current STOXX Europe 50 Index stocks are then added to the selection list.
2. All the stocks on the selection list are then ranked in terms of free-float market capitalization to produce the final index selection list.
3. The largest 40 stocks on the selection list are selected; the remaining 10 stocks are selected from the largest remaining current stocks ranked between 41 and 60; if the number of stocks selected is still below 50, then the largest remaining stocks are selected until there are 50 stocks.

[16] http://www.STOXX.com/download/indices/vendor_codes.xls

9. STOXX BLUE-CHIP INDICES

STOXX Nordic 30 Index (20 – 40 buffer rule)
Similarly, target coverage of 30 Supersector leaders from the STOXX Nordic Total Market Index (excluding secondary share lines) and a 80% Supersector coverage.

STOXX Asia/Pacific 50 Index (40 – 60 buffer rule)
Similarly, target coverage of 50 Supersector leaders from the STOXX Asia/Pacific 600 index.

STOXX North America 50 Index (40 – 60 buffer rule)
Similarly, target coverage of 50 Supersector leaders from the STOXX North America 600 index.

Review frequency: The indices are reviewed annually in September. The review cut-off date is the last trading day of August.

Weighting cap factors: Components are capped at a maximum weight of 10% quarterly.

9.3.3. ONGOING MAINTENANCE

Replacements: A deleted stock is replaced immediately to maintain the fixed number of stocks. Usually, the replacement is based on the latest selection list that is updated monthly. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.
In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the STOXX Regional Benchmark Indices (e.g. STOXX Europe 600) in between the regular review dates but is still a component of the STOXX Regional TMI, then this stock will remain in the STOXX Blue-Chip Index until the next regular review.

Fast exit: The components of the STOXX Europe 50, STOXX Nordic 30, STOXX Asia/Pacific 50 and STOXX North America 50 are monitored for any changes based on the monthly selection list ranking, i.e. on an ongoing monthly basis.
A component is deleted if:

- it ranks 75 (50 for STOXX Nordic 30) or below on the monthly selection list; and
- it ranked 75 (50 for STOXX Nordic 30) or below on the selection list of the previous month.

The announcement will be on the first trading day after close of markets.
The addition will be announced based on the monthly selection list, i.e. the highest-ranked non-component will be selected.
Changes will be implemented on the close of the fifth trading day and are effective the next trading day.

Fast entry: All stocks on the latest selection lists of the STOXX Europe 50, STOXX Nordic 30, STOXX Asia/Pacific 50 and STOXX North America 50 and initial public offering (IPO) stocks are reviewed for a fast-track addition on a quarterly basis. A stock is added, if

- it qualifies for the latest blue-chip selection list generated end of February, May, August or November; and
- it ranks within the lower buffer (ranks 1 – 25; for STOXX Nordic 30: ranks 1-15) on this selection list

If it is added, the stock replaces the smallest stock in the Blue-Chip Index. The announcement will be on the first trading day of the month after close of markets. The implementation is together with the STOXX Total Market indices.

Spin-offs: Each spin-off stock qualifies for addition, if it lies within the upper buffer on the latest selection list for the specific index. The spin-off replaces the lowest ranked stock in that index, as determined by the selection list.
Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

9. STOXX BLUE-CHIP INDICES

9.4. STOXX GLOBAL 150

9.4.1. OVERVIEW

The STOXX Global 150 Blue-Chip Index is a combination of the regional STOXX Blue-Chip indices for North America, Asia Pacific and Europe which cover the supersector leaders of the respective region in terms of free-float market capitalization.

Universe: The index universe is defined as all stocks of the developed markets in Europe, North America and the Asia/Pacific region as defined in section 4.3.

Weighting scheme: The index is weighted according to free-float market capitalization.

Base value and date: 1,000 on December 31, 1991.

Index types and currencies: Price, net return in EUR and USD.

9.4.2. INDEX REVIEW

Component selection: The indices consist of the components of the STOXX Europe 50, STOXX Asia/Pacific 50 and STOXX North America 50. Each regional blue-chip consists of 50 stocks covering the largest Supersector leaders in the STOXX Asia/Pacific 600, STOXX North America 600 and STOXX Europe 600 indices.

Review frequency: The index is reviewed annually in September based on the closing prices of the last trading day in August.

Weighting cap factors: Components are capped at a maximum weight of 10% quarterly.

Derived indices: Not applicable.

9.4.3. ONGOING MAINTENANCE

Replacements: All changes affecting the STOXX Europe 50, STOXX Asia/Pacific 50 and STOXX North America 50 apply for the STOXX Global 150 Index.

Fast exit: The rules of the STOXX Europe 50, STOXX Asia/Pacific 50 and STOXX North America s 50 apply.

Fast entry: The rules of the STOXX Europe 50, STOXX Asia/Pacific 50 and STOXX North America 50 apply.

Spin-offs: The rules of the STOXX Europe 50, STOXX Asia/Pacific 50 and STOXX North America 50 apply.

9. STOXX BLUE-CHIP INDICES

9.5. STOXX BALKAN 50 EQUAL WEIGHT

9.5.1. OVERVIEW

The STOXX Balkan 50 Equal Weight index represents blue-chip stocks from eight Balkan countries in terms of free-float market capitalization.

Universe: The index universe is defined as the following eight Balkan countries: Bulgaria, Croatia, Macedonia, Romania, Serbia, Slovenia Greece and Turkey.

Weighting scheme: The index is price-weighted with a weighting factor to achieve an equal-weighting

Base value and date: 1,000 as of December 31, 2006.

Index types and currencies: Price, net return in EUR and USD.

9.5.2. INDEX REVIEW

Component selection

STOXX Balkan 50 Equal Weight Index (5/3 - 15/7 buffer rule)
Target coverage: highest-ranked components in the STOXX Balkan Total Market Index by free-float market capitalization; only the most liquid stock class for each company in the STOXX Balkan TMI is included.

4. Selection process: For each country, companies are ranked by free-float market capitalization. The highest-ranked components (20 companies from Greece and Turkey, 10 companies from Bulgaria, Croatia, Macedonia, Romania, Serbia and Slovenia) are chosen for the selection list. The selection list of each country is ranked first by free-float market capitalization and second by liquidity (average daily traded value for the past three months). The final rank is calculated from the average of the two ranks. If two or more companies have the same final ranking, then their free-float market capitalization is used as a tie-breaker.
5. Selection list: The top five ranked stocks are selected for Greece and Turkey. The top three ranked stocks are selected for all other countries. The remaining five stocks for Greece and Turkey are selected from the highest remaining current stocks ranked between six and fifteen. The remaining two stocks for all other countries are selected from the highest remaining current stocks ranked between four and seven. If the number of stocks selected is still below ten for Greece and Turkey, and five for the other countries, then the highest remaining stocks are selected until there are enough stocks.

Review frequency: The index is reviewed annually in September based on the closing prices of the last trading day of the previous month.

Weighting cap factors: All components are equal-weighted. The weighting cap factors are published on the second Friday of the quarter, one week prior to quarterly review implementation using Thursdays' closing prices.
Weighting cap factor = (100,000,000,000 / closing price of the stock in EUR), rounded to integers.

Derived indices: Not applicable.

9.5.3. ONGOING MAINTENANCE

Changes are announced immediately, implemented two trading days later and are effective on the next trading day.

Replacements: In case of merger and acquisition, the original stock is replaced by the surviving stock, if it was a component of the same country. Otherwise the highest-ranked non-component on the relevant country selection list qualifies. The selection list is updated on a quarterly basis according to the review component selection procedure. An addition is added at the same weight as the removed company. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Each spin-off stock qualifies for addition, if it lies within the upper buffer on the latest selection list for the specific index. The spin-off replaces the lowest ranked stock in that index, as determined by the selection list.
Qualifying spin-off stocks are added in sequence:
The largest qualifying spin-off stock replaces the original stock in the index.
The next qualifying spin-off stock replaces the lowest ranked stock in the index.
Likewise for the other qualifying spin-off stocks.
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

9. STOXX BLUE-CHIP INDICES

9.6. STOXX CANADA 60

9.6.1. OVERVIEW

Effective up until September 2020 review, the STOXX Canada 60 Index represents the performance of the 60 largest Canadian companies by free-float market capitalization from among the 10 ICB Industries. Effective with September 2020 review, the STOXX Canada 60 Index represents the performance of the 60 largest Canadian companies by free-float market capitalization from among the 11 ICB Industries. It is an industry neutral index and is derived from the STOXX Canada 240 index.

Universe: The index universe is defined as the new composition of the STOXX Canada 240 index which becomes effective on the review date, on the Monday following the 3rd Friday of March, June, September and December.

Weighting scheme: The index is free float market cap weighted with a cap factor in order to maintain industry neutrality with respect to the STOXX Canada 240 index.

Base values and dates: 100 on March 19, 2007

For a complete list please consult the data vendor code sheet on the website[17]. Customized solutions can be provided upon request.

Index types and currencies: Price, net return and gross return in CAD, USD and EUR.
For a complete list please consult the data vendor code sheet on the website

9.6.2. INDEX REVIEW

Selection list: The Selection list is obtained by selecting from the universe (defined above) all the stocks which fulfil the following criteria based on data as of last trading day of the month prior to the respective review month.

13. Liquidity: The 3-month average daily trading volume has to be at least EUR 1 million.
14. Effective up until September 2020 review, for each of the 10 ICB industries in the STOXX Canada 240 index, the stocks are ranked in terms of free float market capitalization. Effective with September 2020 review, for each of the 11 ICB industries in the STOXX Canada 240 index, the stocks are ranked in terms of free float market capitalization. The largest stocks are added to the selection list until the coverage is close to 90% of the free-float market capitalization of the corresponding ICB industry in the STOXX Canada 240 index. If the next highest-ranked stock brings the coverage closer to 90% in absolute terms, then it is also added to the selection list.
15. All current STOXX Canada 60 Index stocks are added to the selection list.

All the stocks in the selection list are then ranked in terms of free-float market capitalization.

Composition list: Target Coverage: The largest 60 companies from the Selection list based on their free-float market capitalization; a 20% buffer rule applies for the ranking.

[17] http://www.STOXX.com/download/indices/vendor_codes.xls

The upper buffer is 48 and the lower buffer is 72. This means, the largest 48 stocks by free-float market capitalization on the selection list qualify for selection.
The remaining 12 stocks are selected from the largest current components ranked between 48 and 72.

If the number of stocks selected is still below 60 after applying the buffer rules, the largest remaining stocks from the Selection list are selected until there are enough stocks.

Review frequency: The index is reviewed on a quarterly basis in line with the STOXX Canada 240 index.

Weighting and capping factors: The index follows a sector neutral approach with respect to the Canada 240 Index. The sector neutrality is enforced by equating the ICB Industry weights of the STOXX Canada 60 Index with that of the Canada 240 Index. For the capping procedure, the new components of Canada 240 that become effective on the review date (Monday following the 3rd Friday of March, June, September, December) are used. The industry weights of the Canada 240 as well as the STOXX Canada 60 Index are calculated on the second Friday of the review month using the previous Thursday's close prices.

- Within each industry of the STOXX Canada 60 Index, all components are weighted based on their free float market capitalization.
- In case there is no representation of a particular industry in the STOXX Canada 60 Index, but this industry is represented in the Canada 240 Index, the weight of the corresponding industry in the Canada 240 Index is distributed among the other industry in the STOXX Canada 60 index in the proportion of their existing industry weights.

9.6.3. ONGOING MAINTENANCE

Replacements: To maintain the number of components constant, a deleted stock is immediately replaced with the highest-ranked non-component from the Selection List, belonging to the same ICB industry as the deleted stock. The Selection List is updated on a quarterly basis as part of the review component selection process. The newly added component enters with the same weight as that of the deleted one. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

In case there is no company available in the Selection List that belongs to the same ICB industry as the deleted component, the highest-ranked non-component from the Selection List is chosen, independently of its industry.

Fast entry: Not Applicable.

Fast exit: Not Applicable.

Spin-offs: Spin-off companies are not permanently added to the index.

Corporate actions: All component are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

10. STOXX DIVIDEND INDICES

10.1. STOXX SELECT DIVIDEND INDICES

10.1.1. OVERVIEW

Similar to the Blue-Chip indices, the STOXX Select Dividend indices are derived from their benchmark indices or their regional subsets. They cover a fixed number of stocks which represent the highest-yielding stocks relative to their home markets in the respective benchmark index.

Universe:
STOXX Europe Select Dividend 30, selected from STOXX Europe 600
EURO STOXX Select Dividend 30, selected from EURO STOXX
STOXX Nordic Select Dividend 20, selected from STOXX Nordic TMI
STOXX EU Enlarged Select Dividend 15, selected from STOXX EU Enlarged TMI
STOXX North America Select Dividend 40, selected from STOXX North America 600 Index
STOXX Asia/Pacific Select Dividend 30, selected from STOXX Asia/Pacific 600 Index
STOXX Global Select Dividend 100, combines the STOXX Europe Select Dividend 30, STOXX North America Select Dividend 40 and STOXX Asia/Pacific Select Dividend 30 indices
STOXX USA Select Dividend 30, selected from STOXX USA 900

Weighting scheme: The indices are price-weighted with a weighting factor based on the dividend yield.

Base values and dates:
STOXX Europe Select Dividend 30 Index: 1000 on December 30, 1998
EURO STOXX Select Dividend 30 Index: 1000 on December 30, 1998
STOXX Nordic Select Dividend 20 Index: 1000 on December 30, 1998
STOXX EU Enlarged Select Dividend 15 Index: 1000 on December 30, 1998
STOXX North America Select Dividend 40 Index: 1000 on December 31, 1998
STOXX Asia/Pacific Select Dividend 30 Index: 1000 on December 31, 1998
STOXX Global Select Dividend 100 Index: 1000 on December 31, 1998
STOXX USA Select Dividend 30 Index: 100 on March 22, 2004

Index types and currencies: For EURO STOXX Select Dividend 30, STOXX Global Select Dividend 100 and STOXX USA Select Dividend 30: price, net return and gross return in EUR and USD. For all others: price and net return in EUR and USD.

10.1.2. INDEX REVIEW

Component selection

1. For each regional Select Dividend index the components of the corresponding STOXX Regional Benchmark indices (or fix component benchmarks) and their secondary share lines are eligible.
2. Companies are screened for the following criteria:
   - Indicated annualized dividend (applies for components and non-components)
   - Non-negative dividend growth rate over the past five years (applies for non-components only)
   - Dividend payments in four out of five calendar years (applies for non-components only)
   - Non-negative payout ratio (applies for components and non-components)
   - Payout ratio of less than or equal to 60% (applies for non-components only)

» A minimum level of liquidity, as described in the following section (applies for non-components only)
» For companies that have more than one share line, the line with the higher dividend yield is chosen.

3. To obtain the selection list all companies are ranked according to an outperformance factor that is calculated as follows:

Net dividend yield of the company versus the net dividend yield of the corresponding home market defined on an index basis.

Liquidity screening for non-components

Depending on the belonging region of the index, the following parameters are considered:

Region	Threshold (EUR)	ADTV days
Asia / Pacific	300,000,000	3
EU Enlarged	2,000,000	10
Eurozone	1,000,000,000	3
Europe	300,000,000	3
Nordic	100,000,000	3
America (developed)	300,000,000	3
USA	300,000,000	3

After defining N as the fixed number of components in the index, each ith non-component stock is considered eligible - in terms of liquidity - if the following inequality holds:

$$ADTV_i > \frac{\text{Threshold}}{N} \cdot \frac{1}{\text{ADTV days}}$$

where $ADTV_i$ represents the Average Daily Traded Value of the ith non-component stock over the 3-month period ending on the month prior to the review month.

STOXX Europe Select Dividend 30

Coverage: the 30 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from the STOXX Europe 600 Index (plus secondary lines).

» Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; STOXX Europe TMI net dividend yield) -1
» Component selection: All current components ranked from 1 to 60 in the selection list will remain in the index. If the number of stocks is below 30, the highest ranked non-components are added until there are enough stocks.

EURO STOXX Select Dividend 30
Coverage: the 30 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from EURO STOXX (plus secondary lines).

- Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; EURO STOXX TMI net dividend yield) -1
- Component selection: All current components ranked from 1 to 60 in the selection list will remain in the index. If the number of stocks is below 30, the highest ranked non-components are added until there are enough stocks.

STOXX Nordic Select Dividend 20
Coverage: the 20 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from the STOXX Nordic TMI (plus secondary lines).

- A payout ratio of less than or equal to 80% applies for non-components.
- Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; STOXX Nordic TMI net dividend yield) -1
- Component selection: the stocks ranked between 1 and 10 are included in the index. Current components ranked between 11 and 30 are added to the index according to their rank. If the number of stocks is still below 20, the highest ranked non-components are added until there are enough stocks.

STOXX EU Enlarged Select Dividend 15
Coverage: the 15 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from the STOXX EU Enlarged TMI (plus secondary lines).

- The payout ratio has to be less than or equal to 100 percent
- The dividend growth rate is based on the past three years.
- Dividend payments in three out of three calendar years
- Outperformance factor calculation: Net dividend yield of the company divided by the maximum of the (STOXX Country TMI net dividend yield; STOXX EU Enlarged TMI net dividend yield) - 1.
- If a home market (STOXX Country TMI) is represented by only five or fewer stocks the outperformance factor is calculated based on the net dividend yield of the STOXX EU Enlarged TMI.
- Component selection: All stocks ranked between 1 and 10 are included in the index. Current components ranked between 11 and 20 are added to the index according to their rank. If the number of stocks is still below 15, the highest ranked non-components are added until there are enough stocks.

STOXX North America Select Dividend 40
Coverage: the 40 highest-yielding companies relative to their home market (STOXX Country TMI) are selected from the STOXX North America 600 index (plus secondary lines).

- Outperformance factor calculation: Net dividend yield of the company divided by the STOXX Country TMI net dividend yield -1.
- Component selection: The companies are ranked by the outperformance factor for each country and the region as a whole. All current components ranked 60 or above in each country ranking will remain in the index. If the number of stocks is still below 40, the highest

ranked non-components from the regional ranking are added until there are enough stocks. A maximum of 30 stocks per country can be included in the index.

STOXX Asia/Pacific Select Dividend 30
Coverage: the 30 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from the STOXX Asia/Pacific 600 index (plus secondary lines).

- A payout ratio of less than or equal to 80% applies for non-components.
- Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; STOXX Asia/Pacific TMI net dividend yield) -1
- Component selection: The companies are ranked by the outperformance factor for each country and the region as a whole. All current components ranked 20 or above in each country ranking will remain in the index. If the number of stocks is still below 30, the highest ranked non-components from the regional ranking are added until there are enough stocks. A maximum of 10 stocks per country can be included in the index.

STOXX Global Select Dividend 100
The index is a combination of the STOXX Europe Select Dividend 30 Index, the STOXX North America Select Dividend 40 Index and the STOXX Asia/Pacific Select Dividend 30 Index.

STOXX USA Select Dividend 30
Coverage: the 30 highest-yielding companies in the USA are selected from the STOXX USA 900 Index (plus secondary lines).

- Component selection: All current components ranked from 1 to 60 in the selection list will remain in the index. If the number of stocks is below 30, the highest ranked non-components are added until there are enough stocks.

Review frequency: The STOXX Select Dividend indices are reviewed on an annual basis in March.

Weighting cap factors: The factors are calculated based on net-dividend yields.

Weight determination:

$$w_i = \frac{\frac{D_i}{p_i}}{\sum_{j=1}^{N} \frac{D_j}{p_j}}$$

w_i = weight
D_i = net dividend of company i
p_i = closing price of company i
D_j = net dividend of company j
p_j = closing price of company j
N = number of index components

Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers.
The weighting factors are published on the second Friday in March, one week prior to quarterly review implementation using Thursday's closing prices.

For all Select Dividend indices, except for the STOXX Global Select Dividend, an additional cap factor of 15% applies. The STOXX Select Dividend Global Index has a cap factor of 10%. All weighting cap factors are reviewed quarterly.

10.1.3. ONGOING MAINTENANCE

Replacements: To maintain the number of components constant, a deleted stock is replaced with the highest-ranked non-component on the selection list. The selection list is updated on a quarterly basis according to the review component selection process. The restrictions on the maximum count per country are applied. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

If a company is deleted from the STOXX Regional Benchmark indices (or fix component benchmarks) between the STOXX Select Dividend annual review dates, but is still a component of the STOXX Global TMI, the stock will remain in the STOXX Select Dividend indices until the next annual review, provided that it still meets the requirements for the STOXX Select Dividend Index.

Fast exit
If STOXX becomes aware of dividend data changes for the components of the STOXX Select Dividend indices the following index adjustments may occur. The timing of the index adjustment depends on the changes in the dividend data:

- If the company cancels one of its dividends: the company will be deleted from the index, the replacement announced immediately, implemented two trading days later and become effective the next trading day. The case of dividend cancellation does not apply to dividends whose payment is postponed within the same fiscal year. Dividends whose payment is postponed indefinitely or to a subsequent fiscal year are considered cancelled. In case a company pays its dividends for a fiscal year in tranches, after the first tranche has been paid, the cancellation of one or more remaining tranches or the postponement of their payment to a subsequent fiscal year is treated as a lowering of dividend.
- If the company lowers its dividend: the company will remain in the index until the next selection list is available. If the company is ranked above the lower buffer on this selection list (e.g. ranked 60 or above for the STOXX Europe Select Dividend 30 Index), it is retained. If it falls below the lower buffer (e.g. ranked 61 or below for the STOXX Europe Select Dividend 30 Index), it is removed and replaced by the highest-ranked non-component on that selection list. The changes will be announced on the 5th trading day of the month together with the selection list and become effective on the first trading day after the third Friday of the month. The weightfactors for the new components will be published on the quarterly underlying data announcement based on previous day closing prices.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not considered for immediate addition in the STOXX Select Dividend indices. If the original company has a significantly lower dividend after the spin-off, then its status will be reviewed for fast exit.

Mergers and takeovers: The original stock is replaced by the surviving stock, if it is ranked at or above the lower buffer limit of the current Select Dividend selection list. If the stocks of the surviving company fall below the lower buffer limit, the original stocks are replaced with the highest-ranked non-component on the selection list.

Weighting factor calculation: Replacements are added with a weight corresponding to their dividend yield on the current selection list. The new component's dividend yield is weighted against the dividend yields of all companies of the new index composition:

$$w_i = \frac{\frac{D_i}{p_i}}{\sum_{j=1}^{N} \frac{D_j}{p_j}}$$

w_i = weight of replacement company (i)
D_i = net dividend of replacement company (i) on cut-off date of current selection list
p_i = closing price of replacement company (i) on cut-off date of current selection list
D_j = net dividend of replacement company (j) on cut-off date on current selection list of company j in new index composition
p_j = closing price on cut-off date of current selection list of company (j) in new index composition
N = number of index components

$$wf_{it} = \frac{\frac{\sum_{j=1}^{N-k} wf_{jt} \cdot p_{jt} \cdot cf_{jt}}{(1-\sum_{h=1}^{k} w_h)} \cdot w_i}{p_{it}}$$

wf_{it} = new weighting factor of replacement (i) at time (t)
k = number of replacements
T = date of closing price for weighting factor calculation
N-1 = remaining index components (previous index composition minus the deleted company)
wf_{jt} = weighting factor of index component (j) at time (t)
$p_{j,t}$ = price of index component (j) at time (t)
cf_{jt} = weighting cap factor of index component (j) at time (t)
w_i = weight of replacement company (i)
p_{it} = price of replacement company (i) at time (t)

The remaining current components stay in the index with unchanged weighting factors.

10. STOXX DIVIDEND INDICES

10.2. STOXX ASEAN-FIVE SELECT DIVIDEND 50

10.2.1. OVERVIEW

The STOXX ASEAN-Five Select Dividend 50 Index aims to select from the ASEAN universe the 50 highest dividend paying companies. Countries that are considered are the Philippines, Malaysia, Thailand, Singapore and Indonesia. Vietnam is not part of the universe for this index.

Universe: All stocks in the investable universe (Philippines, Malaysia, Thailand, Singapore and Indonesia)

Weighting scheme: The indices are weighted according to the Free Float Market Capitalization

Base values and dates: 1000 as of March 31, 2004

Index types and currencies: Price, net and gross return in EUR, JPY and USD

10.2.2. INDEX REVIEW

Component selection and 35 – 70 buffer rule:

The universe is defined as all stocks in the STOXX Asia Total Market index belonging to the Philippines, Malaysia, Thailand, Singapore and Indonesia.

Stocks are excluded from this universe if:

- their 3 Months Average daily trading volume is below 1.5 Million USD,
- Effective up until September 2020 review, they are assigned to the sector “8670”- Real Estate Investment Trusts companies.
  Effective with September 2020 review, they are assigned to the sector “351020”- Real Estate Investment Trusts companies.
- their Payout ratio is below 0% or exceeds 80%.

All remaining stocks are ranked according to their 12 months historical dividend yield. A maximum of 15 components per country are selected; no minimum number of components per country are set. The highest ranked 35 stocks on the selection list are selected; the remaining 15 stocks are selected from the highest ranked current stocks ranked between 36 and 70; if the number of stocks selected is still below 50, then the highest ranked remaining stocks are selected until there are 50 stocks.

Review frequency: The indices are reviewed on an annual basis in March, the components announced on the first Friday, implemented on the third Friday and effective the next trading day. The review cut-off date for the underlying data is the last trading day of the month preceding the review.
Shares and Free Float factors are updated in line with the STOXX Global Total Market indices on a quarterly basis. All changes are implemented on the third Friday in March, June, September and December and effective the next trading day.

Weighting cap factors: Components are capped at a maximum weight of 10% quarterly. The weighting cap factors are published on the second Friday of the review month using Thursday’s closing prices.

10.2.3. ONGOING MAINTENANCE

Replacements: A deleted stock is replaced with the highest-ranked non-component on the selection list if the number of stocks within the index would drop below 45. The selection list is updated once a year at annual review. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not permanently added to the index.

10.3. STOXX ASEAN SELECT DIVIDEND 30

10.3.1. OVERVIEW

The STOXX ASEAN SELECT DIVIDEND 30 Index aims to select from the ASEAN universe the 30 highest dividend paying companies.

Universe: All stocks in the investable universe (ASEAN region)

Weighting scheme: The indices are modified equal weighted. This means price-weighted with a weighting factor to achieve an equal weighting and limiting the maximum weight of a single country.

Base values and dates: 1000 as of March 31, 2004

Index types and currencies: Price, net and gross return in EUR and USD

10.3.2. INDEX REVIEW

Selection List

The following steps are applied:

- All companies in the STOXX ASIA Total Market Index from Malaysia (MY), Philippines (PH), Thailand (TH), Singapore (SG) and Indonesia (ID) and Vietnam (VN) qualify.[18]
- Companies with a 3 months ADTV below 2 Million USD are excluded
- Effective up until September 2020 review, REITs companies (ICB 8670) are excluded. Effective with September 2020 review, REITs companies (ICB 351020) are excluded.
- Companies with payout ratios higher than 80% or below 0% are excluded
- All remaining companies are ranked by their 12 months historical dividend yield

Component list and selection with a 20-40 buffer rule:
The highest ranked 20 stocks on the selection list are selected; the remaining 10 stocks are selected from the highest ranked current stocks ranked between 21 and 40; if the number of stocks selected is still below 30, then the highest ranked remaining stocks are selected until there are 30 stocks.

During this process a maximum of seven components per country (Thailand: five) can be selected and no minimum numbers of components per country are set.

If during the step by step inclusion of the companies, one country reaches its limit (i.e. the constituent just included in the index brings the number of stocks from Singapore to seven), then all further stocks from the country on the selection list are no longer eligible.

Review frequency: The indices are reviewed on an annual basis in March. The review cut-off date for the underlying data is the last trading day of the month preceding the review. The

[18] Further ASEAN countries are eligible (Brunei, Myanmar, Cambodia and Laos) for the index when being added to the STOXX trading universe.

components are announced on the first Friday and implemented on the third Friday in March, June, September and December and effective the next trading day.

Weighting cap factors: Components are equally weighted and Vietnam and Thailand is capped at 15% due to investment restrictions in the local market

10.3.3. ONGOING MAINTENANCE

Replacements: A deleted stock is replaced with the highest-ranked non-component on the selection list. The country constraints apply for replacement and a maximum of seven components per country (Thailand: five) can be selected The selection list is updated once a year at annual review. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not permanently added to the index.

10.4. STOXX MAXIMUM DIVIDEND INDICES

10.4.1. OVERVIEW

The STOXX Maximum Dividend Indices are designed to maximize the dividend yield of the index portfolio. The index contains the 40 stocks from the STOXX Regional benchmark / TMI Indices with the highest expected dividend yield.

Universe:
STOXX Europe Maximum Dividend 40, selected from STOXX Europe 600
STOXX Global Maximum Dividend 40, selected from STOXX Global 1800

Weighting scheme: The indices are price-weighted with a weighting factor based on the adjusted dividend yield.

Base value and dates:
STOXX Europe Maximum Dividend 40 has a base value of 100 as of March 20th, 2000 for net-return and price indices and 29th of December 2000 for gross-return indices

For Global, the index has a base value of 100 as of January 31st 2011

Index types and currencies: For all: price, net return and gross return in EUR and USD.

10.4.2. INDEX REVIEW

Component selection

STOXX Regional Maximum Dividend 40
All components of the STOXX regional Benchmark that pass the following criteria are added to the selection list:
Companies must have a dividend ex-date within the upcoming quarter, i.e. from 3rd Friday of March, June, September and December until the third Friday of the quarterly period afterwards. The dividend data are based on company announcements and estimations known to STOXX by the end of January, April, July and October
Free-float market capitalization of at least 1 billion EUR
Average daily turnover value (ADTV) over the last three months of at least 4 million EUR.

All companies on the selection list are ranked in descending order by the adjusted gross dividend yield (see below for the calculations) and the first 40 companies are selected for the index composition. If fewer than 40 companies meet the above criteria, companies of the previous period with the highest gross dividend yield are selected.

10. STOXX DIVIDEND INDICES

Review frequency:
All regional indices are reviewed quarterly in March, June, September and December

Weighting cap factors and adjusted dividend yield calculation:
At the cut-off date the dividend yields are calculated based on announced or estimated dividends and the closing price.

The adjusted dividend yield used for index selection and weighting is calculated as follows:

$$DY_{iT} = \frac{D_{it}}{p_{iT}}$$

DY_{it} = Dividend Yield of company (i) at time (t)
D_{it} = announced or estimated dividend for share (i) within calculation period (t)
p_{iT} = closing price of share (i) on the cut-off date (T)
t = time within the upcoming calculation period that starts at implementation date t_0
T = cut-off date

$$\text{adjusted}\,DY_{i,T} = \text{scalingfactor}_{j,T} \times DY_{j,T}$$

$$\text{scalingfactor}_{jT} = \begin{cases} \dfrac{\sum_{j}^{m} wl_{jT}}{LR_{jT}}; \text{if } LR_{jT} > \sum_{j}^{m} wl_{jT} \\ 1; \text{else} \end{cases}$$

$$wl_{jT} = \frac{DY_{jT}}{\sum_{j}^{m} DY_{jT}} \times LR_{jT}$$

$$LR_{jT} = \frac{DY_{jT}}{ADTV(3\text{months})_{jT}}$$

wl_{jT} = weighted liquidity ratio of company (j)
LR_{jT} = liquidity ratio of company (j)
m = number of companies on the selection list

The weighting cap factors are derived from the adjusted dividend yields:

$$w_i = \frac{\text{adjusted}\,DY_{it}}{\sum_{j=1}^{N} \text{adjusted}\,DY_{j}}$$

w_i = weight
DY_{it} = Dividend Yield of company (i) at time (t)
N = number of index components

Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers.
Weights are capped at a maximum of 10%.

10.4.1. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit
If STOXX becomes aware of a dividend cancellation for the components of the STOXX Maximum Dividend indices, the company will be deleted from the index without replacement with two trading days notice. Dividends whose payment is postponed indefinitely or to a subsequent fiscal year are considered cancelled. In case a company pays its dividends for a fiscal year in tranches, after the first tranche has been paid, the cancellation of one or more remaining tranches or the postponement of their payment to a subsequent fiscal year is not considered a dividend cancellation.

Fast entry: Not applicable.

Spin-offs: Spin-off companies are not added permanently.

10.5. EURO STOXX QUALITY DIVIDEND 50

10.5.1. OVERVIEW

The EURO STOXX Quality Dividend 50 index aims to select 50 high quality, high dividend-paying and low volatility stocks.

Universe:
The index universe is defined by the parent index, the EURO STOXX Index (as observed on the review effective date, i.e. future composition).

Weighting scheme:
The index is weighted according to free-float market capitalization.

Base values and dates:
The following base values and dates apply: 100 on 19 June 2006.

For a complete list please consult the data vendor code sheet on the website[19]. Customized solutions can be provided upon request.

Index types and currencies:
Price, net and gross return in EUR and USD

10.5.2. INDEX REVIEW

Selection list:
All stocks in the base universe are first screened for liquidity. All stocks that have a 3-month Average Daily Trading Ratio (ADTR) of less than 0.25% are excluded from the base universe. If a stock has missing ADTR information, then the company is also removed from the base universe.

The following indicators are then calculated for all remaining stocks in the base universe:

i) 12-month trailing gross dividend yield (DY)
ii) payout ratio
iii) 3-month and 12-month trailing volatility in EUR
iv) 3-year historical net income yield growth rate for all 'Financials' (Effective up until September 2020 review, companies that have an ICB industry code of 8000. Effective with September 2020 review, companies that have an ICB industry code of 30 or 35); free cash flow (FCF) yield growth rate for all other companies

All values above are observed as of the cut-off date. Data used for ii) and iv) are from the last reported fiscal year.

If any among the 12-month trailing gross dividend yield, payout ratio, 3-year historical FCF / net income growth rate and both 3-month and 12-month trailing volatility of a stock has missing

[19] http://www.STOXX.com/download/indices/vendor_codes.xls

information, then the company is removed from the base universe. Additionally, if any of the dividend yield, payout ratio, or FCF (or net income for Financials. Effective up until September 2020 review, companies that have an ICB industry code of 8000. Effective with September 2020 review, companies that have an ICB industry code of 30 or 35) yield growth rate of a stock is equal to zero, or below zero in the case of dividend yield and payout ratio, then the company is also removed from the base universe.

Ratios and indicators used in the Selection process:

$$ADTR_t = \frac{3\ month\ ADTV_t}{MCap_t}$$

where,

t	cut-off date
ADTV	Average Daily Trading Volume
Mcap	Free-float Market Capitalization

$$Payout\ Ratio_t = \frac{Common\ Dividends_t}{(Net\ Income_t - Preferred\ Dividends_t)}$$

where,

t	cut-off date

$$Volatility_t = \sqrt{\frac{1}{k-1}\sum_{i=1}^{k}(r_i - \bar{r})^2}$$

where,

t	cut-off date
k	number of returns between the cut-off date and: i) the date 3 months prior to the cut-off date when calculating the 3-month historical volatility; if this is not a trading day, then the next trading day should be considered ii) the date 12 months prior to the cut-off date when calculating the 12-month historical volatility; if this is not a trading day, then the next trading day should be considered
r_i	daily return as of day i in the given time series of k returns
$\bar{r}$	mean of all daily returns r_i in the given time series, calculated as: $\bar{r} = \frac{1}{k}\sum_{i=1}^{k} r_i$

$$FCF_t = Net\ Cash\ Flow_t - Net\ CapEx_t$$

$$FCF\ Growth\ Rate_t = \frac{FCF_t}{MCap_t} - \frac{FCF_{t-3}}{MCap_{t-3}}$$

$$Net\ Income\ Growth\ Rate_t = \frac{Net\ Income_t}{MCap_t} - \frac{Net\ Income_{t-3}}{MCap_{t-3}}$$

where,

t	cut-off date
$t-3$	3 years prior to the cut-off date; if this is not a trading day, then the next trading day should be considered
FCF	Free Cash Flow
Net CapEx	Capital Expenditure on Fixed Assets
Mcap	Free-float Market Capitalization

Composition list:
Each stock in the eligible universe is given a standardized score (z-score) for each of the 3 metrics: 12-month historical dividend yield, payout ratio and 3-year FCF (or net income) yield growth rate using the following calculation:

$$z_i = \frac{(x_i - \bar{x})}{\sigma}$$

where:

x_i	value of metric *x* for stock *i*
$\bar{x}$	mean value of the metric *x*
σ	standard deviation of the metric *x*

Each stock is then given an overall score (OS) by taking the sum of the 12-month historical dividend yield z-score, the negative of the payout ratio z-score and the 3-year FCF (or net income) yield growth rate z-score:

$$OS = z_{Dividend\ Yield} - z_{Payout\ Ratio} + z_{FCF\ /\ Net\ Income\ Gro\quad Rate}$$

Next, the Equal Strength Ratio and the size of the target list (n) are calculated as follows:

$$ESR = \sqrt{\frac{50}{N}}$$

$$n = Rounddown\ (ESR * N)$$

where:

N	number of stocks for which an overall score can be calculated

The stocks are sorted in descending order based on their overall score, and the top n stocks are selected in order to create the target list. The final selection list is obtained by sorting the stocks in the target list in ascending order in terms of volatility (maximum between the 3-month and 12-month historical volatility).

The final composition is obtained by selecting the top 50 (lowest volatility) stocks in the final selection list with the following constraint:

- Maximum of 15 stocks per ICB industry

Review frequency:
The reviews are conducted on a semi-annual basis in June and December. The review cut-off date for the underlying data is the last calculation day of May and November respectively.

Weighting cap factors:
The index is weighted according to free-float market capitalization subject to a 4% cap per constituent on a semi-annual basis.

10.5.3. ONGOING MAINTENANCE

Replacements: Not applicable.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-off stocks are not added permanently.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

11. STOXX OPTIMISED INDICES

11.1. STOXX OPTIMISED INDICES BASED ON STOXX EUROPE 600

11.1.1. OVERVIEW

Two set of indices exist on the basis of STOXX 600:
STOXX Europe 600 Optimised Supersector
STOXX Europe 600 Optimised Market Quartiles

These indices apply a sector-dependent liquidity cap that reduces the weighting of the components, whose average daily turnover, as a fraction of its free-float market capitalization, is below the sector average. The hybrid market capitalization and the liquidity weighting methodology reflect optimized tradability of the STOXX Optimised indices, while retaining the free-float market capitalization weighted across the larger and more liquid components.

Universe: Indices for the following regions as defined in section 4.3 are calculated: Europe

Weighting scheme: Free-float market capitalization with a liquidity scaling factor.
Base value and date: All STOXX Europe 600 Optimised indices: 1000 on December 31, 2000.
Index types and currencies: Price, net return in EUR and USD.

11.1.2. INDEX REVIEW

Component selection

All STOXX Europe 600 stocks excluding the ones from Czech Republic, Greece and Iceland are eligible.
Equity turnover and the availability of funds to borrow are calculated for each eligible company:
Equity turnover: Average Daily Turnover (ADTV) over three months in EUR ending with the fifth trading day after the review cut-off date.
Availability of funds to borrow: Based on averaged data over seven trading days starting with on the fifth trading day of the review cut-off date, as provided by Data Explorers in EUR.

STOXX Optimised Supersector

The 30 least liquid and the 30 hardest to borrow stocks are deleted, starting with the smallest, considering the following conditions:

a. At least ten stocks must remain in the relevant Supersector.
b. The combined free-float market capitalization of the excluded stocks from a particular Supersector must not exceed 20%.

Weighting cap factors

The following capping procedure is applied to Optimised Supersector indices:

1. If the weighting of a component is above the Supersector's weighted average ADTV, it is reduced to that value by introducing a liquidity scaling factor (see Liquidity Scaling Factors).
2. A maximum weight cap factor is applied, based on the number of components (n) in the index:

If n < 25 apply 20%
If 25 < = n < 40 apply 15%
If n > = 40 apply 10%

For the technical index calculation both factors are multiplied and applied as one weighting cap factor.

STOXX Optimised Market Quartile
The 30 least liquid and the 30 hardest to borrow stocks are removed. These are then assigned to one of four thematic baskets which are clustered from the ICB subsectors. Please see the Guide to Industrial Classifications Used By STOXX for further information on subsector assignment to the relevant market quartiles.

Weighting cap factors
The following capping procedure is applied to Optimised Market Quartile indices:
1. If the weighting of a component is above the market quartile's weighted average ADTV, it is reduced by a liquidity scaling factor (see Liquidity Scaling Factors).
2. A maximum weight cap factor of 10% is applied.

For the technical index calculation both factors are multiplied and applied as one weighting cap factor.

Review frequency: The Optimised indices are reviewed on a quarterly basis.

Derived indices

Region	Index Name
Europe	STOXX Europe 600 Optimised <Supersector>
Eurozone	EURO STOXX Optimised Banks

11.1.3. ONGOING MAINTENANCE
Replacements: Replacements are handled similar to STOXX Europe 600 Sector indices, except for replacements of Greece, Czech Republic or Iceland. A combined factor of 1 is applied to all new components that are added between two reviews.

Fast exit: Not applicable.
Fast entry: Not applicable.

Spin-offs: Spin-offs are treated the same as in STOXX Europe 600 Sector indices.

12. STOXX STYLE INDICES

12.1. STOXX TM STYLE INDICES

12.1.1. OVERVIEW

The STOXX Total Market Style Indices represent a broad coverage of companies that have similar growth and value characteristics based on fundamental criteria.

Universe: Depending on the Style index, the eligible universe is defined as the components of one of the following parent indices:

- STOXX Europe Total Market
- STOXX Europe Total Market <Size>

Weighting scheme: The index is weighted according to free-float market capitalization.
Base value and date: 1,000 on June 30, 1997.
Index types and currencies: Price, net return in EUR and USD.

12.1.2. INDEX REVIEW

Component selection

Target coverage: growth and value stocks selected from the STOXX Europe TM Index at the first and third quarterly reviews.

Review procedures:

The style characteristics of each stock are determined by analyzing six factors, out of which two are projected, two current and two historical:

1. Projected price/earnings (P/E) ratio: Based on the closing price at the time of the review and on the mean annual earnings per share (EPS) expected for the next fiscal period, as reported by the Institutional Brokers' Estimate System (IBES). A high projected P/E ratio is associated with the Growth style.
2. Projected earnings growth: Based on the expected three to five year annual increase in operating EPS, as defined by the IBES long-term growth forecast. . A high projected earnings growth is associated with the Growth style.
3. Trailing P/E ratio: Based on the closing price at the time of the review and on the previous quarter's EPS from continuing operations, as reported by IBES. A high trailing P/E ratio is associated with the Growth style.
4. Trailing earnings growth: Based on average annualized EPS growth for the previous 21 quarters, as reported by IBES. A high trailing earnings growth is associated with the Growth style.
5. Price/book (P/B) ratio: Based on the closing price at the time of the review and the book value per share. A high current P/B ratio is associated with the Growth style.
6. Dividend yield: Based on the closing price at the time of the review and the total dividends declared by the company during the previous 12 months. A high current dividend yield is associated with the Value style.

Stocks for which the value of a factor cannot be determined are excluded from the selection. The remaining stocks are ranked for each of the six factors. For each factor, the stocks beyond the 5th and 95th percentiles are assigned the same factor values as the stocks at the 5th and 95th percentiles.

For each stock the values of the six factors are z-scored for normalization.

12. STOXX STYLE INDICES

A multivariate, statistical cluster analysis is conducted to produce five clusters: Strong Growth (SG) and Weak Growth (WG), Strong Value (SV) and Weak Value (WV), and Neutral (NT).
Each style cluster is represented by a certain seed. A seed expresses the representative z-score value to be attained by each z-score of any given security in order for that security to be classified as part of that cluster.
The table below shows the seeds for each style:

Style	Strong Growth	Weak Growth	Neutral	Weak Value	Strong Value
Seed	1	0.2	0	-0.2	-1

The clustering procedure foresees that, for each ith stock, the five Euclidean distances between its six z-scores and each seed value are calculated:

$$\text{distance}_{i,k} = \sqrt{\sum_{j=1}^{6} \left(\text{z-score}_{i,j} - \text{seed}_k\right)^2}$$

The seeds act as style attraction points, hence, the smaller the Euclidean distance of a security's z-scores from a seed, the stronger the belief that that security belongs to the style associated with that seed: each security is thus assigned to the style cluster for which the Euclidean distance is smallest among the five.
To properly reflect the fact that a high dividend yield is typically associated with Value stocks, the sign of the dividend yield z-score is reversed in the calculation.

A set of rules aims to avoid that stocks can change more than one cluster from one review to the next and that larger stocks remain the in Neutral cluster for longer than one review period. The rules are as follows:

All stocks that have been classified into the neutral cluster in the last review, will go into the cluster that they classify for in this review.

All stocks that have been classified into the Weak Value (Weak Growth) cluster in the last review, and would be classified in any Growth (Value) or Neutral cluster in the current review, are reclassified to Neutral.
Stocks that:

1. were classified as Neutral in the last review, and
2. are classified as Neutral in the current review, and
3. weigh at least 0.5% in the STOXX Europe Total Market index

are reclassified as either Weak Value or Weak Growth, depending on which cluster seed they are closer to.

Only the stocks associated with a Growth or Value cluster will be part of the respective Style index, all Neutral stocks are excluded from the selection. Additionally, at the second and fourth quarter reviews of the STOXX Europe TM index the following rules apply:
New stocks added to the STOXX Europe TM index are immediately classified as neutral stocks until the next review of the style indices.

Stocks deleted from the STOXX Europe TM index are immediately deleted from the style indices. Stocks reclassified into different STOXX Europe Total Market Size indices are also immediately reclassified into the corresponding STOXX Europe Total Market Style Size indices.

12. STOXX STYLE INDICES

Review frequency: The indices are reviewed semi-annually in March and September.
Weighting cap factors: No weighting cap factors are applied.
Derived indices: Subset for the Eurozone region as defined in section 4.3.

12.1.3. ONGOING MAINTENANCE

Additions and deletions: New stocks added to the parent indices at the June or December review are immediately classified as Neutral stocks until the next review of the Style indices.
Stocks deleted from the parent indices are immediately deleted from the Style indices.
Stocks reclassified into a different parent <Size> index are also immediately reclassified into the corresponding Style <Size> indices.

Replacements: Stocks deleted from the Style indices are not replaced.

Spin-offs: Spin-offs are added permanently if qualifying for the parent indices as of the latest quarterly review list in terms of free-float market capitalization. A spun-off company is added to the same cluster as the parent company.

12. STOXX STYLE INDICES

12.2. STOXX STRONG STYLE INDICES

12.2.1. OVERVIEW

The STOXX Strong Style indices contain companies that have the highest growth and value scores based on fundamental criteria.

Universe: The eligible universe is defined as the components of the STOXX Europe Total Market index.

Weighting scheme: The index is price-weighted according to the growth and value scores.
Base value and date: 1,000 on September 30, 2001.
Index types and currencies: Price, net return in EUR and USD.

12.2.2. INDEX REVIEW

Component selection

STOXX Europe Strong Growth (Value) 20 Index (10 – 30 buffer rule)
Stocks are screened for a minimum level of liquidity: stocks with 3-month average daily traded value below € 10mn will be excluded. If multiple lines of a stock qualify for the index, the less liquid line is removed. If the screening process described above results in being too restrictive, the ADTV filter is progressively lowered in steps of € 0.5mn, and the selection process is repeated until the number of constituents is equal to 20 for the STOXX Strong Growth/Value indices and 40 for the Strong Style Composite indices.

The style characteristics of each stock are determined by analyzing six factors, out of which two are projected, two current and two historical:

1. Projected price/earnings (P/E) ratio: Based on the closing price at the time of the review and on the mean annual earnings per share (EPS) expected for the next fiscal period, as reported by the Institutional Brokers' Estimate System (IBES). A high projected P/E ratio is associated with the Growth style.
2. Projected earnings growth: Based on the expected three to five year annual increase in operating EPS, as defined by the IBES long-term growth forecast. A high projected earnings growth is associated with the Growth style.
3. Trailing P/E ratio: Based on the closing price at the time of the review and on the previous quarter's EPS from continuing operations, as reported by IBES. A high trailing P/E ratio is associated with the Growth style.
4. Trailing earnings growth: Based on average annualized EPS growth for the previous 21 quarters, as reported by IBES. A high trailing earnings growth is associated with the Growth style.
5. Price/book (P/B) ratio: Based on the closing price at the time of the review and the book value per share. A high current P/B ratio is associated with the Growth style.
6. Dividend yield: Based on the closing price at the time of the review and the total dividends declared by the company during the previous 12 months. A high current dividend yield is associated with the Value style.

Stocks for which the value of a factor cannot be determined are excluded from the selection. The remaining stocks are ranked for each of the six factors. For each factor, the stocks beyond the 5th

and 95th percentiles are assigned the same factor values as the stocks at the 5th and 95th percentiles.

For each stock the values of the six factors are z-scored for normalization.

A multivariate, statistical cluster analysis is conducted to produce two clusters: Strong Growth (SG) and Strong Value (SV).
Each style cluster is represented by a certain seed. A seed expresses the representative z-score value to be attained by each z-score of any given security in order for that security to be classified as part of that cluster.
The table below shows the seeds for each style:

Style	Strong Growth	Strong Value
Seed	2	-2

In the clustering procedure the five Euclidean distances between the six z-scores and each seed value are calculated for each i-th stock:

$$\text{distance}_{i,k} = \sqrt{\sum_{j=1}^{6} \left(\text{z-score}_{i,j} - \text{seed}_k\right)^2}$$

Then the growth (value) score is calculated:

$$\text{Growth-score}_i = \frac{\text{distance}_{i,SV}}{\text{distance}_{i,SG} + \text{distance}_{i,SV}} \quad \text{and} \quad \text{Value-score}_i = 1 - \text{Growth-score}_i$$

All stocks ranked 10 or above by their Growth (Value) score on the selection list will be added to the index. The remaining 10 stocks are selected from the largest remaining current stocks ranked between 11 and 30. If the number of stocks selected is still below 20, then the largest remaining stocks are selected until the component count reaches 20.

STOXX Europe Strong Style 40 Index
The STOXX Europe Strong Style 40 Index is the combination of the STOXX Europe Strong Growth 20 and STOXX Europe Strong Value 20 indices.

Review frequency: The indices are reviewed annually in September. The review cut-off date is the last trading day in August.

Quarterly Liquidity screening for non-components:
After defining N as the fixed number of components in the index, each non-component stock in the Selection List is considered eligible – in terms of liquidity – if it has 3-month Average Daily Traded Volume (ADTV) in EUR equal to or exceeding 10 million EUR, over the 3-month period ending on the month prior to the respective months of March, June, September and December. The STOXX Strong Growth/Value and Strong Style Composite indices aim to have 20 and 40 constituents at each review, respectively. Similarly if the liquidity screens are too restrictive, the ADTV filter is progressively lowered in steps of € 0.5mn until the required number of constituents is reached.

Weighting cap factors: The component are weighted according to their value and growth score
Initial weight calculation

$$w_i = \frac{S_i}{\sum_{j=1}^{N} S_j}$$

w_i = target weight
S_i = respective value or growth score of company i
S_j = respective value or growth score of company j
N = number of index components

Weighting cap factor = (1,000,000,000 x target weight / closing price of the stock in EUR), rounded to integers.
All components are capped at a maximum weight of 15% annually.

Derived indices

STOXX Europe Strong Growth 20	STOXX Europe Strong Value 20	STOXX Europe Strong Style Composite 40
EURO STOXX Strong Growth 20	EURO STOXX Strong Value 20	EURO STOXX Strong Style Composite Value 40

12.2.3. ONGOING MAINTENANCE

Replacements: A deleted stock in STOXX Strong Style Index is replaced by the highest-ranked non-component on the relevant STOXX Strong Style selection list. The selection list is updated annually with a quarterly liquidity screening. The new company will be added at the same weight as the company being removed. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Spin-offs: Spun-off companies are not added permanently.

13. STOXX THEME INDICES

13.1. STOXX GLOBAL INFRASTRUCTURE INDICES

13.1.1. OVERVIEW

STOXX Global Extended Infrastructure 100 and STOXX Global Infrastructure Suppliers 50 are Blue Chip indices. The selection of infrastructure-related companies (asset owners or suppliers) is performed by an independent Research Partner. The indices cover the largest components of respective infrastructure sectors.

Universe: The index universe is defined as all stocks from the STOXX Global TMI index that derive at least 50% of the total most recent annual revenues from infrastructure business and/or supplying goods or services to companies from the infrastructure industry.

Infrastructure sectors are based on a proprietary industry classification of our Research Partner Factset and are defined as follows:

- Midstream
- Wireline
- Cable & Satellite
- Rail Transportation
- Road Transportation
- Air Transportation
- Water Transportation
- Passenger Transportation
- Energy Utilities
- Water Utilities
- Waste Management

STOXX uses FactSet Research Systems granular analysis to determine a company's position within the infrastructure subsectors of its FactSet Revere Business Industry Classification System (FactSet RBICS). FactSet Revere is a sector, supply chain, and geographic risk taxonomy expert.

Weighting scheme: The indices are weighted according to free-float market capitalization

Base value and dates: 1'000 on March 21, 2011.

Index types and currencies: Price and net-return in EUR and USD.

Dissemination calendar: STOXX Americas calendar

13.1.2. INDEX REVIEW

Component selection

In the following sections, the cut-off date for the data provided by the Research Partner is the last calculation day in January.

STOXX Global Extended Infrastructure 100 Index

Target coverage: 100 infrastructure sector leaders from the stocks considered to be infrastructure related companies by the Research Partner. There is a minimum liquidity requirement for

components to be eligible: the 3-month average daily trading value (ADTV) has to be at least of EUR 1 million.

For each of the eleven infrastructure sectors, the stocks are ranked in terms of free-float market capitalization and the largest seven stocks are added to the index. If there are fewer than seven stocks within a sector, only the available stocks that passed the required liquidity filter are added to the index.
All remaining stocks are ranked by free-float market capitalization regardless of their sector.
The largest current components ranked 110 or better which have not been selected in step 1 are added until the component count has been reached.
If the number of stocks is still below the required component count the largest remaining stocks are selected until the components count is reached

STOXX Global Infrastructure Suppliers 50 Index
Target coverage: 50 leaders from the stocks considered to be suppliers of the companies from the infrastructure sector by the Research Partner. There is a minimum liquidity requirement for components to be eligible: the 3-month average daily trading value (ADTV) has to be at least of EUR 1 million.

For each of the eleven infrastructure sectors, the stocks are ranked in terms of free-float market capitalization and the largest four stocks are added to the index. If there are fewer than four stocks within a sector, the available stocks that passed the required liquidity filter are added to the index only.
All remaining stocks are ranked by free-float market capitalization regardless of their sector.
The largest current components ranked 55 or better which have not been selected in step 1 are added until the component count has been reached.
If the number of stocks is still below the required component count the largest remaining stocks are selected until the components count is reached

Review frequency: The indices are reviewed annually in March together with the STOXX Total Market indices. The review cut-off date is the last trading day in February.

Weighting cap factors: A cap of 20% is applied on each of the eleven sectors quarterly. The second largest component of the overall index is subject to maximum weight of 15% at the quarterly review.

Derived indices: Not applicable.

13.1.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global TMI are deleted from the STOXX Global Infrastructure indices. A deleted stock is replaced to maintain the fixed number of stocks. The replacement is based on the latest quarterly selection list. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

If the number of companies for a certain infrastructure sector goes below seven for the STOXX Global Extended Infrastructure 100 Index or four for the STOXX Global Infrastructure Suppliers 50 Index, the largest stock from this sector is taken from the selection list.
Otherwise the largest stock from the selection list regardless of its sector is added to the index. Replacements are added with the same weighting cap factor as assigned at the last quarterly review to the specific sector.

Changes are announced immediately, implemented two trading days later and become effective on the next trading day after implementation.

Fast Exit: Not applicable.
Fast entry: Not applicable.

Spin-Offs: Spin-off companies are not added permanently.

13.2. STOXX GLOBAL BROAD INFRASTRUCTURE

13.2.1. OVERVIEW

The STOXX Global Broad Infrastructure Index is derived from the STOXX Developed and Emerging Markets Total Market (all developed and emerging markets of the STOXX Global Total Market Index). The components are chosen from five infrastructure related synthetic supersectors which in turn, comprise of 17 synthetic sectors and selected by the free-float market capitalization.

Universe: The index universe is defined as all companies listed in developed or emerging markets which are part of the STOXX Global Total Market Index.

Weighting scheme: The indices are weighted according to free-float market capitalization with additional weighting cap factors

Base value and dates: 100 on March 16, 2007.
Index types and currencies: Price, gross return and net return in EUR and USD.

Dissemination calendar: STOXX Global calendar

13.2.2. INDEX REVIEW

Component selection:
The companies of the universe are screened for the following criteria and then sorted by their free-float market capitalization:

- Minimum liquidity criteria: 3-month average daily trading volume (ADTV) greater than one million USD.
- Companies must generate at least 50% of their revenues within the following infrastructure-specific super-sectors / sectors. The infrastructure sectors are based on a proprietary industry classification of a Research Partner and are defined as follows:
    - Communication: cable & satellite, data centers wireless, wireless towers, wireline
    - Energy: energy utilities, midstream energy
    - Government outsourcing / social: correctional facilities, hospitals, postal services
    - Transportation: air transportation, passenger transportation, rail transportation, road transportation, water transportation
    - Utilities: waste management, water utilities

Companies are selected according to their free-float market capitalization under the following constraints:

- A maximum of 40 index constituents from each of the five super-sectors (communications, energy, transportation, government outsourcing/social, utilities) is allowed to enter the index
- A maximum number of companies per sector is given by 40/n, with n = number of sectors within each supersector.

Review frequency: The index is reviewed annually in March together with the STOXX Total Market indices. The review cut-off date is the last trading day in February.

Weighting cap factors: To prevent companies, supersectors and countries from dominating the portfolio, the index is subject to a quarterly three-dimensional capping with a maximum weight of

5% on constituent level, 30% on super-sector-level and 40% on country level (please refer to following chapter for a detailed description of the capping procedure).
The weighting cap factors are published on the second Friday of the quarter, one week prior to quarterly review implementation, and calculated using Thursday's closing prices

13.2.3. CAPPING PROCEDURE

The capping-procedure is subject to three steps:

Step 1:

The model aims to equally reduce the weights of all index constituents in order to fulfill the predefined capping criteria. To do so, the initials weights (based on the Free Float mcap) are multiplied by a correction factor that is determined as follows:

$$CF_{min} = \min \begin{cases} CF_{component} = {}^{x}/_{X} \\ CF_{country} = {}^{y}/_{Y} \\ CF_{supersector} = {}^{z}/_{Z} \end{cases}$$

where:

x = maximum component weight
y = maximum country weight
z = maximum super-sector weight
X = largest component weight
Y = largest country weight
Z = largest super-sector weight

Step 2:

In a second step, the altered weights of only those components that do not belong to the group of constituents that led to the cap in step 1 are then multiplied with a second factor UFmin which is determined as follows:

$$UF_{min} = \min \begin{cases} UF_{component} = \frac{x}{X^u} \\ UF_{country} = \min_i \left[UF_{country_i}\right] = \min_i \left[\frac{(y - Y_i^c)}{(Y_i - Y_i^c)}\right] \\ UF_{supersector} = \min_j \left[UF_{supersector_j}\right] = \min_j \left[\frac{(z - Z_j^c)}{(Z_j - Z_j^c)}\right] \\ UF_{index} = \frac{(1 - A^c)}{(A - A^c)} \end{cases}$$

where:

x = maximum component weight
y = maximum country weight
z = maximum super-sector weight
X^u = largest (uncapped) component weight
Y_i = weight of all components of country i

Y_i^c = weight of all capped components of country i
Z_j = weight of all components of supersector j
Z_j^c = weight of all capped components of supersector j
A = weight of all components of the index
A^c = weight of all capped components of the index

Step 3:

In a third step, it has to be distinguished between four scenarios:

Scenario 1:
If $UF_{min} = UF_{component}$: The weight of the largest uncapped component has been increased to reach its maximum of x%. Consequently, it will be fixed until the end of the capping procedure.

Scenario 2:
If $UF_{min} = UF_{country_i}$: The weight of country i has been increased to reach its maximum of y% Consequently, it will be fixed until the end of the capping procedure.

Scenario 3:
If $UF_{min} = UF_{supersector_j}$: The weight of super-sector j has been increased to reach its maximum of z% Consequently, it will be fixed until the end of the capping procedure.

Scenario 4:
If $UF_{min} = UF_{index}$: All predefined criteria are met and the capping procedure ends.

In scenarios 1, 2 and 3, step 2 of the above defined capping iteration is reapplied to the uncapped components until scenario 4 occurs.

13.2.4. ONGOING MAINTENANCE

Replacements: A deleted stock is not replaced. Stocks deleted from the STOXX Global TMI are deleted from the STOXX Global Broad Infrastructure index.

Fast Exit: Not applicable.

Fast entry: Not applicable.

Spin-Offs: Spin-off companies are not added permanently.

13.3. STOXX GLOBAL 3D PRINTING INDEX FAMILY

13.3.1. OVERVIEW

The STOXX Global 3D Printing Tradable index aims to select the top 30 companies related to the 3D Printing sector (>1% of revenues) with tradability criteria (Average Daily Traded Value (ADTV), Free-Float Market Capitalization, Weighting Cap Limits and Developed Country status).

The STOXX Global 3D Printing Pureplay index aims select the top 30 companies highly related to the 3D Printing sector (>10% of revenues) with lower tradability criteria (Average Daily Traded Value (ADTV), Free-Float Market Capitalization)

Universe: The index universe is defined as all companies (equity and ADR lisitings) listed in the STOXX investable universe as defined in section 4.2

Weighting scheme:
STOXX Global 3D Printing Tradable: price-weighted with a weightfactor to achieve an equal weighting
STOXX Global 3D Printing Pureplay: Free-Float Market capitalization weighted

Base value and date: 100 on September 17, 2010
Index types and currencies: Price, net return, gross return in EUR and USD.

13.3.2. INDEX REVIEW

Selection and composition list for the STOXX Global 3D Printing Tradable:
The top 50 companies with involvement into 3D Printing are selected from the universe. Companies are excluded if they do not fulfill the following criteria[20]:

- » ADTV 3Months > 250,000 EUR.
- » Free Float Market Capitalization > 80 mln EUR.
- » Revenues from 3D Printing > 1%.
- » The assigned country belongs to the developed market countries as defined by STOXX. Please refer to section 4.3 for further details.

The remaining companies are ranked according to the Free Float Market Capitalization. The top 30 companies are selected. In case there are less component in the universe, all eligible companies are selected.

Selection and composition list for the STOXX Global 3D Printing Pureplay:
The top 50 companies with involvement into 3D Printing are selected from the universe. Companies are excluded if they do not fulfill the following criteria[20]:

- » ADTV 3 months > 25,000 EUR.
- » Free Float Market Capitalization > 10 mln EUR.
- » Revenues from 3D Printing > 10%.

The remaining companies are ranked according to the Free Float Market Capitalization. The top 30 companies are selected. In case there are less component in the universe, all eligible companies are selected.

---

[20] Revenues provided by Marketline as of the last business day of July; free-float market capitalization for current STOXX components is as of the last business day of July and for new components as provided by Marketline as of the last business day of July.

Review frequency: The index is reviewed annually in September

Weighting cap factors:
STOXX Global 3D Printing: All components are equal-weighted. The weightings are published on the second Friday of each quarter, one week prior to quarterly review implementation using Thursday's closing prices.
Weighting cap factor = (100,000,000,000 x initial weight / closing price of the stock in EUR) and rounded to integers.

STOXX Global 3D Printing Pureplay: the component weights are capped at 20%

Derived indices: Not applicable.

13.3.3. ONGOING MAINTENANCE

Replacements: Deleted stocks are not replaced.

Fast Exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off companies are not added permanently.

13.4. STOXX LOW CARBON

13.4.1. OVERVIEW

The constituents for the STOXX Low Carbon family of indices will be selected from the STOXX Global 1800 universe, excluding coal companies. Companies are selected based on their Carbon Intensity Data (Scope 1 + Scope 2 Greenhouse Gas emissions (GHG) / Revenue ($million)).

The STOXX Low Carbon family of indices consists of the following groups:

- Low Carbon indices: Global, Regional and Country Low Carbon indices
- Blue chip indices: Global, Regional and Country ICB Industry Top 50, 100 or 400 indices
- Reported data indices: Global, Regional and Country Reported Carbon data indices
- Global ex Countries and ex Regions indices
- Global and Regional Low Carbon Footprint indices
- STOXX Global Climate Change Leaders Index

Universe:
All securities from the STOXX Global 1800 index.

Weighting scheme:
Indices are price weighted with a weight factor based on the free-float market capitalization multiplied with the corresponding Z-score carbon intensity factor of each constituent.

Additionally, the Top 50, 100 or 400 indices will be offered with an Equally Weighted version.

A Weight Cap of 5% are applied to all indices.

Base value and date:
100 on 19 December 2011

Index types and currencies:
Price, net and gross return in EUR and USD. Regional indices (e.g. Japan and ex Australia) in JPY and AUD.

13.4.2. INDEX REVIEW

Selection list:
Effective up until September 2020 review, components are selected from the STOXX Global 1800 universe, excluding ICB Code 1771 (Coal). Effective with September 2020 review, components are selected from the STOXX Global 1800 universe, excluding ICB Code 60101040 (Coal).

The indices will be defined by the parent index (see table below):

Underlying Parent Index	Associated Carbon Index
STOXX Global Total Market Index	STOXX Global Climate Change Leaders Index
STOXX Global 1800 index	STOXX Global 1800 Low Carbon index STOXX Europe 600 Low Carbon index

13. STOXX THEME INDICES

	EURO STOXX 50 Low Carbon index EURO STOXX Low Carbon index STOXX USA Low Carbon index STOXX Japan Low Carbon index STOXX Global Low Carbon Footprint index STOXX Europe Low Carbon Footprint index STOXX Global Reported Low Carbon index STOXX Europe Reported Low Carbon index EURO STOXX Reported Low Carbon index STOXX USA Reported Low Carbon index STOXX Global Low Carbon 100 index STOXX Global Low Carbon 400 index STOXX Europe Low Carbon 50 index STOXX Europe Low Carbon 100 index STOXX USA Low Carbon 50 index STOXX Global Low Carbon 100 Equal Weight index STOXX Global Low Carbon 400 Equal Weight index STOXX Europe Low Carbon 50 Equal Weight index STOXX Europe Low Carbon 100 Equal Weight index STOXX USA Low Carbon 50 Equal Weight index STOXX Global 1800 ex USA Low Carbon index STOXX Global 1800 ex Japan Low Carbon index STOXX Global 1800 ex Australia Low Carbon index STOXX Global 1800 ex Europe Low Carbon index

Component selection:
Components are screened according to their Carbon Intensity as defined:
Carbon Intensity = (Scope 1 + Scope 2 GHG emissions) / Revenue (USD million))

The data consists of both Reported (from CDP: companies voluntarily annually report, amongst others, Scope 1 & 2 GHG emissions) and Estimated data (from ISS-Ethix Climate Solutions, who uses, amongst others, CDP data to estimate GHG emissions with a model developed in cooperation with the Zurich ETH university, for companies that do not report to CDP). Should data not be available for a security, the security will be excluded from the universe.

For the following explanation, please read together with the matrix above.

1. Low Carbon indices: Global, Regional and Country Low Carbon indices:
    - From the Universe, select all companies that have both Reported and Estimated Carbon Intensity data.
2. Blue chip indices: Global, Regional and Country ICB Industry Top 50, 100 or 400 indices.
    - From the Universe, companies are grouped by ICB Industry and all companies that have both Reported and Estimated Carbon Intensity data are selected.
    - Rank the companies in ascending order by Carbon Intensity. Select the top N_{EI} companies by industry with the lowest Carbon Intensity figures to create both

Global, Regional and Country Industry Top 50 / 100 / 400 indices, by the following process for each of the ICB Industries:

$$N_{EI} = \frac{N_{Index}}{N_I}$$

rounded to the lower integer and where:

N_{EI}	=	number of selectable Equities for Industry I
N_{Index}	=	required number of Constituent Elements for the index
N_I	=	number of ICB Industries represented by the Equities

In case the number of equities selected across all Industries is not sufficient to reach the required number of Constituent Elements, the remaining Equities will be selected among those with the highest ranking (i.e. lowest emission intensity), where one constituent at a time is selected from each ICB Industry, starting with the ICB Industry where the next in line company has the lowest emission intensity, then moving to the next ICB Industry and so forth.

3. Reported data indices: Global, Regional and Country Reported Carbon data indices.
   - From the Universe, select only companies that have Reported Carbon Intensity data from CDP.

4. Global ex Countries and ex Regions indices:
   - From the Universe, exclude companies from Countries and Regions as defined in the table above

5. Global and Regional Low Carbon Footprint indices:
   - From the Universe, follow a 3 step process.
   - Step 1: Effective up until Septemeber 2020 review, exclude the following ICB Supersectors: Chemicals (ICB code 1300), Utilities (ICB code 7500), Oil & Gas (ICB code 0500), Construction & materials (ICB code 2300), Travel & Leisure (ICB code 5700), Real Estate (ICB code 8600) and Basic Resources (ICB code 1700): Effective with Septemeber 2020 review, exclude the following ICB Supersectors: Chemicals (ICB code 5520), Utilities (ICB code 6510), Energy (ICB code 6010), Construction & materials (ICB code 5010), Travel & Leisure (ICB code 4050), Real Estate (ICB code 3510) and Basic Resources (ICB code 5510)
   - Step 2: Rank the remaining companies by Carbon Intensity.
   - Step 3: From the remaining universe from step 2, exclude the 10% companies with the highest Carbon Intensities.

6. STOXX Global Climate Change Leaders Index:
   - Components are selected from the CDP A-List (formerly also known as the CDP Climate Performance Leadership) dataset. For more details, see https://www.cdp.net/en-US/Pages/disclosure-analytics.aspx.
   - Since the CDP Climate A-list may contain constituents which fall outside the STOXX Global 1800 universe, the universe has been extended to the STOXX Global Total Market index universe. Should a company from the A-list not be contained within the

STOXX Global Total Market index, it will be excluded and will not be eligible for the index.

Weighting scheme:
Price weighted with a weight factor based on the free-float market capitalization multiplied with the corresponding Z-score carbon intensity factor of each constituent:

Determination of free-float market capitalization weights:

$$w_{it} = \frac{p_{it} \cdot n_{it} \cdot ff_{it}}{\sum_{i=1}^{n} p_{it} \cdot n_{it} \cdot ff_{it}}$$

w_{it} = Free Float Market Capitalization weight of company (*i*) at time (*t*)
p_{it} = Price of company (*i*) at time (*t*)
n_{it} = Number of shares of company (*i*) at time (*t*)
ff_{it} = Free-float factor of company (*i*) at time (*t*)
n_{it} = Number of shares

Step 1: For the Low Carbon, blue chip, reported data, global ex countries and ex regions and global and regional low carbon footprint indices:
Calculate the Z-Score for the *sample* (the sample mean & standard deviation are calculated):

$$z_{it} = \frac{x_{it} - \overline{X}_s}{S_s}$$

z_{it} = Z-Score for company (i) at time (t)
x_{it} = Carbon Intensity value for company (i) at time (t)
$\overline{X}_s$ = Mean of the sample
S_s = Standard Deviation of the sample

For the STOXX Global Climate Change Leaders and the EURO STOXX 50 Low Carbon index:
Calculate the Z-Score for the *population* (the population mean & standard deviation are calculated):

$$z_{it} = \frac{x_{it} - \overline{X}_p}{S_p}$$

z_{it} = Z-Score for company (i) at time (t)
x_{it} = Carbon Intensity value for company (i) at time (t)
$\overline{X}_p$ = Mean of the population
S_p = Standard Deviation of the population

Step 2: Free-float market capitalization multiplied with the corresponding Z-score carbon intensity factor of each constituent:
For negative Z-scores (these companies will be over-weighted):

$Wz_{it:z<0} = w_{it} * (1 - z_{it})$

For positive Z-scores (these companies will be under-weighted):

$Wz_{it:z\geq 0} = w_{it} * \left(\frac{1}{1 + z_{it}}\right)$

Step 3: Weights from Step 2 needs to be normalized to 100:

$W_{it} = \left(\frac{Wz_{it}}{\sum Wz_{it}}\right)$

Step 4: Calculate the weighting factor for each component:
Weighting factor = W_{it} * (100,000,000,000,000 / closing price of the stock in EUR), rounded to integers.

For the Equally Weighted indices:
All components are equal-weighted. The weighting factors are published on the second Friday of the quarter, one week prior to quarterly review implementation using Thursdays' closing prices.

Weighting Cap factors:
All indices are subject to a 5% capping per component and the equal-weighted versions are rebalanced quarterly to equal weights.
Review frequency:
The components are reviewed annually in December since carbon data only becomes available annually, during October or November, when published by CDP. In the event that CDP is not able to provide data to STOXX by the cut-off date of first week of December preceding the review in December, the review would take place during the following quarterly review in March.
Shares, Free Float, weight factor (based on the free-float market capitalization multiplied with the corresponding Z-score carbon intensity factor) and Cap Factors are reviewed quarterly.

13.4.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced. If a company is deleted from the STOXX Global 1800 index, but remains in the STOXX Global Total Market index, the stock will not be excluded from the STOXX Low Carbon indices.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one trading day and is then removed from the index.

13.5. STOXX CLIMATE IMPACT AND CLIMATE AWARENESS

13.5.1. OVERVIEW

The STOXX Climate Impact Ex Global Compact and Controversial Weapons and STOXX Climate Impact Ex Global Compact, Controversial Weapons and Tobacco indices will include companies with CDP Performance Bands A to B- (pre-2016 Performance Band A to B). Band A and A- includes companies that are seen as leading companies in terms of climate change: these companies are disclosing particular “actions” which mark them as leaders, as well as high scores across all other levels of the CDP Scoring matrix. Scoring requires detailed company-specific explanations. Band B and B- includes companies that “manage” climate change: companies seek evidence of climate actions implemented and requires company-specific understanding of climate change related issues.

The STOXX Climate Awareness Ex Global Compact and Controversial Weapons and STOXX Climate Awareness Ex Global Compact, Controversial Weapons and Tobacco indices will include companies with a CDP Performance Band A to C- (pre-2016 Performance Band A to C). In addition to the description above of Band A and B, Band C and C- identifies companies who have looked at implications of climate change for, and on, their business and recognizes a high level, contextual knowledge of environmental issues.

All versions will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening (GSS) assessment or are involved in Controversial Weapons activities, as identified by Sustainalytics. Additionally, a version will be available that adds an additional exclusion for the sub-sector Tobacco (Effective up until Septemeber 2020, ICB Code 3785. Effective with Septemeber 2020, ICB Code 45103010). The Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040) is always excluded from STOXX Low Carbon indices.

Universe:

For the Ex Global Compact Principles and Controversial Weapons indices: all securities from the STOXX Global 1800 index, excluding the Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040). Companies without a CDP Performance Band between A and C- will not be included in the index.

For the Ex Global Compact Principles, Controversial Weapons and Tobacco indices, the universe will be all securities fro]m the STOXX Global 1800 index, excluding the Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040) as well as the Tobacco sector (Effective up until Septemeber 2020, ICB Code 3785. Effective with Septemeber 2020, ICB Code 45103010).

Only companies that will be a constituent of the STOXX Global 1800 index when the selection list is published in November each year will be considered for the annual review performed in December.

Weighting scheme:

Indices are price weighted with a weight factor based on the free-float market capitalization percentage weight multiplied with the corresponding Z-score carbon intensity factor of each constituent.

All indices are subject to a 5% capping per component

Base value and date:
100 on 24 December 2012
Index types and currencies:
Price, net and gross return in EUR and USD.

13.5.2. INDEX REVIEW

Selection list:
For the Climate Impact Ex Global Compact and Controversial Weapons Indices: from the STOXX Global 1800 index, exclude the Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040). For the Climate Impact Ex Global Compact Principles, Controversial Weapons and Tobacco Indices: from the STOXX Global 1800 index, exclude the Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040) and the Tobacco sector (Effective up until Septemeber 2020, ICB Code 3785. Effective with Septemeber 2020, ICB Code 45103010). In both cases, exclude companies that are non-compliant based on the Global Standards Screening assessment or are involved in Controversial Weapons, as identified by Sustainalytics.

For the Climate Awareness Ex Global Compact and Controversial Weapons Indices: from the STOXX Global 1800 index, exclude the Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040). For the STOXX Climate Awareness Ex Global Compact Principles, Controversial Weapons and Tobacco Indices: from the STOXX Global 1800 index, exclude the Coal sector (Effective up until Septemeber 2020, ICB Code 1771. Effective with Septemeber 2020, ICB Code 60101040) and the Tobacco sector (Effective up until Septemeber 2020, ICB Code 3785. Effective with Septemeber 2020, ICB Code 45103010). In both cases, exclude companies that are non-compliant based on the Global Standards Screening assessment or are involved in Controversial Weapons, as identified by Sustainalytics.

Only companies that will be a constituent of the STOXX Global 1800 index when the selection list is published in November each year will be considered for the annual review performed in December.

Component selection:
For the STOXX Climate Impact Ex Global Compact and Controversial Weapons Indices: from the selection list, exclude companies identified as non-compliant based on Sustainalytics Global Standards Screening assessment, or are involved in Controversial Weapons. Select all remaining companies with a CDP Performance Band between A and B-.

For the STOXX Climate Impact Ex Global Compact, Controversial Weapons and Tobacco Indices: from the selection list, exclude companies identified as non-compliant based on Sustainalytics Global Standards Screening assessment, or are involved in Controversial Weapons. Select all remaining companies with a CDP Performance Band between A and B-.

For the STOXX Climate Awareness Ex Global Compact and Controversial Weapons Indices: from the selection list exclude companies identified as non-compliant based on Sustainalytics Global

Standards Screening assessment, or are involved in Controversial Weapons. Select all remaining companies with a CDP Performance Band between A and C-.

For the STOXX Climate Awareness Ex Global Compact, Controversial Weapons and Tobacco Indices: from the selection list exclude companies identified as non-compliant based on Sustainalytics Global Standards Screening assessment, or are involved in Controversial Weapons. Select all remaining companies with a CDP Performance Band between A and C-.

Only companies that will be a constituent of the STOXX Global 1800 index when the selection list is published in November each year will be considered for the annual review performed in December.

Weighting scheme:
Price weighted with a weight factor based on the free-float market capitalization percentage weight multiplied with the corresponding Z-score carbon intensity factor of each constituent:

Step 1: Calculate the Z-Score for the population (the population mean & standard deviation are calculated):

$$z_{it} = \frac{x_{it} - \overline{X}_p}{S_p}$$

z_{it} = Z-Score for company (i) at time (t)
x_{it} = Carbon Intensity value for company (i) at time (t)
$\overline{X}_p$ = Mean of the population
S_p = Standard Deviation of the population

Step 2: Free-float market capitalization percentage weight (as per usual STOXX calculation methodology) multiplied with the corresponding Z-score carbon intensity factor of each constituent:

1) For negative Z-scores (these companies will be over-weighted):
$$Wz_{it:z<0} = w_{it} * (1 - z_{it})$$

2) For positive Z-scores (these companies will be under-weighted):
$$Wz_{it:z\geq 0} = w_{it} * \left(\frac{1}{1 + z_{it}}\right)$$

Step 3: Weights from Step 2 needs to be normalized to 100%:

$$W_{it} = \left(\frac{Wz_{it}}{\sum Wz_{jt}}\right)$$

Step 4: Calculate the weighting factor for each component:
Weighting factor = W_{it} * (100,000,000,000,000 / closing price of the stock in EUR), rounded to integers.

Weighting Cap factors:

All indices are subject to a 5% capping per component.

Review frequency:
The components are reviewed annually in December when data becomes available from CDP. In the event that CDP is not able to provide data to STOXX by the cut-off date of first week of December preceding the review in December, the review would take place during the following quarterly review in March.

Shares, Free Float, weight factor (based on the free-float market capitalization multiplied with the corresponding Z-score carbon intensity factor) and Cap Factors are reviewed quarterly.

13.5.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced. If a company is deleted from the STOXX Global 1800 index, but remains in the STOXX Global Total Market index, the stock will not be excluded from the relevant index. If a constituent is deleted, it's weight will be distributed among the remaining constituents in proportion to their weight.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one trading day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

13.6. STOXX USA ETF INDUSTRY INDEX

13.6.1. OVERVIEW

The STOXX USA ETF Industry Index is comprised of 20 companies from the United States exposed to Exchange-traded funds (ETFs) ecosystem. This includes companies involved in ETF issuing, stock/ETF execution (stock exchanges), index providers, and other positively exposed companies to the ecosystem.

Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the ETFs ecosystem.

Universe: The index universe is defined by all the stocks included in the STOXX USA Total Market Index, as observed on the review effective date.

Weighting scheme: Free Float Market Cap weighted with a 10% weighting capfactor per constituent.

Base values and dates: 100 on 20 June 2016

Index types and currencies: Price, Net and Gross Return in USD

Dissemination calendar: STOXX Americas Calendar

13.6.2. INDEX REVIEW

Selection list: The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the base universe are screened for the below information:

i. 6-month Average Daily Traded Volume (ADTV) in USD
ii. Free-float market capitalization
iii. ICB classification: stocks classified as belonging to the eligible ICB list
iv. Revenue information, as captured by Revere's detailed industry classification system (RBICS)

If any of the fields i), ii), iii) and iv) above have missing information for a stock, then that company is excluded from the selection process.

The screening filters below are then applied on the initial universe, in the order they are listed, such that the selection list constitutes of stocks that:

» Have 6-month Average Daily Traded Volume (ADTV) in USD equal to or exceeding 2 million USD

» Minimum size: free-float market capitalization 500 million USD

» ICB inclusion: Companies belonging to Asset Managers and Custodians, Financial Data Providers, Diversified Financial Services, Investment Services, and Software ICB sectors (30202010, 30201030, 30202000, 30202015, and 10101015 ICB codes) are included.

» Revenue: Aggregated revenue exposure equal to or exceeding 50%, from the RBICS sectors associated (see table below)

List of RBICS sectors associated for the purposes of component selection:

Nr	Sector
1	Alternative Exchanges and ECNs
2	Diverse Asset Management and Financial Advisors
3	Equity Fund Managers
4	ETFs and Unit Investment Trust Managers
5	Financial Reference Data Content Providers/Sites
6	General Professional Content Providers and Sites
7	Institutional Financial and Research Content Sites
8	Multi-Type Financial Data Content Providers/Sites
9	Other Clearing and Settlement Services
10	Other Traditional Investment Product Managers
11	Retail Advisory and Brokerage Services
12	Securities Exchanges
13	Credit and Information Bureaus

Composition list: The largest 20 Constituents on the selection list, based on free float market capitalization are selected for final index composition.

The STOXX USA ETF Industry Index aims to have 20 constituents at each review. If the screening process described above results in being too restrictive, the revenue filter is progressively lowered in steps of 5%, and the selection process is repeated until the number of constituents is equal to 20.

Review frequency: The reviews are conducted on a semiannual basis in, June and December. The review cut-off date for the underlying data is the last dissemination day of the month prior to the review month.

Weighting cap factors: Components are capped to 10% at review.

13.6.3. ONGOING MAINTENANCE

Replacements: A deleted company will not be replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

13. STOXX THEME INDICES

Spin-offs: Spin-offs are not added permanently.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

13.7. STOXX EUROPE LUXURY 10 INDEX

13.7.1. OVERVIEW

The STOXX Europe Luxury 10 index aims to select 10 companies that are positively exposed to European luxury goods. This includes companies involved in luxury/fashion accessories, cosmetics/ other care products and high-class vehicles.

Revere (RBICS) data allow for a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure.

Universe: The index universe is defined by all the stocks included in the STOXX Europe Total Market Index, as observed on the review effective date.

Weighting scheme: Free float market cap weighted considering a luxury multiplier and a 20% weighting cap factor per constituent

Base values and dates: 1000 on Jun 20, 2016

Index types and currencies: Price, Net and Gross return in EUR and USD

Dissemination calendar : STOXX Europe Calendar

13.7.2. INDEX REVIEW

Selection: All stocks in the base universe are screened for the below information at the review cut-off date:

i. 3-month Median Daily Traded Volume (MDTV) in USD
ii. 3-month and 12-month historical volatility in USD
iii. Free-float market capitalization in USD
iv. ICB classification: stocks classified as belonging to the eligible ICB list
v. Revenue information, as captured by Revere's detailed industry classification system (RBICS)

If any of the fields i), ii), iii), iv) and v) above have missing information for a stock, then that company is excluded from the selection process.

The screening filters below are then applied on the initial universe, in the order they are listed, such that the selection list constitutes of stocks that:

» Have 3-month Median Daily Traded Volume (MDTV) in USD equal to or exceeding 1 million USD

13. STOXX THEME INDICES

» Volatility filter: Constituents with an absolute value of the Z-Score[21] higher than 5 (|Z-Score| >5) are excluded.

» Minimum size: free-float market capitalization 200 million USD

» ICB Subsector inclusion: Companies belonging to Clothing and Accessories, Luxury Items, Apparel Retailers, Medical Supplies, Footwear, Recreational Vehicles and Boats, Automobiles ICB Subsectors are included.

» Luxury Screen: A combination between ICB classification, target countries and aggregated revenue exposure equal to or exceeding certain thresholds from the RBICS sectors associated (see table below).

List of RBICS associated for the purposes of component selection:

Nr	Sector
1	Activewear and Outerwear Apparel Production
2	Automobile Financing
3	Boat Makers
4	Casual and Dress Footwear Production
5	Conventional Engine Car Manufacturers
6	General Personal Care and Cleaning Products Makers
7	Hair Care Products
8	Jewelry and Gems Production
9	Leather Handbags and Luggage Goods Production
10	Mixed Apparel and Footwear Production
11	Motorsports
12	Multi-Type Apparel and Accessories Production
13	Multi-Type Apparel Production
14	Multi-Type Car Manufacturers
15	Other Health and Personal Care Stores
16	Other Managed Care
17	Powertrain Manufacturing
18	Premium Wear Production
19	Skin Care Products
20	Sunglasses and Prescription Frames Production

[21] The calculation of the maximum between the two Z -Scores (inverse of the 3-month and inverse of the 12-month price volatility in USD)

List of luxury screens associated for the purposes of component selection:

ICB subsector	Target countries	Revenue threshold
Clothing and Accessories	France, United Kingdom, Italy	>=50%
Luxury Items	France, Switzerland, United Kingdom	>=50%
Medical Supplies	France, Switzerland, United Kingdom	>=50%
Apparel Retailers	France, Switzerland, United Kingdom	>=50%
Footwear	Italy, France, Germany	>=50%
Recreational Vehicles and Boats	Italy, United Kingdom, Germany	>=50%
Automobiles	Italy, United Kingdom, Germany	=100%

Selection list: To obtain the June selection list, all eligible companies are ranked according to their free-float market capitalization multiplied by aggregate exposure.

On a quarterly basis in September, December and March, the June selection list is updated for liquidity and volatility criteria. The cut-off date for this data is the last dissemination day of August, November and February respectively.

Composition list: The highest 10 Constituents on the selection list are selected for final index composition.

Review frequency: Annual review is conducted in June. The review cut-off date for the underlying data is the last dissemination day of the month prior to the review month. Changes are implemented after the close of the third Friday and effective on the next trading day.

On a quarterly basis in September, December and March, components are screened for liquidity and volatility criteria. The cut-off date for this data is the last dissemination day of August, November and February respectively. If a component fails the liquidity or volatility screens, it is removed from the index and replaced with the highest-ranked non-component that fulfils the liquidity and volatility criteria in the selection list, the weight of the removed company is allocated to the new component. If a replacement is not available, the weight of the removed stock will be distributed across the components. Changes are implemented after the close of the third Friday and effective on the next trading day.

Weighting cap factors: Components are weighted by free float market capitalization with a luxury multiplier and individual capping. This is achieved by following steps 1-3 below.

<u>Step 1:</u>

Constituents are weighted by their Free float market capitalization and multiplied by luxury exposure multiplier (see table below).

ICB Subsector (as of annual review date)	Multiplier
Clothing and Accessories	1.00
Luxury Items	1.00
Automobiles	1.00
Recreational Vehicles and Boats	1.00
Medical Supplies	0.50
Apparel Retailers	0.50
Footwear	0.50

Step 2:
Weight from Step 2 are normalized to 100 and Components are capped to 20% at review.

Step 3:
Calculate the weighting factor for each component:

Weighting cap factor = (100,000,000,000 x wi / closing price of stock in USD), rounded to integers.

Closing price of stock as of the Thursday prior to the second Friday of the review month in June.

Wi : Weights in Step 2.

13.7.3. ONGOING MAINTENANCE

Replacements: A deleted stock is replaced with the highest-ranked non-component as long as non-components are available in the selection list. The weight of the removed company is allocated to the new component. If a replacement is not available, the weight of the removed stock will be distributed across the components. The selection list is updated on a quarterly basis in September, December and March based on liquidity and volatility as defined in the review process. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.1. STOXX EUROPE SUSTAINABILITY INDICES

14.1.1. OVERVIEW

Universe: The index universe is defined by the STOXX Europe 600.

Weighting scheme: The index is free-float market capitalization weighted.
Base value and date: 100 as of 31 December 1998.
Index types and currencies: Price, net return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website[22].

14.1.2. INDEX REVIEW

Component selection

Components are selected from the STOXX Europe 600 indices according to their sustainability rating (combination of company and sector rating). All companies with a positive sustainability rating will be included in the index. A rating is defined as positive, if the combination of the company and the sector rating result in a shaded matrix field of the Sarasin Sustainability Matrix.
In deviation from Bank J. Safra Sarasin's standard approach, STOXX is including tobacco, adult entertainment and defense & armament in the universe for STOXX Europe Sustainability and EURO STOXX Sustainability. These criteria are considered for exclusion in the indices STOXX Europe/ EURO STOXX Sustainability ex AGTAF/ ex AGTAFA respectively.

Sarasin Sustainability Matrix®

Company \ Sector	low	below	average	above	high
high	1	2	3	4	5
above	6	7	8	9	10
average	11	12	13	14	15
below	16	17	18	19	20
low	21	22	23	24	25

Review frequency: The index is reviewed annually in September.

Weighting cap factors: The index is free-float market capitalization weighted without cappings.

[22] http://www.STOXX.com/download/indices/vendor_codes.xls

14. STOXX SUSTAINABILITY INDICES

Derived indices: The EURO STOXX Sustainability Index is a subset of the STOXX Europe Sustainability Index covering only Eurozone countries.

14.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced in the STOXX Sustainability indices.

Fast Exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off companies are not added permanently.

14. STOXX SUSTAINABILITY INDICES

14.2. STOXX EUROPE SUSTAINABILITY EX AGTAF/ EX AGTAFA

14.2.1. OVERVIEW

Universe: The index universe is defined by the STOXX Europe 600 Index excluding the sectors alcohol, gambling, tobacco, armaments, firearms (AGTAF) and adult entertainment (AGTAFA)

Weighting scheme: The index is free-float market capitalization weighted.
Base value and date: 100 on December 31, 1998.
Index types and currencies: Price, net return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website[23].

14.2.2. INDEX REVIEW

Component selection: Components are selected from the STOXX Europe Sustainability indices. Based on the Sarasin industry classification all companies which gain less than 5% of their revenues in the industries alcohol, gambling, tobacco, armaments, firearms (AGTAF) and / or adult entertainment (AGTAFA) are included in the index.
In deviation from Bank J. Safra Sarasin's standard approach, STOXX is including tobacco, adult entertainment and defense & armament in the universe for STOXX Europe Sustainability and EURO STOXX Sustainability. These criteria are considered for exclusion in the indices STOXX Europe/ EURO STOXX Sustainability ex AGTAF/ ex AGTAFA respectively.

Review frequency: The index is reviewed annually in September.
Weighting cap factors: The indices are free-float market capitalization weighted without cappings.

Derived indices: The EURO STOXX Sustainability Index ex AGTAF/ ex AGTFA Index covers only the following countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

14.2.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced in the STOXX Sustainability indices.

Fast Exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off companies are not added permanently.

[23] http://www.STOXX.com/download/indices/vendor_codes.xls

14. STOXX SUSTAINABILITY INDICES

14.3. STOXX SUSTAINABILITY BLUE-CHIPS

14.3.1. OVERVIEW

European sustainable blue-chip companies are included in the STOXX Europe Sustainability 40 Index and Eurozone companies in the EURO STOXX Sustainability 40 Index.

Universe: The indices are derived from the STOXX Europe Sustainability and the EURO STOXX Sustainability indices.

Weighting scheme: The indices are price-weighted.
Base value and date: 100 as of 31 December 1998.
Index types and currencies: Price, net return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website [24].

14.3.2. INDEX REVIEW

Component selection: Components are selected from the STOXX Europe Sustainability / EURO STOXX Sustainability indices. All companies are ranked according to their free-float market capitalization. The top 40 companies are selected, however, only a maximum of five companies per supersector can be included in the index.

Review frequency: The index is reviewed annually in September.

Weighting cap factors: Constituents are weighted according to the value of the company rating (score). The score is normalized by the maximum score of all eligible companies.
A weighting cap factor is calculated as follows: 1.000.000.000 x initial weight / closing price of stock, where the initial weight is calculated as normalized score/ sum of normalized score of each constituent. Each component's weight is than calculated as: closing price (EUR) x weighting factor. Component weight are not capped.

Derived indices: Not applicable.

14.3.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced in the STOXX Sustainability indices.

Fast Exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off companies are not added permanently.

[24] http://www.STOXX.com/download/indices/vendor_codes.xls

14. STOXX SUSTAINABILITY INDICES

14.4. STOXX ESG SELECT KPIS INDICES

14.4.1. OVERVIEW

The STOXX ESG Select KPIs Indices offer a broad market exposure that is tilted towards companies that score better with respect to a small set of environmental, social, and governance (ESG) KPIs. A global and a US version exist.

Universe: The universe are the STOXX Global 1800 Index and the US companies in the STOXX Global 1800 Index respectively.

Weighting scheme: The indices are weighted by free-float market cap combined with a cap factor that depends on a company's aggregate ESG KPI score. All components are subject to a cap of 5%.

Base values and dates: 1000 on May 18, 2016.

Dissemination calendar: STOXX Global calendar for STOXX Global ESG Select KPIs and STOXX US calendar for STOXX USA ESG Select KPI

14.4.2. INDEX REVIEW

Component list and weighting: Effective up until September 2020 review**,** in a first step, all companies that are non-compliant based on Sustainalytics Global Standards Screening (GSS) assessment, are involved in Controversial Weapons, or are coal miners (ICB Subsector 1771) are excluded from the universe.

Effective with September 2020 review**,** in a first step, all companies that are non-compliant based on Sustainalytics Global Standards Screening (GSS) assessment, are involved in Controversial Weapons, or are coal miners (ICB Subsector 60101040) are excluded from the universe.

Effective with March 2023 review, in a first step, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Unconventional Oil & Gas, Thermal Coal, Tobacco, Weapons, Private Prisons and Controversy Ratings.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

14. STOXX SUSTAINABILITY INDICES

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons (0% revenue threshold)
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Product Involvement: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**
  - **i) Small Arms:**
    »>=5% revenues from manufacturing and selling assault weapons to civilian customers
    »>=5% revenues from manufacturing and selling key components of small arms
    »>=5% revenues from retail and/or distribution of assault weapons
    »>=5% revenues from retail and/or distribution of small arms (non-assault weapons)
    »>=5% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers

  - **ii) Military Contracting:**
    »>=5% revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons
    »>=5% revenues from tailor made products and/or services that support military weapons
    »>=5% revenues from non-weapons related tailor-made products and/or services to the military or defense industry

- **Unconventional Oil & Gas:**
  - **i) Arctic Oil and Gas Exploration:**
    »>=5% revenues Oil & Gas exploration & extraction in Arctic regions AND <=25 Carbon Management Score (Products and Services)

  - **ii) Oil Sands:**
    »>=5% revenues from extracting oil sands AND <=25 Carbon Management Score (Products and Services)

  - **iii) Shale Energy:**
    »>=5% revenues from shale energy exploration and/or production AND <=25 Carbon Management Score (Products and Services)

- **Thermal Coal:**
  »>=5% revenues from thermal coal extraction (including thermal coal mining and exploration)
  >=30% revenues from power generation: coal-fired electricity, heat or steam generation / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

14. STOXX SUSTAINABILITY INDICES

>=5% revenues from power generation: coal-fired electricity, heat or steam generation / thermal coal electricity production (including utilities that own/operates coal-fired power plants) AND <=25 Carbon Management Score (Operations)

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>=5% revenues from supplying tobacco-related products/services
  »>=5% revenues from the distribution and/or retail sale of tobacco products.

- **Private Prisons:**
  »>=5% revenues from private prisons
  »>=5% revenues from private prisons operations

» **Controversy Ratings:** STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
» Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

If information on the Global Standards Screening, Controversial Weapons, Controversy Ratings or Carbon Risk Management Scores are missing for a company, then it is excluded from the eligible universe.

Secondly, for all remaining companies, 5 KPIs are determined and standardized by industry[25]. The standardized KPIs are aggregated using a linear combination with coefficients as stated in the table below.

KPI	Coefficient
CDP emission reduction target (binary)	0.4
% of independent board members	0.05
% women on the board	0.3
Policy against child labor (binary)	0.4
Golden 'chute agreement (binary)	-0.3

Thirdly, all companies with an ESG score greater or equal to the median ESG score build up the composition list.

[25] For each company the average KPI within its ICB industry is subtracted and the result is divided by the standard deviation of the KPI within its industry. Afterwards companies without a KPI are assigned the mean (0).

14. STOXX SUSTAINABILITY INDICES

The companies on the composition list are grouped into quintiles by their respective aggregated ESG score and are assigned cap factors ranging from 1.5 (higher score) to 0.5 (lower score) in 0.25 increments.
The companies are weighted by the product of their free-float market cap and the cap factor:

$$w_i = \frac{ffmcap_i \cdot cf_i}{\sum_{j\ in\ comp.list} ffmcap_j \cdot cf_j}$$

For the global version, country weights are capped to not deviate from those of the universe by more than one percentage point (1%).

Components are capped to a maximum weight of 5%.

Review frequency: The indices are reviewed and rebalanced quarterly. The data cut-off date is the last business day of the month preceding the review month.

14.4.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global 1800 are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-offs are not added permanently.
Mergers and takeovers: The original stock is replaced by the surviving stock.

14. STOXX SUSTAINABILITY INDICES

14.5. STOXX REGIONAL INDUSTRY NEUTRAL ESG AND STOXX REGIONAL EXCLUDING TOBACCO INDUSTRY NEUTRAL ESG INDICES

14.5.1. OVERVIEW

The STOXX Regional Industry Neutral ESG and STOXX Regional Excluding Tobacco Industry Neutral ESG indices track the performance of the leading companies with regard to Environmental, Social and Governance criteria, based on ESG indicators based on a transparent rating model as provided by Sustainalytics.

Universe:
The index universe is defined by all the stocks included in the STOXX Global 1800 Index, as observed on the review effective date. Companies without a rating will not be included in the index.

Weighting scheme:
Free Float Market Cap with a capping algorithm to calculate component weights so that the ICB Industry weight of the index is similar to the ICB Industry weight of the Benchmark.

Base values and dates:
100 on 24 September 2012.

14.5.2. INDEX REVIEW

Selection list:
All securities from the STOXX Global 1800 index. Companies without a rating will not be included in the index.

Before starting with the selection process a set of exclusion criteria are applied.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company

14. STOXX SUSTAINABILITY INDICES

» >10% of voting rights of a company is owned by the involved company

Effective up until September 2020 review, additionally, for the STOXX Europe Excluding Tobacco Industry Neutral ESG and STOXX North America Excluding Tobacco Industry Neutral ESG indices, the sub-sector Tobacco (ICB Code 3785) is also excluded. Effective with September 2020 review, additionally, for the STOXX Europe Excluding Tobacco Industry Neutral ESG and STOXX North America Excluding Tobacco Industry Neutral ESG indices, the sub-sector Tobacco (ICB Code 451030) is also excluded.

Component selection:

- **Regional Unbiased Industry Neutral ESG indices**

Regional Industry Neutral ESG indices for Europe and North America are created by selecting companies with an Environmental (E), Social (S) and Governance (G) score >=50 for each of the E, S & G criteria, from the dataset as provided by Sustainalytics.

For the STOXX Europe Industry Neutral ESG and STOXX North America Industry Neutral ESG all companies fulfilling the requirements are selected.

The STOXX Europe Industry Neutral ESG 200 & 250 and the STOXX North America Industry Neutral ESG 150 & 200 indices are selected from the constituents of the broad indices (STOXX Europe Industry Neutral ESG and STOXX North America Industry Neutral ESG). For each constituent, Sustainalytics provides a Total Rating Score.

For the universe of the broad indices, rank the companies in descending order in terms of the Total Rating Score, i.e. from the highest to the lowest Total Rating Score.

For the Europe versions, select the top 200 and 250 companies. In the event where the 200th or 250th constituents have identical Total Rating Scores, the constituent with the highest free float market capitalization is selected.

For the North America versions, select the top 150 and 200 companies. In the event where the 150th or 200th constituents have identical Total Rating Scores, the constituent with the highest free float market capitalization is selected.

The following versions of the indices are available:

Benchmark Index	Associated ESG Index
STOXX Europe 600 Index	STOXX Europe Industry Neutral ESG STOXX Europe Industry Neutral ESG 200 STOXX Europe Industry Neutral ESG 250
STOXX North America 600 Index	STOXX North America Industry Neutral ESG STOXX North America Industry Neutral ESG 150 STOXX North America Industry Neutral ESG 200

- **Regional Excluding Tobacco Industry Neutral ESG indices**

14. STOXX SUSTAINABILITY INDICES

Effective up until September 2020 review, from the universe, exclude all companies from the sub-sector Tobacco (ICB Code 3785). Effective with September 2020 review, from the universe, exclude all companies from the sub-sector Tobacco (ICB Code 451030). Regional Excluding Tobacco Industry Neutral ESG indices for Europe and North America are created by selecting companies with an Environmental (E), Social (S) and Governance (G) score >=50 for each of the E, S & G criteria, from the dataset as provided by Sustainalytics.

For the STOXX Europe Excluding Tobacco Industry Neutral ESG and STOXX North America Excluding Tobacco Industry Neutral ESG all companies fulfilling the requirements are selected.

The STOXX Europe Excluding Tobacco Industry Neutral ESG 200 & 250 and the STOXX North America Excluding Tobacco Industry Neutral ESG 150 & 200 indices are selected from the constituents of the broad indices (STOXX Europe Excluding Tobacco Industry Neutral ESG and STOXX North America Excluding Tobacco Industry Neutral ESG). For each constituent, Sustainalytics provides a Total Rating Score.

For the universe of the broad indices, rank the companies in descending order in terms of the Total Rating Score, i.e. from the highest to the lowest Total Rating Score.

For the Europe Excluding Tobacco versions, select the top 200 and 250 companies. In the event where the 200th or 250th constituents have identical Total Rating Scores, the constituent with the highest free float market capitalization is selected.

For the North America Excluding Tobacco versions, select the top 150 and 200 companies. In the event where the 150th or 200th constituents have identical Total Rating Scores, the constituent with the highest free float market capitalization is selected.

The following versions of the indices are available:

Benchmark Index	Associated ESG Index
STOXX Europe 600 Index	STOXX Europe Ex Tobacco Industry Neutral ESG STOXX Europe Ex Tobacco Industry Neutral ESG 200 STOXX Europe Ex Tobacco Industry Neutral ESG 250
STOXX North America 600 Index	STOXX North America Ex Tobacco Industry Neutral ESG STOXX North America Ex Tobacco Industry Neutral ESG 150 STOXX North America Ex Tobacco Industry Neutral ESG 200

Weighting scheme:

All components are free float market cap weighted with an capping algorithm which delivers an ICB Industry Neutral weighting compared to the benchmark, on a quarterly basis. The weightings are published on the second Friday of each quarter, one week prior to quarterly review implementation using Thursday's closing prices.

Determination of free-float market capitalization weights:

14. STOXX SUSTAINABILITY INDICES

$$w_{it} = \frac{p_{it} \cdot n_{it} \cdot ff_{it}}{\sum_{i=1}^{n} p_{it} \cdot n_{it} \cdot ff_{it}}$$

wit = Free Float Market Capitalization weight of company (i) at time (t)
pit = Price of company (i) at time (t)
nit = Number of shares of company (i) at time (t)
ffit = Free-float factor of company (i) at time (t)
nit = Number of shares

Weighting Cap factors:
A capping algorithm is applied to calculate component weights so that the ICB Industry weight of the index is similar to the ICB Industry weight of the Benchmark.

Review frequency:
The components are reviewed annually in September. Shares, Free Float, and Capping are reviewed quarterly. For the capping procedure, the benchmark is defined as the new composition of the STOXX Europe 600 and STOXX North America 600 which becomes effective on the review date on the 3rd Friday of March, June, September and December.

14.5.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced. If a company is deleted from the STOXX Global 1800 index, but remains in the STOXX Global Total Market index, the stock will not be excluded from the relevant Regional or Regional Excluding Tobacco ESG index. If a constituents is deleted, it's weight will be distributed among the remaining constituents.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one trading day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.6. STOXX EUROPE 600 ESG-X INDEX

14.6.1. OVERVIEW

The objective of the STOXX Europe 600 ESG-X index is to reflect the STOXX Europe 600 index with standardized ESG exclusion screens applied for Global Standards Screening, Controversial Weapons, Thermal Coal and Tobacco Producers, with the aim of taking responsible investment criteria into account.

Universe: STOXX Europe 600

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on March 19, 2012.

For a complete list please consult the data vendor code sheet on the website[26]. Customized solutions can be provided upon request.

Index types and currencies: Price, net return and gross return in EUR and USD.

Dissemination calendar: STOXX Europe calendar

14.6.2. INDEX REVIEW

Selection list:
From the universe, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Tobacco and Coal.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons

[26] http://www.STOXX.com/download/indices/vendor_codes.xls

» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Tobacco:
STOXX will exclude companies that Sustainalytics identifies to be tobacco producers (0% revenue threshold).

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies to have:
»>25% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>25% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants).

Composition list: The composition list will consist of the companies that remain from the selection list once all the exclusion criteria have been applied.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: Components are capped at a maximum weight of 20%.

Derived indices: None.

14.6.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.7. STOXX BENCHMARK ESG-X INDICES

14.7.1. OVERVIEW

The objective of the STOXX Benchamark ESG-X indices is to reflect STOXX Benchmark Indices with standardized ESG exclusion screens applied for Global Standards Screening, Controversial Weapons, Thermal Coal and Tobacco Producers, with the aim of taking responsible investment criteria into account.

STOXX total market ESG-X indices
STOXX Australia Total Market ESG-X
STOXX Germany Total Market ESG-X
EURO STOXX Total Market ESG-X
STOXX Europe Total Market ESG-X
STOXX Developed Markets Total Market ESG-X
STOXX Nordic Total Market ESG-X
EURO STOXX Total Market Large ESG-X
EURO STOXX Total Market Mid ESG-X
STOXX Developed Markets Total Market Large ESG-X
STOXX Developed Markets Total Market Mid ESG-X
STOXX Emerging Markets Total Market Large ESG-X
STOXX Emerging Markets Total Market Mid ESG-X

STOXX country ESG-X indices
STOXX Australia 150 ESG-X
STOXX Canada 60 ESG-X
STOXX Canada 240 ESG-X
STOXX France 90 ESG-X
STOXX Italy 45 ESG-X
STOXX Japan 600 ESG-X
STOXX Singapore 75 ESG-X
STOXX Spain 30 ESG-X
STOXX UK 180 ESG-X
STOXX USA 500 ESG-X
STOXX USA 900 ESG-X

STOXX regional ESG-X indices
EURO STOXX 50 ESG-X
EURO STOXX ESG-X
STOXX Europe 50 ESG-X
STOXX Nordic 30 ESG-X
STOXX North America 600 ESG-X
STOXX Asia/Pacific 600 ESG-X
STOXX Global 1800 ESG-X
STOXX Global 3000 ESG-X
STOXX Developed Markets 2400 ESG-X
STOXX Emerging Markets 50 ESG-X

14. STOXX SUSTAINABILITY INDICES

STOXX Emerging Markets 800 LO ESG-X
STOXX Emerging Markets 1500 ESG-X
EURO STOXX Large ESG-X
EURO STOXX Mid ESG-X
EURO STOXX Small ESG-X
STOXX Europe Large 200 ESG-X
STOXX Europe Mid 200 ESG-X
STOXX Europe Small 200 ESG-X
EURO STOXX Banks ESG-X
STOXX Europe 600 Banks ESG-X

Universe: The index universe is defined by the corresponding STOXX benchmark index.

Base values and dates: 100 on March 19, 2012 for all indices except for the STOXX Emerging Markets ESG-X indices, which have base values of 100 on December 21, 2012

Index types and currencies: Price, net return and gross return in EUR and USD. Local currency versions available for some country indices

Dissemination calendar: STOXX Europe calendar, except for STOXX USA 500 ESG-X Index, which relies on the STOXX Americas Calendar

14.7.2. INDEX REVIEW

Selection list:
From the universe, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Tobacco and Coal.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversy Rating: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe). Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

ESG Risk Ratings: STOXX will exclude companies that Sustainalytics identifies to have a "Severe" ESG Risk Rating. The ESG Risk Rating evaluates the degree of a company's unmanaged material ESG risk by assessing a company's exposure to, and management of, the

14. STOXX SUSTAINABILITY INDICES

ESG issues that are considered most material for that company from a financial perspective. Sustainalytics assess and categorizes companies into five risk categories (Negligible, Low, Medium, High, Severe).

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:

- Internal production or sale of controversial weapons
- The ultimate holding company owns >10% of voting rights of an involved company
- >10% of voting rights of a company is owned by the involved company

Tobacco:
»>0% revenues from manufacturing tobacco products
»>5% revenues from supplying tobacco-related products/services
»>5% revenues from the distribution and/or retail sale of tobacco products.

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies to have:
»>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

Unconventional Oil & Gas:

i) Arctic Oil and Gas Exploration:
»>5% revenues Oil & Gas exploration & extraction in Arctic regions

ii) Oil Sands:
»>5% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

iii) Shale Energy:
»>5% revenues from shale energy exploration and/or production

Weapons:

i) Small Arms:
»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms to military / law enforcement customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from retail and/or distribution of assault weapons
»>5% revenues from retail and/or distribution of small arms (non-assault weapons)
»>5% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers

ii) Military Contracting:
»> 10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor-made components of these weapons and from tailor made products and/or services that support military weapons

14. STOXX SUSTAINABILITY INDICES

Composition list: The composition list will consist of the companies that remain from the selection list once all the exclusion criteria have been applied.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: All components are capped at a maximum weight of 20%, except for the EURO STOXX 50 ESG-X components, which are capped at 10%.

Derived indices: None.

14.7.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.8. EURO STOXX 50 ESG INDEX

14.8.1. OVERVIEW

The EURO STOXX 50 ESG Index reflects the EURO STOXX 50 Index with standardized ESG exclusion screens applied for Global Standards Screening, ESG Risk Rating, ESG Controversy, Controversial Weapons, Thermal Coal, Unconventional Oil & Gas, Military Contracting, Small arms and Tobacco. Furthermore, companies with the lowest ESG scores are excluded until a total of 20% (based on number of holdings) of the initial EURO STOXX 50 components are excluded. Each exclusion is replaced by a EURO STOXX company with a higher ESG score from the same ICB Supersector as the excluded company.

The index is free float market capitalization weighted with cap factors imposed on the index components such that the index achieves an overall ESG score that exceeds that of the EURO STOXX 50 Index excluding its worst 20% ESG scorers. The EURO STOXX 50 ESG index is designed to have an improved ESG profile over the EURO STOXX 50 index and is thus benchmarked against the EURO STOXX 50 for its ESG score improvement exercise.

Universe: EURO STOXX 50

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on March 19, 2012.

Index types and currencies: Price, net return and gross return in EUR and USD.

Dissemination calendar: STOXX Europe calendar

14.8.2. INDEX REVIEW

Selection list:

Step 1:
From the EURO STOXX 50 index, apply a set of exclusion criteria which follow the Global Standards Screening assessment, ESG Risk Rating, ESG Controversy, a set of definitions for Controversial Weapons, Military Contracting, Small arms,Tobacco,Thermal Coal and Unconventional Oil&Gas.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:

14. STOXX SUSTAINABILITY INDICES

STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Controversy Ratings:
STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company

ESG Risk Ratings:
STOXX will exclude companies that Sustainalytics identifies to have a "Severe" ESG Risk Rating.
The ESG Risk Rating evaluates the degree of a company's unmanaged material ESG risk by assessing a company's exposure to, and management of, the ESG issues that are considered most material for that company from a financial perspective. Sustainalytics assess and categorizes companies into five risk categories (Negligible, Low, Medium, High, Severe).

Tobacco:
STOXX will exclude companies that Sustainalytics identifies to have:
»>0% revenues from manufacturing tobacco products
»>5% revenues from the distribution and/or retail sale of tobacco products
»>5% revenues from supplying tobacco-related products/services

Unconventional Oil & Gas:

Oil Sands:
»>5% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day
Shale Energy:
»>5% revenues from shale energy exploration and/or production
Artic Oil and Gas Exploration:
»>5% revenues Oil & Gas exploration & extraction in Arctic regions

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies to have:
»>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants).

14. STOXX SUSTAINABILITY INDICES

Small Arms:
»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from retail and/or distribution of assault weapons
»>5% revenues from retail and/or distribution of small arms (non-assault weapons)
»>5% revenues from manufacturing and selling small arms to military / law enforcement customers

Military Contracting:
STOXX will exclude companies that Sustainalytics identifies to have:
»>10% combined revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

Step 2:
If more than 20% of the EURO STOXX 50 components have been excluded by the screens in Step 1, Step 2 below is omitted.

From the remaining companies of the EURO STOXX 50 index, exclude a number of companies with the lowest ESG scores, that in combination with the exclusions from Step 1, will result in the exclusion of a total of 20% of constituents (based on number of holdings). In the event that companies that qualify for exclusion have the same ESG score, the company (companies) with the smallest free float market capitalization(s), is (are) excluded.

Step 3:
The replacement of the excluded EURO STOXX 50 companies from Step 1 and Step 2, will be achieved in the following manner:

» Compile the list of companies that are excluded from the EURO STOXX 50 in Steps 1 and 2 (the 20% components of the EURO STOXX 50 Index that need to be replaced)

» The exclusion list will contain the ICB Supersector, ESG score and free-float market capitalization of each excluded company.

» A set of exclusion criteria which follow the Global Standards Screening assessment,ESG Controversy, ESG Risk Rating, a set of definitions for Controversial Weapons, Military Contracting, Small Arms, Tobacco, Thermal Coal and Unconventional Oil & Gas (definitions as per Step 1) is applied to the EURO STOXX universe. The remaining companies of the screened EURO STOXX universe are ranked per ICB Supersector in terms of free float market capitalization adjusted by ESG score ($ffmcap * ESG$), from high to low, with each constituent displaying its corresponding ESG score and free-float market capitalization. This list is used as a replacement universe for replacing the excluded EURO STOXX 50 securities.

» Each excluded EURO STOXX 50 company in the exclusion list is replaced by the highest ranking EURO STOXX company from the replacement universe that:

a) belongs to the same ICB Supersector as the excluded company,
b) has an ESG score > 50, and
c) has a higher ESG score than the excluded company

14. STOXX SUSTAINABILITY INDICES

» In the event where a company with a high ESG score is excluded (mostly applicable to Step 1), and no component is available from the EURO STOXX replacement universe pertaining to the corresponding ICB Supersector that has a higher ESG score, the component with the same ESG score, or as close an ESG score to the excluded company as possible, with the highest free float market capitalization, will be selected.

Composition list: The composition list consists of the companies from the EURO STOXX 50 that remain after the exclusion criteria from Step 1 and Step 2 have been applied, together with the EURO STOXX companies which have been selected as replacements from Step 3.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: The index is weighted by free-float market capitalization, with cap factors that aim to impose to the EURO STOXX 50 ESG Index to have a weighted average ESG score, that exceeds the corresponding score of the EURO STOXX 50 Index, excluding its worst 20% components in terms of ESG scores.
This is applied as follows:

A) The free float market capitalization weighted average ESG score the EURO STOXX 50 Index, excluding its 10 worst components in terms of ESG score, is calculated, and rounded up to 2 decimals ($\mathrm{ESG_{target}}$).

B) Weights based on their free-float market capitalization are assigned to the components of the EURO STOXX 50 ESG Index (composition list). Correspondingly, the weighted average ESG score of the EURO STOXX 50 ESG uncapped index, is calculated ($\frac{\sum_{z=1}^{50} FFMCAP_z * \mathrm{ESG_z}}{\sum_{z=1}^{50} FFMCAP_z}$).

If that score exceeds or is equal to the $\mathrm{ESG_{target}}$ score (i.e. $\frac{\sum_{z=1}^{50} FFMCAP_z * \mathrm{ESG_z}}{\sum_{z=1}^{50} FFMCAP_z} \geq \mathrm{ESG_{target}}$), then the following cap factor calculation steps are omitted (no capping needed).

The above condition can be reformulated as:

$$\sum_{i=1}^{x} (\mathrm{ESG_i} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_i} \geq -\sum_{j=1}^{y} (\mathrm{ESG_j} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_j}$$

Where:

x components in the composition list with ESG score exceeding ESG_{target}

y components in the composition list with ESG score equal to or less than ESG_{target}

If the condition does not hold (right leg exceeds the left), cap factors are imposed on the securities in the composition list that have an ESG score below the $\mathrm{ESG_{target}}$, such that:

$$\sum_{i=1}^{x} (\mathrm{ESG_i} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_i} \geq -\sum_{j=1}^{y} (\mathrm{ESG_j} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_j} * Capfactor$$

The final cap factors are therefore calculated as:

14. STOXX SUSTAINABILITY INDICES

$$\text{CapFactor} = \frac{\sum_{i=1}^{x} (\text{ESG}_i - \text{ESG}_{\text{target}}) * \text{FFMCAP}_i}{-\sum_{j=1}^{y} (\text{ESG}_j - \text{ESG}_{\text{target}}) * \text{FFMCAP}_j}$$

Additionally, components are capped at a maximum weight of 10%.

Derived indices: None.

14.8.3. ONGOING MAINTENANCE

Replacements: A deleted constituent is replaced immediately to maintain the fixed number of constituents. In keeping with the philosophy of the index, the replacement company must pass the criteria as described in "Step 1" of the Selection List in section 14.8.2 Index Review above. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.
In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the EURO STOXX in between the regular review dates but is still a component of the STOXX Regional TMI, then this stock will remain in the EURO STOXX 50 ESG index until the next regular review.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent will be replaced, following the process as described in "Step 3" of the Selection List in section 14.8.2 Index Review above, which will lead to a re-weighting of constituents' weights.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.9. STOXX BENCHMARK ESG-X EX NUCLEAR POWER INDICES

14.9.1. OVERVIEW

The objective of the STOXX Benchmark ESG-X ex Nuclear Power Indices is to reflect STOXX Benchmark Indices with standardized ESG exclusion screens applied for Global Standards Screening, Controversial Weapons, Thermal Coal, Tobacco Producers and Nuclear Power, with the aim of taking responsible investment criteria into account.

STOXX country ESG-X ex Nuclear Power indices
STOXX Germany Total Market ESG-X ex Nuclear Power
STOXX USA 500 ESG-X ex Nuclear Power

STOXX regional ESG-X ex Nuclear Power indices
EURO STOXX ESG-X ex Nuclear Power
STOXX Europe 600 ESG-X ex Nuclear Power
STOXX Global 1800 ESG-X ex Nuclear Power

Universe: The index universe is defined by the corresponding STOXX benchmark ESG-X index.

Base values and dates: 100 on March 19, 2012.

Index types and currencies: Price, net return and gross return in EUR and USD.

Dissemination calendar: STOXX Europe calendar, except for STOXX USA 500 ESG-X ex Nuclear Power Index, which relies on the STOXX Americas Calendar

14.9.2. INDEX REVIEW

Selection list:

From the universe, a set of Nuclear Power exclusionary criteria are applied.

Nuclear Power:
STOXX will exclude companies that Sustainalytics identifies as having:
»>5% revenues from nuclear power production:
- Utilities that own/operate nuclear power generators
  Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

»>5% revenues from nuclear power supporting products / services, including:
- Design and construction of nuclear power plants
- Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
- Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;

- Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

»>5% revenues from nuclear power distribution, including:

- The resale or distribution of electricity generated from nuclear power;
- This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix
  Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

Composition list: The composition list will consist of the companies that remain from the selection list once all the exclusion criteria have been applied.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: All components are capped at a maximum weight of 20%.

Derived indices: None.

14.9.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.10. STOXX ESG-X SELECT DIVIDEND INDICES

14.10.1. OVERVIEW

The STOXX ESG-X Select Dividend indices are derived from the STOXX ESG-X indices and select a fixed number of stocks which represent the highest-yielding stocks relative to their home markets in the respective benchmark index. The STOXX ESG-X indices apply standardized ESG exclusion screens for Global Standard Screening, Controversial Weapons, Thermal Coal and Tobacco Producers, with the aim of taking responsible investment criteria into account.

Universe:
EURO STOXX ESG-X Select Dividend 30, selected from EURO STOXX ESG-X Index
STOXX Europe ESG-X Select Dividend 30, selected from STOXX Europe 600 ESG-X Index
STOXX North America ESG-X Select Dividend 40, selected from STOXX North America 600 ESG-X Index
STOXX Asia/Pacific ESG-X Select Dividend 30, selected from STOXX Asia/Pacific 600 ESG-X Index
STOXX Global ESG-X Select Dividend 100, combines the STOXX Europe ESG-X Select Dividend 30, STOXX North America ESG-X Select Dividend 40 and STOXX Asia/Pacific ESG-X Select Dividend 30 indices

Weighting scheme: The indices are price-weighted with a weighting factor based on the dividend yield.

Base values and dates:
EURO STOXX ESG-X Select Dividend 30 Index: 100 on March 16, 2012
STOXX Europe ESG-X Select Dividend 30 Index: 100 on March 16, 2012
STOXX North America ESG-X Select Dividend 40 Index: 100 on March 16, 2012
STOXX Asia/Pacific ESG-X Select Dividend 30 Index: 100 on March 16, 2012
STOXX Global ESG-X Select Dividend 100 Index: 100 on March 16, 2012

Index types and currencies: For EURO STOXX ESG-X Select Dividend 30 and STOXX Europe ESG-X Select Dividend 30: price, net and gross return in AUD, CAD, CHF, EUR, GBP, JPY and USD. For STOXX North America ESG-X Select Dividend 40, STOXX Asia/Pacific ESG-X Select Dividend 30 and STOXX Global ESG-X Select Dividend 100: price, net and gross return in EUR and USD.

Dissemination calendar: STOXX Europe calendar

14.10.2. INDEX REVIEW

Selection list:
1. For each regional ESG-X Select Dividend index the components of the corresponding STOXX Regional ESG-X index and its secondary share lines are eligible.

2. Companies are screened for the following criteria:
   » Indicated annualized dividend (applies for components and non-components)
   » Non-negative dividend growth rate over the past five years (applies for non-components only)
   » Dividend payments in four out of five calendar years (applies for non-components only)

14. STOXX SUSTAINABILITY INDICES

» Non-negative payout ratio (applies for components and non-components)
» Payout ratio of less than or equal to 60% (applies for non-components only)
» A minimum level of liquidity, as described in the following section (applies for non-components only)
» For companies that have more than one share line, the line with the higher dividend yield is chosen. If any of the share lines is a component, then the component share line is chosen.

3. To obtain the selection list all eligible companies are ranked according to an outperformance factor that is calculated as follows:
Net dividend yield of the company versus the net dividend yield of the corresponding home market defined on an index basis.

Liquidity screening for non-components
Depending on the belonging region of the index, the following parameters are considered:

Region	Threshold (EUR)	ADTV days
Asia / Pacific	300,000,000	3
Eurozone	1,000,000,000	3
Europe	300,000,000	3
America (developed)	300,000,000	3

After defining N as the fixed number of components in the index, each ith non-component stock is considered eligible - in terms of liquidity - if the following inequality holds:

$$ADTVi > \left(\frac{\text{Threshold}}{N}\right)\frac{1}{\text{ADTV days}}$$

where $ADTV_i$ represents the Average Daily Traded Value of the ith non-component stock over the 3-month period ending on the month prior to the respective months of March, June, September and December.

Composition list:

EURO STOXX ESG-X Select Dividend 30
Coverage: the 30 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from EURO STOXX ESG-X (plus secondary lines).
» Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; EURO STOXX TMI net dividend yield) - 1
» Component selection: All current components ranked from 1 to 60 in the selection list will remain in the index. If the number of stocks is below 30, the highest ranked non-components are added until there are enough stocks.

STOXX Europe ESG-X Select Dividend 30
Coverage: the 30 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from the STOXX Europe 600 ESG-X Index (plus secondary lines).

» Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; STOXX Europe TMI net dividend yield) -1.
» Component selection: All current components ranked from 1 to 60 in the selection list will remain in the index. If the number of stocks is below 30, the highest ranked non-components are added until there are enough stocks.

STOXX North America ESG-X Select Dividend 40
Coverage: the 40 highest-yielding companies relative to their home market (STOXX Country TMI) are selected from the STOXX North America 600 ESG-X Index (plus secondary lines).
» Outperformance factor calculation: Net dividend yield of the company divided by the STOXX Country TMI net dividend yield -1.
» Component selection: The companies are ranked by the outperformance factor for each country and region as a whole. All current components ranked 60 or above in each country ranking will remain in the index. If the number of stocks is still below 40, the highest ranked non-components from the regional ranking are added until there are enough stocks. A maximum of 30 stocks per country can be included in the index.

STOXX Asia/Pacific ESG-X Select Dividend 30
Coverage: the 30 highest-yielding companies relative to their home market (STOXX Regional/Country TMI) are selected from the STOXX Asia/Pacific 600 ESG-X Index (plus secondary lines).
» A payout ratio of less than or equal to 80% applies for non-components.
» Outperformance factor calculation: Net dividend yield of the company divided by the maximum of (STOXX Country TMI net dividend yield; STOXX Asia/Pacific TMI net dividend yield) -1.
» Component selection: The companies are ranked by the outperformance factor for each country and region as a whole. All current components ranked 20 or above in each country ranking will remain in the index. If the number of stocks is still below 30, the highest ranked non-components from the regional ranking are added until there are enough stocks. A maximum of 10 stocks per country can be included in the index.

STOXX Global ESG-X Select Dividend 100
The index is a combination of the STOXX Europe ESG-X Select Dividend 30 Index, the STOXX North America ESG-X Select Dividend 40 Index and the STOXX Asia/Pacific ESG-X Select Dividend 30 Index.

Review frequency: The STOXX ESG-X Select Dividend indices are reviewed on an annual basis in March.

Weighting cap factors: The factors are calculated based on net-dividend yields.

Weight determination:

14. STOXX SUSTAINABILITY INDICES

$$w_i = \frac{\frac{D_i}{p_i}}{\sum_{j=1}^{N} \frac{D_j}{p_j}}$$

w_i	weight of company i
D_i	net dividend of company i
p_i	closing price of company i
D_j	net dividend of company j
p_j	closing price of company j
N	number of index components

Weighting cap factor = (1,000,000,000 x w_i / closing price of stock in EUR), rounded to integers.

The weighting factors are published on the second Friday in March, one week prior to quarterly review implementation using Thursday's closing prices.

For all STOXX ESG-X Select Dividend indices, except for the STOXX Global ESG-X Select Dividend 100 Index, an additional cap factor of 15% applies. The STOXX Global ESG-X Select Dividend 100 Index has a cap factor of 10%. All weighting cap factors are reviewed quarterly.

14.10.3. ONGOING MAINTENANCE

Replacements: To maintain the number of components constant, a deleted stock is replaced with the highest-ranked non-component on the selection list. The selection list is updated on a quarterly basis according to the review component selection process. The restrictions on the maximum count per country are applied. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

If a company is deleted from the STOXX Regional Benchmark ESG-X indices between the STOXX ESG-X Select Dividend annual review dates, but is still a component of the STOXX Developed Markets Total Market ESG-X, the stock will remain in the STOXX ESG-X Select Dividend indices until the next annual review, provided that it still meets the requirements for the STOXX ESG-X Select Dividend index.

Fast exit:
If STOXX becomes aware of dividend data changes for the components of the STOXX ESG-X Select Dividend indices the following index adjustments may occur. The timing of the index adjustment depends on the changes in the dividend data:

» If the company cancels one of its dividends: the company will be deleted from the index, the replacement announced immediately, implemented two trading days later and become effective the next trading day. The case of dividend cancellation does not apply to dividends whose payment is postponed within the same fiscal year. Dividends whose payment is postponed indefinitely or to a subsequent fiscal year are considered cancelled. In case a company pays its dividends for a fiscal year in tranches, after the first tranche has been paid, the cancellation of one or more remaining tranches or the postponement of their payment to a subsequent fiscal year is treated as a lowering of dividend.

» If the company lowers its dividend: the company will remain in the index until the next selection list is available. If the company is ranked above the lower buffer on this selection list (e.g. ranked from 1 to 60 for the EURO STOXX ESG-X Select Dividend 30 Index), it is retained. If it falls below the lower buffer (e.g. ranked 61 or below for the EURO STOXX ESG-X Select Dividend 30 Index), it is removed and replaced by the highest-ranked non-component on that selection list. The changes will be announced on the 5th trading day of the month together with the selection list and become effective on the first trading day after the third Friday of the month. The weight factors for the new components will be published on the quarterly underlying data announcement based on previous day closing prices.

In addition, if a component of the STOXX ESG-X Select Dividend indices is not a component of the STOXX Developed Markets Total Market ESG-X after its quarterly review , that company is removed and replaced by the highest-ranked non-component on the next available selection list. The changes will be announced on the 5th trading day of the month together with the selection list and become effective on the first trading day after the third Friday of the month. The weight factors for the new components will be published on the quarterly underlying data announcement based on previous day closing prices.

Fast entry: Not applicable

Spin-offs: Spin-off stocks are not considered for immediate addition in the STOXX ESG-X Select Dividend indices. If the original company has a significantly lower dividend after the spin-off, then its status will be reviewed for fast exit.

Mergers and takeovers: The original stock is replaced by the surviving stock, if it is ranked at or above the lower buffer limit of the current STOXX ESG-X Select Dividend selection list. If the stocks of the surviving company fall below the lower buffer limit, the original stocks are replaced with the highest-ranked non-component on the selection list.

Weighting factor calculation: Replacements are added with a weight corresponding to their dividend yield on the current selection list. The new component's dividend yield is weighted against the dividend yields of all companies of the index composition:

$$w_i = \frac{\frac{D_i}{p_i}}{\sum_{j=1}^{N} \frac{D_j}{p_j}}$$

w_i weight of replacement company i
D_i net dividend of replacement company i on cut-off date of current selection list
p_i closing price of replacement company i on cut-off date of current selection list
D_j net dividend of company j in the new index composition, on cut-off date of current selection list
p_j closing price of company j in the new index composition, on cut-off date of current selection list
N number of index components

14. STOXX SUSTAINABILITY INDICES

$$wf_{it} = \frac{\frac{\sum_{j=1}^{N-k} wf_{jt} \cdot p_{jt} \cdot cf_{jt}}{(1- \sum_{h=1}^{k} w_h)} \cdot w_i}{p_{it}}$$

wf_{it}	new weighting factor of replacement i at time t
k	number of replacements
t	date of closing price for weighting factor calculation
N-k	remaining index components (previous index composition minus the deleted companies)
wf_{jt}	weighting factor of index component j at time t
p_{jt}	price of index component j at time t
cf_{jt}	weighting cap factor of index component j at time t
w_i	weight of replacement company i
p_{it}	price of replacement company i at time t

The remaining current components stay in the index with unchanged weighting factors.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.11. STOXX ESG BROAD MARKET INDICES

14.11.1. OVERVIEW

The STOXX ESG Broad Market Indices track the performance of a selection of STOXX Indices after a set of compliance, involvement and ESG performance screens are applied.

Companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment or are involved in Controversial Weapons are not eligible for selection. Additional exclusion filters are applied, screening companies for involvement in Tobacco Production, Thermal Coal and Military Contracting. The remaining securities are ranked in descending order of their ESG scores within each of the 11 ICB Industry groups. The STOXX ESG Broad Market Indices select the top-ranking securities in each of the ICB Industries until the number of selected securities reaches 80% of the number of securities in the underlying index.

STOXX ESG Broad Market Indices
EURO STOXX ESG Broad Market
STOXX Asia/Pacific 600 ESG Broad Market
STOXX Europe 600 ESG Broad Market
STOXX Global 1800 ESG Broad Market
STOXX Japan 600 ESG Broad Market
STOXX North America 600 ESG Broad Market
STOXX USA 500 ESG Broad Market
STOXX USA 900 ESG Broad Market

Universe: The index universe is defined by the corresponding STOXX index

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on March 19, 2012.

Index types and currencies: Price, net return and gross return in EUR and USD. JPY is available for the STOXX Japan 600 ESG Broad Market Index

Dissemination calendar: STOXX Europe calendar, except for STOXX USA 500 ESG Broad Market and STOXX USA 900 ESG Broad Market Indices, which use the STOXX Americas Calendar

14.11.2. INDEX REVIEW

Selection list:
From the universe, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal and Military Contracting.

14. STOXX SUSTAINABILITY INDICES

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversy Rating: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe). Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

ESG Risk Ratings: STOXX will exclude companies that Sustainalytics identifies to have a "Severe" ESG Risk Rating. The ESG Risk Rating evaluates the degree of a company's unmanaged material ESG risk by assessing a company's exposure to, and management of, the ESG issues that are considered most material for that company from a financial perspective. Sustainalytics assess and categorizes companies into five risk categories (Negligible, Low, Medium, High, Severe).

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
»The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Tobacco:
»>0% revenues from manufacturing tobacco products
»>5% revenues from supplying tobacco-related products/services
»>5% revenues from the distribution and/or retail sale of tobacco products

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies to have:
»>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants).

Unconventional Oil & Gas:

i) Arctic Oil and Gas Exploration:

»>5% revenues Oil & Gas exploration & extraction in Arctic regions

14. STOXX SUSTAINABILITY INDICES

ii) **Oil Sands**:
»>5% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

iii) Shale Energy:
»>5% revenues from shale energy exploration and/or production

Weapons:

i) Small Arms:
»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms to military / law enforcement customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from retail and/or distribution of assault
»>5% revenues from retail and/or distribution of small arms (non-assault weapons
»>5% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers

Military Contracting:
STOXX will exclude companies that Sustainalytics identifies to have:
»> 10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor-made components of these weapons and from tailor made products and/or services that support military weapons.

The securities that fulfil the conditions above are screened for their ESG scores, sourced from Sustainalytics ESG Rating dataset. Securities with no ESG scores are not eligible and will not be considered for selection.

Composition list:
The remaining securities in the selection list are allocated to the 11 ICB Industry groups according to their ICB classifications.

The STOXX ESG Broad Market Indices target a total selection of 80% of the number of securities from their underlying universes. The selection is applied across all industry groups, selecting the highest scorers and preserving the 80% selection ratio within each of the industry groups.
For each of the STOXX ESG Broad Market Indices and for every review selection, the targeted number of securities for final selection and the targeted number of securities in each of the ICB industries are calculated as below:

$Target\ ESGBM = 0.8 * Bm\ count$, rounded down to the nearest integer
$Target\ ICB_i = 0.8 * Bm\ ICB\ count_i$, for each ICB Industry i, rounded down to the nearest integer

Where:

$Bm\ count$	total number of securities in the underlying universe
$Target\ ESGBM$	targeted number of securities in the ESG Broad Market index
i	ICB industry i
$Bm\ ICB\ count_i$	total number of securities in ICB Industry i in the underlying universe
$Target\ ICB_i$	targeted number of securities in ICB Industry i in the ESG Broad Market index

14. STOXX SUSTAINABILITY INDICES

The eligible securities in the selection list are ranked in descending order of their ESG scores within the 11 ICB Industry groups. In the event that two companies for a given industry group have the same ESG score, priority is given to the company with the highest free float market capitalization. The composition list for the STOXX ESG Broad Market Indices is derived using the following steps:

i. The top-ranking securities in each of the ICB Industry groups are selected until a maximum of $Target\ ICB_i$ securities are selected for each industry i
ii. If the total number of selected securities meets the target count for the ESG Broad Market index, selection stops here, and the selected securities will form the composition list for the index.
   If the total number of selected securities does not meet the target count for the ESG Broad Market index, $Target\ ICB_i$ is increased by 1 for each industry group, and step i. is repeated. Further increments of 1 are applied to $Target\ ICB_i$ if necessary, until the total number of selected securities meets or exceeds the target count for the ESG Broad Market index.
iii. The ESG Broad Market index will select at most 80% of the number of companies in the underlying index, $Target\ ESGBM$.
   In the cases where the selection in step ii. is less (not enough eligible securities in the selection list), or equal to the $Target\ ESGBM$, all of the securities will be selected and will form the composition list for the index.
   In the cases where the selection in step ii. is higher than the $Target\ ESGBM$, selection from the second to last iteration will be prioritized, and the highest ESG scorers from the last increment will be selected until a total of $Target\ ESGBM$ securities are selected.

Review frequency:
The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors:
All components are capped at a maximum weight of 10%.

14.11.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry:
Not applicable.

14. STOXX SUSTAINABILITY INDICES

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.12. STOXX SRI INDICES

14.12.1. OVERVIEW

The STOXX SRI (Socially Responsible Investing) Indices track the performance of a selection of STOXX Indices after a set of emission intensity, compliance, involvement and ESG performance screens are applied.

Companies that rank in the highest 10% in terms of their emission intensities are not eligible for selection. Exclusion filters are applied, screening companies for compliance based on the Sustainalytics Global Standards Screening assessment and involvement in Controversial Weapons, Tobacco, Alcohol, Adult Entertainment, Gambling, Weapons, Thermal Coal, Oil & Gas and Nuclear Power. The remaining securities are ranked in descending order of their ESG scores within each of the 11 ICB Industry groups. The STOXX SRI Indices select the top-ranking securities in each of the ICB Industries until the number of selected securities reaches a third of the number of securities in the underlying index.

STOXX SRI Indices
EURO STOXX SRI
STOXX Asia/Pacific 600 SRI
STOXX Europe 600 SRI
STOXX Global 1800 SRI
STOXX Japan 600 SRI
STOXX North America 600 SRI
STOXX USA 500 SRI

Universe: The index universe is defined by the corresponding STOXX benchmark index

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on March 24, 2014.

Index types and currencies: Price, net return and gross return in EUR and USD. JPY is available for the STOXX Japan 600 SRI Index

Dissemination calendar: STOXX Europe calendar, except for STOXX USA 500 SRI Index, which uses the STOXX Americas Calendar

14.12.2. INDEX REVIEW

Selection list:
From the universe, a set of exclusion criteria are applied:

Emission Intensity:
Companies are screened for their Scope 1 and Scope 2 emission intensities based on the ISS ESG emissions data. The companies are then ranked in descending order of their emission intensities, and companies that fall within the highest 10% emitters are not eligible for selection.

14. STOXX SUSTAINABILITY INDICES

For the STOXX Global 1800 SRI Index in specific, securities in the STOXX Global 1800 are assembled into their regional groups, Europe, North America and Asia Pacific, and the 10% highest emitters within each region are screened out.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
»The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Product Involvement: Not have any Product Involvement in the following areas. STOXX will exclude companies that Sustainalytics identifies to have involvement in:

- **Adult Entertainment:**
  »>0% revenues from the production of adult entertainment and/or owns/operates adult entertainment establishments
  »>5% revenues from the distribution of adult entertainment materials

- **Alcohol:**
  »>5% revenues from manufacturing alcoholic beverages
  »>5% revenues from supplying alcohol-related products/services to alcoholic beverage manufacturers
  »>5% revenues from the distribution and/or retail of alcoholic beverages

- **Gambling:**
  »>5% revenues from owning and/or operating a gambling establishment
  »>5% revenues from manufacturing specialized equipment used exclusively for gambling
  »>5% revenues from providing supporting products/services to gambling operations

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>0% revenues from supplying tobacco-related products/services
  »>0% revenues from the distribution and/or retail sale of tobacco products.

14. STOXX SUSTAINABILITY INDICES

- **Conventional Oil & Gas:**

  »>0% revenues from oil and gas exploration, production, refining, transportation and/or storage

  This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).

  »>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)

  »>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Unconventional Oil & Gas:**

  i) **Arctic Oil and Gas Exploration:**

  »>0% revenues Oil & Gas exploration & extraction in Arctic regions

  ii) **Oil Sands:**

  »>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

  iii) **Shale Energy:**

  »>0% revenues from shale energy exploration and/or production

- **Thermal Coal:**

  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)

  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

- **Nuclear Power:**

  »>25% revenues from nuclear power production:

  - Utilities that own/operate nuclear power generators

    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:

  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:

  - The resale or distribution of electricity generated from nuclear power;
  - This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix

    Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

14. STOXX SUSTAINABILITY INDICES

Weapons:

- **Small Arms:**

»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from retail and/or distribution of assault weapons
»>5% revenues from retail and/or distribution of small arms (non-assault weapons)
»>5% revenues from manufacturing and selling small arms to military / law enforcement customers

- **Military Contracting:**

»>0% revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons
»>0% revenues from tailor made products and/or services that support military weapons
»>5% revenues from non-weapons related tailor-made products and/or services to the military or defence industry

Securities with no product involvement data are not eligible for selection. The securities that fulfil the aforementioned conditions are screened for their ESG scores, sourced from Sustainalytics ESG Rating dataset. Securities with ESG score below 50 or no ESG score available are not eligible for selection.

Composition list:
The remaining securities in the selection list are allocated to the 11 ICB Industry groups according to their ICB classifications.

The STOXX SRI Indices select a third of the number of securities from their underlying universes. The selection is applied across all industry groups, selecting the highest scorers and targeting the 33.3% selection ratio within each of the industry groups.

For each of the STOXX SRI Indices and for every review selection, the targeted number of securities for final selection and the targeted number of securities in each of the ICB industries are calculated as below:

$Target\ SRI = \frac{1}{3} * Bm\ count$, rounded down to the nearest integer

$Target\ ICB_i = \frac{1}{3} * Bm\ ICB\ count_i$, for each ICB Industry i, rounded down to the nearest integer

Where:

$Bm\ count$	total number of securities in the underlying universe
$Target\ SRI$	targeted number of securities in the SRI index
i	ICB industry i
$Bm\ ICB\ count_i$	total number of securities in ICB Industry i in the underlying universe
$Target\ ICB_i$	targeted number of securities in ICB Industry i in the SRI index

The eligible securities in the selection list are ranked in descending order of their ESG scores within the 11 ICB Industry groups. In the event that two companies for a given industry group have

the same ESG score, priority is given to the company with the highest free float market capitalization. The composition list for the STOXX SRI Indices is derived using the following steps:

i. The top-ranking securities in each of the ICB Industry groups are selected until a maximum of $Target\ ICB_i$ securities are selected for each industry i
ii. If the total number of selected securities meets the target count for the SRI index, selection stops here, and the selected securities will form the composition list for the index.
   If the total number of selected securities does not meet the target count for the SRI index, $Target\ ICB_i$ is increased by 1 for each industry group, and step i. is repeated. Further increments of 1 are applied to $Target\ ICB_i$ if necessary, until the total number of securities meets or exceeds the target count for the SRI index.
iii. The SRI index will select at most one third of the number of companies in the underlying index, $Target\ SRI$.
   In the cases where the selection in step ii. is less (not enough eligible securities in the selection list), or equal to the $Target\ SRI$, all of the securities will be selected and will form the composition list for the index.
   In the cases where the selection in step ii. is higher than the $Target\ SRI$, selection from the second to last iteration will be prioritized, and the highest ESG scorers from the last increment will be selected until a total of $Target\ SRI$ securities are selected.

Review frequency:
The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors:
All components are capped at a maximum weight of 10%

14.12.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.13. STOXX ESG TARGET TE INDICES

14.13.1. OVERVIEW

STOXX ESG Target TE indices aim to provide a low tracking error to the benchmark index while ensuring an improved ESG score. The weighting of each constituent security is determined through an optimization process that is designed to ensure diversification and uses Axioma's risk model and optimizer to construct the indices.

Universe: The index Universes for the STOXX ESG Target TE indices are defined by all the stocks in the corresponding STOXX benchmark indices, as observed on the review effective dates.

Index	Universe	Parent Index
EURO STOXX ESG Target TE	EURO STOXX	EURO STOXX
STOXX Europe 600 ESG Target TE	STOXX Europe 600	STOXX Europe 600
STOXX Global 1800 ESG Target TE	STOXX Global 1800	STOXX Global 1800
STOXX USA 500 ESG Target TE	STOXX USA 500	STOXX USA 500
STOXX USA 900 ESG Target TE	STOXX USA 900	STOXX USA 900
STOXX Japan 600 ESG Target TE	STOXX Japan 600	STOXX Japan 600
STOXX Asia Pacific 600 ESG Target TE	STOXX Asia Pacific 600	STOXX Asia Pacific 600
STOXX North America 600 ESG Target TE	STOXX North America 600	STOXX North America 600

Weighting scheme: The constituents are price weighted to minimize the predicted tracking error to the benchmark index subject to a set of constraints.

Base values and dates: The following base values and dates apply: 100 on March 19, 2012

Index types and currencies: Price, net and gross return in EUR, USD (and JPY for STOXX Japan 600 ESG Target TE index)

Dissemination calendar: STOXX Europe calendar, except for STOXX USA 500 Target TE and STOXX USA 900 ESG Target TE Indices, which use the STOXX Americas Calendar

14.13.2. INDEX REVIEW

Selection list:
The STOXX benchmark indices, as observed on the review effective dates, define the Universes for the STOXX ESG Target TE indices. From the Universes, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal, Weapons and Oil Sands.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation

and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
»The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Product Involvement: Not have any Product Involvement in the following areas. STOXX will exclude companies that Sustainalytics identifies to have involvement in:

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>5% revenues from supplying tobacco-related products/services
  »>5% revenues from the distribution and/or retail sale of tobacco products.

- **Thermal Coal:**
  »>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

- **Military Contracting:**
  »>5% revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons
  »>5% revenues from tailor made products and/or services that support military weapons

- **Small Arms:**
  »>0% revenues from manufacturing and selling assault weapons to civilian customers
  »>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
  »>0% revenues from manufacturing and selling key components of small arms
  »>5% revenues from retail and/or distribution of assault weapons
  »>5% revenues from retail and/or distribution of small arms (non-assault weapons)
  »>5% revenues from manufacturing and selling small arms to military / law enforcement customers

- **Oil Sands:**
  »>5% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

14. STOXX SUSTAINABILITY INDICES

The securities that fulfil the conditions above are screened for their ESG scores, sourced from Sustainalytics ESG Rating dataset. Securities with no ESG scores are not eligible and will not be considered for selection.

The remaining securities, after the application of the above-mentioned exclusion criteria, are allocated to the 11 ICB Industry groups according to their ICB classifications.

The STOXX ESG Target TE Indices apply the optimization on a selection list that is made of 80% of the number of securities from the underlying Universes. The selection list is created by selecting the highest ESG scorers and preserving the 80% selection ratio within each of the industry groups. The following steps give further details on how the selection list used for the optimization is obtained.

For each of the STOXX ESG Target TE Indices and for every review selection, the targeted number of securities for the selection list and the targeted number of securities in each of the ICB industries are calculated a below:

$Target\ count = 0.8 * Bm\ count$, rounded down to the nearest integer
$Target\ ICB_i = 0.8 * Bm\ ICB\ count_i$, for each ICB Industry i, rounded down to the nearest integer

Where:

$Bm\ count$	total number of securities in the underlying Universe
$Target\ count$	targeted number of securities in the selection list
i	ICB industry i
$Bm\ ICB\ count_i$	total number of securities in ICB Industry i in the underlying Universe
$Target\ ICB_i$	targeted number of securities in ICB Industry i in the selection list

The eligible securities are ranked in descending order of both their ESG scores and free float market capitalizations. The selection list is derived using the following steps:

i. The top-ranking securities in each of the ICB Industry groups are selected until a maximum of $Target\ ICB_i$ securities are selected for each industry i
ii. If the total number of selected securities meets the target count for the selection list, selection stops here, and the securities will form the selection list.
   If the total number of securities does not meet the target count for the selection list, $Target\ ICB_i$ is increased by 1 for each industry group, and step i. is repeated. Further increments of 1 are applied to $Target\ ICB_i$ if necessary, until the total number of securities meets or exceeds the $Target\ count$.
iii. In the cases where the selection in step ii. is less (not enough eligible securities), or equal to the $Target\ count$, all of the securities will be used for the selection list.
   In the cases where the selection in step ii. is higher than the $Target\ count$, selection from the second to last iteration will be prioritized, and the highest ESG scorers from the last increment will be added to the selection list until a total of $Target\ count$ securities are selected.

Constituent selection and weighting:
The portfolio construction is performed using Axioma's portfolio optimization software using the corresponding Axioma regional medium horizon fundamental equity factor risk model. The

objective is to minimize the predicted tracking error to the benchmark index subject to the following constraints, using the selection list created in the previous section. The resulting number of index constituents may be lower than the number of securities on the selection list.

The following constraints aim to ensure tradability and diversification.

ESG Target: For each separate benchmark index, an ESG Z-Score is computed by subtracting off the cap-weighted mean ESG score for the benchmark index and then dividing by the equal-weighted standard deviation of ESG scores.

The ESG Z-Score target score of the index will be equal to or exceed 0.25 indicating an ESG Z-Score 0.25 standard deviations greater than benchmark index. The ESG scores of the components are as calculated by Sustainalytics.

Individual capping: We apply constraints such that maximum weights (4.5% / 8% / 35%) are not
exceeded at index review, whereby the weight of a constituent cannot exceed 8% and the sum weight of those constituents above 4.5% cannot exceed 35%. By applying even tighter constraints than the traditional 5%/10%/40% requirement, we reduce the likelihood of breaching those thresholds, and reduce the gravity of the breaches when they occur.

Minimum constituent weight: If the constituent is held in the index, its minimum weight is 3 bps.

Maximum constituent weight: The maximum asset weight should be below the maximum of the benchmark weight and the minimum of 8% and 20 times the benchmark weight.

Country/industry exposure: The exposure to each country and industry is summed up for the benchmark index, and the percentage exposure of the ESG Target TE indices must lay within 2.5% of those numbers.

Maximum turnover: The indices have a 1.875% one-way turnover constraint, or 3.75% two-way for each quarterly rebalance. This means up to 1.875% of the portfolio is sold in order to purchase other constituents (hence absolute maximum annual turnover is 15%).

Infeasibility Handling: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively, as necessary: Maximum Turnover; Active Country weights; Active ICB Industry (Level 1) weights.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September, and December together with the review of their underlying Universes. All changes are implemented on the third Friday in March, June, September and December and effective the next trading day.

The review cut-off date for the risk model data is the second Friday of the review month. The review cut-off date for the rest of the Universes and underlying data is the is the last dissemination day of the month preceding the review month.

14. STOXX SUSTAINABILITY INDICES

Weighting cap factors: The weighting factors are calculated based on closing prices in EUR from the second Friday of the review month. Weighting factor = (1,000,000,000 / closing price of the stock in EUR), rounded to the nearest integer. The review cut-off dates for Parent index and Axioma data are the second Friday of the review month.

14.13.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.14. STOXX ESG TARGET INDICES

14.14.1. OVERVIEW

STOXX ESG Target indices aim to maximize ESG tilt while keeping the active risk of the index below 1%. The weighting of each constituent security is determined through an optimization process that is designed ensure diversification and uses Axioma's risk model and optimizer to construct the indices.

Universe: The index Universes for the STOXX ESG Target indices are defined by all the stocks in the corresponding STOXX benchmark indices, as observed on the review effective dates.

Index	Universe	Parent Index
EURO STOXX ESG Target	EURO STOXX	EURO STOXX
STOXX Europe 600 ESG Target	STOXX Europe 600	STOXX Europe 600
STOXX Global 1800 ESG Target	STOXX Global 1800	STOXX Global 1800
STOXX USA 500 ESG Target	STOXX USA 500	STOXX USA 500
STOXX USA 900 ESG Target	STOXX USA 900	STOXX USA 900
STOXX Japan 600 ESG Target	STOXX Japan 600	STOXX Japan 600
STOXX Asia Pacific 600 ESG Target	STOXX Asia Pacific 600	STOXX Asia Pacific 600
STOXX North America 600 ESG Target	STOXX North America 600	STOXX North America 600

Weighting scheme: The constituents are price weighted to maximize the ESG score while keeping the active risk to the benchmark index below 1% subject to a set of constraints.

Base values and dates: The following base values and dates apply: 100 on March 19, 2012

Index types and currencies: Price, net and gross return in EUR, USD (and JPY for STOXX Japan 600 ESG Target index)

Dissemination calendar: STOXX Europe calendar, except for STOXX USA 500 ESG Target and STOXX USA 900 ESG Target indices, which use the STOXX Americas Calendar

14.14.2. INDEX REVIEW

Selection list:
The STOXX benchmark indices, as observed on the review effective dates, define the Universes for the STOXX ESG Target indices. From the Universes, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal, Weapons and Oil Sands.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation

and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
»The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Product Involvement: Not have any Product Involvement in the following areas. STOXX will exclude companies that Sustainalytics identifies to have:

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>5% revenues from supplying tobacco-related products/services
  »>5% revenues from the distribution and/or retail sale of tobacco products.

- **Thermal Coal:**
  »>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

- **Military Contracting:**
  »>5% revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons
  »>5% revenues from tailor made products and/or services that support military weapons

- **Small Arms:**
  »>0% revenues from manufacturing and selling assault weapons to civilian customers
  »>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
  »>0% revenues from manufacturing and selling key components of small arms
  »>5% revenues from retail and/or distribution of assault weapons
  »>5% revenues from retail and/or distribution of small arms (non-assault weapons)
  »>5% revenues from manufacturing and selling small arms to military / law enforcement customers

- **Oil Sands:**
  »>5% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

14. STOXX SUSTAINABILITY INDICES

The securities that fulfil the conditions above are screened for their ESG scores, sourced from Sustainalytics ESG Rating dataset. Securities with no ESG scores are not eligible and will not be considered for selection.

The remaining securities, after the application of the above-mentioned exclusion criteria, are allocated to the 11 ICB Industry groups according to their ICB classifications.

The STOXX ESG Target Indices apply the optimization on a selection list that is made of 80% of the number of securities from the underlying Universes. The selection list is created by selecting the highest ESG scorers and preserving the 80% selection ratio within each of the industry groups. The following steps give further details on how the selection list used for the optimization is obtained.

For each of the STOXX ESG Target Indices and for every review selection, the targeted number of securities for the selection list and the targeted number of securities in each of the ICB industries are calculated a below:

$Target\ count = 0.8 * Bm\ count$, rounded down to the nearest integer
$Target\ ICB_i = 0.8 * Bm\ ICB\ count_i$, for each ICB Industry i, rounded down to the nearest integer

Where:

$Bm\ count$	total number of securities in the underlying Universe
$Target\ count$	targeted number of securities in the selection list
i	ICB industry i
$Bm\ ICB\ count_i$	total number of securities in ICB Industry i in the underlying Universe
$Target\ ICB_i$	targeted number of securities in ICB Industry i in the selection list

The eligible securities are ranked in descending order of both their ESG scores and free float market capitalizations. The selection list is derived using the following steps:

i. The top-ranking securities in each of the ICB Industry groups are selected until a maximum of $Target\ ICB_i$ securities are selected for each industry i
ii. If the total number of selected securities meets the target count for the selection list, selection stops here, and the securities will form the selection list.
   If the total number of securities does not meet the target count for the selection list, $Target\ ICB_i$ is increased by 1 for each industry group, and step i. is repeated. Further increments of 1 are applied to $Target\ ICB_i$ if necessary, until the total number of securities meets or exceeds the $Target\ count$.
iii. In the cases where the selection in step ii. is less (not enough eligible securities), or equal to the $Target\ count$, all of the securities will be used for the selection list.
   In the cases where the selection in step ii. is higher than the $Target\ count$, selection from the second to last iteration will be prioritized, and the highest ESG scorers from the last increment will be added to the selection list until a total of $Target\ count$ securities are selected.

Constituent selection and weighting:
The portfolio construction is performed using Axioma's portfolio optimization software using the corresponding Axioma regional medium horizon fundamental equity factor risk model. The

objective is to maximize the ESG scores to the benchmark index subject to the following constraints, using the selection list created in the previous section. The resulting number of index constituents may be lower than the number of securities on the selection list.

The following constraints aim to ensure tradability and diversification.

ESG Z-Score: For each separate benchmark index, an ESG Z-Score is computed by subtracting off the cap-weighted mean ESG score for the benchmark index and then dividing by the equal-weighted standard deviation of ESG scores.

Individual capping: We apply constraints such that maximum weights (4.5% / 8% / 35%) are not
exceeded at index review, whereby the weight of a constituent cannot exceed 8% and the sum weight of those constituents above 4.5% cannot exceed 35%. By applying even tighter constraints than the traditional 5%/10%/40% requirement, we reduce the likelihood of breaching those thresholds, and reduce the gravity of the breaches when they occur.

Minimum constituent weight: If the constituent is held in the index, its minimum weight is 3 bps.

Maximum constituent weight: The maximum asset weight should be below the maximum of the benchmark weight and the minimum of 8% and 20 times the benchmark weight.

Country/industry exposure: The exposure to each country and industry is summed up for the benchmark index, and the percentage exposure of the ESG Target indices must lay within 2.5% of those numbers.

Maximum turnover: The indices have a 1.875% one-way turnover constraint, or 3.75% two-way for each quarterly rebalance. This means up to 1.875% of the portfolio is sold in order to purchase other constituents (hence absolute maximum annual turnover is 15%).

Maximum tracking error: The indices have a maximum of 1% active risk or tracking error to the benchmark.

Infeasibility Handling: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed, as necessary: Maximum Turnover; Active Country weights; Active ICB Industry (Level 1) weights; Maximum tracking error.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September, and December together with the review of their underlying Universes. All changes are implemented on the third Friday in March, June, September and December and effective the next trading day.

The review cut-off date for the risk model data is the second Friday of the review month. The review cut-off date for the Universes and the rest of underlying data is the is the last dissemination day of the month preceding the review month.

Weighting cap factors: The weighting factors are calculated based on closing prices in EUR from the second Friday of the review month. Weighting factor = (1,000,000,000 / closing

price of the stock in EUR), rounded to the nearest integer. The review cut-off dates for Parent index and Axioma data are the second Friday of the review month.

14.14.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.15. EURO STOXX 50 ESG TARGET INDEX

14.15.1. OVERVIEW

The objective of the EURO STOXX 50 ESG Target Index is to reflect the EURO STOXX 50 Index while maximizing its ESG score and at the same time reducing its Carbon Intensity by at least 30%. The predicted tracking error is constrained with respect to its parent index. The index includes ESG exclusion screens for Global Standards Screening, Controversial Weapons, Thermal Coal, Tobacco, Military Contracting, Small Arms, Oil Sands and ESG Controversies.

Universe: The constituents of the EURO STOXX 50 ESG Target indices are selected from the EURO STOXX 50 Index and EURO STOXX Index.

Parent Benchmark: EURO STOXX 50 Index

Weighting scheme: The constituents are weighted to maximize the ESG score to the benchmark index subject to a set of constraints.

Base values and dates: 100 on March 24, 2014

Index types and currencies: Price, net and gross return in EUR, USD

Dissemination calendar: STOXX Europe calendar

14.15.2. INDEX REVIEW

Selection list:

The EURO STOXX 50 ESG Target index composition is derived from the EURO STOXX 50 index and the EURO STOXX as follows:

Step 1:
From the EURO STOXX 50 index and the EURO STOXX index apply the following set of exclusions:

- **Global Standards Screening**: compliant with the Global Standard Screening (GSS). Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

- **Controversial Weapons:** Not involved in Controversial Weapons activities, as identified by Sustainalytics. The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons, and white phosphorus weapons. The criteria for involvement are:
  » Internal production or sale of controversial weapons

» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

» **Product Involvement**: Not have any Product Involvement in the following areas. STOXX will exclude companies that Sustainalytics identifies to have:

Tobacco:
STOXX will exclude companies that Sustainalytics identifies to have:
»>0% revenues from manufacturing tobacco products
»>5% revenues from supplying tobacco-related products/services
»>5% revenues from the distribution and/or retail sale of tobacco products.

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies to have:
»>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

Military Contracting:
STOXX will exclude companies that Sustainalytics identifies to have:
»>5% revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons
»>5% revenues from tailor made products and/or services that support military weapons

Small Arms:
STOXX will exclude companies that Sustainalytics identifies to have:
»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from manufacturing and selling small arms to military / law enforcement customers
»>5% revenues from retail and/or distribution of assault weapons
»>5% revenues from retail and/or distribution of small arms (non-assault weapons))

Oil Sands:
STOXX will exclude companies that Sustainalytics identifies to have:
»>5% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day.

Controversy Ratings:
STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe). Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its

severity on a scale of 1 to 5 (1- Low, 2- Moderate,3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

Step 2:
Replacements for any excluded EURO STOXX 50 companies are sought from the EURO STOXX Index and will be achieved in the following manner:

» Compile the list of companies that are excluded from the EURO STOXX 50 in Steps 1

» The exclusion list will contain the ICB Supersector, ESG score and free-float market capitalization of each company.

» The remaining companies of the screened EURO STOXX universe (as per Step 1), are ranked per ICB Supersector in terms of free float market capitalization adjusted by ESG score (ffmcap * ESG), from high to low

» Each excluded company is replaced by the highest ranking company from the EURO STOXX universe within the same ICB Supersector, where the replacement company has a higher ESG score than both (1) any excluded company in the ICB Supersector and (2) the weighted average ESG score of the EURO STOXX Index

» In the event where no replacement is available that meets the above criteria, the criteria are relaxed such that the replacement company must have a higher ESG score than either (1) or (2). If no replacement is available, the highest-ranking company from the universe within the same ICB sector will be chosen.

This process is repeated until the number of constituents in the EURO STOXX 50 ESG Target Index matches the number of constituents of the EURO STOXX 50 index.

Composition list: The composition list will consist of the companies from the EURO STOXX 50 that remain after the exclusion criteria from Step 1 have been applied, together with the companies which have been selected as replacements from Step 2.

Constituent selection and weighting:
The portfolio construction is performed using Axioma's portfolio optimization software using the corresponding Axioma European medium horizon fundamental equity factor risk model. The objective is to maximize the ESG scores to the benchmark index subject to the following constraints.

The following constraints aim to ensure tradability and diversification.

Constituent Bounds: For the eligible constituent, let
- b = the asset weight in the EURO STOXX Index.
- bmin = the minimum asset weight over all assets in the EURO STOXX Index.

The bounds are:
MAX(bmin, b / 2) < (asset weight in the optimized portfolio) < MIN(10 * b, b + 2%, 10%)
Note: Since the minimum is greater than zero, all companies are held.

Missing ESG Scores: Companies without an ESG score as of the review cut-off date are held at the same weight as the Parent Benchmark

Maximum Tracking Error: The indices have a maximum of 1.5% active risk or tracking error to the Parent Benchmark.

Hard Maximum Turnover Constraint: The indices have a 10% one-way turnover constraint, or 20% two-way for each quarterly rebalance. This means up to 10% of the portfolio is sold to purchase other constituents.

Soft Maximum Turnover Constraint: The indices have a 5% one-way turnover constraint, or 10% two-way for each quarterly rebalance. This means up to 10% of the portfolio is sold to purchase other constituents.

Supersector Active Exposures: Less than 5% active exposure (+/-5%) w/r/t Parent Benchmark. Companies are assigned to the Supersectors according to the ICB classification. This constraint is not applied to the Utilities and Energy Supersectors.

Country Active Exposures: Less than 5% active exposure (+/-5%) w/r/t Parent Benchmark.

Total Carbon Intensity Reduction: At least 30% reduction relative to the Parent Benchmark.

ESG Score Improvement: The ESG Score is at least as high as the Parent Benchmark

Infeasibility Handling: In case of infeasibilities, the Tracking Error, Soft Turnover, and Sector Active Exposures can all be potentially violated if necessary, to find a solution that minimizes the aggregated violations of those constraints.

Review frequency: The indices are reviewed on a quarterly basis in March, June, September and December together with the respective parent index. The review cut-off date for risk model data is the Thursday before the second Friday of the review month. The review cut-off date for other underlying data is the last calculation day of the previous month.

Weighting cap factors:
Weighting factors are based on the closing prices in EUR (p_i) of the Thursday before the second Friday of the review month:
Weighting factor = (1,000,000,000,000 x w_i / p_i), rounded to the nearest integer value.

14.15.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

Mergers and takeovers:
Standard STOXX process.

14. STOXX SUSTAINABILITY INDICES

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.16. STOXX WILLIS TOWERS WATSON CLIMATE TRANSITION INDICES

14.16.1. OVERVIEW

The objective of the STOXX Willis Towers Watson Climate Transition Indices is to align a broad based equity index, from a valuation and financial perspective, with a global economic transition that would limit greenhouse gas concentrations to levels consistent with United Nations objectives for global temperature rises. The index relies on Climate Transition Value at Risk (CTVaR) metrics from Willis Towers Watson, and incorporates screens for Global Standards Screening, Controversial Weapons, Thermal Coal and Oil Sands.

Universe:
STOXX Willis Towers Watson World Climate Transition, selected from iSTOXX World A
STOXX Willis Towers Watson Europe 600 Climate Transition, selected from STOXX Europe 600
STOXX Willis Towers Watson USA 500 Climate Transition, selected from STOXX USA 500

Weighting scheme: The indices are price weighted with weight factors based on free-float market capitalization and the distribution of CTVaR exposure

Base values and dates: 100 on June 18, 2021, for the STOXX Willis Towers Watson World Climate Transition and STOXX Willis Towers Watson USA 500 Climate Transition
100 on September 18, 2020, for the STOXX Willis Towers Watson Europe 600 Climate Transition

Index types and currencies: Price, net and gross return in EUR, USD, GBP

Dissemination calendar: STOXX Europe calendar, except for STOXX Willis Towers Watson USA 500 Climate Transition Index which uses the STOXX Americas calendar

14.16.2. INDEX REVIEW

Selection list:

From the universe, the following set of exclusion criteria are applied:

Global Standards Screening: compliant with the Global Standard Screening (GSS). Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons: Not involved in Controversial Weapons activities, as identified by Sustainalytics. The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium and white phosphorus weapons. The criteria for involvement are:

» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company

14. STOXX SUSTAINABILITY INDICES

» >10% of voting rights of a company is owned by the involved company

Product Involvement: Not have any Product Involvement in the following areas. STOXX will exclude companies that Sustainalytics identifies to have:

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies to have:
»>25% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>50% revenues from power generation: coal-fired electricity, heat or steam generation / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

Oil Sands:
STOXX will exclude companies that Sustainalytics identifies to have:
»>25% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day.

Weighting scheme:
The index weights are based on the free-float market capitalization weights, adjusted by a probability distribution using the CTVaR metric, and scaled to 100%, subject to component, ICB industry and country caps.

Step 1: Adjust free float weights by $CTVaR_{i,score}$

$$CTVaR_{i,score} = \text{erf}\left(\frac{CTVaR_i}{ScaleFactor * \sqrt{2}}\right)$$

$$w_{i,init} = \frac{ffmcap_i}{\sum_{j=1}^{n} ffmcap_j} * (1 + CTVaR_{i,score})$$

Where

$CTVaR_i = Willis\ Towers\ Watson\ CTVaR\ metric\ of\ component\ i$
$w_{i,init} = initial\ weight\ of\ component\ i$
$n = number\ of\ components\ in\ selection\ list$
$ScaleFactor = 10\%$

The Willis Towers Watson CTVaR methodology measures a company's readiness for the global economic transition to a low carbon economy, which incorporates:

- Changes to the supply and demand for commodities, including falling fossil fuel demand and changes to demand for commodities such as copper, cobalt, iron ore and chemicals;
- Climate change transition driven changes in technology, products, industry structure, and consumer behaviour;
- Carbon mitigation policy;
- Carbon mitigation costs;
- Potential new business opportunities.

14. STOXX SUSTAINABILITY INDICES

Securities lacking CTVaR data are assigned a value of 0.

Step 2: Normalize weights from Step 1 to 100%:

$$w_{i,prelim} = \frac{w_{i,init}}{\sum_{j=1}^{n} w_{j,init}}$$

Step 3: Securities which have a weight of less than 0.5bps (0.25bps for current index components) for the STOXX Willis Towers Watson World Climate Transition Index and less than 1bp (0.5bps for current index components) for the STOXX Willis Towers Watson Europe 600 Climate Transition and STOXX Willis Towers Watson USA 500 Climate Transition Indices are excluded, and normalised to 100% per formula in step 2.

Step 4: An iterative capping procedure is applied to ensure that the index is appropriately diversified. The aim of the process is to fulfil the following conditions[27]:

1. Constituents have a maximum weight of max(ffmcap weight, 5%)
2. Constituents have a minimum weight of 0.5bps (0.25bps for the STOXX Willis Towers Watson World Climate Transition)
3. The maximum overweighting of any ICB industry is 5%
4. The maximum active weighting of any country is +/-15%

First an error factor (EF) is determined as follows:

$$EF_{max} = max \begin{cases} EF^{u}_{constituent,i} = \frac{X_i}{x_i^u} \\ EF^{l}_{constituent,i} = \frac{x^l}{X_i} \\ EF_{industry,i} = \frac{Y_i}{y_i} \\ EF^{u}_{country,i} = \frac{Z_i}{z_i^u} \\ EF^{l}_{country,i} = \frac{z_i^l}{Z_i} \end{cases}$$

$x_i^u = maximum\ weight\ of\ constituent\ i\ (max(ffmcap\ weight, 5\%))$
$x^l = minimum\ constituent\ weight\ (0.5bps^{28})$
$X_i = weight\ of\ constituent\ i$
$y_i = maximum\ weight\ of\ industry\ i\ (benchmark\ industry\ weight + 5\%)$
$Y_i = weight\ of\ industry\ i$
$z_i^u = maximum\ weight\ of\ country\ i\ (benchmark\ country\ weight + 15\%)$
$z_i^l = minimum\ weight\ of\ country\ i\ (\max(0, benchmark\ country\ weight - 15\%))$
$Z_i = weight\ of\ country\ i$

[27] Industry and Country weights are observed as of cut-off date

[28] The minimum constituent weight for the STOXX Willis Towers Watson World Climate Transition Index is 0.25bps

An error factor greater than 1 indicates a breach of a capping criterion. In each iteration, there are 5 possible scenarios.

Scenario 1: $EF_{max} = EF^{u}_{constituent,i}$
The weight of constituent i is divided by EF_{max} and the excess weight $(X_i - x_i^u)$ is distributed proportionally to the rest of the constituents.
Scenario 2: $EF_{max} = EF^{l}_{constituent,i}$
The weight of constituent i is multiplied by EF_{max} and the excess weight $(X_i - x^l)$ is distributed proportionally to the rest of the constituents.
Scenario 3: $EF_{max} = EF_{industry,i}$
The weights of industry's i constituents are divided by EF_{max} and the excess weight $(Y_i - y_i)$ is distributed proportionally to the rest of the constituents.
Scenario 4: $EF_{max} = EF^{u}_{country,i}$
The weights of country's i constituents are divided by EF_{max} and the excess weight $(Z_i - z_i^u)$ is distributed proportionally to the rest of the constituents.
Scenario 5: $EF_{max} = EF^{l}_{country,i}$
The weights of country's i constituents are multiplied by EF_{max} and the excess weight $(Z_i - z_i^l)$ is distributed proportionally to the rest of the constituents.

The algorithm is repeated until all the capping criteria are met ($EF_{max} <= 1$). If the capping criteria are not met after 200 iterations but the EF rounded to 5 decimals equals 1 the algorithm stops. If however, it is greater than 1, the capping algorithm is repeated with the country and ICB industry constraints relaxed by 2.5%.

Review frequency: The indices are reviewed on a quarterly basis in March, June, September and December together with the respective parent index. The review cut-off date is the last calculation day of the previous month.

Weighting cap factors: The weighting factors are calculated based on closing prices in EUR from the second Thursday of the review month. Weighting factor = (10,000,000,000,000 * $w_{i,final}$ / closing price of the stock in EUR), rounded to the nearest integer.

14.16.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

Mergers and takeovers: Standard STOXX process.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.17. STOXX EUROPE 600 ESG BROAD MARKET EQUAL WEIGHT INDEX

14.17.1. OVERVIEW

The STOXX Europe 600 ESG Broad Market Equal Weight index tracks the same stocks as the STOXX Europe 600 ESG Broad Market index but uses a different weighting scheme. The securities are equal weighted at the periodic index review.

Universe: The STOXX Europe 600 ESG Broad Market index, as observed on the review effective date, defines the index universe

Weighting scheme: The index is price-weighted with weighting factors to achieve equal weighting

Base values and dates: 100 on March 19, 2012

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar

14.17.2. INDEX REVIEW

Composition list:
Identical as the parent index, STOXX Europe 600 ESG Broad Market.

Review frequency:
The index is reviewed on a quarterly basis in March, June, September and December, in line with the parent index.

Weighting cap factors:
All components are equal weighted on a quarterly basis. The weightings are published on the second Friday of each quarter, one week prior to quarterly review implementation using Thursday's closing prices.
Weighting cap factor = (100,000,000,000 / closing price of the stock in EUR) and rounded to integers.

14.17.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced in line with the parent index, STOXX Europe 600 ESG Broad Market.

Fast exit:
Same as the parent index, STOXX Europe 600 ESG Broad Market.

Fast entry:
Same as the parent index, STOXX Europe 600 ESG Broad Market.

14. STOXX SUSTAINABILITY INDICES

Spin-offs:
Same as the parent index, STOXX Europe 600 ESG Broad Market.

14. STOXX SUSTAINABILITY INDICES

14.18. STOXX PSBC CHINA A ESG INDEX

14.18.1. OVERVIEW

The STOXX PSBC China A ESG Index selects from the largest 300 securities by free float market capitalization in the STOXX China A 900 Index. The index targets a portfolio with superior ESG profile compared to the broad market, while maintaining similar risk characteristics.

The index uses data from the International Institute of Green Finance (IIGF) to apply exclusionary screens. Companies that are assessed by IIGF to be non-compliant with the UN Global Compact Principles, or involved in controversial weapons, tobacco or thermal coal are not eligible for selection. The final selection and weights are then determined using Axioma's portfolio optimization software to maximize the overall IIGF ESG score of the index, subject to predicted risk, tradability, and diversification constraints.

Universe: The largest 300 securities by free float market capitalization from the STOXX China A 900 index define the index universe

Weighting scheme: The constituents are weighted to maximize the portfolio's aggregate ESG score while maintaining lower volatility than the broad market and satisfying various requirements on exposure, diversification, and tradability.

Base values and dates: 100 on December 19, 2016

Index types and currencies: Price, net return and gross return in EUR, CNY, JPY, and USD

Dissemination calendar: STOXX Global calendar

14.18.2. INDEX REVIEW

Selection list:
The largest 300 securities by free float market capitalization from the STOXX China A 900 index, as observed on the review effective date, define the index universe. The following exclusions criteria are applied to these 300 securities:

UN Global Compact
Companies that IIGF identifies as non-compliant with international standards such as the United Nations Global Compact (UNGC) Principles and related norms are not eligible for selection. IIGF assesses companies based on public information, government records and international standards to identify companies that violate international norms and standards.

Controversial Weapons
Companies that IIGF identifies as involved in controversial weapons are not eligible for selection. The following involvements are considered in the controversial weapons screen: cluster weapons, anti-personnel mines, biological and chemical weapons, nuclear weapons, depleted uranium, and white phosphorus weapons. This includes companies with any revenue from direct involvement in the sale or production of controversial weapons, companies that own more than 10% of a directly

14. STOXX SUSTAINABILITY INDICES

involved company, and companies which are owned by directly involved companies (>10% ownership).

Tobacco
Companies in the universe are screened for their involvement in tobacco. Companies that generate revenues from tobacco production (>5%), retail or distribution of tobacco products (>5%) or from supplying specialized products or services for tobacco production (>5%) are not eligible for selection.

Thermal Coal
Companies in the universe are screened for their involvement in thermal coal. Companies that generate revenues from thermal coal mining and extraction (>5%) or thermal coal based power generation/ power distribution generated from thermal coal (>5%) are not eligible for selection.

The securities that fulfil the conditions above are screened for their ESG scores, sourced from IIGF ESG. Securities with no ESG scores are not eligible and will not be considered for selection. The remaining securities are allocated to the 20 ICB Supersector groups according to their ICB classifications.

Constituent selection and weighting
The portfolio construction is performed using Axioma's portfolio optimization software using the Axioma China Medium Horizon Equity Factor Risk Model. The objective is to maximize the overall index ESG z-score. Z-scores are created from the IIGF ESG scores via transformation using the inverse of the cumulative normal distribution. The resulting number of index constituents may be lower than the number of securities in the selection list.

The following constraints aim to control risk and exposure; and ensure tradability and diversification.

Target	Constraint
Exclusions	Stocks excluded per above cannot be held
Risk control	Predicted risk lower than benchmark predicted risk
ESG improvement	Index ESG score must be at least 20% higher than benchmark
ESG tilt	Top third of stocks ranked by ESG score must be held and not underweight (w.r.t benchmark); bottom third can be held if required but never overweight.
Maximum weight	Taken to be the lesser (most stringent) of: 1. 20x benchmark weight; 2. Benchmark weight + 5%; 3. Benchmark weight times (1 + 5 *z*) where *z* is the corresponding ESG z-score (applies only to stocks with non-negative ESG z scores)
Minimum weight	If held, set to the greater of: 1. Benchmark weight – 5% 2. 3 bps (0.03%)
Industry exposure	Maximum Supersector weight = lesser of benchmark weight + 2%, 3x benchmark weight;

14. STOXX SUSTAINABILITY INDICES

	Minimum Supersector weight = greater of benchmark weight – 2%, 0.5 benchmark weight
Turnover	6.66% one-way on quarterly basis for Mar/Jun/Dec, 20% in September; Stocks with no volume (e.g. suspension) will have their weights unchanged.
Liquidity	Names in the bottom 10% by daily volume in the STOXX China A 900 cannot be held

Benchmark: For optimization purposes, "benchmark" is taken to refer to the index universe, that is, the top 300 securities in the STOXX China A 900 index by free float market capitalization, weight renormalized to 100%.

Risk Control: The index must have predicted total risk (using the Axioma China Equity Factor Risk Model) less than or equal to that of the benchmark.

ESG Improvement: The index's ESG score must be at least 20% higher than that of the benchmark. That is, its score must be at least 1.2 times the benchmark score.

ESG Tilt: Stocks in the index universe are ranked by ESG score then bucketed into tertiles. Stocks in the top third (highest ranking) – unless they are part of the exclusions – must be held and cannot be underweight (w.r.t. benchmark). Conversely, stocks in the bottom third (worst scoring) cannot be overweight, though they can still be held in small amounts if deemed absolutely necessary by the optimizer.

Maximum Constituent Weight: The maximum allowable constituent weight should be the lesser of 1) 20 times benchmark weight; 2) benchmark weight plus 5%, and 3) benchmark weight times (1 + 5z) where z is the security's ESG z-score. (3) is only applicable to securities with non-negative ESG z-scores.

Minimum Constituent Weight: If a security is held in the index, its minimum weight is greater of 1) benchmark weight minus 5%; 2) 3 bps (0.03%).

Industry Exposure: For each ICB Supersector, the index weight must be no more than the lesser of 1) benchmark Supersector weight plus 2% and 2) 3x benchmark Supersector weight. The index weight should also be no less than the great of 1) benchmark Supersector weight minus 2% and 2) half the benchmark Supersector weight.

Turnover: The index has a 6.66% one-way turnover limit per quarterly rebalance, applicable to the March, June, and December rebalances. The September rebalance has a 20% one-way turnover limit.

Liquidity: Securities in the STOXX China A 900 are ranked by 60-day median daily volume. Securities falling in the lowest 10% cannot be held.

Constraint Hierarchy: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively in the following order: 1) Industry exposure, 2) Turnover.

14. STOXX SUSTAINABILITY INDICES

Review frequency:
The reviews are conducted on a quarterly basis in March, June, September, and December together with the review of the STOXX China A 900 index. All changes are implemented on the third Friday in March, June, September and December and effective the next trading day. The review cut-off date for the risk model data is the second Friday of the review month. The review cut-off date for the universe and the rest of underlying data is the is the last dissemination day of the month preceding the review month.

Weighting cap factors:
The weighting factors are calculated based on closing prices in EUR from the second Friday of the review month. Weighting factor = (1,000,000,000 / closing price of the stock in EUR), rounded to the nearest integer. The review cut-off date for Axioma data is the second Friday of the review month.

14.18.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process. Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.19. STOXX EUROPE 600 ESG+ INDEX

14.19.1. OVERVIEW

The STOXX Europe 600 ESG+ Index tracks the performance of the STOXX Europe 600 after a set of compliance, involvement and ESG performance screens are applied. Companies that are non-compliant based on the ISS-ESG Norms Based Screening assessment or are involved in Controversial Weapons are not eligible for selection. Additional exclusion filters are applied, screening companies for involvement in Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting. The remaining securities are ranked in descending order of their ESG scores within each of the 11 ICB Industry groups. The STOXX Europe 600 ESG+ Index select the top-ranking securities in each of the ICB Industries until the number of selected securities reaches 80% of the number of securities in the underlying index.

Universe: STOXX Europe 600

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on March 20, 2017.

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar

14.19.2. INDEX REVIEW

Selection list:

From the universe, a set of exclusion criteria are applied which follow the ISS-ESG Norms Based Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting.

Norms Based Screening: Companies are assessed against their adherence to international norms on human rights, labor standards, environmental protection and anti-corruption established in the UN Global Compact and the OECD Guidelines. Companies identified as ‘Red’ are excluded. ISS-ESG identifies companies are ‘Red’, if they are failing to respect established norms and where the issue remains unaddressed.

Controversial Weapons:

Not involved in Controversial Weapons activities, as identified by ISS-ESG. The following weapons are considered controversial: anti-personnel mines, biological weapons, chemical weapons, cluster munitions, depleted uranium program, and nuclear weapons (including Non-NPT). ISS ESG’s Controversial Weapons Research is designed to identify all companies in a corporate structure that have control over the relevant business activities, i.e., all immediate parent companies up to the ultimate parent. Companies identified as ‘Red’ are excluded.

14. STOXX SUSTAINABILITY INDICES

Tobacco:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from involvement in the production of tobacco products.
- >5% revenues from services related to tobacco products.
- >5% revenues from the wholesale or retail distribution of tobacco products.

Thermal Coal:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from thermal coal mining, including any exposure in production or services. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information

- >5% revenues from generation of electric power using coal. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.

- Any involvement in thermal coal mine development operations or plans effective March 2022.

- Any involvement in coal power expansion or plans effective March 2022

Unconventional Oil & Gas:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from the extraction and processing of oil sands for the most recent fiscal year period.
- >5% revenues from oil and gas extraction through arctic drilling for the most recent fiscal year period.
- >5% revenues from hydraulic fracturing for the most recent fiscal year period.

Civilian Firearms:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from involvement in the production of civilian firearms and/or the provision of related services.
- >5% revenues from involvement in the distribution of civilian firearms.

Military Equipment:

STOXX will exclude companies that ISS-ESG identifies to have:

14. STOXX SUSTAINABILITY INDICES

- >10% revenues from involvement in military equipment and services.

The securities that fulfil the conditions above are screened for their ESG scores, sourced from ISS-ESG ESG Performance Score. This metric provides a numerical score from 0 to 100 and is comparable over all rated entities. For corporate issuers Prime Status is based on the ESG rating and a sector specific Prime threshold. All rated entities with values > 50 are Prime, companies with values < 50 are Not Prime. Securities with no ESG scores are not eligible and will not be considered for selection.

Composition list:

The remaining securities in the selection list are allocated to the 11 ICB Industry groups according to their ICB classifications. The STOXX Europe 600 ESG+ Index targets a total selection of 80% of the number of securities from their underlying universes. The selection is applied across all industry groups, selecting the highest scorers and preserving the 80% selection ratio within each of the industry groups.

The targeted number of securities for final selection and the targeted number of securities in each of the ICB industries are calculated as below:

$Target\ ESGBM$ = 0.8 $*\ Bm\ count$, rounded down to the nearest integer
$Target\ ICB$i = 0.8 $*\ Bm\ ICB\ count$i , for each ICB Industry i, rounded down to the nearest integer

Where:

$Bm\ count$	total number of securities in the underlying universe
$Target\ ESGBM$	targeted number of securities in the index
I	ICB industry i
$Bm\ ICB\ count_i$	total number of securities in ICB Industry i in the underlying universe
$Target\ ICB_i$	targeted number of securities in ICB Industry i in the index

The eligible securities in the selection list are ranked in descending order of their ESG scores within the 11 ICB Industry groups. In the event that two companies for a given industry group have the same ESG score, priority is given to the company with the highest free float market capitalization. The composition list for the index is derived using the following steps:

i. The top-ranking securities in each of the ICB Industry groups are selected until a maximum of $Target\ ICBi$ securities are selected for each industry i
ii. If the total number of selected securities meets the target count for the index, selection stops here, and the selected securities will form the composition list for the index. If the total number of selected securities does not meet the target count for the index, $Target\ ICBi$ is increased by 1 for each industry group, and step i. is repeated. Further increments of 1 are applied to $Target\ ICBi$ if necessary, until the total number of selected securities meets or exceeds the target count for the index.
iii. The index will select at most 80% of the number of companies in the underlying index, $Target\ ESGBM$. In the cases where the selection in step ii. is less (not enough eligible securities in the selection list), or equal to the $Target\ ESGBM$, all of the securities will be selected and will form the composition list for the index.

In the cases where the selection in step ii. is higher than the $Target\ ESGBM$, selection from the second to last iteration will be prioritized, and the highest ESG scorers from the last increment will be selected until a total of $Target\ ESGBM$ securities are selected.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: All components are capped at a maximum weight of 10%

14.19.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers: Standard STOXX process.

Corporate Actions All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.20. EURO STOXX 50 ESG FILTERED INDEX

14.20.1. OVERVIEW

The EURO STOXX 50 ESG Filtered Index reflects the EURO STOXX 50 Index with ESG exclusion screens applied for Norms Based Screening, Human Rights controversy, Environmental Protection controversy, Controversial Weapons, Tobacco, Coal, Unconventional Oil & Gas, Fossil Fuels, Nuclear Power, Civilian Firearms, Military Contracting, emissions intensity and energy consumption intensity. Each exclusion is replaced by a EURO STOXX company with the highest market capitalization from the same ICB Supersector as the excluded company.

Universe: EURO STOXX

Weighting scheme: The indices are weighted according to free-float market capitalization. All components are capped at a maximum weight of 10%.

Base values and dates: 100 on 20 March, 2017.

Index types and currencies: Price, net return and gross return in EUR, USD

Dissemination calendar: STOXX Europe calendar

14.20.2. INDEX REVIEW

Selection list:

Step 1: From the EURO STOXX 50 index, apply a set of exclusion criteria which follow the ISS-ESG Norms Based Screening assessment, Human Rights controversy, Environmental Protection controversy, a set of definitions for Controversial Weapons, Tobacco, Coal, Unconventional Oil & Gas, Fossil Fuels, Nuclear Power, Civilian Firearms, Military Contracting, emissions intensity and energy consumption intensity.

Norms Based Screening:

Companies are assessed against their adherence to international norms on human rights, labour standards, environmental protection and anti-corruption established in the UN Global Compact and the OECD Guidelines. Companies identified as ‘Red’ are excluded. ISS-ESG identifies companies are ‘Red’, if they are failing to respect established norms and where the issue remains unaddressed.

Human rights controversy:

Companies are assessed based on their worst Case Severity Indicator within the Key Thematic Area Fundamental Human Rights. The Case Severity Indicator is a measure of the reported risk or impact on society or the environment, and takes into account the degree of corporate involvement. Companies identified as "Very Severe" are excluded.

Environmental Protection controversy :

Companies are assessed based on their worst Case Severity Indicator within the Key Thematic Area Environmental Protection. The Case Severity Indicator is a measure of the reported risk or impact on society or the environment, and takes into account the degree of corporate involvement. Companies identified as “Severe” and "Very Severe" are excluded.

Controversial Weapons:

Not involved in Controversial Weapons activities, as identified by ISS-ESG. The following weapons are considered controversial: anti-personnel mines, biological weapons, chemical weapons, cluster munitions, depleted uranium programme, white phosphorus, and nuclear weapons (including Non-NPT). ISS ESG’s Controversial Weapons Research is designed to identify all companies in a corporate structure that have control over the relevant business activities, i.e., all immediate parent companies up to the ultimate parent. Companies identified as ‘Red’ are excluded.

Tobacco:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from involvement in the production of tobacco products.
- >5% revenues from services related to tobacco products.
- >5% revenues from the wholesale or retail distribution of tobacco products.

Coal:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from extraction/mining of coal for the most recent fiscal year period.
- >10% revenues from generation of electric power using coal. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.

Unconventional Oil & Gas:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from the extraction and processing of oil sands for the most recent fiscal year period.
- >0% revenues from oil and gas extraction through arctic drilling for the most recent fiscal year period.
- >0% revenues from hydraulic fracturing for the most recent fiscal year period.
- Any involvement in oil and gas exploration in water of depths greater than 125 meters.

Fossil Fuels:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from the extraction of oil (including crude oil, condensate, shale oil, bitumen, synthetic crude oil from oil/tar sands, and heavy oils).
- >10% revenues from the generation of electric power using oil. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.

Nuclear Power:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues derived from nuclear power [NuclearPowerRevShareMax]
- >5% revenues from involvement in uranium exploration, extraction, and processing.
- Any involvement in generating electric output from nuclear power plants owned by the company.

Civilian Firearms:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from involvement in the production of civilian firearms and/or the provision of related services.

Military Equipment:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from involvement in the production of military equipment and/or the provision of related services.

Carbon intensity:

STOXX will exclude companies that ISS-ESG identifies to have:

- total (Scope 1 + Scope 2) carbon emissions intensity > 1500. Carbon intensity is expressed as the issuer's total carbon emissions per million USD of revenue as a proxy of the carbon efficiency per unit of output.

Energy consumption intensity:

STOXX will exclude companies that ISS-ESG identifies to have:

- energy consumption in GWh per million EUR of revenue (GWh/mEUR) > 300.

Step 2 - The replacement of the excluded EURO STOXX 50 companies from Step 1, will be achieved in the following manner:

» Compile the list of companies that are excluded from the EURO STOXX 50 in Steps 1

» The exclusion list will contain the ICB Supersector, and free-float market capitalization of each excluded company.

» A set of exclusion criteria which follow the ISS-ESG Norms Based Screening assessment, Human Rights controversy, Environmental Protection controversy, a set of definitions for Controversial Weapons, Tobacco, Coal, Unconventional Oil & Gas, Fossil Fuels, Nuclear Power, Civilian Firearms, Military Contracting, emissions intensity and energy consumption intensity (definitions as per Step 1) is applied to the EURO STOXX universe. The remaining companies of the screened EURO STOXX universe are ranked per ICB Supersector in terms of free float market capitalization, from high to low. This list is used as a replacement universe for replacing the excluded EURO STOXX 50 securities.

» Each excluded EURO STOXX 50 company in the exclusion list is replaced by the highest ranking EURO STOXX company from the replacement universe that belongs to the same ICB Supersector as the excluded company.

» In the event where no component is available from the EURO STOXX replacement universe pertaining to the corresponding ICB Supersector, the component with the highest free float market capitalization from the same ICB Industry as the excluded EURO STOXX 50 company will be selected. In the event there is also no component eligible in the same ICB Industry, the company with the highest free float market capitalization in the replacement universe will be selected.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: All components are capped at a maximum weight of 10%.

14.20.3. ONGOING MAINTENANCE

Replacements: A deleted constituent is replaced immediately to maintain the fixed number of constituents. In keeping with the philosophy of the index, the replacement company must pass the criteria as described in “Step 1” of the Selection List in section Index Review above. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the EURO STOXX in between the regular review dates but is still a component of the EURO STOXX TMI, then this stock will remain in the index until the next regular review.

Fast exit: Not applicable.

Fast entry: Not applicable.

14. STOXX SUSTAINABILITY INDICES

Spin-offs: Each spin-off stock qualifies for addition if it lies within the upper buffer (ranks 1 – 40) on the latest selection list for the index. The spin-off replaces the lowest ranked stock in that index as determined by the selection list. Qualifying spin-off stocks are added in sequence:
» The largest qualifying spin-off stock replaces the original stock in the index.
» The next qualifying spin-off stock replaces the lowest ranked stock in the index.
» Likewise for the other qualifying spin-off stocks
During review implementation month, the published review report in combination with the selection list is used. With the public announcement of the review report in the review implementation month, the spin-off replaces the lowest ranked non-component from the selection list, which is not announced a deletion from the review report at the review effective date.

Mergers and takeovers: Standard STOXX process.

Corporate Actions All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.21. STOXX EUROPE 600 ENERGY ESG+ INDEX

14.21.1. OVERVIEW

The STOXX Europe 600 Energy ESG+ Index tracks the performance of the companies of the STOXX Europe 600 belonging to the ICB Energy Industry after a set of compliance, involvement and ESG performance screens are applied. Companies that are non-compliant based on the ISS-ESG Norms Based Screening assessment or are involved in Controversial Weapons are not eligible for selection. Additional exclusion filters are applied, screening companies for involvement in Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting.

Universe: STOXX Europe 600

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on 20 March, 2017.

Index types and currencies: Price, net return and gross return in EUR, USD

Dissemination calendar: STOXX Europe calendar

14.21.2. INDEX REVIEW

Selection list:

From the universe, only components belonging to the ICB Industry “Energy” are selected. A set of exclusion criteria are then applied which follow the ISS-ESG Norms Based Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting.

Norms Based Screening: Companies are assessed against their adherence to international norms on human rights, labour standards, environmental protection and anti-corruption established in the UN Global Compact and the OECD Guidelines. Companies identified as ‘Red’ are excluded. ISS-ESG identifies companies are ‘Red’, if they are failing to respect established norms and where the issue remains unaddressed.

Controversial Weapons:

Controversial Weapons: Not involved in Controversial Weapons activities, as identified by ISS-ESG. The following weapons are considered controversial: anti-personnel mines, biological weapons, chemical weapons, cluster munitions, depleted uranium programme, white phosphorus, and nuclear weapons (including Non-NPT). ISS ESG’s Controversial Weapons Research is designed to identify all companies in a corporate structure that have control over the relevant business activities, i.e., all immediate parent companies up to the ultimate parent. Companies identified as ‘Red’ are excluded.

14. STOXX SUSTAINABILITY INDICES

Tobacco:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from involvement in the production of tobacco products.
- >5% revenues from services related to tobacco products.
- >5% revenues from the wholesale or retail distribution of tobacco products.

Thermal Coal:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from thermal coal mining, including any exposure in production or services. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.
- >5% revenues from generation of electric power using coal. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.
- Any involvement in thermal coal mine development operations or plans effective March 2022.
- Any involvement in coal power expansion or plans effective March 2022

Unconventional Oil & Gas:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from the extraction and processing of oil sands for the most recent fiscal year period.
- >5% revenues from oil and gas extraction through arctic drilling for the most recent fiscal year period.
- >5% revenues from hydraulic fracturing for the most recent fiscal year period.

Civilian Firearms:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from involvement in the production of civilian firearms and/or the provision of related services.
- >5% revenues from involvement in the distribution of civilian firearms.

Military Equipment:

STOXX will exclude companies that ISS-ESG identifies to have:

- >10% revenues from involvement in military equipment and services.

Missing Data:
Companies with missing ESG exclusion screens data are not excluded from the selection. Companies with a missing ESGPerformanceScore are assumed to have a score of 0.

Composition list:
If less than 20% of the companies belonging to the Energy ICB Industry in the STOXX Europe 600 are excluded by the screens above, the worst companies in terms of ESG performance, as defined by ISS-ESG, are excluded until the target number of constituents is reached. In case two companies have the same ESG Performance score, the company with the larger free-float market capitalization is selected.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: All components are subject to a 30% capping for the largest company and a 15% capping for the other remaining companies. An intra-quarter capping will be triggered if the largest company exceeds 35% or any other company exceeds 20%.

The process is as follows:

Date t: Weight exceeds 35% / 20% at the close of market.
Date t+1: Announcement of the new weighting cap factors (30% / 15%) after close of market.
Date t+3: Implementation of the new capping factors after close of market.
Date t+4: Effective date

Note: Violations of the 35/20 threshold between dates t+1 and t+3 do not trigger another capping.

If there are fewer than 6 components, the largest component's weight is capped at 30% and the remaining components' weights are equal-weighted. In case of 3 or fewer components the components are equal-weighted.

The weighting cap factors are published on the second Friday of the quarter, one week prior to quarterly review implementation, and calculated using Thursday's closing prices.

14.21.3. ONGOING MAINTENANCE

Replacements: : Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: A spin-off is added temporarily for one dissemination day and is then removed from the index.

14. STOXX SUSTAINABILITY INDICES

Mergers and takeovers: Standard STOXX process.

Corporate Actions All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

14. STOXX SUSTAINABILITY INDICES

14.22. STOXX EUROPE 50 ESG+ INDEX

14.22.1. OVERVIEW

The STOXX Europe 50 ESG+ Index reflects the STOXX Europe 50 Index after a set of compliance, involvement and ESG performance screens are applied. Companies that are non-compliant based on the ISS-ESG Norms Based Screening assessment or are involved in Controversial Weapons are not eligible for selection. Additional exclusion filters are applied, screening companies for involvement in Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting. Furthermore, companies with the lowest ESG scores are excluded until a total of 20% (based on number of holdings) of the initial STOXX Europe 50 components are excluded. Each exclusion is replaced by a STOXX Europe 600 company with a higher ESG score from the same ICB supersector as the excluded company. The index is free float market capitalization weighted with cap factors imposed on the index components such that the index achieves an overall ESG score that exceeds that of the STOXX Europe 50 Index excluding its worst 22% ESG scorers.

Universe: STOXX Europe 600

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on 20 March, 2017.

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar

14.22.2. INDEX REVIEW

Selection list:

From the universe, a set of exclusion criteria are applied which follow the ISS-ESG Norms Based Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting.

Norms Based Screening: Companies are assessed against their adherence to international norms on human rights, labor standards, environmental protection and anti-corruption established in the UN Global Compact and the OECD Guidelines. Companies identified as ‘Red’ are excluded. ISS-ESG identifies companies are ‘Red’, if they are failing to respect established norms and where the issue remains unaddressed.

Controversial Weapons:

Not involved in Controversial Weapons activities, as identified by ISS-ESG. The following weapons are considered controversial: white phosphorus, anti-personnel mines, biological weapons, chemical weapons, cluster munitions, depleted uranium program, and nuclear weapons

(including Non-NPT). ISS ESG's Controversial Weapons Research is designed to identify all companies in a corporate struc-ture that have control over the relevant business activities, i.e., all immediate parent companies up to the ultimate parent. Companies identified as 'Red' are excluded.

Tobacco:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from involvement in the production of tobacco products.
- >5% revenues from services related to tobacco products.
- >5% revenues from the wholesale or retail distribution of tobacco products.

Thermal Coal:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from thermal coal mining, including any exposure in production or services. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.
- >5% revenues from generation of electric power using coal. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.
- Any involvement in thermal coal mine development operations or plans effective March 2022.
- Any involvement in coal power expansion or plans effective March 2022

Unconventional Oil & Gas:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from the extraction and processing of oil sands for the most recent fiscal year period.
- >5% revenues from oil and gas extraction through arctic drilling for the most recent fiscal year period.
- >5% revenues from hydraulic fracturing for the most recent fiscal year period.

Civilian Firearms:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from involvement in the production of civilian firearms and/or the provision of related services.
- >5% revenues from involvement in the distribution of civilian firearms.

Military Equipment:

STOXX will exclude companies that ISS-ESG identifies to have:
- >10% revenues from involvement in military equipment and services.

The securities that fulfil the conditions above are screened for their ESG scores, sourced from ISS-ESG ESG Performance Score. This metric provides a numerical score from 0 to 100 and is comparable over all rated entities. For corporate issuers Prime Status is based on the ESG rating and a sector specific Prime threshold. All rated entities with values > 50 are Prime, companies with values < 50 are Not Prime.

Step 2:
From the remaining companies of the STOXX Europe 50 index, exclude a number of companies with the lowest ESG scores, that in combination with the exclusions from step 1, will result in the exclusion of a total of 20% of constituents (based on number of holdings).

Constituents that are in the index, but do not have an ESG score, remain in the selection and are not considered for this exclusion screen if there are 3 or less companies without an ESG score. However, in the event that there are 4 or more companies without an ESG score for a certain review period, these companies should be replaced following the procedure described in Step 3. This exclusion, if applicable, will be done prior to excluding companies based on low ESG scores.

In the event that companies that qualify for exclusion have the same ESG score, the company (companies) with the smallest free float market capitalization(s), is (are) excluded.

Step 3: The replacement of the excluded STOXX Europe 50 companies from Step 1 and Step 2, will be achieved in the following manner:
» Compile the list of companies that are excluded from the STOXX Europe 50 in Steps 1 and 2 (the 20% components of the STOXX Europe 50 Index that need to be replaced)
» The exclusion list will contain the ICB Supersector, ESG score and free-float market capitalization of each company.
» The remaining companies of the screened STOXX Europe 600 universe (as per Step 1), are ranked per ICB Supersector in terms of free float market capitalization adjusted by ESG score ($ffmcap * ESG$), from high to low, with each constituent displaying its corresponding ESG score and free-float market capitalization.
» Each excluded company from the exclusion list is replaced by the highest ranking company from the universe within the same ICB Supersector, where the replacement company has a higher ESG score than the excluded company.
» In the event where a company with a high ESG score is excluded (mostly applicable to Step 1), and no component is available from the universe pertaining to the corresponding ICB Supersector that has a higher ESG score, the component with the same ESG score, or as close an ESG score

to the excluded company as possible, with the highest free float market capitalization, will be selected.
» Each replacement constituent must have an ESG score > 50.

Composition list: The composition list will consist of the companies from the STOXX Europe 50 that remain after the exclusion criteria from Step 1 and Step 2 have been applied, together with the companies which have been selected as replacements from Step 3.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: The index is weighted by free-float market capitalization, with cap factors that aim to impose to the STOXX Europe 50 ESG+ Index to have a weighted average ESG score, that exceeds the corresponding score of the STOXX Europe 50 Index, excluding its worst 22% components in terms of ESG scores.

This is applied as follows:

A) The free float market capitalization weighted average ESG score the STOXX Europe 50 Index, excluding its 22% worst components in terms of ESG score, is calculated, and rounded up to 2 decimals ($\mathrm{ESG_{target}}$).

B) Weights based on their free-float market capitalization are assigned to the components of the STOXX Europe 50 ESG+ Index (composition list). Correspondingly, the weighted average ESG score of the STOXX Europe 50 ESG+ uncapped index, is calculated ($\frac{\sum_{z=1}^{50} FFMCAP_z * \mathrm{ESG_z}}{\sum_{z=1}^{50} FFMCAP_z}$).

If that score exceeds or is equal to the $\mathrm{ESG_{target}}$ score (i.e. $\frac{\sum_{z=1}^{50} FFMC\quad_z * \mathrm{ESG_z}}{\sum_{z=1}^{50} FFMCAP_z} \geq \mathrm{ESG_{target}}$), then the following cap factor calculation steps are omitted (no capping needed).

The above condition can be reformulated as:

$$\sum_{i=1}^{x} (\mathrm{ESG_i} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_i} \geq -\sum_{j=1}^{y} (\mathrm{ESG_j} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_j}$$

Where:

x components in the composition list with ESG score exceeding ESG_{target}

y components in the composition list with ESG score equal to or less than ESG_{target}

If the condition does not hold (right leg exceeds the left), cap factors are imposed on the securities in the composition list that have an ESG score below the $\mathrm{ESG_{target}}$, such that:

$$\sum_{i=1}^{x} (\mathrm{ESG_i} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_i} \geq -\sum_{j=1}^{y} (\mathrm{ESG_j} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_j} * Capfactor$$

The final cap factors are therefore calculated as:

14. STOXX SUSTAINABILITY INDICES

$$\text{CapFactor} = \frac{\sum_{i=1}^{x} (\text{ESG}_i - \text{ESG}_{\text{target}}) * \text{FFMCAP}_i}{-\sum_{j=1}^{y} (\text{ESG}_j - \text{ESG}_{\text{target}}) * \text{FFMCAP}_j}$$

Additionally, components are capped at a maximum weight of 10%.

14.22.3. ONGOING MAINTENANCE

Replacements: A deleted constituent is replaced immediately to maintain the fixed number of constituents. In keeping with the philosophy of the index, the replacement company must pass the criteria as described in “Step 1” of the Selection List in section 14.8.2 Index Review above. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.
In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the STOXX Europe 600 in between the regular review dates but is still a component of the STOXX Europe TMI, then this stock will remain in the STOXX Europe 50 ESG+ index until the next regular review

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers: Standard STOXX process.

14. STOXX SUSTAINABILITY INDICES

14.23. EURO STOXX 50 ESG+ INDEX

14.23.1. OVERVIEW

The EURO STOXX 50 ESG+ Index reflects the EURO STOXX 50 Index after a set of compliance, involvement and ESG performance screens are applied. Companies that are non-compliant based on the ISS-ESG Norms Based Screening assessment or are involved in Controversial Weapons are not eligible for selection. Additional exclusion filters are applied, screening companies for involvement in Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting. Furthermore, companies with the lowest ESG scores are excluded until a total of 20% (based on number of holdings) of the initial EURO STOXX 50 components are excluded. Each exclusion is replaced by a EURO STOXX company with a higher ESG score from the same ICB Supersector as the excluded company. The index is free float market capitalization weighted with cap factors imposed on the index components such that the index achieves an overall ESG score that exceeds that of the EURO STOXX 50 Index excluding its worst 22% ESG scorers.

Universe: EURO STOXX

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on 20 March, 2017.

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar

14.23.2. INDEX REVIEW

Selection list:

From the universe, a set of exclusion criteria are applied which follow the ISS-ESG Norms Based Screening assessment, a set of definitions for Controversial Weapons, Tobacco, Thermal Coal, Unconventional Oil & Gas, Civilian Firearms, and Military Contracting.
Norms Based Screening: Companies are assessed against their adherence to international norms on human rights, labor standards, environmental protection and anti-corruption established in the UN Global Compact and the OECD Guidelines. Companies identified as ‘Red’ are excluded. ISS-ESG identifies companies are ‘Red’, if they are failing to respect established norms and where the issue remains unaddressed.

Controversial Weapons:

Not involved in Controversial Weapons activities, as identified by ISS-ESG. The following weapons are considered controversial: white phosphorus, anti-personnel mines, biological weapons, chemical weapons, cluster munitions, depleted uranium program, and nuclear weapons (including Non-NPT). ISS ESG’s Controversial Weapons Research is designed to identify all companies in a corporate structure that have control over the relevant business

activities, i.e., all immediate parent companies up to the ultimate parent. Companies identified as 'Red' are excluded.

Tobacco:

STOXX will exclude companies that ISS-ESG identifies to have:

- >0% revenues from involvement in the production of tobacco products.
- >5% revenues from services related to tobacco products.
- >5% revenues from the wholesale or retail distribution of tobacco products.

Thermal Coal:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from thermal coal mining, including any exposure in production or services. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.
- >5% revenues from generation of electric power using coal. The maximum percentage of revenues values are based on the best available data, which may include reported revenues, reported percentage of revenues, or estimated revenues based on available information.
- Any involvement in thermal coal mine development operations or plans effective March 2022.
- Any involvement in coal power expansion or plans effective March 2022

Unconventional Oil & Gas:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from the extraction and processing of oil sands for the most recent fiscal year period.
- >5% revenues from oil and gas extraction through arctic drilling for the most recent fiscal year period.
- >5% revenues from hydraulic fracturing for the most recent fiscal year period.

Civilian Firearms:

STOXX will exclude companies that ISS-ESG identifies to have:

- >5% revenues from involvement in the production of civilian firearms and/or the provision of related services.

- >5% revenues from involvement in the distribution of civilian firearms.

Military Equipment:

STOXX will exclude companies that ISS-ESG identifies to have:
- >10% revenues from involvement in military equipment and services.

The securities that fulfil the conditions above are screened for their ESG scores, sourced from ISS-ESG ESG Performance Score. This metric provides a numerical score from 0 to 100 and is comparable over all rated entities. For corporate issuers Prime Status is based on the ESG rating and a sector specific Prime threshold. All rated entities with values > 50 are Prime, companies with values < 50 are Not Prime.

Step 2 - From the remaining companies of the EURO STOXX 50 index, exclude a number of companies with the lowest ESG scores, that in combination with the exclusions from step 1, will result in the exclusion of a total of 20% of constituents (based on number of holdings).

Constituents that are in the index, but do not have an ESG score, remain in the selection and are not considered for this exclusion screen if there are 3 or less companies without an ESG score. However, in the event that there are 4 or more companies without an ESG score for a certain review period, these companies should be replaced following the procedure described in Step 3. This exclusion, if applicable, will be done prior to excluding companies based on low ESG scores.

In the event that companies that qualify for exclusion have the same ESG score, the company (companies) with the smallest free float market capitalization(s), is (are) excluded.

Step 3- The replacement of the excluded EURO STOXX 50 companies from Step 1 and Step 2, will be achieved in the following manner:
» Compile the list of companies that are excluded from the EURO STOXX 50 in Steps 1 and 2 (the 20% components of the EURO STOXX 50 Index that need to be replaced)
» The exclusion list will contain the ICB Supersector, ESG score and free-float market capitalization of each company.
» The remaining companies of the screened EURO STOXX universe (as per Step 1), are ranked per ICB Supersector in terms of free float market capitalization adjusted by ESG score ($ffmcap * ESG$), from high to low, with each constituent displaying its corresponding ESG score and free-float market capitalization.
» Each excluded company from the exclusion list is replaced by the highest ranking company from the universe within the same ICB Supersector, where the replacement company has a higher ESG score than the excluded company.
» In the event where a company with a high ESG score is excluded (mostly applicable to Step 1), and no component is available from the universe pertaining to the corresponding ICB Supersector that has a higher ESG score, the component with the same ESG score, or as close an ESG score to the excluded company as possible, with the highest free float market capitalization, will be selected.
» Each replacement constituent must have an ESG score > 50.

14. STOXX SUSTAINABILITY INDICES

Composition list: The composition list will consist of the companies from the EURO STOXX 50 that remain after the exclusion criteria from Step 1 and Step 2 have been applied, together with the companies which have been selected as replacements from Step 3.

Review frequency: : The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: The index is weighted by free-float market capitalization, with cap factors that aim to impose to the EURO STOXX 50 ESG+ Index to have a weighted average ESG score, that exceeds the corresponding score of the EURO STOXX 50 Index, excluding its worst 22% components in terms of ESG scores.

This is applied as follows:

A) The free float market capitalization weighted average ESG score the EURO STOXX 50 Index, excluding its 22% worst components in terms of ESG score, is calculated, and rounded up to 2 decimals ($\mathrm{ESG_{target}}$).

B) Weights based on their free-float market capitalization are assigned to the components of the EURO STOXX 50 ESG+ Index (composition list). Correspondingly, the weighted average ESG score of the EURO STOXX 50 ESG+ uncapped index, is calculated ($\frac{\sum_{z=1}^{50} FFMCAP_z * \mathrm{ESG_z}}{\sum_{z=1}^{50} FFMC_z}$).

If that score exceeds or is equal to the $\mathrm{ESG_{target}}$ score (i.e. $\frac{\sum_{z=1}^{50} FFMC_z * \mathrm{ESG_z}}{\sum_{z=1}^{50} FFMC_z} \geq \mathrm{ESG_{target}}$), then the following cap factor calculation steps are omitted (no capping needed).

The above condition can be reformulated as:

$$\sum_{i=1}^{x} (\mathrm{ESG_i} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_i} \geq -\sum_{j=1}^{y} (\mathrm{ESG_j} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_j}$$

Where:

x components in the composition list with ESG score exceeding ESG_{target}

y components in the composition list with ESG score equal to or less than ESG_{target}

If the condition does not hold (right leg exceeds the left), cap factors are imposed on the securities in the composition list that have an ESG score below the $\mathrm{ESG_{target}}$, such that:

$$\sum_{i=1}^{x} (\mathrm{ESG_i} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_i} \geq -\sum_{j=1}^{y} (\mathrm{ESG_j} - \mathrm{ESG_{target}}) * \mathrm{FFMCAP_j} * Capfactor$$

The final cap factors are therefore calculated as:

14. STOXX SUSTAINABILITY INDICES

$$\text{CapFactor} = \frac{\sum_{i=1}^{x} (\text{ESG}_i - \text{ESG}_{\text{target}}) * \text{FFMCAP}_i}{-\sum_{j=1}^{y} (\text{ESG}_j - \text{ESG}_{\text{target}}) * \text{FFMCAP}_j}$$

Additionally, components are capped at a maximum weight of 10%.

14.23.3. ONGOING MAINTENANCE

Replacements A deleted constituent is replaced immediately to maintain the fixed number of constituents. In keeping with the philosophy of the index, the replacement company must pass the criteria as described in “Step 1” of the Selection List in section 14.8.2 Index Review above. During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the STOXX Europe 600 in between the regular review dates but is still a component of the STOXX Europe TMI, then this stock will remain in the STOXX Europe 50 ESG+ index until the next regular review.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers: Standard STOXX process.

14. STOXX SUSTAINABILITY INDICES

14.24. STOXX CHINA A 900 LARGE ESG INDEX

14.24.1. OVERVIEW

The STOXX China A 900 Large ESG Index tracks the performance of the largest 300 securities by free float market capitalization in the STOXX China A 900 Index after a set of compliance, involvement and ESG performance screens are applied. The index uses data from the International Institute of Green Finance (IIGF) to apply exclusionary screens. Companies that are assessed by IIGF to be non-compliant with the UN Global Compact Principles, or involved in controversial weapons, tobacco or thermal coal are not eligible for selection. The remaining securities are ranked in descending order of their IIGF ESG scores within each of the 11 ICB Industry groups. The STOXX China A 900 Large ESG index selects the top-ranking securities in each of the ICB Industries until the number of selected securities reaches 80% of the largest 300 securities by free float market capitalization from the STOXX China A 900.

Universe: The largest 300 securities by free float market capitalization from the STOXX China A 900 index.

Weighting scheme: The indices are weighted according to free-float market capitalization.

Base values and dates: 100 on December 19, 2016.

Index types and currencies: Price, net return and gross return in EUR, USD, and CNY.

Dissemination calendar: STOXX Global calendar

14.24.2. INDEX REVIEW

Selection list:
The largest 300 securities by free float market capitalization from the STOXX China A 900 index define the index universe. The following exclusions criteria are applied to these 300 securities:

UN Global Compact
Companies that IIGF identifies as non-compliant with international standards such as the United Nations Global Compact (UNGC) Principles and related norms are not eligible for selection. IIGF assesses companies based on public information, government records and international standards to identify companies that violate international norms and standards.

Controversial Weapons
Companies that IIGF identifies as involved in controversial weapons are not eligible for selection. The following involvements are considered in the controversial weapons screen: cluster weapons, anti-personnel mines, biological and chemical weapons, nuclear weapons, depleted uranium, and white phosphorus weapons. This includes companies with any revenue from direct involvement in the sale or production of controversial weapons, companies that own more than 10% of a directly involved company, and companies which are owned by directly involved companies (>10% ownership).

14. STOXX SUSTAINABILITY INDICES

Tobacco
Companies in the universe are screened for their involvement in tobacco. Companies that generate revenues from tobacco production (>0%), retail or distribution of tobacco products (>5%) or from supplying specialized products or services for tobacco production (>5%) are not eligible for selection.

Thermal Coal
Companies in the universe are screened for their involvement in thermal coal. Companies that generate revenues from thermal coal mining and extraction (>5%) or thermal coal based power generation/ power distribution generated from thermal coal (>5%) are not eligible for selection.

The securities that fulfil the conditions above are screened for their ESG scores, sourced from IIGF ESG. Securities with no ESG scores are not eligible and will not be considered for selection.

Composition list:
The remaining securities in the selection list are allocated to the 11 ICB Industry groups according to their ICB classifications. The STOXX China A 900 Large ESG Index targets a total selection of 80% of the largest 300 securities by free float market capitalization from the STOXX China A 900. The selection is applied across all industry groups, selecting the highest scorers and preserving the 80% selection ratio within each of the industry groups.

For every review selection, the targeted number of securities for final selection and the targeted number of securities in each of the ICB industries are calculated as below:

$Target\ ESGBM = 0.8\ *\ Bm\ count$, rounded down to the nearest integer
$Target\ ICB_i = 0.8\ *\ Bm\ ICB\ count_i$, for each ICB Industry i, rounded down to the nearest integer

Where:

$Bm\ count$	the largest 300 securities by free float market capitalization from the STOXX China A 900
$Target\ ESGBM$	targeted number of securities in the STOXX China A 900 Large ESG index
i	ICB industry i
$Bm\ ICB\ count_i$	total number of securities in ICB Industry i in the largest 300 securities by free float market capitalization from the STOXX China A 900
$Target\ ICB_i$	targeted number of securities in ICB Industry i in the STOXX China A 900 Large ESG index

The eligible securities in the selection list are ranked in descending order of their ESG scores within the 11 ICB Industry groups. In the event that two companies for a given industry group have the same ESG score, priority is given to the company with the highest free float market capitalization. The composition list for the STOXX China A 900 Large ESG Index is derived using the following steps:

i. The top-ranking securities in each of the ICB Industry groups are selected until a maximum of $Target\ ICB_i$ securities are selected for each industry i
ii. If the total number of selected securities meets the target count for the STOXX China A 900 Large ESG index, selection stops here, and the selected securities will form the composition list for the index.

If the total number of selected securities does not meet the target count for the STOXX China A 900 Large ESG index, $Target\ ICB_i$ is increased by 1 for each industry group, and step i. is repeated. Further increments of 1 are applied to $Target\ ICB_i$ if necessary, until the total number of selected securities meets or exceeds the target count for the STOXX China A 900 Large ESG index.

iii. The STOXX China A 900 Large ESG index will select at most 1/3 of the number of companies in the underlying parent universe, $Target\ ESGBM$.

In the cases where the selection in step ii. is less (not enough eligible securities in the selection list), or equal to the $Target\ ESGBM$, all of the securities will be selected and will form the composition list for the index.

In the cases where the selection in step ii. is higher than the $Target\ ESGBM$, selection from the second to last iteration will be prioritized, and the highest ESG scorers from the last increment will be selected until a total of $Target\ ESGBM$ securities are selected.

Review frequency:
The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors:
All components are capped at a maximum weight of 10%.

14.24.3. ONGOING MAINTENANCE

Replacements:
Deleted companies are not replaced.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process. Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

15. STOXX FAITH-BASED INDICES

15.1. STOXX EUROPE CHRISTIAN INDEX

15.1.1. OVERVIEW

The STOXX Europe Christian Index is designed to provide European equity market availability to investors who seek equity ownership in alignment with the moral and social teachings of the Christian religion (social, environmental, ethical and economic responsibility).

Universe: STOXX Europe 600

Weighting scheme: The index is weighted according to free-float market capitalization.

Base value and date: 100 on December 31, 2004.

Index types and currencies: Price and net return in EUR and USD.

15.1.2. INDEX REVIEW

Component selection
From the universe, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons as well as Product Involvement in certain areas of business (see table below).

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Product Involvement:
Furthermore, STOXX will exclude companies that Sustainalytics identifies to have revenues above the following thresholds, generated in the following areas of business:

15. STOXX FAITH-BASED INDICES

Area of involvement	% Revenue Threshold
Pornography	5%
Small arms (civilian customers)	5%
Military contracting weapons	5%
Tobacco production	25%
Tobacco distribution	25%
Birth control, Abortion and HESC	0%
Gambling	25%

Composition list: The composition list will consist of the companies that remain from the selection list once all the exclusion criteria have been applied.

Review frequency: The STOXX Europe Christian index is reviewed on a semi-annual basis in June and December. The review cut-off date is the last dissemination day of the month preceding the review month.

Weighting cap factors: Components are capped at a maximum weight of 20%.

15.1.3. ONGOING MAINTENANCE

Deleted companies are not replaced.

Fast exit:
Not applicable.

Fast entry:
Not applicable.

Spin-offs:
A spin-off is added temporarily for one dissemination day and is then removed from the index.

Mergers and takeovers:
Standard STOXX process.

Corporate Actions:
All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

16. STOXX RISK BASED INDICES

16.1. STOXX MINIMUM VARIANCE AND MINIMUM VARIANCE UNCONSTRAINED INDICES

16.1.1. OVERVIEW

The STOXX Minimum Variance indices are based on benchmark indices, including the STOXX Global 1800 index, regional and country indices, but weighting will be done via a minimum variance optimization. The index family is designed as a strategic overlay on the existing global family of market-cap weighted STOXX indices. The aim will be to have these covering major regions, and then most major countries, still at the benchmark level.

Universe: The components of the STOXX Global 1800 Minimum Variance and STOXX Global 1800 Minimum Variance Unconstrained indices are selected from the STOXX Global 1800 index. Similarly, other STOXX [region] [number] Minimum Variance indices are derived from other STOXX [region] [number] benchmark indices.

Weighting scheme: The indices are price weighted according to a minimum variance optimization

Base values and date: 100 on May 04, 2012

Index types and currency: Price, net and gross return in EUR and USD. Further currency version for local countries available.
For a complete list please consult the data vendor code sheet on the website [29].

Dissemination calendar: STOXX US Calendar.

16.1.2. INDEX REVIEW

Component selection and weighting cap-factors:
The indices are derived from the STOXX regional country benchmark indices. Axioma's Second-Order Cone with Branch-and-Bound Optimisation process is used.

For each benchmark index, there will be two different types of minimum variance overlays. The first will aim to optimize the portfolio with respect to variance, while not modifying other attributes (other factors, country/industry exposure) too much. That way the Minimum Variance index will be very similar to the parent benchmark index but with reduced variance, suitable for investors seeking a better benchmark or an improved version of a benchmark. The second version will have more loosely stated constraints and will aim seek to obtain a more raw minimum variance portfolio, suitable for investors seeking either an even superior benchmark or a good strategy index. Due to the optimization process the Minimum Variance indices may have less constituents than the original index.

The following indices use a revised optimization model for the Minimum Variance ("Tracking error constrained") methodology:

[29] http://www.STOXX.com/download/indices/vendor_codes.xls

16. STOXX RISK BASED INDICES

Name
STOXX China A 900 Minimum Variance
STOXX Emerging Markets 800 LO Minimum Variance

Constraint	**Minimum Variance Unconstrained**	**Minimum Variance ("Regular")**	**Minimum Variance ("Tracking error constrained")**
Individual capping	4.5% / 8% / 35% Minimum 3 bps in post-processing	4.5% / 8% / 35% Minimum 3 bps in post-processing	4.5% / 8% / 35% Max(2%, weight in parent) Minimum 3 bps in post-processing
Effective number of assets	30% of parent benchmark	30% of parent benchmark	60% of parent benchmark
Rebalancing and max. turnover	Monthly, 5%	Quarterly, 7.5%	Quarterly, 5%
Country/industry exposure	None	Within 5% of parent benchmark	Within 5% of parent benchmark
Factor exposure (except Size/Volatility)	None	Within 0.25 std. dev. of parent benchmark	Within 0.25 std. dev. of parent benchmark
Tracking error	None	None	Within 5% w.r.t. parent benchmark
Max. number of names	None	None	Less or equal to Max(Min(Names in parent / 4, 500), 80)

Individual capping
We apply constraints such that maximum weights (5%/10%/40%) are not exceeded, whereby a component cannot have a weight more than 10%, and the sum of all those who have at least 5% cannot exceed 40%. By applying tighter constraints, we reduce the chance of breaching these figures, and reduce the gravity of the breaches if and when they occur.
The tracking error constrained version's methodology in addition limits the individual weights to the greater of the company's weight in the corresponding parent benchmark or 2%.

Effective number of assets
The effective number of assets of an index is the value, H, defined as:

$$\mathrm{H} = \frac{1}{\sum \mathrm{w}^2}$$

which gives an accurate measure of the number of assets that affect a portfolio. The number of components in an index that is weighted by optimisation must be defined along those lines as otherwise, we force the optimization to have many component with insignificant weights.
The constraint is defined as follows for the Unconstrained and regular index:

$$\mathrm{H}_{\mathrm{MinVar}} \geq \mathrm{H}_{\mathrm{Base}} \cdot 30\%$$

For the tracking error constrained version it is defined as:

$$\mathrm{H}_{\mathrm{MinVar}} \geq \mathrm{H}_{\mathrm{Base}} \cdot 60\%$$

Maximum turnover
The Unconstrained version has a 5% one-way turnover constraint, or 10% two-way. This means up to 5% of the portfolio is sold in order to purchase other components (absolute maximum annual turnover is 120%).

The regular versions have 7.5% one-way or 15% two-way (absolute maximum annual turnover is 60%).

The tracking error constrained version have 5% one-way or 10% two-way (absolute maximum annual turnover is 40%).

Minimum liquidity requirement
Recognizing that minimum variance portfolios may sometimes prefer to hold slightly less liquid stocks, the minimum liquidity requirement ensures that there is no material buildup in illiquid positions in certain segments of the portfolio.

The weighted average days-to-trade d_s for a given group of holdings S are defined as:

$$d_S = \sum_{i \in S} w_i \cdot \frac{h_i}{ADV_i}$$

where $h_i = w_i \cdot N$ represents the holdings for stock i and ADV_i represents its average 20-day average daily volume.

Stocks in the benchmark index are ranked by trading volume, and liquidity constraints are imposed on stocks in the two least liquid quintiles. For each of these quintiles Q, the weighted average days to trade of the positions therein is required to be no more than 10 times the weighted average days to trade of the same stocks held at corresponding benchmark weights.

$$\sum_{i \in Q} w_i \cdot \frac{w_i \cdot N}{ADV_i} \leq \gamma \cdot \sum_{i \in Q} b_i \cdot \frac{b_i \cdot N}{ADV_i}$$

Each position value has been rewritten in terms of the portfolio notional value N.
The parameter γ is set to 10.
b_i represents weights in the corresponding capitalization-weighted benchmark index.

Countries, Industries and Factors exposure
These constraints are not applied to the Unconstrained version.
The exposure to each country and industry is summed up for the parent benchmark index, and the percentage exposure of the Minimum Variance index has to be within 5% of those numbers.
The parent index' exposure to each factor is computed and the Minimum Variance is constrained to be within a quarter standard deviation of that.
These constraints make sure the Minimum Variance index is closely related in structure to the parent index, except for risk. Size is redundant as the parent index is a benchmark index excluding micro caps and most small caps.

Tracking error
The tracking error constrained version's tracking error is limited to a maximum of 5% with the exception of the Emerging Market version which has a 7% limit.

Maximum number of names
The tracking error constrained version's number of names in the index is limited to:

$$|\mathrm{MV}| \leq \mathrm{Max}\left(\mathrm{Min}\left(\frac{|\mathrm{BM}|}{4}, 500\right), 80\right)$$

where
|MV| = number of names in the Minimum Variance index
|BM| = number of names in the corresponding parent benchmark index

Review frequency
The Unconstrained versions are reviewed monthly (implementation of all changes after the close of the third Friday and effective the next trading day), all other indices rebalance quarterly, in sync with the parent index (implementation after the close of the third Friday and effective the next trading day in March, June, September and December).

Derived indices: Not applicable.

16.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

16.2. STOXX CHINA A 900 MINIMUM VARIANCE UNCONSTRAINED AM

16.2.1. OVERVIEW

The STOXX China A 900 Minimum Variance Unconstrained AM (Accessible Market) index represents the shares available to foreign investors through Northbound Trading segments of the Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect programs of its parent index STOXX China A 900 Minimum Variance Unconstrained.

Universe: The index universe is defined by the parent index, STOXX China A 900 Minimum Variance Unconstrained.

Weighting scheme: The indices are price weighted according to a minimum variance optimization.

Base values and dates: 100 on May 4, 2012

Index types and currencies: Price, net return, and gross return in EUR, USD, and CNY.

Dissemination calendar: STOXX US Calendar

16.2.2. INDEX REVIEW

Composition list: The data cut-off date is the second Friday. All components of the STOXX China A 900 Minimum Variance Unconstrained index implemented on the following Friday that, as of the cut-off day, are eligible for Northbound trading (for both buying and selling) on either Shanghai Connect or Shenzhen Connect.[30] build up the composition list.

Review frequency: The index is reviewed monthly in line with its parent index. Starting with the April 2019 review, in case the implementation date falls on a day on which Northbound trading via Stock Connect at the Hong Kong Exchange is not available the implementation day is postponed to the next dissemination day when Northbound trading is available.

Weighting cap factors: Weighting cap factors of the parent index are used.

16.2.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently. They will be deleted at the close of the day they start to trade with traded price being available.

---

[30] An updated list is available on
https://www.hkex.com.hk/eng/market/sec_tradinfra/chinaconnect/Eligiblestock.htm

Mergers and takeovers: The surviving stock remains in the index.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

16.3. STOXX LOW RISK WEIGHTED

16.3.1. OVERVIEW

The STOXX Low Risk Weighted Indices select and weight companies from their respective benchmark indices and provide access to a low volatility portfolio.

Universe
STOXX Europe Low Risk Weighted 100, 200, 300 selected from STOXX Europe 600
EURO STOXX Low Risk Weighted 50, 100, 150 selected from EURO STOXX
EURO STOXX 50 Low Risk Weighted 30, 50 selected from EURO STOXX 50
STOXX USA Low Risk Weighted 300 selected from STOXX USA 900
STOXX Japan Low Risk Weighted 300 selected from STOXX Japan 600

Weighting scheme: Price-weighted with a weighting factor based on the inverse of the 12-month volatility with 10% component capping.
Base value and dates: For STOXX USA Low Risk Weighted 300 and STOXX Japan Low Risk Weighted 300: 100 on March 18, 2002. For all others: 100 on January 31, 2011.
Index types and currencies: For STOXX Japan Low Risk Weighted 300: price, net return and gross return in EUR and JPY. For all others: price, net return and gross return in EUR and USD.

16.3.2. INDEX REVIEW

Component selection
At cut-off date of the quarterly review month for all components of the respective benchmark the 12-month historical volatility is calculated on component level.
All components are ranked from lowest to highest volatility and depending on the target number of index constituents, the top ranked components are selected for the index.
Although a 12-month historical volatility is used for the selection of the constituents, a 12-month index membership is not required.

Review frequency: The index is reviewed on a quarterly basis, in line with the STOXX Benchmark indices.

Weighting and capping factors: The weighting factors are calculated based on the inverse of the 12-month historical volatility, as follows:

$$w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j=1}^{N} \frac{1}{\sigma_j}}$$

w_i =weight of component (i)
σ_i historical 12 month volatility of component (i)
Weighting cap factor = (100,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers
Additionally components are capped at a maximum weight of 10% quarterly.

16.3.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast Exit: Not applicable.
Fast entry: Not applicable.
Spin-Offs: Spin-off stocks are not added permanently.

16.4. STOXX EUROPE LOW BETA HIGH DIVIDEND 50

16.4.1. OVERVIEW

The index is tracking 50 companies out of STOXX Europe 600 with the lowest beta to the EURO STOXX 50 and which have a higher dividend yield than the EURO STOXX 50 index

Universe: All companies of the STOXX Europe 600 as it will be effective at the periodic index review in December

Weighting scheme: Price weighted with a weighting factor based on the average daily traded value – (ADTV) over three months. Maximum weights are capped at 5% for each components

Base values and dates: 100 on December 31, 2002
Index types and currencies: Price, net return, gross return in EUR and USD

16.4.2. INDEX REVIEW

Selection list

All stocks in the universe must fulfill the following criteria at the cut-off date, the last trading day in November, to be eligible for the selection list:

- A price history of at least one year prior to the cut-off date
- A 3 months average daily traded value (ADTV) of at least 5mln EUR
- A net dividend yield greater than the EURO STOXX 50 net dividend yield measured over 12 months

$$NDY_{iT} = \frac{\sum D_{it}(1 - taxrate_t)}{p_{iT}}$$

NDY_{iT} = Dividend Yield of company i at the cut-off date T
D_{it} = dividend of company i at time t where T – 12 months < t ≤ T
taxratet = Taxrate of the home country of company i prevailing at time t
p_{iT} = closing price of company i at the cut-off date T

$$NDY_{\text{EURO STOXX 50}} = 1Y\ \text{perf}_{\text{EURO STOXX 50 Ret Return}} - 1Y\ \text{perf}_{\text{EURO STOXX 50 Price}}$$

- All stocks are ranked by the beta[31] over 12 months against the EURO STOXX 50 in ascending order. Positive and negative beta values are included. If two stocks have the same beta, the one with the largest 3 months ADTV will have the best rank

Composition list

The 50 highest ranked stocks from the selection list are chosen for the index composition (the one with lowest beta). No buffer rules are applied. From each country a maximum of 8 stocks can be selected

[31] The formulas for statistical calculations are available in the STOXX Reference Calculations Guide under http://www.stoxx.com/indices/rulebooks.html

Review frequency
The index composition is reviewed annually in December. All changes are implemented on the third Friday and effective the next trading day following the STOXX periodic review calendar.
The cut-off date for the selection list and the ADTV data to calculate the weights is the last business day of the month preceding the review month. The selection list is produced annually.

Weighting and capping factors:
Weight of company i is calculated as following:

$$w_i = \frac{3M\ ADTV\ EUR_i}{\sum_{j=1}^{50} 3M\ ADTV\ EUR_j}$$

where the denominator is the sum of 3 months ADTV in EUR of all the 50 companies within the index.
Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers

The final components weights are capped at 5% each quarter.

16.4.3. ONGOING MAINTENANCE

Replacements: A deleted company is replaced with highest ranked non-component from the selection list and added with weight of the leaving company (weight in = weight out). During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.

If one company is excluded from the STOXX Europe 600 between review dates, but remains in the STOXX Global TMI, this company will not be excluded from the STOXX Europe Low Beta High Div 50 Index.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: A spin-off is added temporarily for one trading day and is then removed from the index.

16.5. STOXX SHARPE RATIO INDICES

16.5.1. OVERVIEW

The STOXX Sharpe Ratio indices include stocks from the respective benchmarks that have the highest Sharpe ratios, while excluding those with low dividend yields and low liquidity.

Universe: STOXX Global 1800 for the Global version, STOXX [Region] 600 for the regional versions (Europe, North America, Asia/Pacific)

Weighting scheme: The indices are price-weighted with a weighting factor based on the inverse of their historical one year volatility

Base values and dates: 100 on Dec 31, 2004
Index types and currencies: Price, net and gross return in EUR and USD
For a complete list please consult the data vendor code sheet on the website[32].

16.5.2. INDEX REVIEW

Selection list:
At the cutoff date, every stocks from the starting universe is screened for liquidity and the gross dividend yield. Stocks are excluded if:

- Their average daily traded value over six month (ADTV 6M) is below 1 mln EUR (below 5mln for the Global version)
- Their gross dividend yield is not in the top 20% of the universe

In case, less than 50 (100 for the global version) stocks are passing the criteria, the gross dividend yield threshold is loosened to have at least 50 (100) companies (the best 50 /100 stocks by gross dividend yield) on the selection list.

If more than 50 (100) stock pass the initial screening for each stock the Sharpe Ratio is calculated as following and all stocks are ranked according to their Sharpe Ratio value:

$$Sharpe\ ratio_i = \frac{(1Y\ return\ in\ EUR_i - Max[0;\ GC\ Pooling\ 12M\ in\ EUR_i])}{Volatility\ of\ the\ EUR\ price_i}$$ [33]

In case the GC pooling value is not available at the calculation time, the most recent value is used.

Composition list:
The highest ranked 50 stocks are selected for inclusion for the regional version (the highest ranked 100 stocks for the global version).

[32] http://www.STOXX.com/download/indices/vendor_codes.xls
[33] Derived from Sharpe (1966) "reward-to-variability ratio"

16. STOXX RISK BASED INDICES

Review frequency: The reviews are conducted on a quarterly basis. The review cut-off date for the underlying data is the last trading day of the month preceding the review.

Weighting and capping factors: The weighting factors are calculated based on the inverse of the 12-month historical volatility, as follows:

$$w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j=1}^{N} \frac{1}{\sigma_j}}$$

w_i weight of component (i)
σ_i historical 12 month volatility of component (i)
Weighting cap factor = (100,000,000 x initial weight / closing price of the stock i in EUR), rounded to integers
Additionally components are capped at a maximum weight of 10% quarterly.

16.5.3. ONGOING MAINTENANCE

Replacements: A deleted company is replaced with highest ranked non-component from the selection list and added with weight of the leaving company (weight in = weight out). During review implementation month the process laid out in section 5.17. of the STOXX Index Methodology Guide will be applied.
A company excluded from the parent index but not from the STOXX Total Market index will not be excluded from the STOXX Sharpe ratio indices.

Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: A spin-off is added temporarily for one trading day and is then removed from the index

16. STOXX RISK BASED INDICES

16.6. STOXX SELECT INDICES

16.6.1. STANDARD STOXX SELECT INDICES

16.6.1.1. OVERVIEW

The STOXX Select family of indices measures the performance of stocks with low volatility and high dividend yield. The index family is derived from regional standard benchmark and thematic indices. The components are weighted by the inverse of the volatility.

Universe: The index universe is defined by the parent index as of the review effective date.

Parent Index/Universe	STOXX Select Index
STOXX Global 1800	STOXX Global Select 100 EUR
STOXX Global 1800	STOXX Global Select 100 USD
STOXX Europe 600	STOXX Europe Select 50 EUR
STOXX North America 600	STOXX North America Select 50 USD
STOXX North America 600	STOXX North America Select 50 EUR
STOXX Asia/Pacific 600	STOXX Asia/Pacific Select 50 JPY
STOXX Asia/Pacific 600	STOXX Asia/Pacific Select 50 EUR
STOXX Nordic Total Market	STOXX Nordic Select 30 SEK
EURO STOXX	EURO STOXX Select 50 EUR
STOXX Emerging Markets 1500	STOXX Emerging Markets Select 100 EUR
STOXX Emerging Markets 1500	STOXX Emerging Markets Select 100 USD
STOXX Emerging Markets 1500 excluding Pakistani stocks	STOXX Emerging Markets ex PK Select 100 EUR
STOXX Emerging Markets 1500 excluding Pakistani stocks	STOXX Emerging Markets ex PK Select 100 USD
STOXX USA 900	STOXX USA Select 50 USD
STOXX Japan 600	STOXX Japan Select 50 JPY
STOXX Canada Total Market	STOXX Canada Select 30 CAD
STOXX Global ESG Leaders	STOXX Global ESG Leaders Select 50 EUR
STOXX Global ESG Leaders	STOXX Global ESG Leaders Select 50 USD
All European stocks from the Global ESG Leaders	STOXX Europe ESG Leaders Select 30 EUR
STOXX Europe Sustainability	STOXX Europe Sustainability Select 30 EUR
STOXX Europe Christian	STOXX Europe Christian Select 30 EUR
STOXX Europe True Exposure 50%	STOXX Europe True Exposure 50% Select 30 EUR
STOXX Europe True Exposure 50%	STOXX Europe True Exposure 50% Select 30 USD
All stocks from the STOXX Europe 600 but not in STOXX Europe True Exposure 50%	STOXX Europe International Exposure Select 30 EUR
All stocks from the STOXX Europe 600 but not in STOXX Europe True Exposure 50%	STOXX Europe International Exposure Select 30 USD
STOXX Global ESG Social Leaders	STOXX Global ESG Social Leaders Select 30 EUR
All European stocks from the STOXX Global ESG Social Leaders	STOXX Europe ESG Social Leaders Select 30 EUR
STOXX Global ESG Environmental Leaders	STOXX Global ESG Environmental Leaders Select 30 EUR
All European stocks from the STOXX Global ESG Environmental Leaders	STOXX Europe ESG Environmental Leaders Select 30 EUR
STOXX Global ESG Governance Leaders	STOXX Global ESG Governance Leaders Select 30 EUR

All European stocks from the STOXX Global ESG Governance Leaders	STOXX Europe ESG Governance Leaders Select 30 EUR
All stocks from the STOXX Global Broad Infrastructure, STOXX Global Infrastructure Extended 100 and STOXX Global Infrastructure Suppliers 50 indices	STOXX Global Infrastructure Select 30 EUR
All stocks from the STOXX Global Broad Infrastructure, STOXX Global Infrastructure Extended 100 and STOXX Global Infrastructure Suppliers 50 indices	STOXX Global Infrastructure Select 30 USD
STOXX Global 1800 Industry Health Care	STOXX Global Health Care Select 30 EUR
STOXX Global 1800 Industry Health Care	STOXX Global Health Care Select 30 USD
STOXX Global 1800 Industry Technology	STOXX Global Technology Select 30 EUR
STOXX Global 1800 Industry Technology	STOXX Global Technology Select 30 USD

Weighting scheme: The indices are price-weighted with a weighting factor based on the inverse of their historical volatility (maximum between their 3-month and 12-month historical volatility)

Base values and dates: 100 on March 22, 2004 for the STOXX Global Infrastructure Select 30, STOXX Global Health Care Select 30 and STOXX Global Technology Select 30 indices. 100 on June 18, 2007 for the STOXX Emerging Markets ex PK Select indices. 100 on June 21, 2004 for all the others.
Index types and currencies: Price, net and gross return
For a complete list, please consult the data vendor code sheet on the website[34].

16.6.1.2. INDEX REVIEW

Selection list:

The review cut-off date is the last trading day of the month preceding the review month of the index.

All stocks in the relevant base universe are screened for their 12-month historical dividend yield. If the value is not available for a stock, the company is removed from the base universe. Additionally, if there are more than 10% of trading days suspension, the stock is excluded:

$$Min\ Number\ of\ Price\ Observations_{Period} = Number\ of\ Trading\ Days_{Period} \times 0.9$$

For the following base indices a liquidity screening is applied and the remaining stocks compose the Eligible Universe:

Base index	3 Months ADTV Threshold
STOXX Emerging Markets 1500	EUR 1 Mln / USD 1 Mln
STOXX USA 900	USD 1 Mln
STOXX Japan 600	JPY 100 Mln

[34] http://www.STOXX.com/download/indices/vendor_codes.xls

16. STOXX RISK BASED INDICES

STOXX Canada Total Market	CAD 1 Mln
STOXX Nordic Total Market	SEK 10 Mln
STOXX Global Infrastructure Select 30	EUR 3 Mln / USD 3 Mln

Composition list:

The following Equal Strength Ratio is calculated

$$ESR = \sqrt{\frac{x}{N}}$$

where,
N Number of stocks in the Eligible Universe
x Number of stocks in the final index

All stocks from the Eligible Universe are sorted in ascending order in terms of volatility (maximum between the 3-month and 12-month historical volatility in the currency of the final index) and companies are selected based on the ESR:

$$number\ of\ companies\ to\ select\ (Volatility\ screen) = round\ down\ of\ (ESR\ \times\ N)$$

All selected stocks are ranked in descending order in terms of dividend yield and the highest ranked x stocks are selected for the final index. In case of identical dividend yields, priority goes to the stock with the lowest volatility from the volatility screen.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December.

Weighting and capping factors: The weighting factors are calculated based on the inverse of their historical volatility. The weights are based on the prices of the Thursday prior to the second Friday of the review month:

$$w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j=1}^{N} \frac{1}{\sigma_j}}$$

w_i weight of component (i)
σ_i Maximum between the historical 12-months and 3-months volatility of component, based on prices converted to the index currency (i)

Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers

Additionally, components are capped at a maximum weight of 10%.

16.6.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-off stocks are not added permanently to the index.
Corporate Actions: All component are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

16.6.2. STOXX LOW CARBON SELECT INDICES

16.6.2.1. OVERVIEW

The STOXX Low Carbon Select family of indices measures the performance of low carbon emissions stocks with low volatility and high dividend yield. The components are weighted by the inverse of their volatility.

Universe: Effective up until September 2020 review, the index universe is defined by the parent index as of the review effective date, excluding ICB Code 1771 (Coal). Effective with September 2020 review, the index universe is defined by the parent index as of the review effective date, excluding ICB Code 60101040 (Coal).

Parent Index/Universe	STOXX Select Index
STOXX Global 1800	STOXX Global Low Carbon Select 100 EUR
EURO STOXX	EURO STOXX Low Carbon Select 50 EUR
STOXX Europe 600	STOXX Europe Low Carbon Select 50 EUR
All US stocks from the STOXX Global 1800	STOXX USA Low Carbon Select 50 USD

Weighting scheme: The indices are price-weighted with a weighting factor based on the inverse of their historical volatility (maximum between their 3-month and 12-month historical volatility)

Base values and dates: 100 on June 21, 2004
Index types and currencies: Price, net and gross return
For a complete list please consult the data vendor code sheet on the website [35].

16.6.2.2. INDEX REVIEW

Selection list:

The review cut-off date is the last trading day of the month preceding the review month of the index. The review in March, June and September will use the same carbon intensity score as the one used in the last December review.

All stocks in the relevant base universe are screened for their Carbon Intensity (reported and estimated) and 12-months historical dividend yield. If one or more values are not available for a stock, the company is removed from the base universe. Additionally, if there are more than 10% of trading days suspension, the stock is excluded:

$$Min\ Number\ of\ Price\ Observations_{Period} = Number\ of\ Trading\ Days_{Period} \times 0.9$$

Carbon Intensity = (Scope 1 + Scope 2 GHG emissions) / Revenue (USD million))

[35] http://www.STOXX.com/download/indices/vendor_codes.xls

16. STOXX RISK BASED INDICES

The data consists of both Reported (from CDP: companies voluntarily reporting on annual basis, amongst others, Scope 1 & 2 GHG emissions) and Estimated data (from ISS-Ethics Climate Solutions, who uses, amongst others, CDP data to estimate GHG emissions with a model developed in cooperation with the Zurich ETH university, for companies that do not report to CDP).

Composition list:

The following Equal Strength Ratio is calculated

$$ESR = \sqrt[3]{\frac{x}{N}}$$

where,
N Number of stocks in the Eligible Universe
x Number of stocks in the final index

In each of the 10 ICB industries(effective with September 2020 review, in each of the 11 ICB industries), all stocks are sorted in ascending order in terms of Carbon Intensity and companies are selected based on the ESR:

$$\text{number of companies to select in industry A (Carbon Intensity screen)} = \text{round down of } (\text{ESR} \times \text{N}_\text{A})$$

where,
A one of the 10 ICB industries(Effective with September 2020 review, one of the 11 ICN industries)
N_A Number of stocks in the Eligible Universe from industry A

All selected stocks are sorted in ascending order in terms of volatility (maximum between the 3-month and 12-month historical volatility in the currency of the final index) and companies are selected based on the ESR.

$$\text{number of companies to select (Volatility screen)} = \text{round down of } (\text{ESR}^2 \times \text{N})$$

All selected stocks are ranked in descending order in terms of dividend yield and the highest ranked x stocks are selected for the final index. If two stocks have the same carbon intensity, priority goes to the stock with the highest dividend yield. In case of identical dividend yields, priority goes to the stock with the lowest volatility from the volatility screen.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December.

Weighting and capping factors: The weighting factors are calculated based on the inverse of their historical volatility. The weights are based on the prices of the Thursday prior to the second Friday of the review month

$$w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j=1}^{N} \frac{1}{\sigma_j}}$$

w_i weight of component (i)

σ_i Maximum between the historical 12-month and 3-month volatility of component (i), based on prices converted to the index currency

Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers

Additionally, components are capped at a maximum weight of 10%.

16.6.2.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-off stocks are not added permanently to the index.
Corporate Actions: All component are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

16. STOXX RISK BASED INDICES

16.7. STOXX DIVERSIFICATION SELECT INDICES

16.7.1. STANDARD STOXX DIVERSIFICATION SELECT INDICES

16.7.1.1. OVERVIEW

The STOXX Diversification Select family of indices measure the performance of stocks with low correlation, low volatility and high dividend yield. The index family is derived from regional standard benchmark and thematic indices. The components are weighted by the inverse of the volatility.

Universe: The index universe is defined by the parent index as of the review effective date.

Parent Index/Universe	STOXX Diversification Select Index
STOXX Global 1800	STOXX Global Diversification Select 100 EUR
STOXX Global 1800	STOXX Global Diversification Select 100 USD
STOXX Europe 600	STOXX Europe Diversification Select 50 EUR
STOXX North America 600	STOXX North America Diversification Select 50 USD
STOXX North America 600	STOXX North America Diversification Select 50 EUR
STOXX Asia/Pacific 600	STOXX Asia/Pacific Diversification Select 50 JPY
STOXX Asia/Pacific 600	STOXX Asia/Pacific Diversification Select 50 EUR
STOXX Nordic Total Market	STOXX Nordic Diversification Select 30 SEK
EURO STOXX	EURO STOXX Diversification Select 50 EUR
STOXX Emerging Markets 1500	STOXX Emerging Markets Diversification Select 100 EUR
STOXX Emerging Markets 1500	STOXX Emerging Markets Diversification Select 100 USD
STOXX USA 900	STOXX USA Diversification Select 50 USD
STOXX Japan 600	STOXX Japan Diversification Select 50 JPY
STOXX Canada Total Market	STOXX Canada Diversification Select 30 CAD
STOXX Global ESG Leaders	STOXX Global ESG Leaders Diversification Select 50 EUR
STOXX Global ESG Leaders	STOXX Global ESG Leaders Diversification Select 50 USD
All European stocks from the Global ESG Leaders	STOXX Europe ESG Leaders Diversification Select 30 EUR
STOXX Europe Sustainability	STOXX Europe Sustainability Diversification Select 30 EUR
STOXX Europe Christian	STOXX Europe Christian Diversification Select 30 EUR
STOXX Europe True Exposure 50%	STOXX Europe True Exposure 50% Diversification Select 30 EUR
STOXX Europe True Exposure 50%	STOXX Europe True Exposure 50% Diversification Select 30 USD
All stocks from the STOXX Europe 600 but not in STOXX Europe True Exposure 50%	STOXX Europe International Exposure Diversification Select 30 EUR
All stocks from the STOXX Europe 600 but not in STOXX Europe True Exposure 50%	STOXX Europe International Exposure Diversification Select 30 USD
STOXX Global ESG Social Leaders	STOXX Global ESG Social Leaders Diversification Select 30 EUR
All European stocks from the STOXX Global ESG Social Leaders	STOXX Europe ESG Social Leaders Diversification Select 30 EUR
STOXX Global ESG Environmental Leaders	STOXX Global ESG Environmental Leaders Diversification Select 30 EUR
All European stocks from the STOXX Global ESG Environmental Leaders	STOXX Europe ESG Environmental Leaders Diversification Select 30 EUR

STOXX Global ESG Governance Leaders	STOXX Global ESG Governance Leaders Diversification Select 30 EUR
All European stocks from the STOXX Global ESG Governance Leaders	STOXX Europe ESG Governance Leaders Diversification Select 30 EUR

Weighting scheme: The indices are price-weighted with a weighting factor based on the inverse of their historical volatility (maximum between their 3-month and 12-month historical volatility)

Base values and dates: 100 on June 21, 2004
Index types and currencies: Price, net and gross return
For a complete list please consult the data vendor code sheet on the website[36].

16.7.1.2. INDEX REVIEW

Selection list:

The review cut-off date is the last trading day of the month preceding the review month of the index.

All stocks in the relevant base universe are screened for their 12-months historical dividend yield. If the value is not available for a stock, the company is removed from the base universe. Additionally, if there are more than 10% of trading days suspension, the stock is excluded:

$$Min\ Number\ of\ Price\ Observations_{Period} = Number\ of\ Trading\ Days_{Period} \times 0.9$$

For the following base indices, a liquidity screening is applied and the remaining stocks compose the Eligible Universe:

Base index	3 Months ADTV Threshold
STOXX Emerging Markets 1500	EUR 1 Mln / USD 1 Mln
STOXX USA 900	USD 1 Mln
STOXX Japan 600	JPY 100 Mln
STOXX Canada Total Market	CAD 1 Mln
STOXX Nordic Total Market	SEK 10 Mln

Composition list:

The following Equal Strength Ratio is calculated

$$ESR = \sqrt[3]{\frac{x}{N}}$$

where,

[36] http://www.STOXX.com/download/indices/vendor_codes.xls

N Number of stocks in the Eligible Universe
x Number of stocks in the final index

All stocks from the Eligible Universe are sorted in ascending order in terms of correlation (average of the 12-month correlation of one stock with all other stocks of the Eligible Universe in the currency of the final index) and companies are selected based on the ESR.

$$number\ of\ companies\ to\ select\ (Correlation\ screen) = round\ down\ of\ (ESR\ \times\ N)$$

All stocks from the Eligible Universe are sorted in ascending order in terms of volatility (maximum between the 3-month and 12-month historical volatility in the currency of the final index) and companies are selected based on the ESR.

$$number\ of\ companies\ to\ select\ (Volatility\ screen) = round\ down\ of\ (ESR^2\ \times\ N)$$

All selected stocks are ranked in descending order in terms of dividend yield and the highest ranked x stocks are selected for the final index. In case of identical average correlation, priority goes to the stock with the highest dividend yield. In case of identical dividend yields, priority goes to the stock with the lowest volatility from the volatility screen.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December.

Weighting and capping factors: The weighting factors are calculated based on the inverse of their historical volatility The weights are based on the prices of the Thursday prior to the second Friday of the review month

$$w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j=1}^{N} \frac{1}{\sigma_j}}$$

w_i weight of component (i)
σ_i Maximum between the historical 12-month and 3-month volatility of component (i), based on prices converted to the index currency

Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR) rounded to integers

Additionally, components are capped at a maximum weight of 10%.

16.7.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-off stocks are not added permanently to the index.

Corporate Actions: All component are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

16.7.2. STOXX LOW CARBON DIVERSIFICATION SELECT INDICES

16.7.2.1. OVERVIEW

The STOXX Low Carbon Diversification Select family of indices measure the performance of low carbon emissions stocks with low correlation, low volatility and high dividend yield. The components are weighted by the inverse of the volatility.

Universe: Effective up until September 2020 review, the index universe is defined by the parent index as of the review effective date, excluding ICB Code 1771 (Coal). Effective with September 2020 review, the index universe is defined by the parent index as of the review effective date, excluding ICB Code 60101040 (Coal).

Parent Index/Universe	STOXX Diversification Select Index
STOXX Global 1800	STOXX Global Low Carbon Diversification Select 100 EUR
EURO STOXX	EURO STOXX Low Carbon Diversification Select 50 EUR
STOXX Europe 600	STOXX Europe Low Carbon Diversification Select 50 EUR
All US stocks from the STOXX Global 1800	STOXX USA Low Carbon Diversification Select 50 USD

Weighting scheme: The indices are price-weighted with a weighting factor based on the inverse of their historical volatility (maximum between their 3-month and 12-month historical volatility)

Base values and dates: 100 on June 21, 2004
Index types and currencies: Price, net and gross return
For a complete list please consult the data vendor code sheet on the website[37].

16.7.2.1. INDEX REVIEW

Selection list:

The review cut-off date is the last trading day of the month preceding the review month of the index. The review in March, June and September will use the same carbon intensity score as the one used for the last December review.

All stocks in the relevant base universe are screened for their Carbon Intensity (reported and estimated) and 12-month historical dividend yield. If one or more values are not available for a stock, the company is removed from the base universe. Additionally, if there are more than 10% of trading days suspension, the stock is excluded:

$$Min\ Number\ of\ Price\ Observations_{Period} = Number\ of\ Trading\ Days_{Period} \times 0.9$$

Carbon Intensity = (Scope 1 + Scope 2 GHG emissions) / Revenue (USD million))

[37] http://www.STOXX.com/download/indices/vendor_codes.xls

16. STOXX RISK BASED INDICES

The data consists of both Reported (from CDP: companies voluntarily annually report, amongst others, Scope 1 & 2 GHG emissions) and Estimated data (from ISS-Ethix Climate Solutions, who uses, amongst others, CDP data to estimate GHG emissions with a model developed in cooperation with the Zurich ETH university, for companies that do not report to CDP).

The following Equal Strength Ratio is calculated

$$\mathrm{ESR} = \sqrt[4]{\frac{\mathrm{x}}{\mathrm{N}}}$$

where,

N	Number of stocks in the Eligible Universe
x	Number of stocks in the final index

In each of the 10 ICB industries(effective with September 2020 review, in each of the 11 ICB industries), all stocks are sorted in ascending order in terms of Carbon Intensity (Reported and Estimated) and companies are selected based on the ESR.

$$\text{number of companies to select in industry A (Carbon Intensity screen)} = \text{round down of } (\mathrm{ESR} \times \mathrm{N_A})$$

where,

A	one of the 10 ICB industries(Effective with September 2020 review, one of the 11 ICB industries)
$\mathrm{N_A}$	Number of stocks in the Eligible Universe from industry A

All selected stocks are sorted in ascending order in terms of correlation (average of the 12-month correlation of one stock with all other stocks of the Eligible Universe in the currency of the final index) and companies are selected based on the ESR.

$$\text{number of companies to select (Correlation screen)} = \text{round down of}(\mathrm{ESR}^2 \times \mathrm{N})$$

All selected stocks are sorted in ascending order in terms of volatility (maximum between the 3-Months and 12-Months historical volatility in the currency of the final index) and companies are selected based on the ESR.

$$\text{number of companies to select (Volatility screen)} = \text{round down of } (\mathrm{ESR}^3 \times \mathrm{N})$$

All selected stocks are ranked in descending order in terms of dividend yield and the highest ranked x stocks are selected for the final index. If two stocks have the same carbon intensity, priority goes to the stock with the highest dividend yield. In case of identical dividend yields, priority goes to the stock with the lowest volatility from the volatility screen. In case of identical volatilities, priority goes to the stock with the lowest average correlation from the correlation step.

Review frequency: The reviews are conducted on a quarterly basis in March, June, September and December.

Weighting and capping factors: The weighting factors are calculated based on the inverse of their historical volatility. The weights are based on the prices of the Thursday prior to the second

Friday of the review month $w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j=1}^{N} \frac{1}{\sigma_j}}$

w_i weight of component (i)
σ_i Maximum between the historical 12-month and 3-month volatility of component (i), based on prices converted to the index currency

Weighting cap factor = (1,000,000,000 x initial weight / closing price of the stock in EUR), rounded to integers

Additionally components are capped at a maximum weight of 10%.

16.7.2.1. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-off stocks are not added permanently to the index.
Corporate Actions: All component are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com.

16.8. EURO STOXX ESG-X & EX NUCLEAR POWER SINGLE FACTOR INDICES

16.8.1. OVERVIEW

The EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices are constructed on the EURO STOXX index with standardized ESG exclusion screens applied for Global Standards Screening, Controversial Weapons, Thermal Coal, Nuclear Power and Tobacco Producers. The objective is to extract the following factor risk premia: Value (Earnings Yield and Value), Quality (Leverage and Profitability) and Medium-term Momentum, while controlling for risk and focusing on tradability. The weighting is determined by a single-factor optimization process.

Universe: EURO STOXX

Weighting scheme: The index is price weighted according to a minimum variance optimization

Base values and dates: 100 on March 19, 2012

Index types and currencies: Price, net and gross return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website[38].

Dissemination calendar: STOXX Europe

16.8.2. INDEX REVIEW

Component selection and weighting cap-factors:
From the universe, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Thermal Coal, Nuclear Power and Tobacco.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

[38] http://www.STOXX.com/download/indices/vendor_codes.xls

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons (0% revenue threshold)
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies as having:
»>25% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>25% power generation capacity from coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operate coal-fired power plants).

Nuclear Power:
STOXX will exclude companies that Sustainalytics identifies as having:
»>25% revenues from nuclear power production:
- » Utilities that own/operate nuclear power generators;
- » Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power.

»>25% revenues from nuclear power supporting products / services, including:
- Design and construction of nuclear power plants;
- Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls;
- » Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
- » Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate.

»>25% revenues from nuclear power distribution, including:
- The resale or distribution of electricity generated from nuclear power;
- » This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix.
  Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power.

Tobacco:
STOXX will exclude companies that Sustainalytics identifies as tobacco producers (0% revenue threshold).

The EURO STOXX ESG-X & Ex Nuclear Power Single Factor optimization is performed using Axioma's Portfolio Optimization software. This portfolio construction tool includes a Second-Order Cone optimization engine as well as a Branch-and-Bound algorithm for combinatorial problems that has been specialized for financial problems.

Risk predictions are made using Axioma's European, Medium-Horizon, Equity Fundamental Factor Risk Model.

16. STOXX RISK BASED INDICES

The EURO STOXX ESG-X & Ex Nuclear Power Single Factor index may have less constituents than the original index.

Constraint	Single Factor Model
Individual capping	4.5% / 8% / 35%
Effective number of assets	At least 30% of parent benchmark
Rebalancing and max. turnover	Quarterly, 7.5%
Country / Industry / Sector exposure	Within 5% of parent benchmark
Factor exposures	
Value (Earnings Yield and Value)	For EURO STOXX ESG-X & Ex Nuclear Power Value Index, Earnings Yield and Value are each at least 0.25 cross sectional standard deviations greater than parent benchmark. For other EURO STOXX ESG-X & Ex Nuclear Power Single Factor Indices, within 0.05 cross sectional standard deviations of the parent benchmark.
Quality(Leverage and Profitability)	For EURO STOXX ESG-X & Ex Nuclear Power Quality Index, Profitability is at least 0.25 cross sectional standard deviations greater than the parent benchmark and Leverage is 0.25 cross sectional standard deviations less than the parent benchmark. For other EURO STOXX ESG-X & Ex Nuclear Power Single Factor Indices, within 0.05 cross sectional standard deviations of the parent benchmark.
Medium-Term Momentum	For EURO STOXX ESG-X & Ex Nuclear Power Momentum Index, Medium-Term Momentum is at least 0.25 cross sectional standard deviations greater than parent benchmark. For other EURO STOXX ESG-X & Ex Nuclear Power Single Factor Indices, within 0.05 cross sectional standard deviations of the parent benchmark.
Size	At least as large as parent benchmark and less than within 0.05 cross sectional standard deviations of the parent benchmark.
Market Sensitivity	Within 0.05 cross sectional standard deviations of the parent benchmark.
Volatility	Within 0.05 cross sectional standard deviations of the parent benchmark.
Tracking error	None
Max. number of names	None

The cross-sectional standard deviation is computed as the standard deviation of factor exposures across assets in the Axioma risk model estimation universe as of the rebalance date (market close on the 2nd Friday of the Review Month).

Individual capping

STOXX aims to build the index such that constituent weights fulfil the 5% / 10% / 40% diversification rule, whereby a component cannot weigh more than 10%, and the weights sum of all those

weighing at least 5% cannot exceed 40%. By applying the tighter constraints of 4.5% / 8% / 35%, STOXX aims to reduce the chance of breaching the above mentioned levels and to reduce the gravity of the breaches if and when they occur.

Effective number of assets

The effective number of assets of an index is the value, H, defined as:

$$\mathrm{H} = \frac{1}{\sum \mathrm{w}^2}$$

where w is the weight in each portfolio asset. H gives an accurate measure of the number of assets that affect a portfolio. The number of holdings in an index that is weighted by optimisation should be constrained along those lines as well, as otherwise, the portfolio may hold an overly concentrated portfolio, with holdings with insignificant weights.

The constraint is defined as follows for the Unconstrained index:

$$\mathrm{H}_{Multi\ Factor} \geq \mathrm{H}_{\mathrm{Base}} \cdot 30\%$$

Maximum turnover

The EURO STOXX ESG-X Ex Nuclear Power Single Factor indices have a 7.5% one-way turnover constraint, or 15% two-way turnover. This means up to 7.5% of the portfolio is sold in order to purchase other components (with the aim of having a maximum annual turnover of 60%).

Minimum liquidity requirement

Recognizing that minimum variance portfolios may prefer to hold slightly less liquid stocks, the minimum liquidity requirement ensures that there is no material buildup in illiquid positions in the portfolio.

The weighted average days-to-trade d_s for a given group of holdings S are defined as:

$$d_S = \sum_{i \in S} w_i \cdot \frac{h_i}{MDTV_i}$$

where $h_i = w_i \cdot N$ represents the holdings for stock i and $MDTV_i$ represents its 60-day median daily traded value.

Stocks in the benchmark index are ranked by traded value, and liquidity constraints are imposed on stocks in the two least liquid quintiles. For each of these quintiles Q, the weighted average days to trade of the positions (w_i) therein is required to be no more than 3 times the weighted average days to trade of the same stocks held at corresponding benchmark weights (b_i).

$$\sum_{i \in Q} w_i \cdot \frac{w_i \cdot N}{MDTV_i} \leq \gamma \cdot \sum_{i \in Q} b_i \cdot \frac{b_i \cdot N}{MDTV_i}$$

Each position value has been rewritten in terms of the portfolio notional value N (since the term appears in both sides of the inequality constraint, it cancels out and the actual value is irrelevant). The parameter γ is set to 3.

b_i represents weights in the corresponding capitalization-weighted benchmark index weight.

Country, Industry and Sector exposure
The exposure to each country, industry and sector is summed up for the parent benchmark index, and the percentage exposure of the EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices have to be within 5% of those values. These constraints make sure the Single Factor indices are closely related in structure to the parent index, except for risk.

Factor exposures
The parent index' exposure to each factor is computed and the EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices are constrained to be within a quarter standard deviation of that. The factor exposures for each asset are determined by Axioma's European, Medium-Horizon, Equity Fundamental Factor Risk Model, which gives factor exposures as Z scores.

- **Value (Earnings Yield and Value)**
  For EURO STOXX ESG-X & Ex Nuclear Power Value index, the percentage exposure to Value and Earnings Yield are each at least 0.25 standard deviations greater than the parent benchmark.

  For the other EURO STOXX ESG-X & Ex Nuclear Power Single Factor Indices, the percentage exposure to Earnings Yield and Value are within 0.05 standard deviations of the parent benchmark.

  Value gives a measure of how fairly a stock is priced within the market. It is calculated as book-to-price. Book-to-price is calculated as the ratio of common equity to average 30-calendar-day total issuer market capitalization. The calculation uses the most recently reported annual common equity value

  Earnings yield is calculated as a combination of three parts realized to one part forecast earnings-to-price. Realized earnings to price is calculated as the most recently reported annual net income value, divided by the average total issuer market capitalization computed over the last 30 calendar days. Forecast earnings-to-price is calculated as forward-looking earnings estimate, divided by the average total issuer market capitalization computed over the last 30 calendar days. Research has indicated that the combination of these two factors is particularly effective at capturing the risk premium associated with Value.

- **Quality (Leverage and Profitability)**
  For EURO STOXX ESG-X & Ex Nuclear Power Quality index, the percentage exposure to Leverage is at least 0.25 standard deviations less than the parent benchmark and the percentage exposure to Profitability is at least than 0.25 standard deviations greater than the parent benchmark.

  For the other EURO STOXX ESG-X & Ex Nuclear Power Single Factor Indices, the percentage exposure to Leverage and Profitability are within 0.05 standard deviations of the parent benchmark.

Leverage provides a measure of a company's exposure to debt levels. It is calculated as the equal-weighted average of the descriptors, debt-to-assets and debt-to-equity. Both descriptors are standardized prior to summation. Debt-to-assets is calculated as the ratio of long-term and short-term debt to total assets, where total assets are computed as the most recently reported value from annual reports. Debt-to-equity is calculated as the ratio of long-term and short-term debt to common equity, where common equity is computed as the average of the four most recently reported values from annual reports.

Profitability of a company is a measure of the company's profitability, and it is often associated with the quality of the company. Profitability is constructed as a linear combination of the return-on-equity, return-on-assets, cash-ow-to-assets, cash-ow-to-income, gross margin, and sales-to-assets descriptors. Return-on-equity is calculated as the most recently reported annual earnings values, divided by the average of the two most recently reported annual common equity values. Return-on-assets is calculated as the most recently reported annual earnings values, divided by the average of the two most recently reported annual total assets values. Cash-flow-to-assets is calculated as the most recently reported annual operating cash flow divided by the average of the two most recently reported annual total assets values. Cash-flow-to-income is calculated as the average of the two most recently reported annual operating cash flows divided by the average of the two most recently reported annual income values. Gross margin is calculated as net sales (sales minus the cost of goods sold), divided by sales. Both the numerator and the denominator values are computed as the most recently reported annual values. Sales-to-assets is calculated as the most recently reported annual sales values, divided by the most recently reported annual total assets values.

- **Medium-term Momentum**
  For EURO STOXX ESG-X & Ex Nuclear Power Momentum index, the percentage exposure to Medium-Term Momentum is at least 0.25 standard deviations greater than the parent benchmark.

  For the other EURO STOXX ESG-X & Ex Nuclear Power Single Factor Indices, the percentage exposure to Medium-Term Momentum is within 0.05 standard deviations of the parent benchmark.

  Medium-Term Momentum gives a measure of a stock's past performance over the medium term. It is defined as an asset's cumulative return over the last 250 trading days, with the last 20 trading days progressively down weighted (approximately the past year excluding the past month). To improve the stability of exposures, the return histories used to calculate the exposures are weighted by a trapezoidal weighting scheme instead of an equal weighting scheme.

- **Size**
  The percentage exposure of the EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices is no less than the parent benchmark exposure and less than 0.05 standard deviations greater than the parent benchmark exposure.

  Size differentiates large and small stocks and is defined as the natural logarithm of the total issuer market capitalization, averaged over the last month. Issuer market

capitalization is computed as the product of the total shares outstanding and closing price, summed over all issues common to the issuer.

- **Market Sensitivity**
  The percentage exposure of the EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices is within 0.05 standard deviations of the parent benchmark exposure.

  Market Sensitivity is a measure of an asset's performance relative to that of the overall market, based on historical data. It is calculated by regressing the historical time series of an asset's return against the European market return and an intercept term. Two years of weekly returns are used for the regression. To improve the stability of exposures, the return histories used to calculate the exposures are weighted by a trapezoidal weighting scheme instead of equal weighting.

- **Volatility**
  The percentage exposure of the EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices is within 0.05 standard deviations of the parent benchmark exposure.

  Volatility gives a measure of an asset's relative volatility over time according to its historical behavior. It is calculated as the square-root of the 125-day average of the asset's absolute return divided by the cross-sectional volatility of the market. The Volatility factor is fully orthogonalized to the Market Sensitivity factor. To improve the stability of exposures, the return histories used to calculate the exposures are weighted by a trapezoidal weighting scheme instead of equal weighting.

Tracking error
This constraint is not applicable to the EURO STOXX ESG-X & Ex Nuclear Power Single Factor indices.

Review frequency
The index is reviewed quarterly in line with the parent index (implementation after the close of the third Friday and effective the next dissemination day in March, June, September and December).

The review cut-off date is the last dissemination day of the month preceding the review month.
The review cut-off date for Axioma data is the second Friday of the review month.

Derived indices: Not applicable.

16.8.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

16.9. EURO STOXX ESG-X & EX NUCLEAR POWER MINIMUM VARIANCE UNCONSTRAINED INDEX

16.9.1. OVERVIEW

The Objective of the EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance Unconstrained index is to reflect the EURO STOXX index with standardized ESG exclusion screens applied for Global Standards Screening, Controversial Weapons, Thermal Coal, Nuclear Power and Tobacco Producers, with weighting determined by a minimum variance optimization.

Universe: EURO STOXX

Weighting scheme: The index is price weighted according to a minimum variance optimization

Base values and dates: 100 on March 19, 2012

Index types and currencies: Price, net and gross return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website[39].

Dissemination calendar: STOXX Europe

16.9.2. INDEX REVIEW

Component selection and weighting cap-factors:
From the universe, a set of exclusion criteria are applied which follow the Global Standards Screening assessment, a set of definitions for Controversial Weapons, Thermal Coal, Nuclear Power and Tobacco.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

[39] http://www.STOXX.com/download/indices/vendor_codes.xls

The criteria for involvement are:
» Internal production or sale of controversial weapons (0% revenue threshold)
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Thermal Coal:
STOXX will exclude companies that Sustainalytics identifies as having:
»>25% revenues from thermal coal extraction (including thermal coal mining and exploration)
»>25% power generation capacity from coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operate coal-fired power plants).

Nuclear Power:
STOXX will exclude companies that Sustainalytics identifies as having:
»>25% revenues from nuclear power production:
» Utilities that own/operate nuclear power generators;
Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power.
»>25% revenues from nuclear power supporting products / services, including:
- Design and construction of nuclear power plants;
- Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls;
- Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
» Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate.
»>25% revenues from nuclear power distribution, including:
- The resale or distribution of electricity generated from nuclear power;
- This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix.
Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power.

Tobacco:
STOXX will exclude companies that Sustainalytics identifies as tobacco producers (0% revenue threshold).

The EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance optimization is performed using Axioma's Portfolio Optimization software. This portfolio construction tool includes a Second-Order Cone optimization engine as well as a Branch-and-Bound algorithm for combinatorial problems that has been specialized for financial problems.

Risk predictions are made using Axioma's European, Medium-Horizon, Equity Fundamental Factor Risk Model.

The EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance Unconstrained index aims to obtain a pure minimum variance portfolio, suitable for investors seeking either a superior

benchmark or a good strategy index. The Minimum Variance Unconstrained index may have less constituents than the original index.

Constraint	Minimum Variance Unconstrained
Individual capping	4.5% / 8% / 35%
Effective number of assets	At least 30% of parent benchmark
Rebalancing and max. turnover	Quarterly, 7.5%
Country/industry exposure	None
Factor exposure	None
Tracking error	None
Max. number of names	None

Individual capping
STOXX aims to build the index such that constituent weights fulfil the 5% / 10% / 40% diversification rule, whereby a component cannot weigh more than 10%, and the weights sum of all those weighing at least 5% cannot exceed 40%. By applying the tighter constraints of 4.5% / 8% / 35%, STOXX aims to reduce the chance of breaching the above mentioned levels and to reduce the gravity of the breaches if and when they occur.

Effective number of assets
The effective number of assets of an index is the value, H, defined as:

$$\mathrm{H} = \frac{1}{\sum \mathrm{w}^2}$$

where w is the weight in each portfolio asset. H gives an accurate measure of the number of assets that affect a portfolio. The number of holdings in an index that is weighted by optimization should be constrained along those lines as well, as otherwise, the portfolio may hold an overly concentrated portfolio, with holdings with insignificant weights.

The constraint is defined as follows for the Unconstrained index:

$$\mathrm{H}_{\mathrm{MinVar}} \geq \mathrm{H}_{\mathrm{Base}} \cdot 30\%$$

Maximum turnover
The EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance Unconstrained index has a 7.5% one-way turnover constraint, or 15% two-way turnover. This means up to 7.5% of the portfolio is sold in order to purchase other components (with the aim of having a maximum annual turnover of 60%).

Minimum liquidity requirement
Recognizing that minimum variance portfolios may prefer to hold slightly less liquid stocks, the minimum liquidity requirement ensures that there is no material buildup in illiquid positions in the portfolio.

The weighted average days-to-trade d_s for a given group of holdings S are defined as:

$$d_S = \sum_{i \in S} w_i \cdot \frac{h_i}{MDTV_i}$$

where $h_i = w_i \cdot N$ represents the holdings for stock i and $MDTV_i$ represents its 60-day median daily traded value.

Stocks in the benchmark index are ranked by traded value, and liquidity constraints are imposed on stocks in the two least liquid quintiles. For each of these quintiles Q, the weighted average days to trade of the positions (w_i) therein is required to be no more than 10 times the weighted average days to trade of the same stocks held at corresponding benchmark weights (b_i).

$$\sum_{i \in Q} w_i \cdot \frac{w_i \cdot N}{MDTV_i} \leq \gamma \cdot \sum_{i \in Q} b_i \cdot \frac{b_i \cdot N}{MDTV_i}$$

Each position value has been rewritten in terms of the portfolio notional value N (since the term appears in both sides of the inequality constraint, it cancels out and the actual value is irrelevant). The parameter γ is set to 10.
b_i represents weights in the corresponding capitalization-weighted benchmark index weight.

Country, Industry, Sector and Factor exposures
These constraints are not applicable to the EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance Unconstrained index.

Tracking error
This constraint is not applicable to the EURO STOXX ESG-X & Ex Nuclear Power Minimum Variance Unconstrained index.

Review frequency
The index is reviewed quarterly in line with the parent index (implementation after the close of the third Friday and effective the next dissemination day in March, June, September and December).

The review cut-off date is the last dissemination day of the month preceding the review month.
The review cut-off date for Axioma data is the second Friday of the review month.

Derived indices: Not applicable.

16.9.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

16. STOXX RISK BASED INDICES

16.10. STOXX GLOBAL LOW RISK WEIGHTED DIVERSIFIED 200 INDEX

16.10.1. OVERVIEW

The STOXX Global Low Risk Weighted Diversified 200 Index selects and weighs companies from STOXX Global 1800 and provides access to a low volatility portfolio. Industry, country and stock capping controls are applied in the selection process to ensure diversification.

Universe: STOXX Global 1800

Weighting scheme: The indices are price-weighted with weighting factors based on the inverse of the 12-month price volatility with single stock, industry and country capping

Base values and dates: 100 on December 20, 2002

For a complete list please consult the data vendor code sheet on the website[40]. Customized solutions can be provided upon request.

Index types and currencies: Price, net and gross return in EUR and USD

Dissemination calendar: STOXX Europe Calendar

16.10.2. INDEX REVIEW

Selection list:
At cut-off date of the quarterly review month, the 12-month historical price volatility in USD is calculated on component level for the new components of the respective benchmark that would be effective on the review effective date. The free-float market capitalization for the parent benchmark used in the selection below is calculated based on the most recent data as known to STOXX at the cut-off date for these new components. A component must have at least 12-month of trading history to be eligible for the index.

All components are ranked from the lowest to highest volatility and the top ranked 200 components are selected for the index based on the selection criteria which are derived based on the following constraints:

1. Component weight constraints
    a. The minimum component weight is 5 bps
    b. The maximum component weight is the minimum of (2%, 25 times the parent benchmark component weight)

2. Country weight constraints
    a. For countries with weights above 2.5% in the parent benchmark, country weights can deviate by +/- 5% against the parent benchmark

[40] http://www.STOXX.com/download/indices/vendor_codes.xls

b. For countries with weights equal or less than 2.5% in the parent benchmark, country weights are capped at 3 times their weight in the parent benchmark

3. Industry weight constraints
   Effective up until September 2020 review, the industry groups are based on the ICB Classification system, following the categorization below:

Grouping	ICB codes
Oil & Gas	Industry 0001
Basic Materials	Industry 1000
Industrials	Industry 2000
Consumer Goods	Industry 3000
Health Care	Industry 4000
Consumer Services	Industry 5000
Telecommunications	Industry 6000
Utilities	Industry 7000
Financials	Supersectors 8300, 8500, and 8700
Real Estate	Supersector 8600
Technology	Industry 9000

   a. The maximum industry group weight is 25%

Effective with September 2020 review, the industry groups are based on the ICB Classification system, following the categorization below:

Grouping	ICB codes
Energy	Industry 60
Basic Materials	Industry 55
Industrials	Industry 50
Consumer Staples	Industry 45
Healthcare	Industry 20
Consumer Discretionary	Industry 40
Telecommunications	Industry 15
Utilities	Industry 65
Financials	Industry 30
Real Estate	Industry 35
Technology	Industry 10

   a. The maximum industry group weight is 25%

The selection process to obtain the 200 components will fulfil the following requirements below.

1. The parent benchmark component weight be at least 0.2 bps.
2. First, ensure the minimum weight requirements can be met. Starting from the top ranking low volatility components, a component is selected into the index until both these conditions are satisfied:
   a. the number of components by country is greater equal than the minimum country weight*100, and

b. the sum of the maximum component weights of components by country is greater than the minimum country weight constraint

3. When the minimum weight requirements are satisfied, the remaining top ranking low volatility components are selected into the index until the number of selected components reaches 200 based on the following criteria:
   a. the number of components by country is less than the maximum country weight*200, and
   b. the number of components by industry is less than the maximum industry weight*200

Review frequency: The index is reviewed on a quarterly basis, in line with the STOXX Global 1800

Weighting and capping factors:
Target weights calculations: The target weights are calculated based on the inverse of the 12-monthly historical price volatility, as follows:

$$w_i = \frac{\frac{1}{\sigma_i}}{\sum_{j\ in\ comp\ list}^{N} \frac{1}{\sigma_j}}$$

w_i = weight of component (i)
σ_i = historical 12-months price volatility of component (i) in USD
N = number of components in the index

Capped weights calculations: The capped weights w_i are derived from the target weights via an iterative process that minimises the relative squared difference between the target weights and the capped weights while maintaining the single component, country and industry group weight constraints.

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their weight in the index.

Weight factor calculation:

$$WeightFactor_i = \frac{cw_i}{p_i} \cdot 100{,}000{,}000{,}000$$

rounded down to the closest integer where:
cw_i = capped weight of company *i* as described above
p_i = close price in EUR of company *i* on the Thursday prior to the second Friday of the review month.

16.10.3. ONGOING MAINTENANCE

16. STOXX RISK BASED INDICES

Replacements: Deleted companies are not replaced. Deletions from the corresponding universe (STOXX Global 1800 Index), which remain in the STOXX Global Total Market Index are not deleted from the index.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-off companies are not added permanently.

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

17. STOXX EXPOSURE INDICES

17.1. STOXX TRUE EXPOSURE INDICES

17.1.1. OVERVIEW

The STOXX True Exposure indices provide investors with exposure to companies that generate a substantial portion of their revenues inside their home region.

Universe: The universe is given by the components of the corresponding benchmark indices (see table below).

Weighting scheme: The indices are weighted by free-float market capitalization multiplied with the corresponding exposure factor. All components are subject to a cap of 5%.

$$w_i = \frac{ffmcap_i \cdot exposure_i}{\sum_{j\ in\ comp.list} ffmcap_j \cdot exposure_j}$$

Details on how the exposure parameter is calculated can be found in chapter 17.1.4.

Base values and dates: 100 on September 24, 2007.

17.1.2. INDEX REVIEW

Component list and selection:

At the cut-off date based on the universe companies that generate at least the defined minimum share of revenues in the respective "home region" are selected into the index. The revenue information is based on most recent annual reports. If the underlying universe does not include a liquidity criterion a three months average daily traded value filter of EUR 1 million is applied. In addition companies that only report a single revenue number (see chapter 17.1.4, case 4) are excluded.

In order to control the turnover a buffer-rule is applied. Current components are removed from the index only if their exposure falls below the threshold.

Index	Home/Universe	Exposure threshold for additions (%)	Exposure threshold for deletion (%)
EURO STOXX True Exposure	EURO STOXX	50, 75	40, 65
STOXX True Exposure Asia/Pacific	STOXX Asia/Pacific 600	50, 75	40, 65
STOXX True Exposure Australia	STOXX Australia 150	50, 75	40, 65
STOXX True Exposure Canada	STOXX Canada 240	50, 75	40, 65
STOXX True Exposure Europe	STOXX Europe 600	50, 75	40, 65
STOXX True Exposure Japan	STOXX Japan 600	50, 75	40, 65
STOXX True Exposure North America	STOXX North America 600	50, 75	40, 65
STOXX True Exposure UK	STOXX UK 180	50, 75	40, 65
STOXX True Exposure USA	STOXX USA 900	50, 75	40, 65

Review frequency:

The index composition including the revenue exposure factor is reviewed annually in September based on most recent available data at the cut-off date at the end of August. The needed data points are updated in the third quarter of each calendar year. Hereby, company revenues data related to the most recent fiscal period. For macroeconomic data points, e.g. exports of

commodities and services, GDPs and imports, the previous calendar year's figures are taken into account. In case a macroeconomic data point is not available, the most recent data is used for calculations.
In addition, the indices are rebalanced and capped quarterly.

Weighting cap factors: The components are capped based on the exposure factor. In case the weight exceeds 5% an additional capping to 5% is applied.

17.1.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global TMI are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-offs are not added permanently.
Mergers and takeovers: The original stock is replaced by the surviving stock.

17.1.4. EXPOSURE PARAMETER

In a first step the raw revenue break down data per company is standardized (i.e. translated to predefined countries and regions). In order to calculate the percentage of the revenue exposure of a company to a single country which was not necessarily reported in a first step, the regions need to be split into countries. In a second step a metric is needed that assigns a certain percentage to a country within a region (e.g. how much of revenues which were assigned to Europe come from Germany).

In order to calculate the respective exposures, revenues have to be broken down to the country level. Hereby four cases need to be distinguished:

Case 1: The company already reports revenues broken down to the country level

The share of total revenues TR_i generated in country c is determined by dividing the ratio of the reported country revenues $S_{i,c}$ and total revenues.

$$x_{i,c} = \frac{S_{i,c}}{TR_i}$$

Case 2: Revenues are reported on a regional level (while the reported region does not include the company's home country)

In case revenues are reported solely on a more aggregated (i.e. regional) level, the respective country revenues are determined based on export relations between the reporting company's home country's industry's exports to all countries of the respective region. Hereby, exports comprise exported goods and services.

In order to link exported goods and services to companies, a mapping of goods and services to ICB Supersectors has been conducted. The respective table including the mapping can be found at the end of the document.

The revenues of company i (located in country H and belonging to industry J) that are generated in country c of region R is calculated as:

$$S_{i,c_R} = \frac{EXP_{H,J,c_R}}{\sum_{c_R}^{C} EXP_{H,J,c_R}} S_{i,R}$$

where $S_{i,R}$ indicates the revenues of company i generated in region R, and EXP_{H,J,c_R} indicates the exports from company i's home country's (H) industry J to country c of region R.

In case disaggregated commodity and services data is not available for a given home-country – region combination, the estimation is done based on a country (no longer country and industry specific) approach.

If i denotes the company and H denotes this company's home country, then the revenues S_{i,c_R} generated by company i located in country H that are generated in country c_R of region R is be calculated as follows:

$$S_{i,c_R} = \frac{EXP_{H,c_R}}{\sum_{c_R}^{C} EXP_{H,c_R}} S_{i,R}$$

where $S_{i,R}$ indicates the revenues of company i generated in region R. EXP_{H,c_R} indicates the exports from country H to country c_R of region R. $\sum_{c_R}^{C} EXP_{H,c_R}$ indicates the sum of exports from country H to all countries c in region R.

The share of total revenues TR_i generated in country c_R is then again determined by dividing the ratio of the estimated country revenues $S_{i,c}$ and total revenues.

$$x_{i,c_R} = \frac{S_{i,c_R}}{TR_i}$$

Case 3: Revenues are reported on a regional level (while the reported region includes the company's home country)

In case the reported region does include the reporting company's home country, the portion of revenues that is assumed to be generated in company i's home country H may first be extracted from the revenues of company i generated in region R.

The home country portion $S_{i,H}$ is calculated as follows:

$$S_{i,H} = \left(1 - \frac{\sum_{c_R}^{C} EXP_{H,c_R}}{\sum_{c_R}^{C} EXP_{H,c_R} + GDP_H - EXP_{H,V} + IMP_{H,V}}\right) S_{i,R}$$

where GDP_H indicates the gross domestic product of company i's home country H, $EXP_{H,V}$ indicated the exports from the home country H of company i to the rest of the world V, and $IMP_{H,V}$ indicated the imports from the rest of the world V to company i's home country H.

The corresponding share of total revenues being generated locally is determined as follows:

$$x_{i,H} = \frac{S_{i,H}}{TR_i}$$

The portion of revenues $S_{i,K}$ generated in the reported home region K outside of reporting company i's home country H is then calculated as:

$S_{i,K} = S_{i,R} - S_{i,H}$.

Finally, the remaining country revenues are again determined as follows:

$$S_{i,c_R} = \frac{EXP_{H,J,c_R}}{\sum_{c_R}^{C} EXP_{H,J,c_R}} S_{i,K}.$$

Again, in case disaggregated commodity and services data is not available for a given home-country – region combination, the estimation is done based on a country (no longer country and industry specific) approach:

$$S_{i,c_R} = \frac{EXP_{H,c_R}}{\sum_{c_R}^{C} EXP_{H,c_R}} S_{i,K}.$$

Following the above described procedure, share of total revenues being generated locally is determined as follows:

$$x_{i,c_R} = \frac{S_{i,c_R}}{TR_i}$$

Case 4: Revenues are reported for the entire world

In this case a company only reports a single revenue number for the entire world W, without any further breakdown to a country or lower regional level, a methodology similar to that explained above may be applied to break down revenues to a per country level.
The home portion of total reported revenues is determined by separating the home country portion:

$$S_{i,H} = \left(1 - \frac{EXP_{H,V}}{GDP_H + IMP_{H,V}}\right) S_{i,W}$$

With the corresponding revenue share being:

$$x_{i,H} = \frac{S_{i,H}}{TR_i}$$

where $S_{i,W}$ indicates revenues of company i generated in the world W.

Again, the portion of revenues generated locally may alternatively be determined as the average share of local revenues determined across all those companies NH from country H in the data sample that directly report their local revenues, as was described above.
The portion of revenues generated in the "rest of the world" V is calculated as:

$S_{i,V} = S_{i,W} - S_{i,H}$.

Finally, the remaining country revenues may be determined as follows:

$$S_{i,c_V} = \frac{EXP_{H,J,c_V}}{\sum_{c_V}^{C} EXP_{H,J,c_V}} S_{i,V}$$

where EXP_{H,J,c_V} indicates the exports from company i's home country's (H) industry J to country c in the rest of the world V.

Following the procedure outlined in case 2 and 3, in case disaggregated commodity and services data is not available for a given home-country – region combination, the estimation is done based on a country (no longer country and industry specific) approach:

$$S_{i,c_V} = \frac{EXP_{H,c_V}}{\sum_{c_V}^{C} EXP_{H,c_V}} S_{i,V}$$

With the corresponding revenue shares being:

$x_{i,c_V} = \frac{S_{i,c_V}}{TR_i}$.

17. STOXX EXPOSURE INDICES

17.2. STOXX INTERNATIONAL EXPOSURE INDICES

17.2.1. OVERVIEW

The STOXX International Exposure indices provide investors with exposure to companies that generate a substantial portion of their revenues outside their home region.

Universe: The universe is given by the components of the corresponding benchmark indices the EURO STOXX and STOXX Japan 600 respectively.

Weighting scheme: The indices are weighted by free-float market capitalization multiplied with the corresponding exposure factor. All components are subject to a cap of 5%.

$$w_i = \frac{\text{ffmcap}_i \cdot \text{exposure}_i}{\sum_{j \text{ in comp.list}} \text{ffmcap} \cdot \text{exposure}}$$

Details on how the exposure parameter is calculated can be found in chapter Exposure Parameter.

Base values and dates: 100 on September 24, 2007.

For a complete list please consult the data vendor code sheet on the website[41]. Customized solutions can be provided upon request.

Index types and currencies: Price, net return, gross return in EUR, USD, GBP for the Eurozone and JPY for Japanese version

17.2.2. INDEX REVIEW

Component list and selection:

At the cut-off date based on the universe companies that generate at least the defined minimum share of revenues in the respective "target region" are selected into the index. The revenue information is based on most recent annual-reports

In order to control the turnover in the index the selection is subject to a buffer-rule on a component level. Current components are removed from the index only if their exposure falls below the threshold:

Index	Universe	Target Region	Exposure threshold for additions (%)	Exposure threshold for deletion(%)
EURO STOXX International Exposure	EURO STOXX	Global ex Eurozone	50	40
STOXX Japan International Exposure	STOXX Japan 600	Global ex Japan	50	40

[41] http://www.STOXX.com/download/indices/vendor_codes.xls

Review frequency:
The index-composition including the revenue-exposure factor is reviewed annually in September based on most recent available data at the cut-off date at the end of August. The needed data-points are updated in the third quarter of each calendar year. Hereby, company-revenues data relates to the most recent fiscal period. For macroeconomic data points, e.g. exports of commodities and services, GDPs and imports, the previous calendar years' figures are taken into account. In case a macroeconomic data-point is not available, the most recent data is used for the calculations
The underlying free-float factors and the number of shares are updated in line with the quarterly review-frequency of the respective parent index.

Weighting cap factors: The components are capped based on the exposure factor. In case the weight exceeds 5% an additional capping to 5% is applied.

17.2.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

Mergers and takeovers: The original stock is replaced by the surviving stock.

17.2.4. EXPOSURE PARAMETER

The raw revenue break-down data per company is provided by Capital IQ and standardized. In order to calculate the percentage of the revenue exposure of a company to a single country which was not necessarily reported in a first step, the regions need to be split into countries. In a second step a metric is needed that assigns a certain percentage to a country within a region (e.g. how much of revenues which were assigned to Europe come from Germany).

In order to calculate the respective exposures, revenues have to be broken down to the country level and hereby four cases need to be distinguished:

Case 1: The company already reports revenues broken down to the country level

The share of total revenues TR_i generated in country c is determined by dividing the ratio of the reported country revenues $S_{i,c}$ and total revenues.

$$x_{i,c} = \frac{S_{i,c}}{TR_i}$$

Case 2: Revenues are reported on a regional level (while the reported region does not include the company's home country)

In case revenues are reported solely on a more aggregated (i.e. regional) level, the respective country revenues are determined based on export relations between the reporting company's home country and all countries of the respective region. Hereby, exports comprise exported goods and services.

If i denotes the company and H denotes this company's home country, then the revenues S_{i,c_R} generated by company i located in country H that are generated in country c_R of region R is be calculated as follows:

$$S_{i,c_R} = \frac{EXP_{H,c_R}}{\sum_{c_R}^{C} EXP_{H,c_R}} S_{i,R}$$

where $S_{i,R}$ indicates the revenues of company i generated in region R. EXP_{H,c_R} indicates the exports from country H to country c_R of region R. $\sum_{c_R}^{C} EXP_{H,c_R}$ indicates the sum of exports from country H to all countries c in region R.

The share of total revenues TR_i generated in country c_R is then again determined by dividing the ratio of the estimated country revenues $S_{i,c}$ and total revenues.

$$x_{i,c_R} = \frac{S_{i,c_R}}{TR_i}$$

Case 3: Revenues are reported on a regional level (while the reported region includes the company's home country)

In case the reported region does include the reporting company's home country, the portion of revenues that is assumed to be generated in company i's home country H may first be extracted from the revenues of company i generated in region R.

The home country portion $S_{i,H}$ is calculated as follows:

$$S_{i,H} = \left(1 - \frac{\sum_{c_R}^{C} EXP_{H,c_R}}{\sum_{c_R}^{C} EXP_{H,c_R} + GDP_H - EXP_{H,V} + IMP_{H,V}}\right) S_{i,R}$$

where GDP_H indicates the gross domestic product of company i's home country H, $EXP_{H,V}$ indicated the exports from the home country H of company i to the rest of the world V, and $IMP_{H,V}$ indicated the imports from the rest of the world V to company i's home country H.

The corresponding share of total revenues being generated locally is determined as follows:

$$x_{i,H} = \frac{S_{i,H}}{TR_i}$$

The portion of revenues $S_{i,K}$ generated in the reported home region K outside of reporting company i's home country H is then calculated as:

$S_{i,K} = S_{i,R} - S_{i,H}$.

Finally, the remaining country revenues are again determined as follows:

$S_{i,c_R} = \frac{EXP_{H,c_R}}{\sum_{c_R}^{C} EXP_{H,c_R}} S_{i,K}$.

Following the above described procedure, share of total revenues being generated locally is determined as follows:

$$x_{i,c_R} = \frac{S_{i,c_R}}{TR_i}$$

Case 4: Revenues are reported for the entire world

In this case a company only reports a single revenue number for the entire world W, without any further breakdown to a country or lower regional level, a methodology similar to that explained above may be applied to break down revenues to a per country level.
The home portion of total reported revenues is determined by separating the home country portion:

$$S_{i,H} = \left(1 - \frac{EXP_{H,V}}{GDP_H + IMP_{H,V}}\right) S_{i,W}$$

With the corresponding revenue share being:

$$x_{i,H} = \frac{S_{i,H}}{TR_i}$$

where $S_{i,W}$ indicates revenues of company i generated in the world W.

Again, the portion of revenues generated locally may alternatively be determined as the average share of local revenues determined across all those companies NH from country H in the data sample that directly report their local revenues, as was described above.
The portion of revenues generated in the “rest of the world” V is calculated as:

$S_{i,V} = S_{i,W} - S_{i,H}$.

Finally, the remaining country revenues may be determined as follows:

$$S_{i,c_V} = \frac{EXP_{H,c_V}}{\sum_{c_V}^{C} EXP_{H,c_V}} S_{i,V}$$

With the corresponding revenue shares being:

$x_{i,c_V} = \frac{S_{i,c_V}}{TR_i}$.

18. STOXX THEMATIC INDICES

18.1. STOXX GLOBAL ARTIFICIAL INTELLIGENCE INDEX

18.1.1. OVERVIEW

Derived from the STOXX® Developed & Emerging Markets Total Market Index, the STOXX® Global Artificial Intelligence Index is comprised of companies that are positively exposed to artificial intelligence (AI). AI is the science of creating computing programs that mimic – as closely as possible – the patterns of learning, growth and mastery exhibited in human intelligence. As AI develops, these companies are positioned to take advantage of the long-term trend towards automation, which may have a substantial impact on their revenue in the future.
Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial positive AI exposure.

Universe: The index universe is defined as all stocks from the STOXX Developed and Emerging Total Market index.

Weighting scheme: The indices are weighted proportionally to the free-float market cap of selected stocks multiplied by the aggregate revenue exposure of each stock to the Sectors listed below.

Base values and dates: 100 on 18 June 2012.

Index types and currencies: Price, net return, gross return in EUR and USD.

18.1.2. INDEX REVIEW

For each STOXX Global Artificial Intelligence Index the companies in the index universe are screened for all of the following criteria (applied in the order in which they are listed):

» **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than one million EUR
» **Revenues:** more than 50% of revenues over the past year generated within the aggregate of the RBICS sectors associated with AI (see table below)
» **Multiple share lines:** in case a company is present with multiple listings in an index, only the most liquid share line will be kept

List of RBICS sectors associated with AI for the purposes of constituent selection:

- Programmable Logic Device Semiconductors (551020351510)
- Video Multimedia Semiconductors (551020401525)
- Other Programmable Logic and ASIC Semiconductors (551020351010)
- Microprocessor (MPU) Semiconductors (551020302510)
- Imaging Laboratories (351515151510)
- Communication and Collaboration Content Sites (552010351015)
- Web Search Sites and Software (552010351520)
- Web Navigation Sites and Software (552010351510)
- Business Intelligence Software (552015151510)
- Machine Vision and Quality Control Manufacturing (401020202010)
- Data Storage Drives and Peripherals (551520201010)
- Data Storage Media (551520201510)
- Multi-Type Data Storage Hardware Makers (551520202510)

- Colocation and Data Center Services (552010201010)
- Data Transport Carrier Services (601010301015)
- Disk Storage Systems (551520202010)
- Information Storage Systems (551520202015)
- Other Memory Semiconductors (551020251510)
- Networking Semiconductors (551020401010)
- Flash Memory Semiconductors (551020251010)
- Other Nonvolatile Memory Semiconductors (551020251015)

Review frequency: The index composition is reviewed annually in June. The review cut-off date is the last trading day of the preceding May. The index Weighting Cap Factors are recalculated quarterly in March, June, September and December.

Weighting cap factors: Index weighting cap factors are recalculated quarterly in March, June, September and December. They are published on the second Friday of each of those months and based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ae_i \cdot ff_i}{\sum_j ae_j \cdot ff_j}$$

ae_i is the sum of all exposures of company *i* to the sectors that are included in the index;
ff_i is the free float market capitalization of company *i*

Capped weight calculation
The capped weights (cw_i) are derived from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%
- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \times 10{,}000{,}000{,}000$$

rounded to the closest integer and where:
cw_i is the capped weight of company i as described above
p_{s_i}= close price in EUR of company i on the Thursday preceding the second Friday of the review month
wcf_i= weighting cap factor of company i

18.1.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Developed & Emerging TMI are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

Mergers and takeovers: The original stock is replaced by the surviving stock.

18.2. STOXX GLOBAL DIGITAL SECURITY INDEX

18.2.1. OVERVIEW

The STOXX Global Digital Security Index is comprised of companies from selected countries exposed to a defined theme: Digital Security. This includes firms which are involved in the transmission, safeguarding and/or handling of sensitive data and/or access control of secure locations (e.g. data centers). These companies, or components of their business lines, are positioned to benefit from long-term structural trends driving economic change and which, in the future, may have a substantial impact on their performance.

Revere (RBICS) data allows a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the respective themes.

The indices are also taking ESG considerations into account. Companies that are non-compliant with the Global Standards Screening (GSS) or are involved in Controversial Weapons activities, or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics, are excluded. Additional exclusion filters are incorporated, screening companies for involvement in Weapons (Small Arms and Military Contracting), Unconventional Oil & Gas (Arctic Oil and Gas Exploration, Oil Sands and Shale Energy), Conventional Oil & Gas, Thermal Coal, Nuclear Power and Tobacco.

Universe: The index universe is defined as all stocks from the STOXX Global Total Market index.

Weighting scheme: The index constituents are weighted according to adjusted equal weights. Weight factors are published on the second Friday of the Review/Rebalance month and based on the stocks' prices of the preceding Thursday.

Base values and dates: 1000 on 18 June 2012

Index types and currencies: Price, Net and Gross Return in EUR and USD

Dissemination calendar: STOXX Europe calendar

18.2.2. INDEX REVIEW

In order to be included in the STOXX Global Digital Security Index, the companies in the index universe are screened for all of the following criteria:

- **Country classification:** stocks classified as belonging to the eligible countries list
- **Minimum liquidity:** 3-month median daily traded volume (MDTV) greater than one million EUR
- **Minimum size:** free-float market capitalization greater than 200 million EUR

» **Revenues:** more than 50% of revenues generated within the sectors associated with the Digital Security theme. Within each individual index, the threshold is lowered to 45% for current components.
STOXX uses FactSet Research Systems granular analysis to determine a company's position within the subsectors of its FactSet Revere Business Industry Classification System (FactSet RBICS). FactSet Revere is a sector, supply chain, and geographic risk taxonomy expert.

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

» **Product Involvement**: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**
  iii) Small Arms:
  »>0% revenues from manufacturing and selling assault weapons to civilian customers
  »>0% revenues from manufacturing and selling small arms to military / law enforcement customers
  »>0% revenues from manufacturing and selling key components of small arms
  »>5% revenues from retail and/or distribution of assault weapons
  »>5% revenues from retail and/or distribution of small arms (non-assault weapons)
  »>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
  iv) Military Contracting:
  »>10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

- **Unconventional Oil & Gas:**
  iv) Arctic Oil and Gas Exploration:
  »>0% revenues Oil & Gas exploration & extraction in Arctic regions
  »>10% significant ownership (extraction) of a company that is involved in Oil & Gas exploration & extraction in Arctic regions
  v) Oil Sands:
  »>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

»>10% significant ownership of a company that is involved in extraction of oil sands

vi) Shale Energy:

»>0% revenues from shale energy exploration and/or production

»>10% significant ownership of a company that is involved in shale energy exploration and/or production

- **Conventional Oil & Gas:**

  »>0% revenues from oil and gas exploration, production, refining, transportation and/or storage

  This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).

  »>10% significant ownership of a company that is involved in exploration, production, refining, transportation and storage of oil and/or gas

  »>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)

  »>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Thermal Coal:**

  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)

  »>10% significant ownership of a company that is involved in the extraction of thermal coal

  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

  »>10% significant ownership of a company that is involved in the generating electricity from thermal coal

- **Nuclear Power:**

  »>25% revenues from nuclear power production:

  - Utilities that own/operate nuclear power generators
    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:

  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:

  - The resale or distribution of electricity generated from nuclear power;
  - This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix
    Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>10% significant ownership of a company that is involved in the manufacturing tobacco products
  »>0% revenues from supplying tobacco-related products/services
  »>10% significant ownership of a company that is involved in supplying tobacco-related products/services
  »>0% revenues from the distribution and/or retail sale of tobacco products.
  »>10% significant ownership of a company that is involved in distribution and/or retail sale (>10% total revenues) of tobacco products.

» **Controversy Ratings**: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

If information on any of the above fields is missing for a company, then it is excluded from the eligible universe.

The STOXX Global Digital Security Index aims to have a minimum number of 80 constituents at each review. If the screening process above described results to be too restrictive, the revenue filter is progressively lowered in steps of 5% for the index, to a minimum of 30%, until the number of constituents is equal to or greater than 80 (i.e. all stocks which pass the lowered threshold are added to the index).

The eligible countries are defined as follows:

Australia	Japan	Brazil	Peru
Austria	Netherlands	Chile	Philippines
Belgium	New Zealand	China (B, H shares, Red Chips)	Poland
Canada	Norway	Colombia	South Africa
Denmark	Portugal	Czech Republic	South Korea
Finland	Singapore	Egypt	Taiwan
France	Spain	Greece	Thailand
Germany	Sweden	Hungary	Turkey
Hong Kong	Switzerland	India	
Ireland	United Kingdom	Indonesia	
Israel	United States	Malaysia	
Italy		Mexico	

The included FactSet RBICS sectors are:

Nr.	Digital Security L6 RBICS sectors
1	Access Systems Manufacturing

18. STOXX THEMATIC INDICES

2	Aerospace and Defense IT Services
3	Alarm Systems Manufacturing
4	Carrier Core (Backbone) Equipment
5	Carrier Edge Network Management Equipment
6	Closed Circuit Television (CCTV) Systems/Products
7	Colocation and Data Center Services
8	Customer Premises Network Security Equipment
9	Data Storage Infrastructure Software
10	Diversified Electronic Security Equipment
11	Diversified IT Infrastructure Software
12	Document Management Software
13	Electronic Security Identification Equipment
14	Electronic System Security Equipment
15	Enterprise Security Management Software
16	Fixed Microwave Systems Equipment
17	General Carrier Edge (Access) Equipment
18	General Information Technology (IT) Consulting
19	General Infrastructure and Network Consulting
20	General Internet and Online Services
21	General Security Services
22	Government IT Services
23	Inspection and Detection Systems Manufacturing
24	Mixed Building/Physical Security Equipment Makers
25	Network Administration Software
26	Network Security Access Policy Software
27	Network Security Software
28	Other Local Area Networking Equipment
29	Other Network Software
30	Other Wide Area Networking (WAN) Equipment
31	Point-of-Sale (POS) Terminal Manufacturing
32	Security and Identification Semiconductors
33	Security and Management Consulting
34	Security Systems Services
35	Wireless and Wi-Fi Equipment
36	Wireline Equipment

Review frequency: The index is reviewed annually in June. The review cut-off date for the observation of the parent index, liquidity, size, revenues and ESG information is the last index dissemination day in May. Furthermore, on a quarterly basis in September, December and March, current components are screened for their Global Standards Screening assessment and Controversy Rating. The cut-off date for this exercise is the last dissemination day of August, November and February respectively. If a current component is assessed as non-compliant based on the Global Standards Screening or observed to have a Category 5 Controversy Rating, it is removed from the index, effective on the next dissemination day following the 3rd Friday of the month.

Weighting cap factors: Weight factors are calculated annually in June. They are published on the second Friday of June, based on the stocks' closing prices of the preceding Thursday. Components are initially weighted by adjusted equal weighting mechanism with a multiplier set as L = 5. The resulting weights are assessed to check if a stricter version of the UCITS bounds (4.5/8/35) is exceeded. In case of any breaches, an iterative process takes place to cap the weights by these bounds, and ensure diversification. This is achieved by following steps 1-6 below.

Additionally, on a quarterly basis in September, December and March, the companies' weights are assessed for any breaches on the stricter UCITS bounds based on the stocks' closing prices of the Thursday preceding the second Friday of the respective quarter. Company weights are re-capped if the bounds are exceeded, and weight factors published on the second Friday, based on the stocks' closing prices of the preceding Thursday. No capping applies if the weights did not exceed the UCITS bounds.

Step1:
The companies in the portfolio are sorted by their free-float market capitalization in ascending order, and their initial weight is defined as:

$$w_i = \frac{ffmcap_i}{\sum_{j \text{ in comp list}}^{N} ffmcap_j}$$

where:

$ffmcap_i$	the free-float market capitalization of company i on the Thursday preceding the second Friday of the review month
N	the number of companies in the index

The companies are also assigned a rank from 1, for the company with the lowest free-free float market capitalization, to N, for the one with the highest.

For the purposes of the above weight calculation, if a company is present with multiple listings in the portfolio, then the issuer's weight is calculated by summing the free-float market capitalization of all its listings, and only one rank is assigned to it.

Step 2:
An iterative process takes place where for each company in the ranking list formed in step 1, a cumulative weight is calculated such that:

$$Sw_i = (N - n_i) * w_i + \sum_{1}^{n_i} w_j$$

where:

w_i	the initial weight calculated for company i
n_i	the ranking assigned to company i
$\sum_{1}^{n_i} w_j$	the sum of weights (as calculated in step 1) of the companies ranking from 1 to n_i
N	the number of companies in the corresponding thematic index

Step 3:
The company with rank Z, is identified as the first one in the ranking list where the cumulative weight, exceeds the inverse of the multiplier, i.e. $Sw_z \geq 1/L$.

Step 4:
A normalization factor W_Z is calculated, such that:

$$W_Z = w_Z - \frac{Sw_z - \frac{1}{L}}{N - Z + 1}$$

Step 5:
The adjusted equal weights are calculated as follows:

$$aew_i = \begin{cases} w_i * L, \text{if } n_i < Z \\ W_Z * L, \text{if } n_i \geq Z \end{cases}$$

Step 6:
The adjusted equal weights are checked against the requirements that: the sum of all constituents' weights above 4.5% does not exceed 35%, and no single weight exceeds 8%. If any of these criteria is not met, the multiplier L is increased by an increment of 1, and the above steps from Step 3 are repeated until the requirements are met or a maximum multiplier of L = 10 is reached. If the adjusted equal weights still do not fall within the boundaries of 4.5/8/35 using L = 10, they are capped using the capping procedure described below, otherwise the final weights (fw) are set to the adjusted equal weights from the last iteration.

For the capping procedure, the final weights are derived from the adjusted equal weights (L=10) via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their adjusted equal weights.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

In the case where a company is present with multiple listings in the portfolio, then the final weight calculated for the company, is allocated to each share line according to its free-float market capitalization.

The weighting factors are calculated such that:

$$wf_{i,ki} = \frac{fw_{i,k}}{p_{i,k}} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

$p_{i,k}$	close price of share line k of company i on the Thursday preceding the second Friday of the review month
$wf_{i,k}$	weight factor of share line k of company i.

18.2.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global Total Market index are deleted from the STOXX Global Digital Security Index. Any deleted stocks are not replaced.

Fast Exit: Not applicable.

Fast entry: Not applicable.

Spin-Offs: Spin-off companies are not added permanently.

18.3. STOXX GLOBAL FINTECH INDEX

18.3.1. OVERVIEW

The STOXX® Global Fintech Index is comprised of companies associated with financial technology (fintech). These businesses use technology to change how financial services are offered to end customers, and/or to boost the competitive edge of traditional financial services providers by improving efficiencies and driving new products and solutions. As the evolution of fintech progresses, and its support from governments and regulators increases, these companies are well-positioned to benefit from the long-term trend towards fintech, which may have a substantial impact on their revenues in the future.
Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial fintech exposure.

Universe: The STOXX Developed and Emerging Total Market index, as observed on the review effective date defines the index universe.

Weighting scheme: The index is weighted proportionally to the free-float market cap of the selected stocks multiplied by the aggregate revenue exposure of each stock to the sectors listed below.

Base values and dates: 100 on June 18, 2012

Index types and currencies: Price, net return, gross return in EUR, USD and JPY

Dissemination calendar: STOXX Europe calendar

18.3.2. INDEX REVIEW

All companies in the index universe are screened for all of the following criteria (applied in the order in which they are listed):

» **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than one million EUR
» **Revenues:** more than 50% of revenues over the past year generated within the aggregate of the RBICS sectors associated with Fintech (see table below)
» **Multiple share lines:** in case a company is present with multiple listings, only the most liquid share line is considered

List of RBICS sectors associated with Fintech for the purposes of constituent selection:

- Alternative Exchanges and ECNs (302010252510)
- Automated Teller Machines (ATMs) (303010153010)
- Automated Teller Machines (ATMs) Hardware Makers (551510201010)
- Blockchain Technology (303015101040)
- Commercial Bank and Credit Union Software (303015101010)
- Commodities Trading Services (302010252010)
- Credit and Information Bureaus (101015103010)
- Cryptocurrency Trading/Exchanges (303010153030)
- Diversified Brokerage Services (302010251010)
- Diversified Enterprise Resource Planning Software (552015153015)
- Electronic Payment Processing (303010153015)
- Finance and Banking Systems Production (551510201015)

- Finance Information and News Media and Sites (552010101025)
- Financial and Compliance ERP Software (552015153020)
- Institutional Brokerage Services (302010251015)
- Institutional Financial and Research Content Sites (552010301025)
- Insurance Software (303015101015)
- Investment Management/Brokerage Software (303015101020)
- Issuance and Securitization Services (302010251515)
- Market Makers and Specialists (302010251020)
- Mixed Electronic Transaction Processing (303010153020)
- Money Transfer Services (303010153025)
- Multi-Type Financial Data Content Providers/Sites (552010301030)
- Other Finance Industry Software (303015101025)
- Payment Processing Software (303015101030)
- Point-of-Sale (POS) Terminal Manufacturing (551510101510)
- Retail Brokerage Services (302010251035)
- Retail Industry Software (201515301010)
- Securities Exchanges (302010252515)
- Trade Execution Services (302010251040)
- Trading Software (303015101035)

Review frequency: The index composition is reviewed annually in June. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors: Index weighting cap factors are calculated quarterly in March, June, September and December. They are published on the second Friday of each of these months, based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ae_i \cdot ff_i}{\sum_j ae_j \cdot ff_j}$$

,where:

ae_i the sum of all exposures of company *i* to the sectors associated with fintech

ff_i the free float market capitalization of company *i*, calculated using close price in EUR on the Thursday preceding the second Friday of the review month

Capped weight calculation

The capped weights (cw_i) derive from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%
- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer, where:

wcf_i	weighting cap factor of company i
cw_i	capped weight of company i as described above
p_i	close price in EUR of company i on the Thursday preceding the second Friday of the review month

18.3.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Developed & Emerging Total Market Index are not replaced.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-offs are not added permanently.

Mergers and takeovers: The original stock is replaced by the surviving stock.

18.4. STOXX GLOBAL ELECTRIC VEHICLES & DRIVING TECHNOLOGY INDEX

18.4.1. OVERVIEW

The STOXX Global Electric Vehicles & Driving Technology Index is comprised of companies from selected countries exposed to a defined theme: electric vehicles and assisted-driving technologies. This includes firms which are involved in the manufacturing of electric and autonomous vehicles, battery suppliers for electric vehicles, other suppliers in the electric and autonomous vehicle manufacturers' supply chain, as well as companies providing electric vehicle charging stations and battery charging equipment . These companies, or components of their business lines, are expected to benefit from long-term structural trends driving economic change and which, in the future, may have a substantial impact on their performance.

Revere (RBICS) data allows a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the respective themes. In addition, the index uses Factset's supply chain relationship data, which exposes business relationship interconnections among companies, providing pure exposure to the theme.

The index is also taking ESG considerations into account. Companies that are non-compliant with the Global Standards Screening (GSS) or are involved in Controversial Weapons activities, or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics, are excluded. Additional exclusion filters are incorporated, screening companies for involvement in Weapons (Small Arms and Military Contracting), Unconventional Oil & Gas (Arctic Oil and Gas Exploration, Oil Sands and Shale Energy), Conventional Oil & Gas, Thermal Coal, Nuclear Power and Tobacco.

Universe: The index universe is defined as all stocks from the STOXX Global Total Market index.

Weighting scheme: The index constituents are weighted according to adjusted equal weights. Weight factors are published on the second Friday of the Review/Rebalance month and based on the stocks' prices of the preceding Thursday.

Base values and dates: 1000 on 18 June 2012

Index types and currencies: Price, Net and Gross Return in EUR and USD

Dissemination calendar: STOXX Europe calendar

18.4.2. INDEX REVIEW

STOXX uses FactSet Research Systems granular analysis to determine a company's position within the subsectors of its FactSet Revere Business Industry Classification System (FactSet RBICS). FactSet Revere is a sector, supply chain, and geographic risk taxonomy expert.

At the review cut-off date an iterative process takes place to derive four groups of stocks that will compose the final index: "Electric Vehicle Manufacturers", "Electric Vehicle Battery Suppliers", "Electric Vehicle Manufacturers' Supply Chain" and "Electric Vehicle Charging Stations and Equipment". The following steps are followed in the exact order as noted.

Initially, companies with more than 50% of aggregated revenues generated within the L6 RBICS sectors listed below, are grouped and tagged as “potential Electric Vehicle Manufacturers”. The threshold is lowered to 45% for current components. Companies from this pre-selection list will at a later step be screened for eligibility to be included in the final “Electric Vehicle Manufacturers” selection list.

Nr.	Potential Electric Vehicle Manufacturers
1	Alternative Energy Car Manufacturers
2	Autonomous Commercial/Transit Vehicle Production
3	Autonomous Control Truck Production
4	Commercial and Public Service Vehicles Makers
5	Conventional Engine Car Manufacturers
6	Diversified Consumer Vehicle Manufacturing
7	Heavy Duty Trucks and Trailers Makers
8	Multi-Type Car Manufacturers
9	Other Commercial Transportation Equipment Makers

Similarly, companies with more than 50% of revenues generated within the L6 RBICS sectors listed below, are grouped and tagged as “potential Electric Vehicle Battery Suppliers”. The threshold for current components is 45% for this group also.

Nr.	Potential Electric Vehicle Battery Suppliers
1	Electric Vehicle Batteries Manufacturing
2	Heavy-Duty Industrial Batteries Manufacturing
3	Mixed Heavy-Duty and High-End Batteries Makers

Consequently, all companies in the “potential Electric Vehicle Battery Suppliers” pre-selection list, are screened for their customers, and if they are supplying companies which fall in the “potential Electric Vehicle Manufacturers” pre-selection list, then these companies are included in the final “Electric Vehicle Battery Suppliers” selection list.

Similarly, companies from the “potential Electric Vehicle Manufacturers” pre-selection list that are customers of companies in the “potential Electric Vehicle Battery Suppliers” pre-selection list, are also included in their corresponding selection list: “Electric Vehicle Manufacturers”.

Moreover, two additional screenings are applied to the remaining companies in the “potential Electric Vehicle Manufacturers” pre-selection list. If a company is highlighted as not being a customer of any “potential Electric Vehicle Battery Suppliers”, then it is only admitted in the “Electric Vehicle Manufacturers” selection list if:

- It has more than 50% of aggregated revenues generated within the following sectors (45% in the case of current components):
    - Alternative Energy Car Manufacturers
    - Autonomous Commercial/Transit Vehicle Production
    - Autonomous Control Truck Production

, or:

- It has more than 0% of aggregated revenues generated within the following sectors:
    - Electric Vehicle Batteries Manufacturing
    - Heavy-Duty Industrial Batteries Manufacturing
    - Mixed Heavy-Duty and High-End Batteries Makers

All companies that are suppliers of “Electric Vehicle Manufacturers”, and have more than 50% of aggregated revenues generated within the sectors below, are included in the “Electric Vehicle Manufacturers’ Supply Chain” selection list. The threshold stands at 45% for current components.

18. STOXX THEMATIC INDICES

Nr.	Potential Electric Vehicle Manufacturers' Supply Chain
1	Auto Exterior Comfort/Safety/Electronics Products
2	Auto Interior Comfort/Safety/Electronics Products
3	Automotive and Marine Electronics Manufacturing
4	Battery Charging Equipment Manufacturing
5	Conventional Flat Panel Display Equipment
6	Diversified Electrical/Power System Manufacturing
7	Diversified Semiconductors
8	Electric Motors Manufacturing
9	Electric Vehicle Batteries Manufacturing
10	Electric Vehicle Charging Stations
11	Electrical Systems and Equipment Manufacturing
12	Electronic Interconnect Components
13	Electronic Materials Manufacturing
14	Fuse Passive Electronic Components
15	General Analog and Mixed Signal Semiconductors
16	Global Positioning Systems (GPS) Manufacturing
17	Heavy-Duty Industrial Batteries Manufacturing
18	Image Sensor and Image Capture Semiconductors
19	Microprocessor (MPU) Semiconductors
20	Mixed Heavy-Duty and High-End Batteries Makers
21	Monitoring and Control Sensor/Instrument Products
22	Motion Control and Precision Motors Manufacturing
23	Multi-Type Motor Vehicle Parts Manufacturers
24	Optoelectronics Electronic Components
25	Other Auto Comfort, Safety and Electronic Products
26	Other Communications Semiconductors
27	Other Discrete Semiconductors
28	Other Electric Motors and Motion Control Products
29	Other Industrial Electrical Product Manufacturing
30	Other Module and Subassembly Electronic Components
31	Other Optoelectronics Discrete Semiconductors
32	Other Passive Electronic Components
33	Other Power Analog and Mixed Signal Semiconductors
34	Other Processor Semiconductors
35	Pan-Powertrain and Chassis Manufacturing
36	Peripheral Semiconductors
37	Power Module and Subassembly Electronic Components
38	Powertrain and Chassis Thermal Management Products
39	Powertrain Manufacturing
40	Programmable Logic Device Semiconductors
41	Specialty Analog and Mixed Signal Semiconductors
42	Vehicle Autonomous Control Electronics Makers
43	Vehicle Autonomous Control Software
44	Video Multimedia Semiconductors

Finally, all companies that have more than 50% of aggregated revenues generated within the sectors below, are included in the "Electric Vehicle Charging Stations and Equipment" selection list. Once again, the threshold stands at 45% for current components.

Nr.	Electric Vehicle Charging Stations and Equipment
1	Battery Charging Equipment Manufacturing
2	Electric Vehicle Charging Stations

In order to be included in the STOXX Global Electric Vehicles & Driving Technology Index, the companies in the four selection lists ("Electric Vehicle Manufacturers", "Electric Vehicle Battery Suppliers", "Electric Vehicle Manufacturers' Supply Chain" and "Electric Vehicle Charging Stations and Equipment") are screened for all of the following criteria:

» **Country classification:** stocks classified as belonging to the eligible countries list

» **Minimum liquidity:** 3-month median daily traded volume (MDTV) greater than one million EUR

» **Minimum size:** free-float market capitalization greater than 200 million EUR

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

» **Product Involvement**: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**
  i) Small Arms:
  »>0% revenues from manufacturing and selling assault weapons to civilian customers
  »>0% revenues from manufacturing and selling small arms to military / law enforcement customers
  »>0% revenues from manufacturing and selling key components of small arms
  »>5% revenues from retail and/or distribution of assault weapons
  »>5% revenues from retail and/or distribution of small arms (non-assault weapons)
  »>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
  ii) Military Contracting:
  »>10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

- **Unconventional Oil & Gas:**
  i) Arctic Oil and Gas Exploration:
  »>0% revenues Oil & Gas exploration & extraction in Arctic regions

»>10% significant ownership (extraction) of a company that is involved in Oil & Gas exploration & extraction in Arctic regions

ii) Oil Sands:

»>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day

»>10% significant ownership of a company that is involved in extraction of oil sands

iii) Shale Energy:

»>0% revenues from shale energy exploration and/or production

»>10% significant ownership of a company that is involved in shale energy exploration and/or production

- **Conventional Oil & Gas:**

  »>0% revenues from oil and gas exploration, production, refining, transportation and/or storage

  This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).

  »>10% significant ownership of a company that is involved in exploration, production, refining, transportation and storage of oil and/or gas

  »>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)

  »>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Thermal Coal:**

  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)

  »>10% significant ownership of a company that is involved in the extraction of thermal coal

  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)

  »>10% significant ownership of a company that is involved in the generating electricity from thermal coal

- **Nuclear Power:**

  »>25% revenues from nuclear power production:

  - Utilities that own/operate nuclear power generators
    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:

  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:

  - The resale or distribution of electricity generated from nuclear power;

- This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix
  Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>10% significant ownership of a company that is involved in the manufacturing tobacco products
  »>0% revenues from supplying tobacco-related products/services
  »>10% significant ownership of a company that is involved in supplying tobacco-related products/services
  »>0% revenues from the distribution and/or retail sale of tobacco products.
  »>10% significant ownership of a company that is involved in distribution and/or retail sale (>10% total revenues) of tobacco products.

» **Controversy Ratings**: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

If information on any of the above fields is missing for a company, then it is excluded from the eligible universe.

The STOXX Global Electric Vehicles & Driving Technology Index aims to have a minimum number of 80 constituents at each review. If the screening process described above results in being too restrictive, the revenue filter for the "potential Electric Vehicle Battery Suppliers" is progressively lowered in steps of 5%, and the selection process is repeated until the number of constituents is equal to or greater than 80. If for a threshold of 5%, the process still returns less than 80 components, then all companies with a revenue exposure above 0% are considered as "potential Electric Vehicle Battery Suppliers", and the selection process is repeated.

If again the process returns less than 80 companies, the revenue filters for "potential Electric Vehicle Manufacturers", "potential Electric Vehicle Manufacturers' Supply Chain" and "Electric Vehicle Charging Stations and Equipment" are then progressively lowered in steps of 5%, in a similar way as explained above, until the minimum number of companies is met.

During the iterative process explained above, the revenue thresholds for current components, are correspondingly lowered for all groups, just so they are 5% lower than the threshold set for non-components.

The eligible countries are defined as follows:

Australia	Japan	Brazil	Peru
Austria	Netherlands	Chile	Philippines
Belgium	New Zealand	China (B, H shares, Red Chips)	Poland

Canada	Norway	Colombia	South Africa
Denmark	Portugal	Czech Republic	South Korea
Finland	Singapore	Egypt	Taiwan
France	Spain	Greece	Thailand
Germany	Sweden	Hungary	Turkey
Hong Kong	Switzerland	India	
Ireland	United Kingdom	Indonesia	
Israel	United States	Malaysia	
Italy		Mexico	

Review frequency: The index is reviewed annually in June. The review cut-off date for the observation of the parent index, liquidity, size, revenues and ESG information is the last index dissemination day in May. Furthermore, on a quarterly basis in September, December and March, current components are screened for their Global Standards Screening assessment and Controversy Rating. The cut-off date for this exercise is the last dissemination day of August, November and February respectively. If a current component is assessed as non-compliant based on the Global Standards Screening or observed to have a Category 5 Controversy Rating, it is removed from the index, effective on the next dissemination day following the 3rd Friday of the month.

Weighting cap factors: Weight factors are calculated annually in June. They are published on the second Friday of June, based on the stocks' closing prices of the preceding Thursday. Components are initially weighted by adjusted equal weighting mechanism with a multiplier set as L = 5. The resulting weights are assessed to check if a stricter version of the UCITS bounds (4.5/8/35) is exceeded. In case of any breaches, an iterative process takes place to cap the weights by these bounds, and ensure diversification. This is achieved by following steps 1-6 below.

Additionally, on a quarterly basis in September, December and March, the companies' weights are assessed for any breaches on the stricter UCITS bounds based on the stocks' closing prices of the Thursday preceding the second Friday of the respective quarter. Company weights are re-capped if the bounds are exceeded, and weight factors published on the second Friday, based on the stocks' closing prices of the preceding Thursday. No capping applies if the weights did not exceed the UCITS bounds.

Step1:
The companies in the portfolio are sorted by their free-float market capitalization in ascending order, and their initial weight is defined as:

$$w_i = \frac{\mathrm{ffmcap}_i}{\sum_{j \text{ in comp list}}^{N} \mathrm{ffmcap}_j}$$

where:

ffmcap_i the free-float market capitalization of company i on the Thursday preceding the second Friday of the review month

N the number of companies in the index

The companies are also assigned a rank from 1, for the company with the lowest free-free float market capitalization, to N, for the one with the highest.

For the purposes of the above weight calculation, if a company is present with multiple listings in the portfolio, then the issuer's weight is calculated by summing the free-float market capitalization of all its listings, and only one rank is assigned to it.

Step 2:
An iterative process takes place where for each company in the ranking list formed in step 1, a cumulative weight is calculated such that:

$$\mathrm{Sw_i} = (\mathrm{N} - \mathrm{n_i}) * \mathrm{w_i} + \sum_{1}^{\mathrm{n_i}} \mathrm{w_j}$$

where:

$\mathrm{w_i}$	the initial weight calculated for company i
$\mathrm{n_i}$	the ranking assigned to company i
$\sum_{1}^{\mathrm{n_i}} \mathrm{w_j}$	the sum of weights (as calculated in step 1) of the companies ranking from 1 to $\mathrm{n_i}$
N	the number of companies in the corresponding thematic index

Step 3:
The company with rank Z, is identified as the first one in the ranking list where the cumulative weight, exceeds the inverse of the multiplier, i.e. $\mathrm{Sw_z} \geq 1/\mathrm{L}$.

Step 4:
A normalization factor $\mathrm{W_Z}$ is calculated, such that:

$$\mathrm{W_Z} = \mathrm{w_Z} - \frac{\mathrm{Sw_z} - \frac{1}{\mathrm{L}}}{\mathrm{N} - \mathrm{Z} + 1}$$

Step 5:
The adjusted equal weights are calculated as follows:

$$\mathrm{aew_i} = \begin{cases} \mathrm{w_i} * \mathrm{L}\,, \text{if } \mathrm{n_i} < \mathrm{Z} \\ \mathrm{W_Z} * \mathrm{L}\,, \text{if } \mathrm{n_i} \geq \mathrm{Z} \end{cases}$$

Step 6:
The adjusted equal weights are checked against the requirements that: the sum of all constituents' weights above 4.5% does not exceed 35%, and no single weight exceeds 8%. If any of these criteria is not met, the multiplier L is increased by an increment of 1, and the above steps from Step 3 are repeated until the requirements are met or a maximum multiplier of L = 10 is reached. If the adjusted equal weights still do not fall within the boundaries of 4.5/8/35 using L = 10, they are capped using the capping procedure described below, otherwise the final weights (fw) are set to the adjusted equal weights from the last iteration.

For the capping procedure, the final weights are derived from the adjusted equal weights (L=10) via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components

of the index that are not already subject to capping under the above rules, proportionally to their adjusted equal weights.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

In the case where a company is present with multiple listings in the portfolio, then the final weight calculated for the company, is allocated to each share line according to its free-float market capitalization.

The weighting factors are calculated such that:

$$wf_{i,ki} = \frac{fw_{i,k}}{p_{i,k}} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

$p_{i,k}$	close price of share line k of company i on the Thursday preceding the second Friday of the review month
$wf_{i,k}$	weight factor of share line k of company i.

18.4.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global Total Market index are deleted from the STOXX Global Electric Vehicles & Driving Technology Index. Any deleted stocks are not replaced.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-off companies are not added permanently.

18.5. STOXX GLOBAL SHARING ECONOMY DRIVERS INDEX

18.5.1. OVERVIEW

The STOXX® Global Sharing Economy Drivers Index is comprised of companies that are prominent disruptors in the Sharing Economy trend.

Sharing Economy is an economic model that is based on acquiring, providing or sharing access to goods and services via community based platforms. The shared resources are reusable and required for a temporary use, leading to extensive and productive use of underutilized resources. The index selects companies that are the major drivers in this area.

Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial Sharing Economy Drivers exposure. Furthermore, STOXX will exclude companies that Sustainalytics considers non-compliant based on Sustainalytics Global Standards Screening (GSS) assessment or companies that Sustainalytics identifies to be involved with controversial weapons.

Universe: The STOXX Developed and Emerging Total Market index, as observed on the review effective date defines the index universe.

Weighting scheme: The index is weighted proportionally to the free-float market cap of the selected stocks multiplied by the aggregate revenue exposure of each stock to the sectors listed below.

Base values and dates: 100 on June 18, 2012

Index types and currencies: Price, net return, gross return in EUR, USD and JPY

Dissemination calendar: STOXX Europe calendar

18.5.2. INDEX REVIEW

All companies in the index universe are screened for all of the following criteria (applied in the order in which they are listed):

» **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than one million EUR
» **Revenues:** more than 50% of revenues over the past year generated within the aggregate of the RBICS sectors associated with Fintech (see table below)
» **Multiple share lines:** in case a company is present with multiple listings, only the most liquid share line is considered

List of RBICS sectors associated with Sharing Economy Drivers for the purposes of constituent selection:

- Construction and Mining Machinery Distributors (401520101515)
- Consumer Electronics and Appliance Rental (202515101510)
- Education Information and News Media and Sites (552010101020)
- Educational Support Services (502510101010)
- Food Delivery Services (151010202010)
- Industrial Equipment Leasing Services (303010101515)
- Internet Department Stores (501015103010)

- Media Download and Streaming Digital Content Sites (552010351030)
- Other Automotive Equipment Rental (201510201010)
- Other Leasing Services (303010101525)
- Other Post-Secondary Education (502510101515)
- Parking Facility Services (101020101035)
- Passenger Car Rental (201510201015)
- Real Estate Classifieds and Directories Sites (552010101040)
- Travel Agencies (151010302010)
- Travel Publishers (151010302510)
- Truck, Trailer and Recreational Vehicle Rental (201510201020)

Finally, on the remaining companies, the additional exclusion criteria below are applied:

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons (0% revenue threshold)
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Review frequency: The index composition is reviewed annually in June. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors: Index weighting cap factors are calculated quarterly in March, June, September and December. They are published on the second Friday of each of these months, based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ae_i \cdot ff_i}{\sum_j ae_j \cdot ff_j}$$

,where:

ae_i the sum of all exposures of company *i* to the sectors associated with Sharing Economy Drivers

ff_i the free float market capitalization of company *i*, calculated using close price in EUR on the Thursday preceding the second Friday of the review month

Capped weight calculation

The capped weights (cw_i) derive from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%
- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer, where:

wcf_i	weighting cap factor of company i
cw_i	capped weight of company i as described above
p_i	close price in EUR of company i on the Thursday preceding the second Friday of the review month

18.5.3. ONGOING MAINTENANCE

Replacements:
Stocks deleted from the STOXX Developed & Emerging Total Market Index are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable

Spin-offs: Spin-offs are not added permanently.

Mergers and takeovers: The original stock is replaced by the surviving stock.

18.6. STOXX GLOBAL REVENUES-BASED THEMATIC INDICES

18.6.1. OVERVIEW

The STOXX Thematic indices are comprised of companies exposed to a defined set of themes: Silver Economy, Smart Cities, Global Millennials, Industry 4.0, Smart Factory, Sharing Economy, Housing Construction and Next Generation Telecoms. These companies or components of their business lines are positioned to benefit from long-term structural trends driving social, economic and environmental change, which, in the future, will have a substantial impact on their performance.

Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the respective themes.

Universe: The STOXX Developed and Emerging Total Market index, as observed on the review effective date defines the index universe.

Weighting scheme: The indices are weighted proportionally to the free-float market cap of the selected stocks multiplied by the aggregate revenue exposure of each stock to the sectors listed below, associated with each theme.

Base values and dates: 100 on June 18, 2012

Index types and currencies: Price, net return, gross return in EUR, USD

Dissemination calendar: STOXX Europe calendar

18.6.2. INDEX REVIEW

Selection list: All companies in the index universe are screened for all of the following criteria (applied in the order in which they are listed):

- **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than 1,000,000 EUR
- **Revenues:** more than 50% revenues generated within the aggregate of the RBICS sectors associated to the specific theme (see table below).
- **Multiple share lines:** in case a company is present with multiple listings in a specific thematic cluster, only the most liquid share line will be retained.

List of RBICS sectors associated with respective themes for the purposes of constituent selection:

Nr	Silver Economy
1	Ambulatory and Outpatient Care
2	Anesthesiology Devices
3	Assisted Living
4	Autonomous Control Transit Production
5	Burial Casket Manufacturing
6	Cardiology Non-Surgical Devices
7	Cardiology Surgical Devices
8	Cardiovascular System Biopharmaceuticals
9	Casinos and Casino Hotels
10	Dental Devices
11	Dietary and Naturopathic Supplements
12	Diverse Asset Management and Financial Advisors

Nr	Industry 4.0
1	3D Modeling/Rapid Prototyping Automation Providers
2	Application Management Consulting
3	Audio Multimedia Semiconductors
4	Automotive Industry Software
5	Blockchain Technology
6	Business Intelligence Software
7	Business Intelligence/Data Warehousing Consulting
8	Carrier Edge Network Management Equipment
9	Colocation and Data Center Services
10	Computer Aided Design (CAD) Software
11	Customer Premises Network Security Equipment
12	Data Storage Infrastructure Software

18. STOXX THEMATIC INDICES

13	Diverse Institutional/High-Net Advisory Finance
14	Diversified Healthcare Business Management
15	Diversified Patient Care
16	Ear, Nose and Throat (ENT) Devices
17	Full Service Hotels and Resorts
18	Funeral and Cemetery Services
19	General Analog and Mixed Signal Semiconductors
20	General and Acute Hospitals
21	General Death Care Services
22	Healthcare and Life Sciences Equity REITs
23	Healthcare Consulting
24	Hematological Oncology Biopharmaceuticals
25	Home Healthcare
26	Home Testing Clinical Diagnostics Devices
27	Household Robots
28	IC-Level Electronic Design Software
29	IC-Level Intellectual Property Software Libraries
30	Internet Department Stores
31	Internet Pharmacies and Drug Retail
32	Joint Replacement and Reconstruction Devices
33	Lower Respiratory Biopharmaceuticals
34	Luxury Hotels and Resorts
35	Microprocessor (MPU) Semiconductors
36	Mixed Usage Travel Arrangement and Reservation
37	Mixed-Type Hotels, Motels and Resorts
38	Musculoskeletal System Biopharmaceuticals
39	Neurology Biopharmaceuticals
40	Neurology Devices
41	Nutraceuticals
42	Ocean-Going Cruise Lines
43	Oncology Devices
44	Ophthalmology Biopharmaceuticals
45	Ophthalmology Devices
46	Other Building Materials and Garden Supply Stores
47	Other Communications Semiconductors
48	Other Hospitals
49	Other Long-Term Care Facilities
50	Other Memory Semiconductors
51	Other Oncology Biopharmaceuticals
52	Other Orthopedics Devices
53	Pension Funds
54	Peripheral Semiconductors
55	Pharmacies and Drug Stores
56	Plastic and Reconstructive Surgery Devices
57	Point of Care Testing Kits
58	Power, Control and Mixed Signal Semiconductors
59	Primary Patient Care
60	Private Wealth Managers
61	Programmable Logic Device Semiconductors
62	Retail Advisory Services
63	Skilled Nursing Facility (Nursing Home)
64	Specialized Patient Care
65	Tour Operators
66	Travel Agencies
67	Travel Publishers
68	Type 1 Diabetes Biopharmaceuticals
69	Urology Biopharmaceuticals
70	Urology Devices
71	Vacation Ownership Operators
72	Vehicle Autonomous Control Electronics Makers
73	Vehicle Autonomous Control Software
74	Volatile Memory Semiconductors
75	Wearable Technology

Nr	Sharing Economy
1	Communication and Collaboration Content Sites
2	Construction and Mining Machinery Distributors
3	Consumer Electronics and Appliance Rental
4	Education Information and News Media and Sites
5	Educational Support Services
6	Electronic Payment Processing
7	Food Delivery Services
8	Industrial Equipment Leasing Services
9	Internet Department Stores
10	Mapping/Geographic Information Systems Software
13	Disk Storage Systems
14	Drone Manufacturers
15	Drone Parts Manufacturers
16	Enterprise Middleware Software
17	Enterprise Security Management Software
18	Flash Memory Semiconductors
19	General Analog and Mixed Signal Semiconductors
20	General Enterprise Management Software
21	General Factory Automation Makers
22	General Information Technology (IT) Consulting
23	General Infrastructure and Network Consulting
24	Image Sensor and Image Capture Semiconductors
25	Industrial Robots and Robotic Assembly Line Makers
26	Information Storage Systems
27	Lasers and Optical Instrument Manufacturing
28	Machine Vision and Quality Control Manufacturing
29	Manufacturing Industry Software
30	Microprocessor (MPU) Semiconductors
31	Monitoring and Control Sensor/Instrument Products
32	Multi-Industry-Specific Factory Machinery Makers
33	Multi-Tactic Enterprise Solutions Consulting
34	Network Administration Software
35	Network Design and Implementation Consulting
36	Network Security Software
37	Operating Systems Software
38	Other Automation Support Product Manufacturing
39	Other Communications Semiconductors
40	Other Design and Engineering Software
41	Other Memory Semiconductors
42	Other Network Software
43	Other Nonvolatile Memory Semiconductors
44	Other Processor Semiconductors
45	Other Test and Measurement Equipment
46	Peripheral Semiconductors
47	Power, Control and Mixed Signal Semiconductors
48	Programmable Logic Device Semiconductors
49	RF Analog and Mixed Signal Semiconductors
50	Security and Management Consulting
51	Smart Grid Technology and Smart Meter Products
52	Software Design and Engineering Consulting
53	Solid Waste Recycling Equipment Manufacturing
54	Specialty Analog and Mixed Signal Semiconductors
55	Supply Chain ERP Software
56	Virtual Reality Design and Engineering Software
57	Virtual Reality Equipment
58	Volatile Memory Semiconductors
59	Wireline Equipment

Nr	Housing Construction
1	Access Systems Manufacturing
2	Alarm Systems Manufacturing
3	Building Construction
4	Building Maintenance and Engineering Services
5	Cabinets and Countertops Manufacturing
6	Cement Manufacturing
7	Closed Circuit Television (CCTV) Systems/Products
8	Concrete Blocks, Bricks and Aggregates Makers
9	Decorative Component Manufacturing
10	Electrical Systems and Equipment Manufacturing
11	Flooring Manufacturing
12	General Analog and Mixed Signal Semiconductors
13	General Architectural Component Manufacturing
14	General Building Materials Retail
15	General Coatings and Paints Makers
16	General Construction Materials Manufacturing
17	Hardware, Plumbing and HVAC Supplies
18	Heating, Ventilation and Air Conditioning Products
19	Home Builders
20	Home Builders and Manufactured Buildings
21	IC-Level Electronic Design Software
22	IC-Level Intellectual Property Software Libraries
23	Industrial and Engineering Hand Tool Manufacturing
24	Insulation Manufacturing
25	Integrated Steel Mills Mixed Production Makers
26	Interior and Exterior Covering Materials Stores

18. STOXX THEMATIC INDICES

11	Media Download and Streaming Digital Content Sites
12	Other Automotive Equipment Rental
13	Other Leasing Services
14	Other Post-Secondary Education
15	Parking Facility Services
16	Passenger Car Rental
17	Payment Processing Software
18	Real Estate Classifieds and Directories Sites
19	Travel Agencies
20	Travel Publishers
21	Truck, Trailer and Recreational Vehicle Rental

Nr	Smart Factory
1	3D Modeling/Rapid Prototyping Automation Providers
2	Computer Aided Design (CAD) Software
3	Flash Memory Semiconductors
4	General Analog and Mixed Signal Semiconductors
5	General Factory Automation Makers
6	Industrial Robots and Robotic Assembly Line Makers
7	Lasers and Optical Instrument Manufacturing
8	Machine Vision and Quality Control Manufacturing
9	Manufacturing Industry Software
10	Microprocessor (MPU) Semiconductors
11	Multi-Industry-Specific Factory Machinery Makers
12	Other Automation Support Product Manufacturing
13	Other Communications Semiconductors
14	Other Memory Semiconductors
15	Other Nonvolatile Memory Semiconductors
16	Other Processor Semiconductors
17	Peripheral Semiconductors
18	Power, Control and Mixed Signal Semiconductors
19	Programmable Logic Device Semiconductors
20	RF Analog and Mixed Signal Semiconductors
21	Solid Waste Recycling Equipment Manufacturing
22	Specialty Analog and Mixed Signal Semiconductors
23	Supply Chain ERP Software
24	Volatile Memory Semiconductors

Nr	Smart Cities
1	Access Systems Manufacturing
2	Alarm Systems Manufacturing
3	Alternative Energy Car Manufacturers
4	Autonomous Control Transit Production
5	Autonomous Control Truck Production
6	Closed Circuit Television (CCTV) Systems/Products
7	Customer Premises Network Security Equipment
8	Diversified Electrical/Power System Manufacturing
9	Diversified Semiconductor Manufacturing Services
10	Diversified Technology Hardware
11	Drone Manufacturers
12	Drone Parts Manufacturers
13	Education Information and News Media and Sites
14	Educational Support Services
15	Electronic Security Identification Equipment
16	Electronic System Security Equipment
17	Energy Efficient Lighting and LED Manufacturing
18	Enterprise Middleware Software
19	Enterprise Security Management Software
20	Flash Memory Semiconductors
21	Fuel Cell Equipment and Technology Providers
22	General Communications Equipment
23	Healthcare Management Software
24	Healthcare Operations Support Software
25	Household Robots
26	Microprocessor (MPU) Semiconductors
27	Mixed Renewable Energy Generation Manufacturing
28	Network Security Software
29	Other Memory Semiconductors
30	Other Nonvolatile Memory Semiconductors
31	Other Optoelectronics Discrete Semiconductors
32	Other Post-Secondary Education
33	Other Wireless Equipment
34	Photovoltaic and Solar Cells and Systems Providers
35	Power, Control and Mixed Signal Semiconductors
36	Programmable Logic Device Semiconductors
27	Lime and Gypsum Products Manufacturing
28	Locks and Deadbolts Manufacturing
29	Manufactured Building Makers
30	Microprocessor (MPU) Semiconductors
31	Minimills Manufacturing Flats
32	Mining and Excavation Equipment Manufacturing
33	Mixed Architecture/Infrastructure Component Makers
34	Mixed Building/Physical Security Equipment Makers
35	Mixed Heavy Building Materials/Aggregates Makers
36	Mixed Specialty and Commodity Chemical Makers
37	Multi-Product Adhesive, Sealant and Paint Makers
38	Oriented Strand Board (OSB) Manufacturing
39	Other Communications Semiconductors
40	Other Construction Wood Products Makers
41	Other Memory Semiconductors
42	Other Metal Processing and Recycling Providers
43	Paints Manufacturing
44	Peripheral Semiconductors
45	Photovoltaic and Solar Cells and Systems Providers
46	Pipes and Pipe Fittings Manufacturing
47	Plumbing Fixtures and Trim Manufacturing
48	Power, Control and Mixed Signal Semiconductors
49	Programmable Logic Device Semiconductors
50	Public Infrastructure Components Manufacturing
51	Ready-Mix Concrete Makers
52	Residential Specialty Engineering Contractors
53	Structural Support Component Manufacturing
54	Tools and Outdoor Care Building Hand Tool Products
55	Utility Meter Manufacturing
56	Volatile Memory Semiconductors
57	Windows and Doors Manufacturing

Nr	Next Generation Telecoms
1	Asia (Excluding China) Wireless Services
2	Asia (Excluding China) Wireline Services
3	Australia and New Zealand Wireless Services
4	Australia and New Zealand Wireline Services
5	Cable Equipment
6	Cable Interconnect Components
7	Call Management and Routing Services
8	Canada Wireline Services
9	Carrier Core (Backbone) Equipment
10	Carrier Edge Network Management Equipment
11	Cellular Site Equipment
12	Central and Eastern Europe Wireless Services
13	Central and Eastern Europe Wireline Services
14	Central and South America Wireless Services
15	Central and South America Wireline Services
16	China Wireless Services
17	China Wireline Services
18	Colocation and Data Center Services
19	Data Transport Carrier Services
20	Disk Storage Systems
21	Diversified Satellite Services
22	Electronic Interconnect Components
23	Fixed Microwave Systems Equipment
24	General Carrier Edge (Access) Equipment
25	General Communications Equipment
26	General Communications Services
27	General Customer Premises Equipment (CPE)
28	General United States Telecommunications Services
29	IC-Level Electronic Design Software
30	IC-Level Intellectual Property Software Libraries
31	International Fixed Satellite Services
32	International Mobile Satellite Services
33	Lasers and Optical Instrument Manufacturing
34	Mexico Wireline Services
35	Microprocessor (MPU) Semiconductors
36	Middle East and Africa Wireless Services
37	Middle East and Africa Wireline Services
38	Mixed International Telecommunications Services
39	Multiregion Wireless Services
40	Multiregion Wireline Services
41	Multi-Type United States Wireless Services
42	Multi-Type United States Wireline Services

37	RF Analog and Mixed Signal Semiconductors
38	RFID Asset Tracking Equipment Manufacturing
39	Security and Management Consulting
40	Server Computer Systems
41	Smart Grid Technology and Smart Meter Products
42	Specialty Analog and Mixed Signal Semiconductors
43	Test and Measurement Communications Equipment
44	Utility Meter Manufacturing
45	Vehicle Autonomous Control Electronics Makers
46	Vehicle Autonomous Control Software

Nr	Millennials
1	Activewear and Outerwear Apparel Production
2	Athletic Footwear Production
3	Budget Hotels and Motels
4	Career Classifieds and Directories Media and Sites
5	City Guides Content Providers and Sites
6	Communication and Collaboration Content Sites
7	Console Games Software
8	Dietary and Naturopathic Supplements
9	Education Information and News Media and Sites
10	Electronic Gaming/Entertainment Electronics Makers
11	Events, Tickets and Mixed-Type Recreation
12	Fitness and Exercise Equipment
13	Fitness and Recreational Sports Centers
14	Food Delivery Services
15	General Entertainment Content Providers and Sites
16	Handheld and Smart Phone Games Software
17	Internet Accessories Retail
18	Internet Apparel Retail
19	Internet Department Stores
20	Internet Discount Stores
21	Internet Electronics Retail
22	Internet Entertainment Retail
23	Internet Footwear Retail
24	Internet Off-Price Retail
25	Internet Warehouse / Superstore Retail
26	Media Download and Streaming Digital Content Sites
27	Mixed Apparel and Footwear Production
28	Mixed Usage Travel Arrangement and Reservation
29	Mobile Platform Applications Software
30	Nutraceuticals
31	Nutritional Supplement OEMs
32	Off-Price Retail Stores
33	Online Game Websites and Software
34	Other Automotive Equipment Rental
35	Other Classifieds and Directories Media and Sites
36	Other Games Software
37	Other Sporting and Athletic Goods
38	Passenger Car Rental
39	Performing Arts and Exhibitions
40	Smart Phone Manufacturing
41	Sporting Goods Stores
42	Team, Individual and Other Sports Manufacturing
43	Travel Agencies
44	Travel Publishers
45	Virtual Reality Equipment
46	Wearable Technology
47	Web Search Sites and Software
48	Winter Sports

43	Network Administration Software
44	Networking Semiconductors
45	Optoelectronics Electronic Components
46	Other Carrier Services
47	Other Cellular Phones Manufacturing
48	Other Communications Semiconductors
49	Other Core Infrastructure Equipment
50	Other Handheld and Smart Phone Software
51	Other Interconnect Components
52	Other Local Area Networking Equipment
53	Other Memory Semiconductors
54	Other Nonvolatile Memory Semiconductors
55	Other Optoelectronics Discrete Semiconductors
56	Other Processor Semiconductors
57	Other Satellite Equipment
58	Other Telecommunications Industry Software
59	Other Test and Measurement Equipment
60	Other United States Wireline Voice Services
61	Other Wide Area Networking (WAN) Equipment
62	Other Wireless Equipment
63	Pan-America Wireless Services
64	Pan-America Wireline Services
65	Pan-Asia/Pacific Wireless Services
66	Pan-Asia/Pacific Wireline Services
67	Pan-Europe Wireless Services
68	Pan-Europe Wireline Services
69	Peripheral Semiconductors
70	Programmable Logic Device Semiconductors
71	RF Analog and Mixed Signal Semiconductors
72	Smart Phone Manufacturing
73	Tandem Interconnection Services
74	Telecommunications Construction
75	Telecommunications Customer Relationship Software
76	Telecommunications Operations Support Software
77	Test and Measurement Communications Equipment
78	United States Long Distance Voice Services
79	United States Satellite Services
80	United States Video and Television Services
81	United States Wireless Business Data Services
82	United States Wireless Voice Services
83	United States Wireline Business Data Services
84	United States Wireline Data Services
85	US Voice Over IP Telephony (VoIP) Services
86	Volatile Memory Semiconductors
87	Western Europe Wireless Services
88	Western Europe Wireline Services
89	Wireless and Wi-Fi Equipment
90	Wireless Infrastructure Services
91	Wireline Equipment

Finally, on the remaining companies, the additional exclusion criteria below are applied:

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation

and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:

- Internal production or sale of controversial weapons
- The ultimate holding company owns >10% of voting rights of an involved company
- >10% of voting rights of a company is owned by the involved company

Review frequency: The index composition is reviewed annually in June. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors: Index weighting cap factors are calculated quarterly in March, June, September and December. They are published on the second Friday of each of these months, based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ae_i \cdot ff_i}{\sum_j ae_j \cdot ff_j}$$

, where:

ae_i the sum of all exposures of company *i* to the sectors associated with respective theme
ff_i the free float market capitalization of company *i*, calculated using close price in EUR on the Thursday preceding the second Friday of the review month

Capped weight calculation
The capped weights (cw_i) derive from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%
- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer, where:

wcf_i	weighting cap factor of company i
cw_i	capped weight of company i as described above
p_i	close price in EUR of company i on the Thursday preceding the second Friday of the review month

18.6.3. ONGOING MAINTENANCE

Replacements:
Stocks deleted from the STOXX Developed & Emerging Total Market Index are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

Mergers and takeovers: The original stock is replaced by the surviving stock.

18.7. STOXX GLOBAL SMART CITY INFRASTRUCTURE INDEX

18.7.1. OVERVIEW

The STOXX Global Smart City Infrastructure Index tracks the performance of companies deploying the physical structures and facilities needed as urban development becomes more intelligent and efficiency-focused. As such, the index targets two global thematic trends: that of smart cities and of infrastructure. As cities in the digital era are faced with expanding populations, limited natural resources, rapidly changing technology and the need to protect the environment, new facilities are required to address challenges and exploit innovative means of transport, housing, energy, waste management and communications.

STOXX uses FactSet's Revere (RBICS) granular data for a detailed breakdown of the revenue sources of the eligible companies, to select those most exposed to the smart city infrastructure theme. Nearly 50 sectors have been associated to the theme and include cellular site equipment, metal recycling providers, multi-type passenger transportation and water treatment agents manufacturing.

The index is also taking ESG considerations into account. Companies that are non-compliant with the Global Standards Screening (GSS) or are involved in Controversial Weapons activities, or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics, are excluded. Additional exclusion filters are incorporated, screening companies for involvement in Weapons (Small Arms and Military Contracting), Unconventional Oil & Gas (Arctic Oil and Gas Exploration, Oil Sands and Shale Energy), Conventional Oil & Gas, Thermal Coal, Nuclear Power and Tobacco.

Universe: The index universe is defined as all stocks from the STOXX Global Total Market index.

Weighting scheme: The index constituents are weighted according to adjusted equal weights. Weight factors are published on the second Friday of the Review/Rebalance month and based on the stocks' prices of the preceding Thursday.

Base values and dates: 1000 on 24 June 2013

Index types and currencies: Price, Net and Gross Return in EUR and USD

Dissemination calendar: STOXX Europe calendar

18.7.2. INDEX REVIEW

In order to be included in the STOXX Global Smart City Infrastructure Index, the companies in the index universe are screened for all of the following criteria:

- **Country classification:** stocks classified as belonging to the eligible countries list
- **Minimum liquidity:** 3-month median daily traded volume (MDTV) greater than one million EUR
- **Minimum size:** free-float market capitalization greater than 200 million EUR

» **Revenues**: more than 50% of revenues generated within the sectors associated with the Smart City Infrastructure theme. The threshold is lowered to 45% for current components.
STOXX uses FactSet Research Systems granular analysis to determine a company's position within the subsectors of its FactSet Revere Business Industry Classification System (FactSet RBICS). FactSet Revere is a sector, supply chain, and geographic risk taxonomy expert.

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

» **Product Involvement**: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**
  i) Small Arms:
  »>0% revenues from manufacturing and selling assault weapons to civilian customers
  »>0% revenues from manufacturing and selling small arms to military / law enforcement customers
  »>0% revenues from manufacturing and selling key components of small arms
  »>5% revenues from retail and/or distribution of assault weapons
  »>5% revenues from retail and/or distribution of small arms (non-assault weapons)
  »>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
  ii) Military Contracting:
  »>10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

- **Unconventional Oil & Gas:**
  i) Arctic Oil and Gas Exploration:
  »>0% revenues Oil & Gas exploration & extraction in Arctic regions
  »>10% significant ownership (extraction) of a company that is involved in Oil & Gas exploration & extraction in Arctic regions
  ii) Oil Sands:
  »>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day
  »>10% significant ownership of a company that is involved in extraction of oil sands
  iii) Shale Energy:

»>0% revenues from shale energy exploration and/or production
»>10% significant ownership of a company that is involved in shale energy exploration and/or production

- **Conventional Oil & Gas:**
  »>0% revenues from oil and gas exploration, production, refining, transportation and/or storage
  This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).
  »>10% significant ownership of a company that is involved in exploration, production, refining, transportation and storage of oil and/or gas
  »>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)
  »>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Thermal Coal:**
  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>10% significant ownership of a company that is involved in the extraction of thermal coal
  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)
  »>10% significant ownership of a company that is involved in the generating electricity from thermal coal

- **Nuclear Power:**
  »>25% revenues from nuclear power production:
  - Utilities that own/operate nuclear power generators
    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:
  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:
  - The resale or distribution of electricity generated from nuclear power;
  - This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix
    Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products

»>10% significant ownership of a company that is involved in the manufacturing tobacco products
»>0% revenues from supplying tobacco-related products/services
»>10% significant ownership of a company that is involved in supplying tobacco-related products/services
»>0% revenues from the distribution and/or retail sale of tobacco products.
»>10% significant ownership of a company that is involved in distribution and/or retail sale (>10% total revenues) of tobacco products.

» **Controversy Ratings**: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

» **ESG Risk Ratings**[42]: STOXX will exclude companies that Sustainalytics identifies to have a "Severe" ESG Risk Rating.
The ESG Risk Rating evaluates the degree of a company's unmanaged material ESG risk by assessing a company's exposure to, and management of, the ESG issues that are considered most material for that company from a financial perspective. Sustainalytics assess and categorizes companies into five risk categories (Negligible, Low, Medium, High, Severe).

» **Combination of ESG Risk Ratings and Controversy Ratings**: in addition to the above, STOXX will exclude companies with a "High" ESG Risk Rating, that also have a Controversy Rating of Category 2 or higher (i.e. Moderate, Significant or High).

If information on any of the above fields is missing for a company, then it is excluded from the eligible universe.

The STOXX Global Smart City Infrastructure Index aims to have a minimum number of 80 constituents at each review. If the screening process above described results in being too restrictive, the revenue filter is progressively lowered in steps of 5% for the index, to a minimum of 30% (25% for current components), until the number of constituents is equal to or greater than 80 (i.e. all stocks which pass the lowered threshold are added to the index).

The eligible countries are defined as follows:

Australia	Japan	Brazil	Peru
Austria	Netherlands	Chile	Philippines
Belgium	New Zealand	China (B, H shares, Red Chips)	Poland
Canada	Norway	Colombia	South Africa

[42] It should be acknowledged that much of the historical data set is based on a back-filling methodology, rather than on Sustainalytics conducted research. As such, on data that is back-filled, Sustainalytics does not take claim on the actual accuracy of that data at that point in time. Furthermore, historical data sets are only meant to serve as a proxy and is not meant to be indicative of future results

18. STOXX THEMATIC INDICES

Denmark	Portugal	Czech Republic	South Korea
Finland	Singapore	Egypt	Taiwan
France	Spain	Greece	Thailand
Germany	Sweden	Hungary	Turkey
Hong Kong	Switzerland	India	
Ireland	United Kingdom	Indonesia	
Israel	United States	Malaysia	
Italy		Mexico	

The included FactSet RBICS sectors are:

Nr.	Smart City Infrastructure L6 RBICS sectors
1	Air Purification and Filtration Equipment Products
2	Air, Liquid and Gas Control Equipment Products
3	Building Maintenance and Engineering Services
4	Bus Transportation
5	Cellular Site Equipment
6	Closed Circuit Television (CCTV) Systems/Products
7	Communications Infrastructure Software
8	Compressor and Pumping Equipment Manufacturing
9	Customer Premises Network Security Equipment
10	Design, Integration and Implementation Consulting
11	Diversified Electrical/Power System Manufacturing
12	Diversified General Waste Collection
13	Diversified Hazardous Materials Disposal
14	Electric Vehicle Charging Stations
15	Electrical Systems and Equipment Manufacturing
16	Electronic Security Identification Equipment
17	Electronic Waste Services
18	Emission Control Services and Technologies
19	Energy Efficient Lighting and LED Manufacturing
20	Environmental Consulting
21	Environmental Services
22	Garbage Services
23	General Carrier Edge (Access) Equipment
24	General Communications Equipment
25	Government and Public Service Industry Software
26	Government IT Services
27	Hazardous/Industrial Waste Disposal
28	Infrastructure Consulting and Design Services
29	Insulation Manufacturing
30	Light Emitting Diode Discrete Semiconductors
31	Liquid and Water Purification/Filtration Products
32	Metal Recycling Providers
33	Monitoring and Control Sensor/Instrument Products
34	Multi-Type Passenger Transportation
35	Networking Semiconductors
36	Other Communications Semiconductors
37	Other Core Infrastructure Equipment
38	Other Environmental Control Machine Manufacturing

39	Other Metal Processing and Recycling Providers
40	Other Waste Services
41	Other Wide Area Networking (WAN) Equipment
42	Passenger Rail Transportation
43	Power, Control and Mixed Signal Semiconductors
44	Recycling Services
45	Residential Specialty Engineering Contractors
46	Smart Grid Technology and Smart Meter Products
47	Soil Remediation
48	Solid Waste Recycling Equipment Manufacturing
49	Test and Measurement Communications Equipment
50	Traffic Safety and Management Equipment Products
51	Transportation Construction
52	Utility Meter Manufacturing
53	Wastewater Residual Management
54	Wastewater Treatment Services
55	Water Treatment Agents Manufacturing
56	Wireless Infrastructure Services

Review frequency: The index is reviewed annually in June. The review cut-off date for the observation of the parent index, liquidity, size, revenues and ESG information is the last index dissemination day in May. Furthermore, on a quarterly basis in September, December and March, current components are screened for their Global Standards Screening assessment and Controversy Rating. The cut-off date for this exercise is the last dissemination day of August, November and February respectively. If a current component is assessed as non-compliant based on the Global Standards Screening or observed to have a Category 5 Controversy Rating, it is removed from the index, effective on the next dissemination day following the 3rd Friday of the month

Weighting cap factors: Weight factors are calculated annually in June. They are published on the second Friday of June, based on the stocks' closing prices of the preceding Thursday. Components are initially weighted by adjusted equal weighting mechanism with a multiplier set as L = 5. The resulting weights are assessed to check if a stricter version of the UCITS bounds (4.5/8/35) is exceeded. In case of any breaches, an iterative process takes place to cap the weights by these bounds, and ensure diversification. This is achieved by following steps 1-6 below.

Additionally, on a quarterly basis in September, December and March, the companies' weights are assessed for any breaches on the stricter UCITS bounds based on the stocks' closing prices of the Thursday preceding the second Friday of the respective quarter. Company weights are re-capped if the bounds are exceeded, and weight factors published on the second Friday, based on the stocks' closing prices of the preceding Thursday. No capping applies if the weights did not exceed the UCITS bounds.

<u>Step1</u>:
The companies in the portfolio are sorted by their free-float market capitalization in ascending order, and their initial weight is defined as:

$$w_i = \frac{\mathrm{ffmcap}_i}{\sum_{j \text{ in comp list}}^{N} \mathrm{ffmcap}_j}$$

where:

$\mathrm{ffmcap_i}$	the free-float market capitalization of company i on the Thursday preceding the second Friday of the review month
N	the number of companies in the index

The companies are also assigned a rank from 1, for the company with the lowest free-free float market capitalization, to N, for the one with the highest.

For the purposes of the above weight calculation, if a company is present with multiple listings in the portfolio, then the issuer's weight is calculated by summing the free-float market capitalization of all its listings, and only one rank is assigned to it.

Step 2:
An iterative process takes place where for each company in the ranking list formed in step 1, a cumulative weight is calculated such that:

$$\mathrm{Sw_i} = (\mathrm{N} - \mathrm{n_i}) * \mathrm{w_i} + \sum_{1}^{\mathrm{n_i}} \mathrm{w_j}$$

where:

$\mathrm{w_i}$	the initial weight calculated for company i
$\mathrm{n_i}$	the ranking assigned to company i
$\sum_{1}^{\mathrm{n_i}} \mathrm{w_j}$	the sum of weights (as calculated in step 1) of the companies ranking from 1 to $\mathrm{n_i}$
N	the number of companies in the STOXX Global Smart City Infrastructure index

Step 3:
The company with rank Z, is identified as the first one in the ranking list where the cumulative weight, exceeds the inverse of the multiplier, i.e. $\mathrm{Sw_z} \geq 1/\mathrm{L}$.

Step 4:
A normalization factor $\mathrm{W_Z}$ is calculated, such that:

$$\mathrm{W_Z} = \mathrm{w_Z} - \frac{\mathrm{Sw_z} - \frac{1}{\mathrm{L}}}{\mathrm{N} - \mathrm{Z} + 1}$$

Step 5:
The adjusted equal weights are calculated as follows:

$$\mathrm{aew_i} = \begin{cases} \mathrm{w_i} * \mathrm{L}\,, \text{if } \mathrm{n_i} < \mathrm{Z} \\ \mathrm{W_Z} * \mathrm{L}\,, \text{if } \mathrm{n_i} \geq \mathrm{Z} \end{cases}$$

Step 6:
The adjusted equal weights are checked against the requirements that: the sum of all constituents' weights above 4.5% does not exceed 35%, and no single weight exceeds 8%. If any of these criteria is not met, the multiplier L is increased by an increment of 1, and the above steps from Step 3 are repeated until the requirements are met or a maximum multiplier of L = 10 is reached. If the adjusted equal weights still do not fall within the boundaries of 4.5/8/35 using L = 10, they are capped using the capping procedure described below, otherwise the final weights (fw) are set to the adjusted equal weights from the last iteration.

For the capping procedure, the final weights are derived from the adjusted equal weights (L=10) via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their adjusted equal weights.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

In the case where a company is present with multiple listings in the portfolio, then the final weight calculated for the company, is allocated to each share line according to its free-float market capitalization.

The weighting factors are calculated such that:

$$wf_{i,ki} = \frac{fw_{i,k}}{p_{i,k}} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

$p_{i,k}$	close price of share line k of company i on the Thursday preceding the second Friday of the review month
$wf_{i,k}$	weight factor of share line k of company i.

18.7.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global Total Market index are deleted from the STOXX Global Smart City Infrastructure Index. Any deleted stocks are not replaced.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-off companies are not added permanently.

18.8. STOXX GLOBAL PET CARE INDEX

18.8.1. OVERVIEW

The STOXX Global Pet Care Index is comprised of companies that stand to benefit from the continuously growing trend of pet ownership.

Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to pet care trend.

Furthermore, the index excludes companies that Sustainalytics considers to be non-compliant based on the Sustainalytics Global Standards Screening assessment or to be involved with controversial weapons.

Universe: The index universe is defined by all stocks included in the indices below, as observed on the review effective date:

- STOXX Developed and Emerging Markets Total Market
- STOXX China A Total Market
- STOXX China ADR Total Market
- STOXX China P Chips Total Market

Weighting scheme: The indices are weighted proportionally to the free-float market cap of the selected stocks multiplied by the aggregate revenues in EUR of each stock to the sectors listed below, associated to the Pet Care theme.

Base values and dates: 100 on June 18, 2012

Index types and currencies: Price, net and gross return in EUR and USD

Dissemination calendar: STOXX Americas calendar

18.8.2. INDEX REVIEW

Selection list:
The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the index universe are screened for all of the following criteria (applied in the order in which they are listed):

» **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than 1,000,000 EUR
» **Revenues:** more than 25% revenues generated within the aggregate of the RBICS sectors associated with the Pet Care theme (see table below), or more than 500,000,000 EUR generated within those sectors.
» **Multiple share lines:** in case a company is present with multiple listings, only the most liquid share line will be retained.

List of RBICS sectors associated with the Pet Care theme for the purposes of constituent selection:

Nr	Pet Care

1 Internet Pet and Pet Supply Retail
2 Pet and Pet Supply Stores
3 Pet Food Manufacturing
4 Pet Supplies Manufacturing
5 Veterinary Diagnostics
6 Veterinary Pharmaceuticals
7 Veterinary Product Distributors
8 Veterinary Services

Finally, on the remaining companies, the additional exclusion criteria below are applied:

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:

- Internal production or sale of controversial weapons
- The ultimate holding company owns >10% of voting rights of an involved company
- >10% of voting rights of a company is owned by the involved company

Review frequency: The index composition is reviewed annually in June. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors: Index weighting cap factors are calculated quarterly in March, June, September and December. They are published on the second Friday of each of these months, based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ar_i \cdot ff_i}{\sum_j ar_j \cdot ff_j}$$

, where:

ar_i the revenues of company *i* in EUR generated from the sectors associated with the theme

ff_i the free float market capitalization of company *i*, calculated using close price in EUR on the Thursday preceding the second Friday of the review month

Capped weight calculation
The capped weights (cw_i) derive from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%

- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer, where:

wcf_i	weighting cap factor of company i
cw_i	capped weight of company i as described above
p_i	close price in EUR of company i on the Thursday preceding the second Friday of the review month

18.8.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the indices constituting the parent universe are not replaced.

Fast exit:
In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

18.9. STOXX HEALTH & WEIGHT LOSS INDICES

18.9.1. OVERVIEW

The STOXX Health & Weight Loss indices are comprised of companies aiming to tackle obesity, one of the most pressing global health challenges, and companies that stand to benefit from the increasing adoption of healthier lifestyles among millennials.

Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping these indices to select companies with substantial exposure to “fighting globesity”.

Furthermore, the indices exclude companies that Sustainalytics considers to be non-compliant based on the Sustainalytics Global Standards Screening assessment or to be involved with controversial weapons.

Universe: The index universe for the STOXX Global Health & Weight Loss is defined by all stocks included in the indices below, as observed on the review effective date:

- STOXX Developed and Emerging Markets Total Market
- STOXX China ADR Total Market
- STOXX China P Chips Total Market
- STOXX China A Total Market: *only shares available to foreign investors through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect*

The STOXX Global ex China A Health & Weight Loss index universe includes all indices above apart from the last one.

Weighting scheme: The indices are weighted proportionally to the free-float market cap of the selected stocks multiplied by the aggregate revenue exposure of each stock to the sectors listed below, associated to the Globesity theme.

Base values and dates: 100 on June 18, 2012

Index types and currencies: Price, net and gross return in EUR and USD

18.9.2. INDEX REVIEW

Selection list:
The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the index universe are screened for all of the following criteria (applied in the order in which they are listed):

- **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than 1,000,000 EUR
- **Revenues:** more than 50% revenues generated within the aggregate of the RBICS sectors associated with the Globesity theme (see table below).
- **Multiple share lines:** in case a company is present with multiple listings, only the most liquid share line will be retained.

List of RBICS sectors associated with the Globesity theme for the purposes of constituent selection:

Nr	Health & Weight Loss
1	Activewear and Outerwear Apparel Production
2	Athletic Footwear Production
3	Cardiology Surgical Devices
4	Diet and Weight Loss Centers
5	Dietary and Naturopathic Supplements
6	Fitness and Exercise Equipment
7	Fitness and Recreational Sports Centers
8	Fresh Fruits and Vegetables Retail
9	Home Testing Clinical Diagnostics Devices
10	Mixed Apparel and Footwear Production
11	Nutraceuticals
12	Nutritional Supplement OEMs
13	Other Sporting and Athletic Goods
14	Respiratory Devices
15	Sporting Goods Stores
16	Team, Individual and Other Sports Manufacturing
17	Type 1 Diabetes Biopharmaceuticals
18	Type 2 Diabetes Biopharmaceuticals
19	Wearable Technology
20	Weight Management Biopharmaceuticals

Finally, on the remaining companies, the additional exclusion criteria below are applied:

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:

- Internal production or sale of controversial weapons
- The ultimate holding company owns >10% of voting rights of an involved company
- >10% of voting rights of a company is owned by the involved company

Review frequency: The index compositions are reviewed annually in June. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors: Index weighting cap factors are calculated quarterly in March, June, September and December. They are published on the second Friday of each of these months, based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ae_i \cdot ff_i}{\sum_j ae_j \cdot ff_j}$$

, where:

ae_i	the sum of all exposures of company *i* to the sectors associated with the theme
ff_i	the free float market capitalization of company *i*, calculated using close price in EUR on the Thursday preceding the second Friday of the review month

Capped weight calculation: The capped weights (cw_i) derive from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%
- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer, where:

wcf_i	weighting cap factor of company i
cw_i	capped weight of company i as described above
p_i	close price in EUR of company i on the Thursday preceding the second Friday of the review month

18.9.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the indices constituting the parent universe are not replaced.

Fast exit: In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

18.10. STOXX VIDEO GAMING & ESPORTS INDICES

18.10.1. OVERVIEW

The STOXX Video Gaming & eSports indices are comprised of companies that stand to benefit from the continuously growing trend of video gaming and eSports. The increasing popularity of video gaming and the players' engagement has moved the eSports industry into the mainstream. eSports is a rapidly rising industry where professional video gamers compete with each other and its appeal to millennials significantly drives gaming demand.

Revere (RBICS) data allow a detailed breakdown of the revenue sources of the eligible companies, helping these indices to select companies with substantial exposure to the video gaming and eSports trend.

Furthermore, the indices exclude companies that Sustainalytics considers to be non-compliant based on the Sustainalytics Global Standards Screening assessment or to be involved with controversial weapons.

Universe: The index universe for the STOXX Global Video Gaming & eSports is defined by all stocks included in the indices below, as observed on the review effective date:

- STOXX Developed and Emerging Markets Total Market
- STOXX China A Total Market: *only shares available to foreign investors through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect*
- STOXX China ADR Total Market
- STOXX China P Chips Total Market

The STOXX Global ex China A Video Gaming & eSports index universe includes all indices above apart from the last one.

Weighting scheme: The indices are weighted proportionally to the free-float market cap of the selected stocks multiplied by the aggregate revenue exposure of each stock to the sectors listed below, associated to the Video Gaming & eSports theme.

Base values and dates: 100 on June 18, 2012

Index types and currencies: Price, net and gross return in EUR and USD

18.10.2. INDEX REVIEW

Selection list:
The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the index universe are screened for all the following criteria (applied in the order in which they are listed):

- **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than 1,000,000 EUR
- **Revenues:** more than 50% revenues generated within the aggregate of the RBICS sectors associated with the Video Gaming & eSports theme (see table below), or more than 2,000,000,000 EUR generated within those sectors.
- **Multiple share lines:** in case a company is present with multiple listings, only the most liquid share line will be retained.

List of RBICS sectors associated with the Video Gaming & eSports theme for the purposes of constituent selection:

Nr	Video Gaming & eSports
1	Computer and Software Stores
2	Console Games Software
3	Electronic Gaming Equipment
4	Electronic Gaming/Entertainment Electronics Makers
5	General Computer Hardware Manufacturing
6	General Entertainment Content Providers and Sites
7	Handheld and Smart Phone Games Software
8	Human Interface Peripherals
9	Microprocessor (MPU) Semiconductors
10	Multi-Type Business and Personal Systems
11	Online Casinos
12	Online Game Websites and Software
13	Online Gaming Systems
14	Other Games Software
15	Video Multimedia Semiconductors

Finally, on the remaining companies, the additional exclusion criteria below are applied:

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:

- Internal production or sale of controversial weapons
- The ultimate holding company owns >10% of voting rights of an involved company
- >10% of voting rights of a company is owned by the involved company

Review frequency: The index compositions are reviewed annually in June. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors: Index weighting cap factors are calculated quarterly in March, June, September and December. They are published on the second Friday of each of these months, based on the stocks' prices of the preceding Thursday.

Initial weight calculation:

$$w_i = \frac{ae_i \cdot ff_i}{\sum_j ae_j \cdot ff_j}$$

, where:

ae_i	the sum of all exposures of company *i* to the sectors associated with the theme
ff_i	the free float market capitalization of company *i*, calculated using close price in EUR on the Thursday preceding the second Friday of the review month

Capped weight calculation: The capped weights (cw_i) derive from the initial weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% should not exceed 35%
- No single weight should exceed 8%

To that end, any excess weight is redistributed from a company to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their current weight in the index.

In the event that 19 or fewer securities are included in the index, the capped weights for all securities will be equal to 1/n where n is the number of securities included in the index.

Weight factor calculation

$$wcf_i = \frac{cw_i}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer, where:

wcf_i	weighting cap factor of company i
cw_i	capped weight of company i as described above
p_i	close price in EUR of company i on the Thursday preceding the second Friday of the review month

18.10.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the indices constituting the parent universe are not replaced.

Fast exit: In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently.

18. STOXX THEMATIC INDICES

18.11. STOXX GLOBAL THEMATIC INDICES

18.11.1. OVERVIEW

The STOXX Global Thematic indices are indices comprised of companies from selected countries exposed to a defined set of themes: Ageing Population, Automation & Robotics, Digitalisation, Breakthrough Healthcare. These companies, or components of their business lines, are positioned to long-term structural trends driving social, economic and environmental change which, in the future, will have a substantial impact on their performance.

FactSet Revere (RBICS) data allows a detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the respective themes.

The indices are also taking ESG considerations into account. Companies that are non-compliant with the Global Standards Screening (GSS) or are involved in Controversial Weapons activities, or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics, are excluded. Additional exclusion filters are incorporated, screening companies for involvement in Weapons (Small Arms and Military Contracting), Unconventional Oil & Gas (Arctic Oil and Gas Exploration, Oil Sands and Shale Energy), Conventional Oil & Gas, Thermal Coal, Nuclear Power and Tobacco.

Universe: The index universe is defined as all stocks from the STOXX Global Total Market index.

Weighting scheme: The index constituents are weighted according to adjusted equal weights. Weight factors are published on the second Friday of the Review/Rebalance month and based on the stocks' prices of the preceding Thursday.

Base value and date: 1000 on June 20, 2011

Index types and currencies: Price, Net and Gross Return in EUR and USD

Dissemination calendar: STOXX Europe calendar

18.11.2. INDEX REVIEW

For each STOXX Global Thematic index, the companies in the index universe are screened for all of the following criteria:

- **Country classification:** stocks classified as belonging to the eligible countries list (as shown below)
- **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than one million EUR
- **Minimum size:** free-float market capitalization greater than 200 million EUR
- **Revenues:** more than 50% of revenues generated within the sectors associated with the relevant index theme. Within each individual index, the threshold is lowered to 45% for current components.

STOXX uses FactSet Research Systems granular analysis to determine a company's position within the subsectors of its FactSet Revere Business Industry Classification System (FactSet RBICS). FactSet Revere is a sector, supply chain, and geographic risk taxonomy expert.

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

» **Product Involvement**: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**
  - **Small Arms:**

»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms to military / law enforcement customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from retail and/or distribution of assault weapons
»>5% revenues from retail and/or distribution of small arms (non-assault weapons)
»>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers

  - **Military Contracting:**

»>10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

- **Unconventional Oil & Gas:**

iv) Arctic Oil and Gas Exploration:
»>0% revenues Oil & Gas exploration & extraction in Arctic regions
»>10% significant ownership (extraction) of a company that is involved in Oil & Gas exploration & extraction in Arctic regions

v) Oil Sands:
»>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day
»>10% significant ownership of a company that is involved in extraction of oil sands

vi) Shale Energy:
»>0% revenues from shale energy exploration and/or production

»>10% significant ownership of a company that is involved in shale energy exploration and/or production

- **Conventional Oil & Gas:**
  »>0% revenues from oil and gas exploration, production, refining, transportation and/or storage
  This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).
  »>10% significant ownership of a company that is involved in exploration, production, refining, transportation and storage of oil and/or gas
  »>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)
  »>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Thermal Coal:**
  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>10% significant ownership of a company that is involved in the extraction of thermal coal
  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)
  »>10% significant ownership of a company that is involved in the generating electricity from thermal coal

- **Nuclear Power:**
  »>25% revenues from nuclear power production:
  - Utilities that own/operate nuclear power generators
    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:
  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:
  - The resale or distribution of electricity generated from nuclear power;
  - This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix
    Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products

»>10% significant ownership of a company that is involved in the manufacturing tobacco products
»>0% revenues from supplying tobacco-related products/services
»>10% significant ownership of a company that is involved in supplying tobacco-related products/services
»>0% revenues from the distribution and/or retail sale of tobacco products.
»>10% significant ownership of a company that is involved in distribution and/or retail sale (>10% total revenues) of tobacco products.

» **Controversy Ratings**: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

If information on any of the above fields is missing for a company, then it is excluded from the eligible universe.

Each STOXX Global Thematic index aims to have a minimum number of 80 constituents at each review: if the screening process described above results in being too restrictive for an index, the revenue filter is progressively lowered in steps of 5% for that particular index, until the number of constituents is equal to or greater than 80 (i.e. all stocks which pass the lowered threshold are added to the index).

The included FactSet RBICS sectors for each theme are:

Nr.	Automation & Robotics	Breakthrough Healthcare
1	3D Modeling/Rapid Prototyping Automation Providers	Active and Intermediate Chemicals OEMs
2	Automotive Industry Software	Autoimmune Disorders Biopharmaceuticals
3	Autonomous Commercial/Transit Vehicle Production	Bioanalytical Consumables
4	Autonomous Control Ship Builders	Biological Specimen Storage
5	Autonomous Control Truck Production	Biologics OEMs
6	Autonomous Drone Manufacturers	Breast Cancer Biopharmaceuticals
7	Autonomous Drone Parts Manufacturers	Cardiology Surgical Devices
8	Autonomous Transport Control Software	Cardiovascular System Biopharmaceuticals
9	Business Intelligence Software	Clinical Limited Service CROs
10	Business Planning and Control ERP Software	Diversified Bioanalytical Instruments
11	Computer Aided Design (CAD) Software	Diversified Contract Manufacturing Organizations
12	Diversified Enterprise Resource Planning Software	Diversified Contract Research Organizations
13	Food Production Machinery Manufacturing	Diversified Healthcare Business Management
14	General Enterprise Management Software	Drug Delivery Technology Development
15	General Factory Automation Makers	Drug Development Software
16	Global Positioning Systems (GPS) Manufacturing	Drug Lead Discovery, Validation and Optimization
17	Household Robot Makers	Final Dosage Forms OEMs
18	Industrial Robots and Robotic Assembly Line Makers	General Clinical Diagnostics Devices
19	Lasers and Optical Instrument Manufacturing	General Surgical Devices
20	Machine Vision and Quality Control Manufacturing	Genetic Molecular Diagnostic Test Kits

18. STOXX THEMATIC INDICES

21	Manufacturing Industry Software	Healthcare Management Software
22	Material Handling/Conveyor Equipment Manufacturing	Hematological Oncology Biopharmaceuticals
23	Microprocessor (MPU) Semiconductors	Home Testing Clinical Diagnostics Devices
24	Mixed Industrial Machinery Parts/Equipment Makers	Immune Deficiency Disorders Biopharmaceuticals
25	Monitoring and Control Sensor/Instrument Products	Immunoassays Clinical Diagnostics Devices
26	Motion Control and Precision Motors Manufacturing	Multi-Type Drug Discovery Services
27	Multi-Industry-Specific Factory Machinery Makers	Neurology Biopharmaceuticals
28	Multiple Industry-Specific Software	Neurology Devices
29	Networking Semiconductors	Oncology Devices
30	Other Automation Support Product Manufacturing	Other Biopharmaceutical OEMs
31	Other Electric Motors and Motion Control Products	Other Chemistry Clinical Diagnostics Devices
32	Other Processor Semiconductors	Other Healthcare and Pharma Industry Software
33	Other Programmable Logic and ASIC Semiconductors	Other Oncology Biopharmaceuticals
34	Packaging and Coating Application Machinery Makers	Patient Data Management Software
35	Paper and Textile Automation Providers	Point of Care Testing Kits
36	Plastics and Rubber Automation Providers	Preclinical Limited Service CROs
37	Programmable Logic Device Semiconductors	Surgical Robotic Systems
38	Software Design and Engineering Consulting	Viral Biopharmaceuticals
39	Surgical Robotic Systems	
40	Test, Measurement and Metrology Equipment Makers	
41	Vehicle Autonomous Control Electronics Makers	
42	Vehicle Autonomous Control Software	
43	Video Multimedia Semiconductors	
44	Welding and Joining Tool Manufacturing	

Nr.	**Ageing Population**	**Digitalisation**
1	Annuities	Automotive Classifieds and Directories Media/Sites
2	Assisted Living	Career Classifieds and Directories Media and Sites
3	Boat Makers	Carrier Edge Network Management Equipment
4	Cardiology Medical Devices	City Guides Content Providers and Sites
5	Cardiology Surgical Devices	Colocation and Data Center Services
6	Cardiovascular System Biopharmaceuticals	Commercial Bank and Credit Union Software
7	Credit Life	Communication and Collaboration Content Sites
8	Diverse Institutional/High-Net Advisory Finance	Development and Design Services
9	Diversified Life and Health Insurance	Disk Storage Systems
10	Diversified Patient Care	Document Management Software
11	Drug Lead Discovery, Validation and Optimization	E-Commerce Service Providers
12	Funeral and Cemetery Services	Electronic Payment Processing
13	General and Acute Hospitals	Enterprise Middleware Software
14	General Clinical Laboratories	Express Couriers
15	General Death Care Services	General Consumer Content Providers
16	Golf Courses and Country Clubs	General Customer Premises Equipment (CPE)
17	Golf Equipment	General Delivery and Logistics Providers
18	Health Insurance	General Entertainment Content Providers and Sites
19	Healthcare and Life Sciences Equity REITs	Insurance Software
20	Healthcare Staffing and Recruiting	Internet Accessories Retail
21	Heart Disorders Biopharmaceuticals	Internet Apparel Retail
22	Hematological Oncology Biopharmaceuticals	Internet Automotive Parts Sales
23	Hematology Biopharmaceuticals	Internet Building Materials / Garden Supply Retail
24	Home Healthcare	Internet Department Stores

18. STOXX THEMATIC INDICES

25	Imaging Laboratories	Internet Discount Stores
26	Insurance Brokerage	Internet Electronics Retail
27	Joint Replacement and Reconstruction Devices	Internet Entertainment Retail
28	Life and Health Reinsurance	Internet Footwear Retail
29	Life Insurance	Internet Furniture and Home Furnishings Retail
30	Medicare Managed Care	Internet Motor Vehicle Sales
31	Mixed Usage Travel Arrangement and Reservation	Internet Office Supplies Retail
32	Motor Homes and Campers (RVs) Manufacturing	Internet Off-Price Retail
33	Neurology Biopharmaceuticals	Internet Pet and Pet Supply Retail
34	Neurology Devices	Internet Pharmacies and Drug Retail
35	Ocean-Going Cruise Lines	Internet Warehouse / Superstore Retail
36	Oncology Devices	Investment Management/Brokerage Software
37	Ophthalmology Biopharmaceuticals	Managed Hosting Services
38	Ophthalmology Devices	Media Download and Streaming Digital Content Sites
39	Other Building Materials and Garden Supply Stores	Mixed Electronic Transaction Processing
40	Other Hospitals	Multi-Type Home and Office Software
41	Other Long-Term Care Facilities	Network Administration Software
42	Other Managed Care	Network Security Software
43	Other Oncology Biopharmaceuticals	Online Marketing and Advertising Support Services
44	Other Orthopedics Devices	Other Classifieds and Directories Media and Sites
45	Other Supplemental Health Insurance	Other Finance Industry Software
46	Pension Fund Managers	Other Hosting Services
47	Personal Recreation Vehicle Manufacturing	Other Internet Health and Personal Care Retail
48	Pharmacies and Drug Stores	Other Network Software
49	Pharmacy Benefit Management (PBM)	Payment Processing Software
50	Plastic and Reconstructive Surgery Devices	Real Estate Classifieds and Directories Sites
51	Private Wealth Managers	Retail Industry Software
52	Retail Advisory and Brokerage Services	Trading Software
53	Retail Advisory Services	Travel Publishers
54	Retail Brokerage Services	Web Development Software Makers
55	Skilled Nursing Facility (Nursing Home)	Web Navigation Sites and Software
56	Specialized Patient Care	Web Portal Sites and Software
57	Tour Operators	Web Search Sites and Software
58	Travel Agencies	
59	Travel Publishers	
60	Vacation Ownership Operators	

The eligible countries are defined as follows:

Australia	Japan	Brazil	Peru
Austria	Netherlands	Chile	Philippines
Belgium	New Zealand	China (B, H shares, Red Chips)	Poland
Canada	Norway	Colombia	South Africa
Denmark	Portugal	Czech Republic	South Korea
Finland	Singapore	Egypt	Taiwan
France	Spain	Greece	Thailand
Germany	Sweden	Hungary	Turkey
Hong Kong	Switzerland	India	
Ireland	United Kingdom	Indonesia	

Israel	United States	Malaysia
Italy		Mexico

Review frequency: The index is reviewed annually in June. The review cut-off date for the observation of the parent index, liquidity, size, revenues and ESG information is the last index dissemination day in May. Furthermore, on a quarterly basis in September, December and March, current components are screened for their Global Standards Screening assessment and Controversy Rating. The cut-off date for this exercise is the last dissemination day of August, November and February respectively. If a current component is assessed as non-compliant based on the Global Standards Screening or observed to have a Category 5 Controversy Rating, it is removed from the index, effective on the next dissemination day following the 3rd Friday of the month.

Weighting cap factors: Weight factors are calculated annually in June. They are published on the second Friday of June, based on the stocks' closing prices of the preceding Thursday. Components are initially weighted by adjusted equal weighting mechanism with a multiplier set as L = 5. The resulting weights are assessed to check if a stricter version of the UCITS bounds (4.5/8/35) is exceeded. In case of any breaches, an iterative process takes place to cap the weights by these bounds, and ensure diversification. This is achieved by following steps 1-6 below.

Additionally, on a quarterly basis in September, December and March, the companies' weights are assessed for any breaches on the stricter UCITS bounds based on the stocks' closing prices of the Thursday preceding the second Friday of the respective quarter. Company weights are re-capped if the bounds are exceeded, and weight factors published on the second Friday, based on the stocks' closing prices of the preceding Thursday. No capping applies if the weights did not exceed the UCITS bounds.

Step1:
The companies in the portfolio are sorted by their free-float market capitalization in ascending order, and their initial weight is defined as:

$$w_i = \frac{\mathrm{ffmcap}_i}{\sum_{j \text{ in comp list}}^{N} \mathrm{ffmcap}_j}$$

where:

ffmcap_i	the free-float market capitalization of company i on the Thursday preceding the second Friday of the review month
N	the number of companies in the corresponding thematic index

The companies are also assigned a rank from 1, for the company with the lowest free-free float market capitalization, to N, for the one with the highest.

For the purposes of the above weight calculation, if a company is present with multiple listings in the portfolio, then the issuer's weight is calculated by summing the free-float market capitalization of all its listings, and only one rank is assigned to it.

Step 2:
An iterative process takes place where for each company in the ranking list formed in step 1, a cumulative weight is calculated such that:

$$Sw_i = (N - n_i) * w_i + \sum_1^{n_i} w_j$$

where:

w_i	the initial weight calculated for company i
n_i	the ranking assigned to company i
$\sum_1^{n_i} w_j$	the sum of weights (as calculated in step 1) of the companies ranking from 1 to n_i
N	the number of companies in the corresponding thematic index

Step 3:
The company with rank Z, is identified as the first one in the ranking list where the cumulative weight, exceeds the inverse of the multiplier, i.e. $Sw_z \geq 1/L$.

Step 4:
A normalization factor W_Z is calculated, such that:

$$W_Z = w_Z - \frac{Sw_z - \frac{1}{L}}{N - Z + 1}$$

Step 5:
The adjusted equal weights are calculated as follows:

$$aew_i = \begin{cases} w_i * L, \text{if } n_i < Z \\ W_Z * L, \text{if } n_i \geq Z \end{cases}$$

Step 6:
The adjusted equal weights are checked against the requirements that: the sum of all constituents' weights above 4.5% does not exceed 35%, and no single weight exceeds 8%. If any of these criteria is not met, the multiplier L is increased by an increment of 1, and the above steps from Step 3 are repeated until the requirements are met or a maximum multiplier of L = 10 is reached. If the adjusted equal weights still do not fall within the boundaries of 4.5/8/35 using L = 10, they are capped using the capping procedure described below, otherwise the final weights (fw) are set to the adjusted equal weights from the last iteration.

For the capping procedure, the final weights are derived from the adjusted equal weights (L=10) via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their adjusted equal weights.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

In the case where a company is present with multiple listings in the portfolio, then the final weight calculated for the company, is allocated to each share line according to its free-float market capitalization.

The weighting factors are calculated such that:

$$wf_{i,ki} = \frac{fw_{i,k}}{p_{i,k}} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

$p_{i,k}$	close price of share line k of company i on the Thursday preceding the second Friday of the review month
$wf_{i,k}$	weight factor of share line k of company i.

18.11.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global Total Market index are deleted from the STOXX Global Thematic indices. A deleted stock is not replaced.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-off companies are not added permanently.

18.12. STOXX GLOBAL AUTOMATION & ROBOTICS (TTM) JPY INDEX

18.12.1. OVERVIEW

The STOXX Global Automation & Robotics (TTM) (Telegraphic Transfer Middle rate) JPY index tracks the performance of the STOXX Global Automation & Robotics index (USD Version) converted to Japanese Yen utilizing the TTM JPY exchange rate.
The TTM JPY rate is published end of day Japan time, hence it's available in the morning CET time and it refers to the previous day. For this reason, the previous day's index value is used in the calculation.

The base index is STOXX Global Automation & Robotics index (USD version).

Index types and currencies: Price, Net Return, Gross Return in JPY TTM FOREX

Base values and dates: The following base values and dates apply: 1000 on June 21, 2011

Dissemination calendar: STOXX Global calendar

18.12.2. CALCULATIONS

The index value is calculated as follows:

$$I_t = I_{t_0} \cdot \frac{U_{t-1}}{U_{t_0-1}} \cdot \frac{FX_t}{FX_{t_0}}$$

Where,

I_t	The index value at day *t*
FX_t	The Reuters TTM rate at day *t*, defined as "$\mathrm{USDTTM} = \mathrm{BTMJ}$"$(t)$
U_{t-1}	The index value of the underlying index on day t-1, as defined in the table below.
t_0	The index base date
I_{t_0}	The index base value
U_{t_0-1}	The underlying index value on the day before the base date, set to the value of 1000
FX_{t_0}	The Reuters TTM rate at base date, set to the value of 80.19

Longname	ISIN	Symbol
STOXX Global Automation & Robotics USD Gross Return	CH0325904370	IXAROBS
STOXX Global Automation & Robotics USD Net Return	CH0325904388	IXAROBU
STOXX Global Automation & Robotics USD Price	CH0325904396	IXAROBK

18.13. STOXX GLOBAL DIGITAL ENTERTAINMENT AND EDUCATION INDEX

18.13.1. OVERVIEW

The STOXX Global Digital Entertainment and Education Index is comprised of companies or components of their business line that stand to benefit from the increasing adoption of technologically focused solutions to meet modern lifestyle demands and changing consumer habits within the areas of entertainment and education.

STOXX uses FactSet's Revere (RBICS) granular data for a detailed breakdown of the revenue sources of the eligible companies, to select those most exposed to the digital entertainment and education theme. Over 30 sectors have been associated to the theme and include Media Download and Streaming Digital Content Sites, Online Game Websites and Software, and Educational Software among others.

The index is also taking ESG considerations into account. Companies that are non-compliant with the Global Standards Screening (GSS), or are involved in Controversial Weapons activities, or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics, are excluded. Additional exclusion filters are incorporated, screening companies for involvement in Weapons (Small Arms and Military Contracting), Unconventional Oil & Gas (Arctic Oil and Gas Exploration, Oil Sands and Shale Energy), Conventional Oil & Gas, Thermal Coal, Nuclear Power and Tobacco.

Universe: The index universe is defined as all stocks from the STOXX Global Total Market index.

Weighting scheme: The index constituents are weighted according to adjusted equal weights. Weight factors are published on the second Friday of the Review/Rebalance month and based on the stocks' prices of the preceding Thursday.

Base values and dates: 1000 on 22 June 2015

Index types and currencies: Price, Net and Gross Return in EUR and USD

Dissemination calendar: STOXX Europe calendar

18.13.2. INDEX REVIEW

In order to be included in the STOXX Global Digital Entertainment and Education Index, the companies in the index universe are screened for all of the following criteria:

- **Country classification:** stocks classified as belonging to the eligible countries list
- **Minimum liquidity:** 3-month median daily traded volume (MDTV) greater than one million EUR
- **Minimum size:** free-float market capitalization greater than 200 million EUR

» **Revenues**: more than 50% of revenues generated within the sectors associated with the digital entertainment and education theme. The threshold is lowered to 45% for current components. STOXX uses FactSet Research Systems granular analysis to determine a company's position within the subsectors of its FactSet Revere Business Industry Classification System (FactSet RBICS). FactSet Revere is a sector, supply chain, and geographic risk taxonomy expert.

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.

» Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

» **Product Involvement**: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**

i) Small Arms:

»>0% revenues from manufacturing and selling assault weapons to civilian customers
»>0% revenues from manufacturing and selling small arms to military / law enforcement customers
»>0% revenues from manufacturing and selling key components of small arms
»>5% revenues from retail and/or distribution of assault weapons
»>5% revenues from retail and/or distribution of small arms (non-assault weapons)
»>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers

ii) Military Contracting:

»>10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

- **Unconventional Oil & Gas:**

i) Arctic Oil and Gas Exploration:

»>0% revenues Oil & Gas exploration & extraction in Arctic regions
»>10% significant ownership (extraction) of a company that is involved in Oil & Gas exploration & extraction in Arctic regions

ii) Oil Sands:

»>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day
»>10% significant ownership of a company that is involved in extraction of oil sands

iii) Shale Energy:

»>0% revenues from shale energy exploration and/or production
»>10% significant ownership of a company that is involved in shale energy exploration and/or production

- **Conventional Oil & Gas:**

  »>0% revenues from oil and gas exploration, production, refining, transportation and/or storage
  This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).
  »>10% significant ownership of a company that is involved in exploration, production, refining, transportation and storage of oil and/or gas
  »>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)
  »>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Thermal Coal:**

  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>10% significant ownership of a company that is involved in the extraction of thermal coal
  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)
  »>10% significant ownership of a company that is involved in the generating electricity from thermal coal

- **Nuclear Power:**

  »>25% revenues from nuclear power production:
  - Utilities that own/operate nuclear power generators
    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:
  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:
  - The resale or distribution of electricity generated from nuclear power;
  - This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix

Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>10% significant ownership of a company that is involved in the manufacturing tobacco products
  »>0% revenues from supplying tobacco-related products/services
  »>10% significant ownership of a company that is involved in supplying tobacco-related products/services
  »>0% revenues from the distribution and/or retail sale of tobacco products.
  »>10% significant ownership of a company that is involved in distribution and/or retail sale (>10% total revenues) of tobacco products.

» **Controversy Ratings**: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).

Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

» **ESG Risk Ratings**[43]: STOXX will exclude companies that Sustainalytics identifies to have a "Severe" ESG Risk Rating.
The ESG Risk Rating evaluates the degree of a company's unmanaged material ESG risk by assessing a company's exposure to, and management of, the ESG issues that are considered most material for that company from a financial perspective. Sustainalytics assess and categorizes companies into five risk categories (Negligible, Low, Medium, High, Severe).

» **Combination of ESG Risk Ratings and Controversy Ratings**: in addition to the above, STOXX will exclude companies with a "High" ESG Risk Rating, that also have a Controversy Rating of Category 2 or higher (i.e. Moderate, Significant or High).

If information on any of the above fields is missing for a company, then it is excluded from the eligible universe.

The STOXX Global Digital Entertainment and Education Index Index aims to have a minimum number of 80 constituents at each review. If the screening process described above results in being too restrictive, the revenue filter is progressively lowered in steps of 5% for the index, to a minimum of 30% (25% for current components), until the number of constituents is equal to or greater than 80 (i.e. all stocks which pass the lowered threshold and comply with the following sustainability criteria are added to the index).

The eligible countries are defined as follows:

[43] It should be acknowledged that much of the historical data set is based on a back-filling methodology, rather than on Sustainalytics conducted research. As such, on data that is back-filled, Sustainalytics does not take claim on the actual accuracy of that data at that point in time. Furthermore, historical data sets are only meant to serve as a proxy and is not meant to be indicative of future results

18. STOXX THEMATIC INDICES

Australia	Japan	Brazil	Peru
Austria	Netherlands	Chile	Philippines
Belgium	New Zealand	China (B, H shares, Red Chips)	Poland
Canada	Norway	Colombia	South Africa
Denmark	Portugal	Czech Republic	South Korea
Finland	Singapore	Egypt	Taiwan
France	Spain	Greece	Thailand
Germany	Sweden	Hungary	Turkey
Hong Kong	Switzerland	India	
Ireland	United Kingdom	Indonesia	
Israel	United States	Malaysia	
Italy		Mexico	

The included FactSet RBICS sectors are:

Nr.	Digital Entertainment and Education L6 RBICS sectors
1	Audio Electronics Manufacturing
2	Communication and Collaboration Content Sites
3	Conferencing Equipment
4	Console Games Software
5	Consumer Electronics Accessories Manufacturing
6	Education Information and News Media and Sites
7	Educational Software
8	Educational Support Services
9	Electronic Gaming Equipment
10	Electronic Gaming/Entertainment Electronics Makers
11	General Consumer Electronics Manufacturing
12	General Gaming Products and services
13	Handheld and Smart Phone Games Software
14	Home and Office Productivity Peripherals
15	Home and Office Virtual Reality Software
16	Human Interface Peripherals
17	Media and Entertainment Industry Software
18	Media Download and Streaming Digital Content Sites
19	Media Player and Recorder Equipment
20	Mobile Platform Applications Software
21	Multimedia Semiconductors
22	Online Game Websites and Software
23	Online Gaming Systems
24	Other Computer Display Equipment
25	Other Games Software
26	Other Video Electronics Equipment
27	Portable Computer Systems
28	Productivity Software
29	Professional Advancement Education
30	Smart Phone Manufacturing
31	Television Equipment Manufacturing
32	Video Multimedia Semiconductors
33	Video Signal Processor and Receiver Equipment
34	Wearable Technology

Review frequency: The index is reviewed annually in June. The review cut-off date for the observation of the parent index, liquidity, size, revenues and ESG information is the last index dissemination day in May. Furthermore, on a quarterly basis in September, December and March, current components are screened for their Global Standards Screening assessment and Controversy Rating. The cut-off date for this exercise is the last dissemination day of August, November and February respectively. If a current component is assessed as non-compliant based on the Global Standards Screening or observed to have a Category 5 Controversy Rating, it is removed from the index, effective on the next dissemination day following the 3rd Friday of the month.

Weighting cap factors: Weight factors are calculated annually in June. They are published on the second Friday of June, based on the stocks' closing prices of the preceding Thursday. Components are initially weighted by adjusted equal weighting mechanism with a multiplier set as L = 5. The resulting weights are assessed to check if a stricter version of the UCITS bounds (4.5/8/35) is exceeded. In case of any breaches, an iterative process takes place to cap the weights by these bounds, and ensure diversification. This is achieved by following steps 1-6 below.

Additionally, on a quarterly basis in September, December and March, the companies' weights are assessed for any breaches on the stricter UCITS bounds based on the stocks' closing prices of the Thursday preceding the second Friday of the respective quarter. Company weights are re-capped if the bounds are exceeded, and weight factors published on the second Friday, based on the stocks' closing prices of the preceding Thursday. No capping applies if the weights did not exceed the UCITS bounds.

Step1:
The companies in the portfolio are sorted by their free-float market capitalization in ascending order, and their initial weight is defined as:

$$w_i = \frac{\mathrm{ffmcap}_i}{\sum_{j \text{ in comp list}}^{N} \mathrm{ffmcap}_j}$$

where:

ffmcap_i	the free-float market capitalization of company i on the Thursday preceding the second Friday of the review month
N	the number of companies in the index

The companies are also assigned a rank from 1, for the company with the lowest free-free float market capitalization, to N, for the one with the highest.

For the purposes of the above weight calculation, if a company is present with multiple listings in the portfolio, then the issuer's weight is calculated by summing the free-float market capitalization of all its listings, and only one rank is assigned to it.

Step 2:
An iterative process takes place where for each company in the ranking list formed in step 1, a cumulative weight is calculated such that:

$$Sw_i = (N - n_i) * w_i + \sum_{1}^{n_i} w_j$$

where:

w_i	the initial weight calculated for company i
n_i	the ranking assigned to company i
$\sum_1^{n_i} w_j$	the sum of weights (as calculated in step 1) of the companies ranking from 1 to n_i
N	the number of companies in the STOXX Global Digital Entertainment and Education Index

Step 3:
The company with rank Z, is identified as the first one in the ranking list where the cumulative weight, exceeds the inverse of the multiplier, i.e. $Sw_z \geq 1/L$.

Step 4:
A normalization factor W_Z is calculated, such that:

$$W_Z = w_Z - \frac{Sw_z - \frac{1}{L}}{N - Z + 1}$$

Step 5:
The adjusted equal weights are calculated as follows:

$$aew_i = \begin{cases} w_i * L \text{, if } n_i < Z \\ W_Z * L \text{, if } n_i \geq Z \end{cases}$$

Step 6:
The adjusted equal weights are checked against the requirements that: the sum of all constituents' weights above 4.5% does not exceed 35%, and no single weight exceeds 8%. If any of these criteria is not met, the multiplier L is increased by an increment of 1, and the above steps from Step 3 are repeated until the requirements are met or a maximum multiplier of L = 10 is reached. If the adjusted equal weights still do not fall within the boundaries of 4.5/8/35 using L = 10, they are capped using the capping procedure described below, otherwise the final weights (fw) are set to the adjusted equal weights from the last iteration.

For the capping procedure, the final weights are derived from the adjusted equal weights (L=10) via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their adjusted equal weights.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

In the case where a company is present with multiple listings in the portfolio, then the final weight calculated for the company, is allocated to each share line according to its free-float market capitalization.

The weighting factors are calculated such that:

$$wf_{i,ki} = \frac{fw_{i,k}}{p_{i,k}} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

$p_{i,k}$	close price of share line k of company i on the Thursday preceding the second Friday of the review month
$wf_{i,k}$	weight factor of share line k of company i.

18.13.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global Total Market index are deleted from the STOXX Global Digital Entertainment and Education Index. Any deleted stocks are not replaced.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-off companies are not added permanently.

18.14. STOXX ASIA TECHNOLOGY 100 INDEX

18.14.1. OVERVIEW

The STOXX Asia Technology 100 index tracks 100 large and liquid Asian technology securities.

STOXX uses FactSet's Revere (RBICS) granular data for a detailed breakdown of the revenue sources for the eligible companies, helping identify companies that derive significant revenues from the development of products and services from technology innovations, leading to breakthroughs in areas such as internet and digitization, health-tech, mobility, autonomous technology and industrial automation.

Universe: The index universe is defined by all stocks included in the following indices, as observed on the review effective date: STOXX Asia Total Market, STOXX China P Chips Total Market, and STOXX China A Total Market (*only shares available to foreign investors through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect*).

Weighting scheme: The index is free-float market capitalization weighted, with cap factors adjusting for foreign ownership restrictions.

Base values and dates: 1000 on June 22, 2015

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Global calendar

18.14.2. INDEX REVIEW

Selection list: The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the index universe are screened for all of the following criteria, in the order they are listed:

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:

» Internal production or sale of controversial weapons

» The ultimate holding company owns >10% of voting rights of an involved company

» >10% of voting rights of a company is owned by the involved company

» **Controversy Ratings:** STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).

» **Product Involvement:** STOXX will exclude companies that Sustainalytics identifies to have:

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>10% revenues from the distribution and/or retail sale of tobacco products.

- **Thermal Coal:**
  »>5% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>5% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)
  »>5% revenues from providing tailor-made products and services that support thermal coal extraction

- **Military Contracting:**
  »>10% revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons
  »>10% revenues from tailor made products and/or services that support military weapons

» **Minimum liquidity:** 6-month average daily trading value (ADTV) equal to or greater than 5,000,000 USD.

» **Revenues**: more than 50% of revenues generated within the RBICS Level 1 Technology sector, and from additional RBICS Level 6 sectors (please see L6 RBICS list below). The threshold is lowered to 40% for current components.

» **Foreign ownership restrictions**: for components whose foreign ownership limit is smaller than 1 (100%), the foreign headroom (FHR) should be at least 15% (10% for current components), where FHR = (foreign ownership limit – foreign holdings) / foreign ownership limit.

» **Multiple share lines**: in case a company is present with multiple listings, only one is eligible. For a security with multiple listings coming from different indices: priority is given in order of this list: STOXX Asia Total Market, STOXX China P Chips Total Market and STOXX China A Total Market. If the multiple listings are coming from the same index, the most liquid share-line (according to 6M ADTV) is considered for selection.

The following of Level 6 RBICS sectors are used for the constituent selection, in addition to the RBICS Level 1 Technology sector:

Nr.	L6 RBICS sectors	Nr.	L6 RBICS sectors
1	3D Modeling/Rapid Prototyping Automation Providers	53	Imaging Laboratories
2	Aerospace and Defense IT Services	54	Immunoassays Clinical Diagnostics Devices
3	Alt. Energy Autonomous Heavy Duty Truck Makers	55	Industrial Robots and Robotic Assembly Line Makers

18. STOXX THEMATIC INDICES

4	Alt. Energy Autonomous Transit Vehicle Production	56	Insurance Software
5	Alt. Energy Motor Homes and Campers (RVs) Makers	57	Internet Accessories Retail
6	Alt. Energy Recreation Vehicle Manufacturing	58	Internet Apparel Retail
7	Alternative Energy Boats Makers	59	Internet Automotive Parts Sales
8	Alternative Energy Car Manufacturers	60	Internet Building Materials / Garden Supply Retail
9	Alternative Energy Heavy Duty Trucks Makers	61	Internet Department Stores
10	Alternative Energy Motorcycles Makers	62	Internet Discount Stores
11	Alternative Energy Transit Vehicles Makers	63	Internet Electronics Retail
12	Analytical and Bioanalytical Services	64	Internet Entertainment Retail
13	Automotive Industry Software	65	Internet Footwear Retail
14	Autonomous Commercial/Transit Vehicle Production	66	Internet Furniture and Home Furnishings Retail
15	Autonomous Drone Manufacturers	67	Internet Motor Vehicle Sales
16	Autonomous Drone Parts Manufacturers	68	Internet Office Supplies Retail
17	Battery Charging Equipment Manufacturing	69	Internet Off-Price Retail
18	Bioanalytical Consumables	70	Internet Pet and Pet Supply Retail
19	Biological Specimen Storage	71	Internet Pharmacies and Drug Retail
20	Biologics OEMs	72	Internet Warehouse / Superstore Retail
21	Biotechnology and Genomics (GMO/Hybrids) Products	73	Investment Management/Brokerage Software
22	Blockchain Technology	74	Lasers and Optical Instrument Manufacturing
23	Clinical and Preclinical Limited Service CROs	75	Machine Vision and Quality Control Manufacturing
24	Clinical Limited Service CROs	76	Manufacturing Industry Software
25	Commercial Bank and Credit Union Software	77	Mixed Electronic Transaction Processing
26	Conventional Autonomous Transit Vehicles Makers	78	Monitoring and Control Sensor/Instrument Products
27	Conventional Engine Autonomous Truck Makers	79	Motion Control and Precision Motors Manufacturing
28	Cryptocurrency Mining	80	Multinational Internet Banks
29	Cryptocurrency Trading and Exchanges	81	Multi-Type Drug Discovery Services
30	Data Transport Carrier Services	82	Online Casinos
31	Diabetes Diagnostic Testing Devices	83	Online Gaming Systems
32	Diabetes Home Monitoring Devices	84	Online Marketing and Advertising Support Services
33	Diversified Bioanalytical Instruments	85	Other Chemistry Clinical Diagnostics Devices
34	Drug Delivery Technology Development	86	Other Electric Motors and Motion Control Products
35	Drug Development Software	87	Other Finance Industry Software
36	Drug Lead Discovery, Validation and Optimization	88	Other Healthcare and Pharma Industry Software
37	Electric Vehicle Batteries Manufacturing	89	Other Internet Health and Personal Care Retail
38	Electric Vehicle Charging Stations	90	Patient Data Management Software
39	Electronic Payment Processing	91	Payment Processing Software
40	Food Delivery Services	92	Point of Care Testing Kits
41	Fuel Cell Equipment and Technology Providers	93	Preclinical Limited Service CROs
42	Full Service CROs	94	Retail Industry Software
43	General Clinical Diagnostics Devices	95	Smart Grid Technology and Smart Meter Products
44	Genetic Molecular Diagnostic Test Kits	96	Surgical Robotic Systems
45	Government and Public Service Industry Software	97	Telemedicine
46	Grocery Delivery Services	98	Trading Software
47	Healthcare IT Services	99	Transportation Industry Software
48	Healthcare Management Software	100	Travel Publishers

49	Home Testing Clinical Diagnostics Devices	101	United States Internet Banks
50	Household Robot Makers	102	Vehicle Autonomous Control Electronics Makers
51	Hydrogen Fuel Manufacturing	103	Vehicle Autonomous Control Software
52	Hydrogen Gas Manufacturing,		

Composition list: All companies in the selection list are sorted in descending order of their adjusted market capitalization, and the 100 highest ranking companies are selected for inclusion in the index.

If a foreign ownership limit exists and it is smaller than 100%:

$$adjusted\ free\ float_i = min[\,free\ float_i\,, (foreign\ ownership\ limit - foreign\ holdings)]$$

Otherwise:

$$adjusted\ free\ float_i = free\ float_i$$

And the adjusted market capitalization is calculated as:

$$adjusted\ mcap_i = adjusted\ free\ float_i * p_i * s_i$$

where:
p_i USD price of company i
s_i number of shares of company i

and free float, adjusted free float, foreign ownership limit, and foreign holdings[44] are all expressed as a percentage of the total number of shares.

A foreign investor is an investor whose country is different from the country of the security as defined by STOXX. The calculation of foreign holdings includes only foreign investors whose holdings are greater than, or equal to, 5% of the total number of shares.

Review frequency:
The reviews are conducted on a quarterly basis in March, June, September and December. The review cut-off date is the last dissemination day of the preceding month.

Weighting cap factors:
The index is free-float market capitalization weighted, with cap factors adjusting for foreign ownership restrictions.

$$w_i = \frac{adjusted\ mcap_i}{\sum_1^N adjusted\ mcap_j}$$

where:
w_i weight of company i
N Number of constituents in the index

Weights are capped at a maximum of 8%.

[44] Foreign holdings are incorporated from September 2021 onwards.

18.14.3. ONGOING MAINTENANCE

Replacements: A deleted stock is not replaced. Deletions may include sanctioned securities and to which trading is compromised.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off companies are not added permanently.

18.15. STOXX GLOBAL METAVERSE INDEX

18.15.1. OVERVIEW

Metaverse is an emerging concept that simulates the real world or imagines a world beyond it, integrating digital and physical interactions for an immersive experience. The field of virtual and extended realities and digital interface is expected to disrupt many aspects of the everyday world, from social interactions and entertainment, to a range of business segments such as medicine and education. The STOXX® Global Metaverse Index looks to select key players in the theme: companies that will be leading the way and defining the metaverse, as well as those providing key technologies and infrastructure to support the development of the space.

The index selects companies exposed to a defined set of technologies related to the ongoing adoption of the metaverse, ranging from those developing interactive virtual platforms, wearables and immersive technologies to companies providing computer processing capabilities and infrastructure. STOXX uses EconSight's patent data, a specialist patent analytics provider with a sophisticated patent classification system, to identify companies with an advantage in the cutting-edge technologies. EconSight's detailed taxonomy, alongside its patent Quality and Specialization scores is used to identify companies that are market leaders and innovators in the identified technologies.

The index takes ESG considerations into account: companies that are non-compliant with the Global Standards Screening (GSS) or are involved in Controversial Weapons activities, or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics, are excluded. Additional exclusion filters are incorporated, screening companies for involvement in Weapons (Small Arms and Military Contracting), Unconventional Oil & Gas (Arctic Oil and Gas Exploration, Oil Sands and Shale Energy), Conventional Oil & Gas, Thermal Coal, Nuclear Power and Tobacco.

Universe: The index universe is defined as all stocks from the STOXX Global Total Market index

Weighting scheme: The index constituents are weighted according to adjusted equal weights and adjusted by the metaverse patent specialization score of each company.

Base values and dates: 1000 on March 19, 2012

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar

18.15.2. INDEX REVIEW

Selection list: The companies in the index universe are screened for all of the following criteria:

- **Country classification:** stocks classified as belonging to the eligible countries list (as shown below)
- **Minimum liquidity:** 3-month median daily trading value (MDTV) greater than one million EUR
- **Minimum size:** free-float market capitalization greater than 200 million EUR

» **Global Standards Screening**: STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

» **Controversial Weapons**: STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons
The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.
The criteria for involvement are:
» Internal production or sale of controversial weapons
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company.

» **Product Involvement**: STOXX will exclude companies that Sustainalytics identifies to have

- **Weapons:**
  i) Small Arms:
  »>0% revenues from manufacturing and selling assault weapons to civilian customers
  »>0% revenues from manufacturing and selling small arms to military / law enforcement customers
  »>0% revenues from manufacturing and selling key components of small arms
  »>5% revenues from retail and/or distribution of assault weapons
  »>5% revenues from retail and/or distribution of small arms (non-assault weapons)
  »>0% revenues from manufacturing and selling small arms (non-assault weapons) to civilian customers
  ii) Military Contracting:
  »>10% aggregated revenues from manufacturing military weapons systems and/or integral, tailor made components of these weapons and from tailor made products and/or services that support military weapons

- **Unconventional Oil & Gas:**
  i) Arctic Oil and Gas Exploration:
  »>0% revenues Oil & Gas exploration & extraction in Arctic regions
  »>10% significant ownership (extraction) of a company that is involved in Oil & Gas exploration & extraction in Arctic regions
  ii) Oil Sands:
  »>0% revenues from extracting oil sands. This category evaluates oil sands' share of total oil and gas average production in barrels of oil equivalent per day
  »>10% significant ownership of a company that is involved in extraction of oil sands
  iii) Shale Energy:
  »>0% revenues from shale energy exploration and/or production
  »>10% significant ownership of a company that is involved in shale energy exploration and/or production

- **Conventional Oil & Gas:**

»>0% revenues from oil and gas exploration, production, refining, transportation and/or storage
This category evaluates oil and gas related activities' share of total company's revenue. Assessments are made for producers, refiners, transporters, and companies engaged in storage (proxy: revenues).
»>10% significant ownership of a company that is involved in exploration, production, refining, transportation and storage of oil and/or gas
»>25% revenues from providing tailor-made products and services that support oil and gas exploration, production, refining, transportation and storage (proxy: revenues)
»>25% revenues from generating electricity from oil and/or gas (proxy: generating capacity)

- **Thermal Coal:**
  »>0% revenues from thermal coal extraction (including thermal coal mining and exploration)
  »>10% significant ownership of a company that is involved in the extraction of thermal coal
  »>0% power generation capacity: coal-fired electricity, heat or steam generation capacity / thermal coal electricity production (including utilities that own/operates coal-fired power plants)
  »>10% significant ownership of a company that is involved in the generating electricity from thermal coal

- **Nuclear Power:**
  »>25% revenues from nuclear power production:
  - Utilities that own/operate nuclear power generators
    Note: in this category Sustainalytics tracks the percentage of a company's generating capacity that is based on nuclear power

  »>25% revenues from nuclear power supporting products / services, including:
  - Design and construction of nuclear power plants
  - Design and manufacture of specialized parts for use in nuclear power plants, including steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation and controls
  - Special services, such as the transport of nuclear power materials, and nuclear plant maintenance;
  - Uranium mining and exploration, including companies that mine uranium and convert, enrich, and fabricate

  »>25% revenues from nuclear power distribution, including:
  - The resale or distribution of electricity generated from nuclear power;
  - This applies to distributors, resellers and utilities that distribute nuclear power as a part of their energy mix
    Note: In this category Sustainalytics tracks the percentage of a company's energy mix that is generated from nuclear power

- **Tobacco:**
  »>0% revenues from manufacturing tobacco products
  »>10% significant ownership of a company that is involved in the manufacturing tobacco products
  »>0% revenues from supplying tobacco-related products/services
  »>10% significant ownership of a company that is involved in supplying tobacco-related products/services

»>0% revenues from the distribution and/or retail sale of tobacco products.
»>10% significant ownership of a company that is involved in distribution and/or retail sale (>10% total revenues) of tobacco products.

» **Controversy Ratings**: STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).
Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

If information on any of the above fields is missing for a company, then it is excluded from the eligible universe.

The eligible countries are defined as follows:

Australia	Japan	Brazil	Peru
Austria	Netherlands	Chile	Philippines
Belgium	New Zealand	China (B, H shares, Red Chips)	Poland
Canada	Norway	Colombia	South Africa
Denmark	Portugal	Czech Republic	South Korea
Finland	Singapore	Egypt	Taiwan
France	Spain	Greece	Thailand
Germany	Sweden	Hungary	Turkey
Hong Kong	Switzerland	India	
Ireland	United Kingdom	Indonesia	
Israel	United States	Malaysia	
Italy		Mexico	

The remaining companies are screened for their patent exposure to technologies associated with the metaverse theme: virtual platforms that provide user experiences; software, hardware and wearables that enable immersive and lifelike experiences; graphic processing, 3D image modelling and rendering capabilities; digital goods and market places; and companies providing digital infrastructure and support the development of the theme. Patents belonging to the following technologies, as identified by EconSight, are used for the selection:

Nr.	Patents
1	3D image modelling
2	Avatar
3	Blockchain
4	Digital Twin
5	Graphic Processing Unit (GPU)
6	Non-Fungible Tokens (NFTs)
7	Virtual, Augmented and Extended Reality

The overall exposure of the eligible companies to these technologies is aggregated, and their involvement in the metaverse is assessed using the following patent metrics:

- **High Quality Patents**: defined as the number of active patents that a company holds that fall in the top 10% in terms of patent quality within the defined technologies. Patent quality is the product of citations (a measure of technology relevance) and countries covered within the patent (market coverage). Citations can be viewed as an external assessment of how competitors view the importance of a patent. Market coverage is seen as an internal assessment of how patents owners value the importance of their own invention. Both indicators are weighted so that newer citations or larger countries are more relevant. The High Quality Patents metric allows for comparisons of patent strength between individual companies.
- **Patent Specialization**: defined as total number of active patents associated with the technologies divided by the total number of active patents the company has. It provides an indication of the importance the identified technologies to the overall patent activities of the company and is a measure of technological innovation.

The eligible companies from the STOXX Global Total Market index that meet one or more of the following criteria are selected:

- The securities are ranked in descending order of their number of high quality patents within the metaverse technologies. The top 10% ranking companies are selected. In the instances where more than one company has the same number of high quality patents at the 10% threshold, preference is given to the company with highest specialization within the theme.
- Companies with patent specialization greater or equal to 30% in the defined technologies (25% for current components).

Companies with less than 10 active patents in the defined metaverse technologies are not eligible for selection.

Review frequency:
The index is reviewed annually in March. The review cut-off date for the observation of the parent index, liquidity, size, patent and ESG information is the last index dissemination day in February. Furthermore, on a quarterly basis in June, September, and December, current components are screened for their Global Standards Screening assessment and Controversy Rating. The cut-off date for this exercise is the last dissemination day of May, August, and November respectively. If a current component is assessed as non-compliant based on the Global Standards Screening or observed to have a Category 5 Controversy Rating, it is removed from the index, effective on the next dissemination day following the 3rd Friday of the month.

Weighting cap factors:
Weight factors are calculated annually in March. They are published on the second Friday of March, based on the stocks' closing prices of the preceding Thursday. Components are initially weighted by adjusted equal weighting mechanism with a multiplier set as L = 5, the weights are then multiplied by the metaverse patent specialization score. The resulting weights are assessed to check if a stricter version of the UCITS bounds (4.5/8/35) is exceeded. In case of any breaches, the resulting weights are capped by these bounds to ensure diversification. This is achieved by following steps 1-7 below.

Additionally, on a quarterly basis in June, September and December, the companies' weights are assessed for any breaches on the stricter UCITS bounds based on the stocks' closing prices of the Thursday preceding the second Friday of the respective quarter. Company weights are re-capped if the bounds are exceeded, and weight factors published on the second Friday, based on the stocks' closing prices of the preceding Thursday. No capping applies if the weights did not exceed the UCITS bounds.

Step1:
The companies in the portfolio are sorted by their free-float market capitalization in ascending order, and their initial weight is defined as:

$$w_i = \frac{ffmcap_i}{\sum_{j \text{ in comp list}}^{N} ffmcap_j}$$

where:

$ffmcap_i$	the free-float market capitalization of company i on the Thursday preceding the second Friday of the review month
N	the number of companies in the index

The companies are also assigned a rank from 1, for the company with the lowest free-free float market capitalization, to N, for the one with the highest.

For the purposes of the above weight calculation, if a company is present with multiple listings in the portfolio, then the issuer's weight is calculated by summing the free-float market capitalization of all its listings, and only one rank is assigned to it.

Step 2:
An iterative process takes place where for each company in the ranking list formed in step 1, a cumulative weight is calculated such that:

$$Sw_i = (N - n_i) * w_i + \sum_1^{n_i} w_j$$

where:

w_i	the initial weight calculated for company i
n_i	the ranking assigned to company i
$\sum_1^{n_i} w_j$	the sum of weights (as calculated in step 1) of the companies ranking from 1 to n_i
N	the number of companies in the corresponding thematic index

Step 3:
The company with rank Z, is identified as the first one in the ranking list where the cumulative weight, exceeds the inverse of the multiplier, i.e. $Sw_z \geq 1/L$.

Step 4:
A normalization factor W_Z is calculated, such that:

$$W_Z = w_Z - \frac{Sw_Z - \frac{1}{L}}{N - Z + 1}$$

Step 5:
The adjusted equal weights are calculated as follows:

$$aew_i = \begin{cases} w_i * L, \text{if } n_i < Z \\ W_Z * L, \text{if } n_i \geq Z \end{cases}$$

Step 6:
Patent specialized weights are defined as the adjusted equal weights multiplied by the metaverse patent specialization score (ss):

$$pw_i = \frac{aew_i * ss_i}{\sum_j^N aew_j * ss_j}$$

Step 7:
The patent specialized weights are checked against the requirements that: the sum of all constituents' weights above 4.5% does not exceed 35%, and no single weight exceeds 8%. If any of these criteria is not met, they are capped using the capping procedure described below, otherwise the final weights (fw) are set to the patent specialized weights from Step 6.

For the capping procedure, the final weights are derived from the patent specialized weights via an iterative process that seeks to maintain the following conditions:

- The sum of all weights above 4.5% shall not exceed 35%
- No single weight shall exceed 8%

To that end, any excess weight is redistributed from a component to the rest of the components of the index that are not already subject to capping under the above rules, proportionally to their patent specialized weights.

In case the number of constituents is not sufficient to fulfil the capping requirements, the index is equal-weighted.

In the case where a company is present with multiple listings in the portfolio, the final weight calculated for the company is allocated to each share line according to its free-float market capitalization.

The weighting factors are calculated such that:

$$wf_{i,k} = \frac{fw_{i,k}}{p_{i,k}} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

$p_{i,k}$	close price of share line k of company i on the Thursday preceding the second Friday of the review month
$wf_{i,k}$	weight factor of share line k of company i

18.15.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Global Total Market index are deleted from the STOXX Global Metaverse index. A deleted stock is not replaced.

Fast exit: Not applicable

Fast entry: Not applicable

Spin-offs: Spin-off companies are not added permanently.

18.16. STOXX GLOBAL COPPER UNIVERSE INDEX

18.16.1. OVERVIEW

The STOXX Global Copper Universe index is comprised of companies with exposure to the copper mining industry. The exposure screening uses Revere (RBICS) Revenue datasets that allow detailed breakdown of the revenue sources of the eligible companies.

Weighting scheme: The index is weighted by free-float market capitalization.

Base values and dates: 1000 on September 19, 2022

Index types and currencies: Price, net return and gross return in EUR and USD

Dissemination calendar: STOXX Global calendar

18.16.2. INDEX REVIEW

The index constituents are consisted of:

- All constituents of STOXX World AC All Cap Index
- All constituents of STOXX Global Total Market Index
- All constituents of STOXX World DR index
- Stocks listed on the eligible markets for STOXX Global Total Market Index that are not part of above indices are also in included in the starting universe.
- China A shares available to foreign investors through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect, including stocks listed on ChiNext and STAR board, are part of the starting universe

The selected stocks are further limited to those that have one of the following characteristics: RBICS L6 Focus of Copper Ore Mining; revenue exposure from RBICS L6 subindustry of Copper Ore Mining greater or equal to 0.

The selection is limited to Emerging and Developed countries using STOXX World Country Classification.

Review frequency:
The index is reviewed on an annual basis in September. The data cut-off for the review is the last dissemination day two month prior to the review month.

18.16.3. ONGOING MAINTENANCE

Replacements: A deleted company will not be replaced.

Fast exit: China Connect Securities are monitored on a daily basis. If there is an announcement that a China Connect Security index component will become ineligible in the future, then the China Connect Security index component is removed from the index with a two-day notice. “Ineligible”

refers to China A shares that are not eligible to “both buy and sell“ on the Shanghai Connect Northbound Trading or on the Shenzhen Connect Northbound Trading schemes of the Stock Exchange of Hong-Kong.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com.

18.17. STOXX GLOBAL COPPER AND METALS MINING INDEX

18.17.1. OVERVIEW

The STOXX Global Copper and Metals Mining Index is comprised of companies with significant exposure to the copper mining industry either through revenue percentage or market share. Revere (RBICS) Focus and Revenue datasets allow detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the copper industry.

Universe: STOXX Global Copper Universe index

Weighting scheme: The index is price-weighted with weighting factors based on free-float market capitalization with group and concentration capping.

Base value and date: 1000 on September 18, 2017.

Index types and currencies: Price, Net and Gross return in USD and EUR

Dissemination calendar: STOXX Global calendar

18.17.2. INDEX REVIEW

The free-float market capitalisation of stocks used in selection and weighting the index is adjusted for foreign ownership restrictions in line with STOXX World AC All Cap Index. China A shares in the starting universe apply a 0.2 multiplier to their FOL adjusted free float, in-line with STOXX World AC All Cap Index.

Selection List: The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the base universe are screened for the below information:

i. Free-float adjusted market capitalization
ii. 3-month Average Daily Traded Volume (ADTV) in USD
iii. Revenue information, as captured by Revere's industry classification system (RBICS) in RBICS Focus and RBICS revenue datasets.

Indian Stocks are not eligible for inclusion. Stocks that have missing information in any of the fields i), ii), iii) above are excluded from selection.

The screening filters below are then applied on the initial universe, in the order they are listed, such that the selection list constitutes of stocks that:

» **Minimum size:** free-float market capitalization greater than 100 million USD.

» **Minimum liquidity:** 3-month Average Daily Traded Volume (ADTV) in USD equal to or exceeding 1 million USD.

» **Multiple share lines:** In case a company is present with multiple listings and/or a DR line and/or multiple share classes, if one of the lines is an existing index constituent, it will be retained if no other line from the same company has a 3-month ADTV equal or higher to 1.5 times its 3-month ADTV at a given review period or has had higher 3-month ADTV for past eight consecutive quarters. Otherwise, the most liquid share line will be selected.

The index constituents are selected form the remaining companies according to the following steps:

1. Tier 1 – Companies categorized as Copper Ore Mining under RBICS L6 Focus Copper Ore Mining are selected. If there are fewer than 50 companies, the selection proceeds to step 2. If there are 50 or more companies, the selection proceeds to step 3.

2. Tier 2 – Companies that have revenue exposure equal or over 25% but less than 50% from RBICS L6 subindustry of Copper Ore Mining are ranked by their revenue exposure. Companies are selected from the highest to the lowest revenue exposure until there are 50 stocks in the index. Once 50 companies are reached after steps 1 and 2, the selection stops and proceeds to step 3. If there are fewer than 50 companies after steps 1 and 2, then step 3 below follows.

3. Tier 3 – Companies that are not in Tier 1 or 2, and are in the top fifty percent in terms of market share from Copper Ore Mining are selected. Market share is defined by the percentile ranking of all companies in the starting universe with revenue from RBICS L6 subindustry of Copper Ore Mining higher or equal to 1 million USD.

Tier 3 is always included to ensure that companies with high dollar revenues from copper ore mining are represented.

Review frequency:
The reviews are conducted on an annual basis in September. On a quarterly basis in March, June and December, the indices are rebalanced. The cut-off date for the underlying data is the last calculation day of February, May, August, and November respectively.

Weighting and Weighting factors:
Weight factors are calculated quarterly in March, June, September, and December. They are published on the second Friday of March, June, September, and December., based on the stocks' closing prices of the preceding Thursday, defined as :

weighting factor = (1,000,000,000,000 x stock index weight / stock closing price).

Weighting factors are rounded to the nearest integer value. The constituent stock index weight are determined following below process.

The index constituents are initially weighted by their free float adjusted market capitalization. It is then assessed against the weight limits. If either the tier weight limits or the concentration constraints are not satisfied, the index is first capped by Tier Group Capping. It is subsequently capped by Concentration Capping. If either the tier weight limits or the concentration constraints are not satisfied after the capping, the above capping procedure is repeated until the tier weight limits and the concentration constraints are both satisfied.

Tier Group Weight Limit:

Tier Group	Aggregated Weight Limit
Tier 3	Max 50%

The STOXX Tier Capping applies the tier group weighting limits by assessing the aggregated weight of the tier groups:

- If a tier group in aggregate weighs over the maximum weight limit, all company weights in the tier group are set to
  $[Current\ Company\ Weight] \times [Max\ Tier\ Weight\ Limit]/[Current\ Tier\ Weight]$;
- The excess weight is redistributed to the rest of the uncapped index constituents proportional to their current weights.

After the capping, if the tier group weighting limits are not satisfied, the above iteration is repeated until it is satisfied.

Concentration Constraint (4.5% / 8% / 45%):
The maximum company weight of the index is no higher than 8% and companies with a weight over 4.5% do not exceed 45% in aggregation.

Companies are first sorted in descending order in terms of their initial weight. Companies with the same initial weights are further ranked by their Free float adjusted market capitalization and their capped weights are derived via an iterative process:

- From the top to bottom, each company's weight is assessed. For each company, we assess the cumulative weight of all companies with a weight higher or equal to the company. If the cumulative weight is higher than 45% and the company ranks 6th or below, the company is capped at 4.5%, otherwise it is capped at 8%. The excess weight is redistributed to the rest of the uncapped index constituents, pro-rata to their current weight.

After the iteration, if the (4.5% / 8% / 45%) rule is not satisfied, the above iteration is repeated until is the weighting constraints are satisfied. There is no re-ranking in the subsequent iterations.

When the capping is infeasible, the whole capping procedure is reattempted by removing the Tier Group Limit.

18.17.3. ONGOING MAINTENANCE

Replacements: A deleted company will not be replaced.

Fast exit: China Connect Securities are monitored on a daily basis. If there is an announcement that a China Connect Security index component is ineligible in the future, then the China Connect Security index component is removed from the index with a two-day notice.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com

18. STOXX THEMATIC INDICES

18.18. STOXX GLOBAL LITHIUM UNIVERSE INDEX

18.18.1. OVERVIEW

The STOXX Global Lithium Universe index is comprised of companies with exposure to the lithium mining industry. The exposure screening uses Revere (RBICS) Revenue datasets that allow detailed breakdown of the revenue sources of the eligible companies.

Weighting scheme: The index is weighted by free-float market capitalization.

Base values and dates: 1000 on Sep 19, 2022

Index types and currencies: Price, Gross and Net return in EUR and USD

Dissemination calendar: STOXX Global calendar

18.18.2. INDEX REVIEW

The index constituents are consisted of:

- All constituents of STOXX World AC All Cap Index
- All constituents of STOXX Global Total Market Index
- All constituents of STOXX World DR index
- Stocks listed on the eligible markets for STOXX Global Total Market Index that are not part of above indices are also in included in the starting universe.
- China A shares available to foreign investors through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect, including stocks listed on ChiNext and STAR board, are part of the starting universe

The selected stocks are further limited to those that have one of the following characteristics: RBICS L6 Focus of Lithium Ore Mining; RBICS L6 Focus of Lithium Compounds Manufacturing; revenue exposure from RBICS L6 subindustries of Lithium Ore Mining or Lithium Compounds Manufacturing greater or equal to 0.

The selection is limited to Emerging and Developed countries using STOXX World Country Classification.

Review frequency: The index review is conducted on an annual basis in September. The data cut-off for the is the last dissemination day two month prior to the review month.

18.18.3. ONGOING MAINTENANCE

Replacements: A deleted company will not be replaced.

Fast exit: China Connect Securities are monitored on a daily basis. If there is an announcement that a China Connect Security index component will become ineligible in the future, then the China Connect Security index component is removed from the index with a two-day notice. “Ineligible”

refers to China A shares that are not eligible to “both buy and sell “on the Shanghai Connect Northbound Trading or on the Shenzhen Connect Northbound Trading schemes of the Stock Exchange of Hong-Kong.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com.

18. STOXX THEMATIC INDICES

18.19. STOXX GLOBAL LITHIUM MINERS AND PRODUCERS INDEX

18.19.1. OVERVIEW

The Stoxx Global Lithium Miners and Producers Index is comprised of companies with high exposure to the lithium industry through lithium miners and compounds manufacturers.
Revere (RBICS) Focus, and Revenue datasets allow detailed breakdown of the revenue sources of the eligible companies, helping this index to select companies with substantial exposure to the lithium industry.

Universe: STOXX Global Lithium Universe index

Weighting scheme: The index is price-weighted with weighting factors based on free-float market capitalization with group and concentration capping.

Base value and date: 1000 on September 18, 2017.

Index types and currencies: Price, Net and Gross return in USD and EUR

Dissemination calendar: STOXX Global calendar

18.19.2. INDEX REVIEW

The free-float market capitalisation of stocks used in selection and weighting the index is adjusted for foreign ownership restrictions in line with STOXX World AC All Cap Index. China A shares in the underlying universe apply a 0.2 multiplier to their FOL adjusted free float, in-line with STOXX World AC All Cap Index.

Selection: The index review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date all stocks in the base universe are screened for the below information:

i. Free-float adjusted market capitalization
ii. 3-month Average Daily Traded Volume (ADTV) in USD
iii. Revenue information, as captured by Revere's industry classification system (RBICS) in RBICS Focus and RBICS revenue datasets.

Indian Stocks are not eligible for inclusion. Stocks that have missing information in any of the fields i), ii), iii) above are excluded from selection.

The screening filters below are then applied on the initial universe, in the order they are listed, such that the selection list constitutes of stocks that:

» **Minimum size:** free-float market capitalization greater than 100 million USD.

» **Minimum liquidity:** have 3-month Average Daily Traded Volume (ADTV) in USD equal to or exceeding 1 million USD.

» **Multiple share lines:** in case a company is present with multiple listings and/or a DR line and/or multiple share classes, if one of the lines is an existing index constituent, it will be retained if no other line from the same company has a 3-month ADTV equal or higher to 1.5 times its 3-month ADTV at a given review period or has had higher 3-month ADTV for past eight consecutive quarters. Otherwise, the most liquid share line will be selected.

» **RBICS Focus L1 classification**: companies have RBICS Focus L1 classification of Non-Energy Materials.

The index constituents are selected form the remaining companies according to the following steps:

1. Tier 1a – Companies categorized as Lithium Ore Mining under RBICS L6 Focus Lithium Ore Mining are selected.

2. Tier 1b – Companies categorized as Lithium Compounds Manufacturing under RBICS L6 Focus Lithium Compounds Manufacturing are selected.

3. Tier 1c – Companies with 50% or more combined revenue exposure from RBICS L6 subindustries of Lithium Ore Mining and Lithium Compounds Manufacturing are selected. If there are fewer than 50 companies after steps 1, 2 and 3, then step 4 below follows.

4. Tier 2: Companies with a combined revenue exposure from RBICS L6 Lithium Ore Mining and Lithium Compounds Manufacturing greater than or equal to 25% but less than 50% are ranked. Companies are selected from highest to lowest revenue exposure until 50 constituents are part of the index or all companies in the ranking are selected.

High Exposure Companies: A company is labelled as a high exposure company if:

- It is selected in Tier 1a, Tier 1b or Tier 1c.
- Companies that are in the top twenty percent in terms of market share. Market share is defined by the percentile ranking of all companies in the underlying universe with combined revenue from RBICS L6 subindustries of Lithium Ore Mining and Lithium Compounds Manufacturing greater than or equal to 1 million USD. High exposure companies apply additional weighting restriction as per Weighting cap factors.

Review frequency: The reviews are conducted on an annual basis in September. On a quarterly basis in March, June and December, the indices are rebalanced. The cut-off date for the underlying data is the last calculation day of February, May, August and November respectively.

Weighting and Weighting factors: Weight factors are calculated quarterly in March, June, September and December. They are published on the second Friday of March, June, September and December, based on the stocks' closing prices of the preceding Thursday, defined as :

Weighting Factor = (1,000,000,000,000 x stock index weight / stock closing price).

Weighting factors are rounded to the nearest integer value. The constituent stock index weight are determined following below process.

18. STOXX THEMATIC INDICES

The index constituents are initially weighted by their free float adjusted market capitalization. It is then assessed against the weight limits (detailed below). Rebalances in March, June and December use the stock tier group and high exposure company labels assigned in previous September review.

After free float adjusted market capitalization, if the high exposure company weighting limit, the tier weight limits or the concentration constraints are not satisfied, the index is first capped by High Exposure Company Limit, then Tier Group Capping. It is subsequently capped by Concentration Capping. If any of the weight limit is not satisfied after the capping, the above capping procedure is repeated until the tier weight limits and the concentration constraints are both satisfied.

<u>High Exposure Companies Limit:</u>
High exposure companies in aggregate is designed to have the most weight of the index. If their weight in aggregate weight is lower than 90%, their weight is set to:

$$[Current\ Company\ Weight] \times \frac{0.9}{[Current\ High\ Exposure\ Companies\ Total\ Weight]}$$

The rest of the index constituents has their weight set to:

$$[Current\ Company\ Weight] \times \frac{0.1}{1 - [Current\ High\ Exposure\ Companies\ Total\ Weight]}$$

<u>Tier Group Weight Limit:</u>

Tier Group	Aggregated Weight Limit
Tier 1a	Min 25%
Tier 1b	Min 25%
Tier 2	Max 25%

If Tier 1a or Tier 1b has fewer than 4 stocks, the corresponding minimum weight limit of the tier group is adjusted to

$$8\% \times [Number\ of\ Constituents\ in\ The\ Tier\ Group].$$

The STOXX Tier Capping applies the tier group weighting limits by assessing the aggregated weight of the tier groups:

- If a tier group in aggregate weighs over the maximum weight limit, all company weights in the tier group are set to

$$[Current\ Company\ Weight] \times \frac{[Max\ Tier\ Weight\ Limit]}{[Current\ Tier\ Weight]};$$

- If a tier group in aggregate weighs below the minimum weight limit, all company weights in the tier group are set to

$$[Current\ Company\ Weight] \times \frac{[Min\ Tier\ Weight\ Limit]}{[Current\ Tire\ Weight]};$$

- The excess weight is redistributed to the rest of the uncapped index constituents proportional to their current weights.

After the capping, if the tier group weighting limits are not satisfied, the above iteration is repeated until it is satisfied.

Concentration Constraint (4.5% / 8% / 45%):
The maximum company weight of the index is no higher than 8% and companies with a weight over 4.5% do not exceed 45% in aggregation.

Companies are first sorted in descending order in terms of their initial weight. Companies with the same initial weights are further ranked by their Free-float adjusted market capitalization, and their capped weights are derived via an iterative process:

- From the top to bottom, each company's weight is assessed. For each company, we assess the cumulative weight of all companies with a weight higher or equal to the company. If the cumulative weight is higher than 45% and the company ranks 6th or below, the company is capped at 4.5%, otherwise it is capped at 8%. The excess weight is redistributed to the rest of the uncapped index constituents, pro-rata to their current weight.

After the iteration, if the (4.5% / 8% / 45%) rule is not satisfied, the above iteration is repeated until is the weighting constraints are satisfied. There is no re-ranking in the subsequent iterations.

When the capping is infeasible, the whole capping procedure is reattempted by increasing the Tier 2 max weight by 5% and the whole capping procedure is reattempted. This is repeated by increasing Tier 2 max weight 5% at a time till the capping is feasible. If the capping remains infeasible after Tier 2 max weight is relaxed to 100%, the whole capping procedure is reattempted by removing the High Exposure Companies Limit.

18.19.3. ONGOING MAINTENANCE

Replacements: A deleted company will not be replaced.

Fast exit: China Connect Securities are monitored on a daily basis. If there is an announcement that a China Connect Security index component is ineligible in the future, then the China Connect Security index component is removed from the index with a two-day notice.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All component are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com.

19. STOXX AI THEMATIC INDICES

19.1. STOXX AI GLOBAL ARTIFICIAL INTELLIGENCE INDICES

19.1.1. OVERVIEW

Artificial intelligence (AI) is the science of creating computer programs and machines that exhibit human-like intelligence and cognitive skills. The STOXX® AI Global Artificial Intelligence Indices are comprised of companies from a wide range of industries that invest heavily in the development of new AI technologies. These companies are therefore considered to be well-positioned to benefit from the increased adoption of AI technologies.

STOXX teamed up with an award-winning AI company, Yewno, whose proprietary AI algorithms, which include machine learning, computational linguistics and knowledge graph techniques, are used to identify the index constituents from the universe of the STOXX® Developed and Emerging Markets Total Market Index. The key criterion used in the selection process is patent filings related to AI IP, thereby identifying AI innovators as well as AI adopters.

Index name	Symbol	Bloomberg ticker	Reuters RIC
STOXX AI Global Artificial Intelligence EUR (Price)	STXAAIP	STXAAIP Index	.STXAAIP
STOXX AI Global Artificial Intelligence EUR (Net Return)	STXAAIR		.STXAAIR
STOXX AI Global Artificial Intelligence EUR (Gross Return)	STXAAIGR	STXAAIGR Index	.STXAAIGR
STOXX AI Global Artificial Intelligence USD (Price)	STXAAIL	STXAAIL Index	.STXAAIL
STOXX AI Global Artificial Intelligence USD (Net Return)	STXAAIV		.STXAAIV
STOXX AI Global Artificial Intelligence USD (Gross Return)	STXAAIGV	STXAAIGV Index	.STXAAIGV
STOXX AI Global Artificial Intelligence ADTV5 EUR (Price)	STXAA5P		.STXAAIP
STOXX AI Global Artificial Intelligence ADTV5 EUR (Net Return)	STXAA5R	STXAAIR Index	.STXAAIR
STOXX AI Global Artificial Intelligence ADTV5 EUR (Gross Return)	STXAA5GR		.STXAAIGR
STOXX AI Global Artificial Intelligence ADTV5 USD (Price)	STXAA5L		.STXAA5L
STOXX AI Global Artificial Intelligence ADTV5 USD (Net Return)	STXAA5V		.STXAA5V
STOXX AI Global Artificial Intelligence ADTV5 USD (Gross Return)	STXAA5GV		.STXAA5GV

Universe: The index universe is defined as all stocks from the STOXX Developed and Emerging Total Market Index as of the last calculation day of the month two months preceding the review month. Any stocks that are removed from the index between that day and the time of index review will not be considered for inclusion in the index.

Weighting scheme: The indices are equal-weighted. In case a company is present with multiple listings in an index, only the most liquid share line will be kept. Weight factors are published on the second Friday of the Review month and based on the stocks' prices of the preceding Thursday.

Base values and dates: 100 on 18 March 2013

Index types and currencies: Price, Net Return, Gross Return in EUR and USD

19.1.2. INDEX REVIEW

For the purposes of the STOXX AI Global Artificial Intelligence Indices, Yewno Inc. calculates two metrics relevant to a company's involvement in the field of Artificial Intelligence:
AI Intellectual Property Exposure is defined as the ratio of the number of AI patents awarded to a company over the most recent 3-year period to the total number of patents awarded to that company over the same period. It provides an indication of the importance AI research and applications to the overall activities of each company.

AI Contribution is defined as the ratio of the number of AI patents awarded to a company over the most recent 3-year period to the total number of AI patents awarded to all companies in the indices' Universe. It provides an indication of the importance of each company's AI research and applications to the overall AI-related activities of other companies in the index Universe.

The companies in the STOXX AI Global Artificial Intelligence indices' universe are screened for all of the following criteria (in the order in which they are listed below):

- **Exposure:** Companies which fall above the 25th percentile in both measures mentioned above (AI Intellectual Property Exposure and AI Contribution) will be included in the indices. For the purposes of calculating the 25th percentile of each measure, companies with a value of zero in that measure will be ignored.
- **Minimum liquidity:** 3-month average daily trading value (ADTV) greater than 1,000,000 EUR (5,000,000 EUR for the STOXX AI Global Artificial Intelligence ADTV5 Index). This filter will be applied after all relevant calculations for the exposure filter above are complete.
- **Multiple share lines:** in case a company is present with multiple listings in an index, only the most liquid share line will be kept

Review frequency: Each index is reviewed quarterly in March, June, September and December. No further capping applies between reviews.

Weighting cap factors:

$$wf_i = \frac{1/N}{p_i} \cdot 10{,}000{,}000{,}000$$

rounded to the closest integer and where:

N = number of companies in the index
p_i = close price in EUR of company i on the Thursday preceding the second Friday of the review month
wf_i = weight factor of company i.

19. STOXX AI THEMATIC INDICES

19.1.3. ONGOING MAINTENANCE

Replacements: Stocks deleted from the STOXX Developed & Emerging TMI are not replaced.
Fast exit: Not applicable
Fast entry: Not applicable
Spin-offs: Spin-offs are not added permanently.
Mergers and takeovers: The original stock is replaced by the surviving stock.

20. STOXX PREMIA INDICES

20.1. EURO STOXX SINGLE PREMIUM INDICES

20.1.1. OVERVIEW

The EURO STOXX Single Premium Indices are based on the EURO STOXX Index and aim to extract factor risk premia on equities while controlling risks and focusing on tradability. The index strategy was developed based on research by Finreon, a provider of innovative asset management solutions and spin-off from the University of St. Gallen. These indices differ from each other by the risk premia they exploit, which consist of the following: Value, Size, Momentum, Residual Momentum, Reversal, Low Risk and Quality.

Universe: The index universe is defined by the parent index, the EURO STOXX Index

Weighting scheme: The indices are price-weighted according to the principle of risk parity

Base values and dates: The following base values and dates apply: 100 on Dec 19, 2003

Index types and currencies: Price, Net Return and Gross Return in EUR, USD and CHF

Dissemination calendar: STOXX Europe calendar

For a complete list please consult the data vendor code sheet on the website[45]. Customized solutions can be provided upon request.

20.1.2. INDEX REVIEW

The data cut-off date for the underlying data is the Friday 4 weeks prior to the review implementation date.

Selection list:
Components are selected from the EURO STOXX index by filtering on various indicators that have been normalized and combined, reflecting the relevant factor premium in each case. Only components with a price history of at least 156 weeks are eligible to be included.

Normalization and Combination
Each factor consists of several indicators. These indicators are calculated from fundamental data or price data. The indicators are standardized as follows:

$$z_i = \frac{S_i - S_{mean}}{\sigma(S)}$$

where
S_i = indicator value for stock i^{th}
S_{mean} = average indicator value of the stocks in the relevant ICB industry or universe
$\sigma(S)$ = standard deviation of the indicator across stocks in the relevant ICB industry or universe

[45] http://www.STOXX.com/download/indices/vendor_codes.xls

20. STOXX PREMIA INDICES

All indicators in a Factor Score must be available for a stock to be included in a single premium index. In order to reduce sensitivity to statistical outliers, values for each indicator that lie below the 5th percentile or above the 95th percentile for that indicator are adjusted to be equivalent to the 5th or 95th percentile respectively before standardisation.

The standardized scores are combined to arrive at an aggregated factor score as follows:

$$Factor\ Score_i^j = \sum_{k=1}^{m} w^k z_i^k$$

Where
m = number of indicators in Factor Score j
z_i^k = standardized indicator k for stock i
w^k = weighting for indicator k with all the weightings summing up to 1, $\sum_{k=1}^{m} w^k = 1$

The target number of components in the relevant EURO STOXX Single Premium Index is set to 1/3 (rounded up to the closest integer) of the eligible stocks. The aggregated Factor Scores are ranked in descending order for value, momentum, residual momentum and quality and in ascending order for size, reversal and low risk indicators. A list composed of the top ranking stocks up to the target number of components and an additional selection buffer of 10% (i.e. target number multiplied by 10% rounded down to the closest integer) is compiled. In order to reduce turnover, current index components that are in this list are selected. Then, as many stocks as necessary to reach the target number of components are selected among the remaining top-ranked stocks in the list.

Factors Calculation

1. VALUE

The underlying value indicators consist of the following:
1. Book Value per Share to Price (B/P)
2. Earnings per Share to Price (E/P)
3. Dividend per Share over last 12 months to Price (D/P)

The indicators are standardized by ICB industry if there are at least 10 eligible stocks within the industry, otherwise the indicators for components in that ICB industry are standardized across all eligible stocks with respect to that factor, and the aggregated Value Score is:

$$Factor\ Score_i^{VALUE} = \frac{1}{2} z_i^{B/P} + \frac{1}{4} z_i^{E/P} + \frac{1}{4} z_i^{D/P}$$

2. SIZE

The underlying size indicators consist of the following:
1. The natural logarithm of the free-float market capitalization (MCAP)
2. The natural logarithm of the company's Total Assets (TA)

The indicators are standardized by ICB industry if there are at least 10 stocks within the industry, otherwise the indicators for components in that ICB Industry are standardized across all eligible stocks with respect to that factor, and the aggregated Size Score is:

$$Factor\ Score_i^{SIZE} = \frac{1}{2} z_i^{MCAP} + \frac{1}{2} z_i^{TA}$$

3. MOMENTUM

The underlying momentum indicators consist of the following:

a) The 52 minus 4 weeks gross return (52-4TR)
b) The 26 minus 4 weeks gross return (26-4TR)

The indicators are standardized across all eligible stocks with respect to that factor the aggregated Momentum Score is:

$$Factor\ Score_i^{MOMENTUM} = \frac{1}{2} z_i^{52-4T} + \frac{1}{2} z_i^{26-4TR}$$

4. RESIDUAL MOMENTUM

The underlying residual momentum indicators consist of the following:

a) The 52 minus 4 weeks standardised residual return (52-4RR), based on CAPM regression over weekly data covering 156 weeks of the component against the reference market
b) The 26 minus 4 weeks standardised residual return (26-4RR), based on CAPM regression over weekly data covering 156 weeks of the component against the reference market

The risk free rate used is the Germany 3m deposit rate. The indicators are standardized across all eligible stocks with respect to that factor and the aggregated Residual Momentum Score is:

$$Factor\ Score_i^{RESIDUAL_MOMENTUM} = \frac{1}{2} z_i^{52-4R} + \frac{1}{2} z_i^{26-4R}$$

5. REVERSAL

The underlying reversal indicators consist of the following:

a) The 260 minus 52 weeks gross return (260-52TR)
b) The 156 minus 52 weeks gross return (156-52TR)

The indicators are standardized across all eligible stocks with respect to that factor and the aggregated Reversal Score is:

$$Factor\ Score_i^{REVERSAL} = \frac{1}{2} z_i^{260-52TR} + \frac{1}{2} z_i^{156-52TR}$$

6. LOW RISK

The underlying low risk indicators consist of the following:

a) Volatility calculated on the basis of weekly gross return data over the previous 156 weeks (VOL)
b) 90% value-at-risk for the weekly gross returns over the previous 156 weeks (VaR). The loss is represented as a positive number.
c) Correlation coefficient between the weekly gross returns of the component against the weekly gross return of the EURO STOXX Index over the previous 156 weeks (CORR)

The indicators are standardized across all eligible stocks with respect to that factor and the aggregated Low Risk Score is:

$$Factor\ Score_i^{LOW_RISK} = \frac{1}{3} z_i^{VOL} + \frac{1}{3} z_i^{VaR} + \frac{1}{3} z_i^{CORR}$$

7. QUALITY

The underlying quality indicators consist of the following:
a) Gross income divided by Total Asset (ROA)
b) Earnings per share divided by revenue per share (NetMargin)

The indicators are standardized by ICB Industry if there are at least 10 eligible stocks within the industry, otherwise the indicators for components in that ICB Industry are standardized across all eligible stocks with respect to that factor, and the aggregated Quality Score is:

$$Factor\ Score_i^{QUALITY} = \frac{1}{2} z_i^{ROA} + \frac{1}{2} z_i^{NetMargin}$$

Optimization

The objective of the optimization is to have a balanced risk contribution of each of the components of the index to overall volatility of the respective EURO STOXX Single Premium Index. The relative contribution to risk is defined as the risk contribution divided by the volatility. The risk contribution of each component is equal to the product of its weight by its marginal risk contribution. The marginal risk contribution corresponds to the change in volatility of the EURO STOXX Single Premium Index induced by a small change in the weight of the component.

The relative contribution to risk (RC) of the ith component is given by the following formula:

$$RC_i = w_i \frac{\left(\frac{\partial \sigma(w)}{\partial w_i}\right)}{\sigma(w)} = w_i \frac{(\sum w)_i}{w' \sum w}$$

σ(w) = Volatility of the EURO STOXX Single Premium Index calculated using weekly gross return times series over a period of 156 weeks
w_i = Weight of component i in the EURO STOXX Single Premium Index
w = Vector composed of all the weights w_i

∑ = Covariance matrix[46] of the components in the EURO STOXX Single Premium Index calculated using weekly gross return times series over a period of 156 weeks

The following optimization is performed to arrive at the weights in accordance with the principles of risk parity:

$$w_t{}^* = argmin_w \left(\sum_i^n \left(RC_i - \frac{1}{n} \right)^2 + (w_t - w_{t-1})' * (w_t - w_{t-1}) + \sum_j 100 * min\left(0, upper\ limit\ constraint\ weight\ j - \sum_i w_{i,t}^j \right)^2 \right)$$

where n is the total number of components in the EURO STOXX Single Premium Index.

The objective function consists of the following 3 terms:

a) $\sum_i^n \left(RC_i - \frac{1}{n} \right)^2$ is the equal risk contribution term
b) $(w_t - w_{t-1})' * (w_t - w_{t-1})$ is the turnover control term where w_t denotes the weight vector of the new components in the current rebalancing period which the objective function is minimizing for and w_{t-1} denotes the weight vector on the cut-off date of the components from the previous rebalancing period
c) The third term is the penalty on the upper limit ICB industry weight and upper limit country weight for the set j of all ICB industries and countries. The upper limit ICB industry weight is defined as min(1.5x EURO STOXX ICB industry weight, EURO STOXX industry weight + 5%) and the upper limit country weight is defined as min(1.5x EURO STOXX country weight, corresponding EURO STOXX country weight + 5%).

This optimization has the following constraints:

1. Each component weight, w_i, should be non-negative and the sum of all the component weights should be equal to 100%
2. Maximum component weight, w_i^{MAX} = min(4%, 20x w_i^{REF}). The reference weight, w_i^{REF}, is defined as 0.5 * w_i^{MktCap} + 0.5 * w_i^{ADTV} normalized to sum to 100%.

$$w_i^{MktCap} = \frac{Market\ Cap_i}{\sum_{j=1}^n Market\ Cap_j}$$

$$w_i^{ADTV} = \frac{ADTV_i}{\sum_{j=1}^n ADTV_j}$$

where
Market Cap_i is the 52-week average of the weekly closing free-float market capitalization of component i,
$ADTV_i$ is the 52-week average of the 5-day average traded volume of component i,

[46] The covariance matrix is denoised using Random Matrix Theory

3. Minimum ICB industry weight of min(sum of wiMAX of the components within this ICB industry, max(0.5x EURO STOXX ICB industry weight, EURO STOXX ICB industry weight – 5%)).
4. Minimum country weight of min(sum of w_i^{MAX} of the components within this country, max(0.5x EURO STOXX country weight, EURO STOXX country weight – 5%)).

Composition list: Variable number of constituents depending on the selection and optimization process

Review frequency: The review are conducted on a quarterly basis in March, June, September and December, together with the parent EURO STOXX index.

Weighting cap factors: weight * (100,000,000,000 / closing price of the stock), rounded to integers based on the closing prices on the Thursday prior to the second Friday of the review month.

20.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.
Fast exit: Not applicable.
Fast entry: Not applicable.
Spin-offs: Spin-offs are not added permanently.
Corporate Actions: All component are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

21. STOXX FACTOR INDICES

21.1. STOXX FACTOR INDICES

21.1.1. OVERVIEW

STOXX single and multi-factor indices aim to harvest the risk premia of several academically validated style factors – Value, Momentum, Quality, Size and Low Risk. At the same time the index rules ensure tradability and diversification as well as limit untargeted systematic exposures.
STOXX uses Axioma's risk model and optimizer to construct the factor indices. The STOXX single and multi-factor indices are based on the respective STOXX country or regional benchmark indices. STOXX uses Axioma's risk model and optimizer to construct the factor indices.

Universe: The constituents of the STOXX single and multi-factor indices are selected from the respective STOXX country and regional benchmark indices.

Factor Index	Parent Index
STOXX USA 500 Ax Value	STOXX USA 500
STOXX USA 500 Ax Momentum	
STOXX USA 500 Ax Quality	
STOXX USA 500 Ax Low Risk	
STOXX USA 500 Ax Size	
STOXX USA 500 Ax Multi-Factor	
STOXX USA 900 Ax Value	STOXX USA 900
STOXX USA 900 Ax Momentum	
STOXX USA 900 Ax Quality	
STOXX USA 900 Ax Low Risk	
STOXX USA 900 Ax Size	
STOXX USA 900 Ax Multi-Factor	
STOXX Global 1800 Ax Value	STOXX Global 1800
STOXX Global 1800 Ax Momentum	
STOXX Global 1800 Ax Quality	
STOXX Global 1800 Ax Low Risk	
STOXX Global 1800 Ax Size	
STOXX Global 1800 Ax Multi-Factor	
STOXX Global 1800 ex USA Ax Value	STOXX Global 1800 ex USA
STOXX Global 1800 ex USA Ax Momentum	
STOXX Global 1800 ex USA Ax Quality	
STOXX Global 1800 ex USA Ax Low Risk	
STOXX Global 1800 ex USA Ax Size	
STOXX Global 1800 ex USA Ax Multi-Factor	
STOXX Europe 600 Ax Value	STOXX Europe 600
STOXX Europe 600 Ax Momentum	
STOXX Europe 600 Ax Quality	
STOXX Europe 600 Ax Low Risk	
STOXX Europe 600 Ax Size	
STOXX Europe 600 Ax Multi-Factor	
STOXX Asia/Pacific 600 Ax Value	STOXX Asia/Pacific 600
STOXX Asia/Pacific 600 Ax Momentum	

21. STOXX FACTOR INDICES

STOXX Asia/Pacific 600 Ax Quality	
STOXX Asia/Pacific 600 Ax Low Risk	
STOXX Asia/Pacific 600 Ax Size	
STOXX Asia/Pacific 600 Ax Multi-Factor	
STOXX Japan 600 Ax Value	
STOXX Japan 600 Ax Momentum	
STOXX Japan 600 Ax Quality	STOXX Japan 600
STOXX Japan 600 Ax Low Risk	
STOXX Japan 600 Ax Size	
STOXX Japan 600 Ax Multi-Factor	

Weighting scheme: The constituents are weighted to maximize the exposure to the required target factor subject to a set of constraints.

Base values and dates: 100 on March 19, 2012

Index types and currencies: Price, net return, gross return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website.

Dissemination calendar: STOXX Americas calendar (Global, Global ex USA, USA), STOXX Europe calendar (Europe) and STOXX Global calendar (Asia/Pacific, Japan)

21.1.2. INDEX REVIEW

Constituent selection and weighting: The portfolio construction is performed using Axioma's portfolio optimization software using the corresponding Axioma regional medium horizon fundamental equity factor risk model.

The objective is to maximize the exposure to the target factors. The factors are defined in the following way:

Factor	Definition based on Axioma risk model (RM) factors
Value	1/3 RM Value + 2/3 RM Earning Yield
Momentum	RM Medium-Term Momentum
Quality	3/4 RM Profitability - 1/4 RM Leverage
Size	- RM Size
Low Risk	- 1/2 RM Market Sensitivity - 1/2 RM Volatility
Multi-Factor	Equal weight of above 5 factors

The following constraints aim to ensure tradability, diversification, as well as control for unintended systematic exposures:

Target	Constraint
Individual capping	4.5% / min (20x parent index weight, 8%) / 35%, minimum 3 bps in post-processing
Effective number of constituents	At least 30% of parent index
Max. number of constituents	Max(Min(constituents in parent index / 4, 500), 80)
Country/industry exposure	Within 5% of parent index
Tracking error	Within 5% w.r.t. parent index

Liquidity	Weighted Days to Trade of 2 least liquid quintiles limited to be less than 10 times of parent index
Maximum turnover	12.5% one-way on a quarterly basis
Tradability	Freeze weights of stocks with zero/missing volume
Untargeted style factors exposure (single factor indices only)	Within 0.25 standard deviations of parent index
Outliers (multi-factor index only)	No overweight w.r.t. parent index in companies that are in the 5% worst exposure group for each targeted RM factor
Factor backstop exposures (multi-factor index only)	No negative exposure in any of the targeted risk model factors

Individual capping: We apply constraints such that maximum weights (5% / 10% / 40%) are not exceeded at index review, whereby the weight of a constituent cannot exceed 10% and the sum weight of those constituents above 5% cannot exceed 40%. By applying even tighter constraints (4.5% / 8% / 35%), we reduce the likelihood of breaching these thresholds, and reduce the gravity of the breaches if and when they occur.
In addition, individual weights cannot be greater than 20 times the company's weight in the corresponding parent benchmark.
In a post-processing step, after the optimization, components with a weight less 3bps are removed.

Effective number of constituents: The effective number of constituents of an index is defined as the inverse of its Herfindahl index:

$$E = \frac{1}{\sum w^2}$$

which provides a measure of the number of constituents that affect a portfolio. The constraint ensures that the optimization procedure does not result in too many constituents with insignificant weights. The constraint is defined as follows:

$$E_{Factor} \geq 30\% \cdot E_{Parent}$$

Max. number of constituents: The maximum number of constituents in the factor index is limited by:

$$|F| \leq \mathrm{Max}\left(\mathrm{Min}\left(\frac{|BM|}{4}, 500\right), 80\right)$$

where

$\lvert F \rvert$	= number of constituents in the factor index
$\lvert BM \rvert$	= number of constituents in the corresponding parent index

Country/industry exposure: The exposure to each country and industry is summed up for the parent index, and the percentage exposure of the factor indices must lay within 5 percentage points.

Tracking error: The tracking error of the indices with regards to their parent indices is constrained to a maximum of 5%.

Liquidity: Recognizing that factor exposure maximization process may lead to holding less liquid stocks, the minimum liquidity requirement ensures that there is no material buildup in illiquid positions in certain segments of the portfolio.
The weighted average days-to-trade d_s for a given set of components S is defined as:

$$d_S = \sum_{i \in S} w_i \cdot \frac{w_i \cdot N}{ADV_i}$$

where w_i represents the weight for component i, N the portfolio notional value and MDV_i represents its median 60-day daily traded value.

Components in the parent index are ranked by traded value and liquidity constraints are imposed on components in the two least liquid quintiles. For each of these quintiles Q the weighted average days to trade of the positions therein is required to be no more than 10 times the weighted average days to trade of the same stocks held at corresponding parent index weights.

$$\sum_{i \in Q} w_i \cdot \frac{w_i \cdot N}{MDV_i} \leq \gamma \cdot \sum_{i \in Q} b_i \cdot \frac{b_i \cdot N}{MDV_i}$$

The parameter γ is set to 10 to ensure that an allocation to the factor indices does not take longer to be implemented than ten times compared to an equally sized allocation to the parent index.
b_i represents weights in the corresponding parent index.

Maximum turnover: The indices have a 12.5% one-way turnover constraint, or 25% two-way. This means up to 12.5% of the portfolio is sold in order to purchase other constituents (hence absolute maximum annual turnover is 100%).

Tradability: The weight in the factor index of components with zero or missing volume (as for example for suspended stocks) is frozen.

Untargeted style factors (single-factor indices only): The parent index' exposure to each factor is computed and the single factor index is constrained to be within a quarter standard deviation of that. These constraints make sure the index is closely related in structure to the parent index for the style factors that are not being targeted.

Outliers (multi-factor index only): The multi-factor index will not hold any overweight in constituents in the worst 5% with respect to the targeted style factors.

Factor backstop exposures (multi-factor index only): The parent index' exposure to each factor is computed and the multi-factor index will not hold negative exposures to any of the targeted style factors.

Constraint Hierarchy: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively in the following order: 1) Liquidity, 2) Turnover, 3) Tradability. If still no feasible solution is found, the maximum number of components bound is relaxed by increments of 20 until a solution is found.

21. STOXX FACTOR INDICES

Review frequency: The indices are reviewed on a quarterly basis in March, June, September and December together with the respective parent index. The review cut-off date for risk model data is the second Friday of the review month.

21.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

21. STOXX FACTOR INDICES

21.2. STOXX ESG-X FACTOR INDICES

21.2.1. OVERVIEW

STOXX single and multi-factor indices aim to harvest the risk premia of several academically validated style factors – Value, Momentum, Quality, Size and Low Risk. At the same time the index rules ensure tradability and diversification as well as limit untargeted systematic exposures.
STOXX uses Axioma's risk model and optimizer to construct the factor indices. The STOXX ESG-X single and multi-factor indices are based on the respective STOXX ESG-X country or regional benchmark indices. STOXX uses Axioma's risk model and optimizer to construct the factor indices.

Universe: The constituents of the STOXX ESG-X single and multi-factor indices are selected from the respective STOXX ESG-X country and regional benchmark indices.

Factor Index	Parent Index
STOXX USA 500 ESG-X Ax Value	STOXX USA 500 ESG-X
STOXX USA 500 ESG-X Ax Momentum	
STOXX USA 500 ESG-X Ax Quality	
STOXX USA 500 ESG-X Ax Low Risk	
STOXX USA 500 ESG-X Ax Size	
STOXX USA 500 ESG-X Ax Multi-Factor	
STOXX USA 900 ESG-X Ax Value	STOXX USA 900 ESG-X
STOXX USA 900 ESG-X Ax Momentum	
STOXX USA 900 ESG-X Ax Quality	
STOXX USA 900 ESG-X Ax Low Risk	
STOXX USA 900 ESG-X Ax Size	
STOXX USA 900 ESG-X Ax Multi-Factor	
STOXX Global 1800 ESG-X Ax Value	STOXX Global 1800 ESG-X
STOXX Global 1800 ESG-X Ax Momentum	
STOXX Global 1800 ESG-X Ax Quality	
STOXX Global 1800 ESG-X Ax Low Risk	
STOXX Global 1800 ESG-X Ax Size	
STOXX Global 1800 ESG-X Ax Multi-Factor	
STOXX Europe 600 ESG-X Ax Value	STOXX Europe 600 ESG-X
STOXX Europe 600 ESG-X Ax Momentum	
STOXX Europe 600 ESG-X Ax Quality	
STOXX Europe 600 ESG-X Ax Low Risk	
STOXX Europe 600 ESG-X Ax Size	
STOXX Europe 600 ESG-X Ax Multi-Factor	
STOXX Asia/Pacific ESG-X 600 Ax Value	STOXX Asia/Pacific 600 ESG-X
STOXX Asia/Pacific ESG-X 600 Ax Momentum	
STOXX Asia/Pacific ESG-X 600 Ax Quality	
STOXX Asia/Pacific ESG-X 600 Ax Low Risk	
STOXX Asia/Pacific ESG-X 600 Ax Size	
STOXX Asia/Pacific ESG-X 600 Ax Multi-Factor	
STOXX Japan 600 ESG-X Ax Value	STOXX Japan 600 ESG-X
STOXX Japan 600 ESG-X Ax Momentum	

21. STOXX FACTOR INDICES

STOXX Japan 600 ESG-X Ax Quality
STOXX Japan 600 ESG-X Ax Low Risk
STOXX Japan 600 ESG-X Ax Size
STOXX Japan 600 ESG-X Ax Multi-Factor

Weighting scheme: The constituents are weighted to maximize the exposure to the required target factor subject to a set of constraints.

Base values and dates: 100 on March 19, 2012

Index types and currencies: Price, net return, gross return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website.

Dissemination calendar: STOXX Americas calendar (Global, USA), STOXX Europe calendar (Europe) and STOXX Global calendar (Asia/Pacific, Japan)

21.2.2. INDEX REVIEW

Constituent selection and weighting: The portfolio construction is performed using Axioma's portfolio optimization software using the corresponding Axioma regional medium horizon fundamental equity factor risk model.

The objective is to maximize the exposure to the target factors. The factors are defined in the following way:

Factor	Definition based on Axioma risk model (RM) factors
Value	1/3 RM Value + 2/3 RM Earning Yield
Momentum	RM Medium-Term Momentum
Quality	3/4 RM Profitability - 1/4 RM Leverage
Size	- RM Size
Low Risk	- 1/2 RM Market Sensitivity - 1/2 RM Volatility
Multi-Factor	Equal weight of above 5 factors

The following constraints aim to ensure tradability, diversification, as well as control for unintended systematic exposures:

Target	Constraint
Individual capping	4.5% / min (20x parent index weight, 8%) / 35%, minimum 3 bps in post-processing
Effective number of constituents	At least 30% of parent index
Max. number of constituents	Max(Min(constituents in parent index / 4, 500), 80)
Country/industry exposure	Within 5% of parent index
Tracking error	Within 5% w.r.t. parent index
Liquidity	Weighted Days to Trade of 2 least liquid quintiles limited to be less than 10 times of parent index
Maximum turnover	12.5% one-way on a quarterly basis
Tradability	Freeze weights of stocks with zero/missing volume
Untargeted style factors exposure (single factor indices only)	Within 0.25 standard deviations of parent index

21. STOXX FACTOR INDICES

Outliers (multi-factor index only)	No overweight w.r.t. parent index in companies that are in the 5% worst exposure group for each targeted RM factor
Factor backstop exposures (multi-factor index only)	No negative exposure in any of the targeted risk model factors

Individual capping: We apply constraints such that maximum weights (5% / 10% / 40%) are not exceeded at index review, whereby the weight of a constituent cannot exceed 10% and the sum weight of those constituents above 5% cannot exceed 40%. By applying even tighter constraints (4.5% / 8% / 35%), we reduce the likelihood of breaching these thresholds, and reduce the gravity of the breaches if and when they occur.
In addition, individual weights cannot be greater than 20 times the company's weight in the corresponding parent benchmark.
In a post-processing step, after the optimization, components with a weight less 3bps are removed.

Effective number of constituents: The effective number of constituents of an index is defined as the inverse of its Herfindahl index:

$$\mathrm{E} = \frac{1}{\sum \mathrm{w}^2}$$

which provides a measure of the number of constituents that affect a portfolio. The constraint ensures that the optimization procedure does not result in too many constituents with insignificant weights. The constraint is defined as follows:

$$\mathrm{E}_{\mathrm{Factor}} \geq 30\% \cdot \mathrm{E}_{\mathrm{Parent}}$$

Max. number of constituents: The maximum number of constituents in the factor index is limited by:

$$|\mathrm{F}| \leq \mathrm{Max}\left(\mathrm{Min}\left(\frac{|\mathrm{BM}|}{4}, 500\right), 80\right)$$

where

$\lvert\mathrm{F}\rvert$	= number of constituents in the factor index
$\lvert\mathrm{BM}\rvert$	= number of constituents in the corresponding parent index

Country/industry exposure: The exposure to each country and industry is summed up for the parent index, and the percentage exposure of the factor indices must lay within 5 percentage points.

Tracking error: The tracking error of the indices with regards to their parent indices is constrained to a maximum of 5%.

Liquidity: Recognizing that factor exposure maximization process may lead to holding less liquid stocks, the minimum liquidity requirement ensures that there is no material buildup in illiquid positions in certain segments of the portfolio.
The weighted average days-to-trade d_s for a given set of components S is defined as:

$$d_S = \sum_{i \in S} w_i \cdot \frac{w_i \cdot N}{ADV_i}$$

where w_i represents the weight for component i, N the portfolio notional value and MDV_i represents its median 60-day daily traded value.

Components in the parent index are ranked by traded value and liquidity constraints are imposed on components in the two least liquid quintiles. For each of these quintiles Q the weighted average days to trade of the positions therein is required to be no more than 10 times the weighted average days to trade of the same stocks held at corresponding parent index weights.

$$\sum_{i \in Q} w_i \cdot \frac{w_i \cdot N}{MDV_i} \leq \gamma \cdot \sum_{i \in Q} b_i \cdot \frac{b_i \cdot N}{MDV_i}$$

The parameter γ is set to 10 to ensure that an allocation to the factor indices does not take longer to be implemented than ten times compared to an equally sized allocation to the parent index. b_i represents weights in the corresponding parent index.

Maximum turnover: The indices have a 12.5% one-way turnover constraint, or 25% two-way. This means up to 12.5% of the portfolio is sold in order to purchase other constituents (hence absolute maximum annual turnover is 100%).

Tradability: The weight in the factor index of components with zero or missing volume (as for example for suspended stocks) is frozen.

Untargeted style factors (single-factor indices only): The parent index' exposure to each factor is computed and the single factor index is constrained to be within a quarter standard deviation of that. These constraints make sure the index is closely related in structure to the parent index for the style factors that are not being targeted.

Outliers (multi-factor index only): The multi-factor index will not hold any overweight in constituents in the worst 5% with respect to the targeted style factors.

Factor backstop exposures (multi-factor index only): The parent index' exposure to each factor is computed and the multi-factor index will not hold negative exposures to any of the targeted style factors.

Constraint Hierarchy: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively in the following order: 1) Liquidity, 2) Turnover, 3) Tradability. If still no feasible solution is found, the maximum number of components bound is relaxed by increments of 20 until a solution is found.

Review frequency: The indices are reviewed on a quarterly basis in March, June, September and December together with the respective parent index. The review cut-off date for risk model data is the second Friday of the review month.

21.2.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

21.3. STOXX INDUSTRY NEUTRAL FACTOR INDICES

21.3.1. OVERVIEW

STOXX industry neutral single and multi-factor indices aim to harvest the risk premia of several academically validated style factors – Value, Momentum, Quality, Size and Low Risk within each ICB industry. At the same time the rules ensure tradability and diversification as well as limit untargeted systematic exposures.
STOXX uses Axioma's risk model and optimizer to construct the industry neutral factor indices. The STOXX industry neutral single and multi-factor indices are based on the respective STOXX country or regional benchmark indices.

Universe: The constituents of the STOXX industry-neutral single and multi-factor indices are selected from the respective STOXX country and regional benchmark indices.

Index	Parent Index
STOXX USA 500 Industry Neutral Ax Value	STOXX USA 500
STOXX USA 500 Industry Neutral Ax Size	
STOXX USA 500 Industry Neutral Ax Quality	
STOXX USA 500 Industry Neutral Ax Multi-Factor	
STOXX USA 500 Industry Neutral Ax Momentum	
STOXX USA 500 Industry Neutral Ax Low Risk	
STOXX Europe 600 Industry Neutral Ax Value	STOXX Europe 600
STOXX Europe 600 Industry Neutral Ax Size	
STOXX Europe 600 Industry Neutral Ax Quality	
STOXX Europe 600 Industry Neutral Ax Multi-Factor	
STOXX Europe 600 Industry Neutral Ax Momentum	
STOXX Europe 600 Industry Neutral Ax Low Risk	

Weighting scheme: The constituents are weighted to maximize the exposure to the required target factor subject to a set of constraints.

Base values and dates: 100 on March 19, 2012

Index types and currencies: Price, net return, gross return in EUR and USD.
For a complete list please consult the data vendor code sheet on the website.

Dissemination calendar: STOXX Americas calendar (USA) and -STOXX Europe calendar (Europe)

21.3.2. INDEX REVIEW

Constituent selection and weighting: The portfolio construction is performed using Axioma's portfolio optimization software using the respective Axioma regional medium horizon fundamental factor risk model.

21. STOXX FACTOR INDICES

The objective is to maximize the exposure to the target factors. The factors are defined in the following way:

Factor	Definition based on Axioma risk model (RM) factors
Value	1/3 RM Value + 2/3 RM Earning Yield
Momentum	RM Medium-Term Momentum
Quality	3/4 RM Profitability - 1/4 RM Leverage
Size	- RM Size
Low Risk	- 1/2 RM Market Sensitivity - 1/2 RM Volatility
Multi-Factor	Equal weight of above 5 factors

The following constraints aim to ensure tradability, diversification, as well as control for unintended systematic exposures:

Target	Constraint
Individual capping	4.5% / min (20x parent index weight, 8%) / 35%. minimum 3 bps in post-processing
Effective number of constituents	At least 30% of parent index
Max. number of constituents	Max(Min(constituents in parent index / 4, 500), 80)
Country exposure	Within 5% of parent index
Industry exposure	Within 0.01% of parent index
Tracking error	Within 5% w.r.t. parent index
Liquidity	Weighted Days to Trade of 2 least liquid quintiles limited to be less than 10 times of parent index
Maximum turnover	12.5% one-way on a quarterly basis
Untargeted style factors exposure (single factors only)	Within 0.25 standard deviations of parent index
Outliers (multi-factor only)	No overweight w.r.t. parent index of 5% worst exposure companies.
Factor backstop exposures (multi-factor only)	No negative exposure in any of the targeted risk model factors

Individual capping: We apply constraints such that maximum weights (5% / 10% / 40%) are not exceeded at index review, whereby the weight of a constituent cannot exceed 10% and the sum weight of those constituents above 5% cannot exceed 40%. By applying tighter constraints, we reduce the chance of breaching these thresholds, and reduce the gravity of the breaches if and when they occur.
There is the additional limit that the individual weights cannot be greater than 20 times the company's weight in the corresponding parent benchmark.
If the parent index itself does not satisfy the individual capping constraints those are not enforced on the corresponding single and multi-factor indices.

Effective number of constituents: The effective number of constituents of an index is the value, H, defined as:

$$H = \frac{1}{\sum w^2}$$

which gives an accurate measure of the number of constituents that affect a portfolio. The number of constituents in an index that is weighted by optimization must be defined, so that the optimization process does not result in too many constituents with insignificant weights.
The constraint is defined as follows:

$$\mathrm{H}_{\mathrm{MinVar}} \geq \mathrm{H}_{\mathrm{Base}} \cdot 30\%$$

Max number of constituents: The maximum number of constituents in the index is limited to:

$$|\mathrm{F}| \leq \mathrm{Max}\left(\mathrm{Min}\left(\frac{|\mathrm{BM}|}{4}, 500\right), 80\right)$$

where
|F| = number of constituents in the respective single and multi-factor indices
|BM| = number of constituents in the corresponding parent index

Country exposure: The exposure to each country is summed up for the parent index, and the percentage exposure of the indices must lay within 5% of those numbers

Industry exposure: The exposure to each ICB industry (level 1) is summed up for the parent index, and the percentage exposure of the indices must lay within +/-0.01% of those numbers, i.e. industry neutrality

Tracking error: The tracking error of the indices with regards to their parent indices is constrained to a maximum of 5%.

Liquidity: Recognizing that factor exposure maximization process may lead to holding less liquid stocks, the minimum liquidity requirement ensures that there is no material buildup in illiquid positions in certain segments of the portfolio.

The weighted average days-to-trade d_s for a given group of components S are defined as:

$$d_S = \sum_{i \in S} w_i \cdot \frac{w_i \cdot N}{ADV_i}$$

where w_i represents the weight for component i, N the portfolio notional value and ADV_i represents its average 20-day average daily volume.

Components in the parent index are ranked by trading volume. and liquidity constraints are imposed on components in the two least liquid quintiles. For each of these quintiles Q. the weighted average days to trade of the positions therein is required to be no more than 10 times the weighted average days to trade of the same stocks held at corresponding parent index weights.

$$\sum_{i \in Q} w_i \cdot \frac{w_i \cdot N}{ADV_i} \leq \gamma \cdot \sum_{i \in Q} b_i \cdot \frac{b_i \cdot N}{ADV_i}$$

The parameter γ is set to 10 to ensure that an allocation to the factor indices does not take longer to implement than ten times compared to an equally sized allocation to the parent index.

b_i represents weights in the corresponding parent index.

Maximum turnover: The indices have a 12.5% one-way turnover constraint, or 25% two-way. This means up to 12.5% of the portfolio is sold in order to purchase other constituents (absolute maximum annual turnover is 100%).

Untargeted style factors (single factor indices only): The parent index' exposure to each factor is computed and the single factor index is constrained to be within a quarter standard deviation of that. These constraints make sure the index is closely related in structure to the parent index for the style factors that are not being targeted.

Outliers (multi-factor only): The multi-factor index will not hold any overweight in constituents in the worst 5% with respect to the targeted style factors

Factor backstop exposures (multi-factor only): The parent index' exposure to each factor is computed and the multi-factor index will not hold negative exposures to any of the targeted style factors

If a solution that satisfies the above constraints cannot be found, the maximum number of constituents can be increased by 20 until a solution is found.

Review frequency: The index is reviewed quarterly together with the parent index (implementation after the close of the third Friday and effective the next dissemination day in March, June, September and December). The review cut-off dates for Parent Index and Axioma Risk Model data are the second Friday of the review month.

Weighting cap factors: The weighting factors are calculated based on closing prices in EUR (p_i) from the 2nd Friday of the review month. Weighting factor = (1,000,000,000 x w_i / p_i), rounded to the nearest integer.

21.3.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently.

21.4. STOXX EQUITY FACTOR INDEX FAMILY

21.4.1. OVERVIEW

The STOXX Equity Factor Index Family are constructed by maximizing the index exposure to a multi-factor alpha signal while satisfying a set of constraints intended to closely track their parent indices.

Universe:

The constituents of the Equity Factor Indices are selected from their respective parent indices listed below.

Index	Parent Index
STOXX U.S. Equity Factor	STOXX USA 900
STOXX International Equity Factor	STOXX Global 1800 ex USA
STOXX U.S. Small-Cap Equity Factor	STOXX US Small Cap
STOXX Emerging Markets Equity Factor	STOXX Emerging Markets
STOXX International Small-Cap Equity Factor	STOXX International Developed Markets Small Cap
STOXX Global Equity Factor	STOXX World AC

Weighting scheme: The final index weights are the result of an optimization process. The indices are optimized to maximize exposure to select factors subject to constraints.

Base values and Base dates: For a complete list please consult the data vendor code sheet on the website.[47]

Index types and currencies: Price, net and gross return in USD and EUR.

Dissemination calendar: STOXX US Calendar for STOXX U.S. Equity Factor Index and STOXX U.S. Small-Cap Equity Factor Index, and STOXX Global Calendar for STOXX International Equity Factor Index, STOXX Emerging Markets Equity Factor Index, STOXX International Small-Cap Equity Factor Index and STOXX Global Equity Factor Index

21.4.2. FACTOR DEFINITIONS

The Multi-Factor Alpha Signal is derived from sixteen Signals, which are combined to create 5 Factors - **Momentum**, **Quality**, **Value**, **Low Volatility**, and **Size**. The Factors are combined to create a Multi-Factor Alpha Signal, as described below.

The Momentum Factor is a composite of the following 3 Signals: **Earnings Announcement Drift**, **Earnings Momentum**, and **Price Momentum**.

- **Earnings Announcement Drift** is given by the sum of idiosyncratic returns from the Axioma Risk Model on the most recent earnings announcement date and the next business day. Idiosyncratic returns are defined as a stock's local currency return minus

[47] http://www.STOXX.com/download/indices/vendor_codes.xls

the portions attributable to the Axioma Risk Model's non-currency common factors. Resulting values are truncated at +/-15% and smoothed using an exponentially weighted moving average (EWMA) with a half-life of 6 months.

- **Earnings Momentum** is given by the sum of the number of EPS upgrades for the current (FY1) and following (FY2) fiscal years minus the sum of the FY1 and FY2 EPS downgrades for the current and following fiscal years, all divided by the sum of the total number of FY1 and FY2 EPS estimates. The signal is smoothed using an EWMA with a half-life of 6 months. Stocks with resulting ratio greater than 1.0 are treated as missing values in the calculation of the score.

- **Price Momentum** is given by the sum of monthly local currency returns over the 12 complete months prior to the review cut-off date, excluding the latest month. The signal is smoothed using an EWMA with a half-life of 1 month.

Each Signal is z-scored using the Parent Index weights and truncated at +/- 3 standard deviations. The Momentum Factor combines the Signals at 25%, 50% and 25% weights, respectively, and is again z-scored and truncated at +/-3 standard deviations.

The Quality Factor is a composite of the following 6 Signals: **Accruals**, **Dilution**, **Gross Profitability**, **Change in Net Operating Assets (NOA)**, **Carbon Emissions Intensity**, and **Science Based Targets (SBTI)**.

- **Accruals** is given by the monthly change in operating assets minus the monthly change in total liabilities, all divided by the 36-month rolling average of total assets and multiplied by -1.0. Values are truncated at -12% and 20%. The signal is smoothed using an EWMA with a half-life of 24 months.

- **Dilution** is given by the negative of the relative monthly change in total shares outstanding, adjusted for any corporate actions. Values are truncated at +/- 50%. The signal is smoothed using an EWMA with a half-life of 24 months.

- **Gross Profitability** is given by the revenues minus the cost of goods sold, all divided by total assets, where all 3 quantities are all greater than 0. Values are truncated at the 2nd and 98th percentiles. No EWMA smoothing is applied.

- **Change in NOA** is given by the negative of the monthly change in net operating assets divided by the 36-month rolling average of total assets, with net operating assets calculated as the monthly delta in operating assets (total assets minus cash) minus the monthly delta in liabilities (total liabilities minus debt). Values are truncated at -5% and 10%. The signal is smoothed using an EWMA with a half-life of 60 months.

- **Carbon Emissions Intensity** is given by the negative of carbon emissions intensity (Scope 1 and Scope 2 tons of carbon divided by revenues) in USD, as reported by ISS.
- **SBTI** is constructed by combining two signals as reported by ISS.

  If ClimateGHGReductionTargets = "Approved SBT", then SBTI = 2;
  If ClimateGHGReductionTargets = "Committed SBT", then SBTI = 1;

If ClimateGHGReductionTargets = “Ambitious Target”, then SBTI = 1;
If ClimateGHGReductionTargets = “Non-Ambitious Target”, then SBTI = 0;
Otherwise, SBTI = -1.

Signals are z-scored (apart from SBTI) using the Parent Index weights and outliers are truncated at +/- 3 standard deviations. For Carbon Emission Intensity in particular, values are z-scored relative to each stock’s ICB Supersector. The Quality Factor combines the Signals at 20%, 20%, 20%, 20%, 13%, and 7% weights, respectively, and is again z-scored and truncated.

The Value Factor is a composite of the following 5 Signals: **Book to Price**, **Cash Flow Yield**, **Time Series Normalized Cash Flow Yield**, **Dividend Yield** and **Earnings Yield**.

- **Book to Price** is given by the latest book value divided by the total market capitalization.
- **Cash Flow Yield** is given by the latest 12-month cash flow divided by the total market capitalization. Values are truncated at +/- 0.35. The signal is smoothed using an EWMA with a half-life of 3 months.
- **Time Series Normalized Cash Flow Yield is** derived by first computing Cash Flow Yield as described above without the truncation and EWMA. Then, for each stock, z-scoring relative to its own time series, by subtracting its EWMA with a half-life of 36 months, then dividing by its exponentially weighted standard deviation, also using a half-life of 36 month. Finally, the signal is then smoothed using an EWMA with a half-live of 1 month.
- **Dividend Yield** is given by the latest 12-month trailing dividend divided by the total market capitalization.
- **Earnings Yield** is given by the latest 12-month net income divided by the total market capitalization.

Signals are z-scored using the Parent Index weights and outliers are truncated at +/- 3 standard deviations. The Value Factor combines the 5 Signals equally at 20% weights and is again z-scored and truncated.

The Low Volatility Factor is given by the standard deviation of monthly total returns in local currency, calculated over the 12 complete months prior to the review cut-off date. Stock level volatilities are exponentially smoothed twice using an EWMA with half-lives of 1-month and then 2-months. Values are then multiplied by -1 and are converted to percentage ranks within the eligible universe and truncated at the 1st and 99th percentiles. The percentage ranks are then transformed into scores using the inverse of cumulative normal distribution and are truncated at +/- 3 standard deviations

The Size Factor is given by the negative of the natural logarithm of the total market capitalization in USD. Values are z-scored and truncated at +/- 3 standard deviations.

Individual signal z-scores are set to 0 where data is missing.

21. STOXX FACTOR INDICES

The Multi-Factor Alpha Signal is created by combining the following Factors with respective weights per index:

STOXX U.S. Equity Factor Index, STOXX International Equity Factor Index, STOXX Emerging Markets Equity Factor Index, STOXX Global Equity Factor Index: 36% Quality, 27% Momentum, 27% Value, 5% Low Volatility and 5% Low Size.

STOXX U.S. Small-Cap Equity Factor Index and STOXX International Small-Cap Equity Factor Index: 35% Quality, 30% Momentum, 30% Value, 5% Low Volatility.

Finally, the Multi-Factor Alpha Signal is smoothed using an EWMA with a half-life of 12 months and then values are multiplied by each stock's corresponding idiosyncratic volatility from the Axioma Risk Model.

21.4.3. INDEX REVIEW

Constituent selection: The portfolio construction is performed using Axioma's portfolio optimization software.

The objective of the optimization problem is to maximize the exposure of the portfolio to the Multi-Factor Alpha, as described above.

The following constraints are enforced to ensure diversification and control for unintended systematic exposures and turnover.

Target	Constraint
Minimum weight	Max (0%, Parent Index Weight - 2%)
Minimum non-zero (threshold) weight	1 bp
Maximum weight	Min (Parent Index Weight + 2%, 20 * Parent Index Weight)
Maximum issuer weight	10%
Maximum sum of issuers > 4.5%	22.5%
Predicted Beta	Between 0.98 and 1.02
Active sector (ICB Level 1) exposures	Within 2% of Parent Index
Active country exposures	Within 5% of Parent Index
Active signal exposures	0.2 < Quality < 0.5 0.2 < Momentum < 0.4 0 < Value < 0.4 0 < Low Volatility < 0.4 0 < Size < 0.4*
Turnover	Maximum 5% one way per quarter
Ex-Ante Tracking Error	Maximum 100 bps
Percentile days to trade/liquidity constraint**	Maximum bound using Percentile=10%, Strength=20 parameters
Do Not Trade	Names with zero 60d MDV

*Size constraint not applicable to STOXX U.S. Small-Cap Equity Factor Index and STOXX International Small-Cap Equity Factor Index

** Liquidity constraint only applicable to STOXX U.S. Small-Cap Equity Factor Index, STOXX Emerging Markets Equity Factor Index, STOXX International Small-Cap Equity Factor Index and STOXX Global Equity Factor Index

Asset Holding Limits: The minimum weight of each asset in the index is the maximum of 0% and the Parent Index weight minus 2%. The maximum weight of each asset in the index is the minimum of the Parent Index weight plus 2% and twenty times the Parent Index weight. Only assets in the Parent Index may be held unless otherwise noted below.

Threshold Holding Limit. The minimum non-zero weight for each asset is 1 bp.

Issuer Weight. The maximum issuer weight is 10%.

Diversification. The sum of all issuer weights greater than 4.5% must be less than 22.5%.

Beta Limits: The beta of the portfolio must lie between 0.98 and 1.02. The predicted beta from the Axioma Risk model is used for this constraint.

Active ICB Industry (Level 1) Weights: The exposure to each ICB Industry (Level 1) is summed up for the Index, and the percentage exposure of the index must be within 2% of the Parent Index values.

Active Country Weights: The exposure to each country is summed up for the Index, and the percentage exposure of the index must be within 5% of Parent Index values.

Active Signal Exposures: The minimum and maximum active exposures to the five custom factors are:

0.2 < Quality < 0.5
0.2 < Momentum < 0.4
0.0 < Value < 0.4
0.0 < Low Volatility < 0.4
0.0 < Size < 0.4*

*Not applied to STOXX U.S. Small-Cap Equity Factor Index and STOXX International Small-Cap Equity Factor Index

Ex-ante Tracking Error: The Index has a maximum of 100 bps ex-ante tracking error, using the Axioma Risk Model specified below.

Maximum Turnover: The index has a one-way turnover limit of 5% per each quarterly rebalance.

Percentile days to trade/liquidity constraint: The maximum weight of each asset in the Index is limited to twenty times its 60 day median daily trading volume multiplied by the ratio of benchmark weight and 60 day median daily trading volume of the representative asset p. The representative asset is the 10th percentile of all assets in the Parent Index when sorted by the ratio of 60 day median trading volume divided by the Parent Index weight.

$$w_k \leq S\, V_k\, b_p / V_p$$

where:

w_k = the weight of the k-th asset in the portfolio

p = the asset with the 10-th percentile of V_k / b_k

b_k = the weight of the k-th asset in the benchmark

V_k = the daily trading volume for the k-th asset

S = 20 (Strength)

Do Not Trade: Names with zero median daily trading volume (MDV) are not traded, even if they are no longer in the Parent Index.

Axioma Risk Model: The Axioma Risk Model used depends on the Parent Index.
STOXX USA 900, STOXX US Small Cap: Axioma US Medium Horizon Fundamental Factor Risk Model with base currency USD.
STOXX Global 1800 ex USA, STOXX Emerging Markets, STOXX International Developed Markets Small Cap and STOXX World AC: Axioma World Wide Medium Horizon Fundamental Factor Risk Model with base currency USD.

Infeasibility Handling: If a solution that satisfies the above constraints cannot be found, 2 of the constraints can potentially be relaxed to find a final index solution:

- Ex-ante Tracking Error (TE)
- Quarterly, One-Way Turnover (TO)

The index relaxation methodology tests each of the following cases, in order. Once a solution is found, that solution is used and the other cases are not attempted.

1. TE = 1.0%; TO = 5%.
2. TE = 1.0%; TO = 6%.
3. TE = 1.1%; TO = 6%.
4. TE = 1.1%; TO = 7%.
5. TE = 1.2%; TO = 7%.
6. TE = 1.2%; TO = 8%.
7. TE = 1.3%; TO = 8%.
8. TE = 1.3%; TO = 9%.
9. TE = 1.4%; TO = 9%.
10. TE = 1.4%; TO = 10%.
11. TE = 1.5%; TO = 10%.

If all cases are tried without finding a solution, then the predicted tracking error (TE) is set to 1.5% and the maximum turnover (TO) is relaxed to whatever level is necessary to obtain a solution.

21. STOXX FACTOR INDICES

Review frequency: The reviews are conducted on a quarterly basis in March, June[48], September and December. The implementation is conducted after the close of third Friday in the review months and effective the next trading day. The weighting factors are calculated based on closing prices from the Wednesday before the second Friday of the review months. Weighting factor is equal to (stock's target weight × 1.000.000.000 / closing price of the stock), rounded to the nearest integer.

The review cut-off date for Parent Index and Axioma data is the Wednesday before the second Friday of the review months. The underlying announcements are published after the close on the second Friday of the review months.

21.4.4. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-off stocks are not added permanently

[48] The 2022 June review was conducted after the close on 31May22. The cut-off date for this review was 19May22.

22. STOXX CTB AND STOXX PAB INDICES

22.1. STOXX CLIMATE TRANSITION BENCHMARK INDICES

22.1.1. OVERVIEW

The STOXX Climate Transition Benchmark (STOXX CTB) Indices track the performance of liquid securities from a selection of STOXX Benchmark Indices. The indices[49] are constructed to follow the EU Climate Transition Benchmark (EU CTB) requirements outlined in the Commission Delegated Regulation (EU) 2020/1818 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks[50]. The indices are designed to help investors in the transition to a low-carbon economy by adopting a decarbonization trajectory.

Companies identified as non-compliant based on Sustainalytics Global Standards Screening (GSS) assessment, are involved in Controversial Weapons or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics are not eligible for selection. Tobacco Producers, as identified by ISS ESG, are also not eligible. Furthermore, STOXX will exclude companies that ISS ESG assesses to have significant obstruction in the following UN SDGs: SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, SDG 14 Life Below Water and SDG 15 Life On Land.

The weighing process follows an optimization process to meet the minimum requirements detailed in the Commission Delegated Regulation (EU) 2020/1818. The STOXX Climate Transition Benchmark Indices aim to reduce their greenhouse gases (GHG) emission intensity by at least 30% when compared to their underlying benchmarks. Additionally, they are designed to meet the year on year 7% decarbonization target. Scope 1, Scope 2 and Scope 3 emissions are used in the total emission considerations[51]. All of these emissions, including Scope 3, are used across all sectors from the first date of index construction.

The methodology ensures that the STOXX CTB index exposure to ‘High Climate Impact sectors’, sectors that are key to low-carbon transition, is not underweighted relative to the investment universe. STOXX will classify the eligible securities into two sectoral groups: ‘High Climate Impact’ and ‘Low Climate Impact’. This is based on the securities’ NACE industry classification[52]. The securities in the STOXX Climate Transition Benchmark Indices are weighted such that the total weight of the high climate impact components is at least equal to the total high climate impact weight in the corresponding STOXX Benchmark Index.

---

[49] Regulation (EU) 2019/2089 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R2089

[50] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R1818

[51] Scope 1, Scope 2 and Scope 3 data obtained from ISS ESG. As a first step, ISS ESG collects all publicly available self-reported greenhouse gas emissions data from corporate disclosures such as CDP and CSR reports. Once self-reported emissions data from all available sources is collected, the data is tested for trustworthiness. This is done through a combination of quantitative and qualitative analysis.

[52] Stocks in the NACE Section codes: A, B, C, D, E, F, G, H, L are classified as “High Climate Impact” and stocks in the NACE section codes: I, J, K, M, N, O, P, Q, R, S, T, U as “Low Climate Impact”. Further information regarding NACE can be found on https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE)

22. STOXX CTB AND STOXX PAB INDICES

ISS ESG tracks companies that have disclosed science-based targets with the Science Based Targets initiative (SBTi)[53]. This comprises a list of securities that are setting greenhouse gas emission reduction targets in line with the goals of the Paris Agreement, i.e. to keep "global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius."[54] STOXX will use this information to identify which of these three groups companies belong to: (a) companies with concrete targets and emission reduction targets verified by SBTi, (b) companies that have committed to the SBTi but do not yet have approved targets, and (c) those that have not yet committed with the SBTi. The STOXX Climate Transition Benchmark Indices overweigh companies with SBTi approved targets, and even more so those with SBTi approved targets and consistent 7% or more reduction in annual GHG intensity. Moreover, STOXX will allow up to 10 years of transition time for securities to commit and have their science-based targets approved and published by the SBTi. Starting in March 2021, securities that have not committed to the science-based initiatives will be underweighted incrementally and will not be eligible for selection starting in March 2025. Similarly, securities that are committed but do not have SBTi verified targets will be subjected to incremental underweighting (March 2021 to March 2030). From March 2030, the STOXX Climate Transition Benchmark Indices will only include companies that have their targets approved and published by the SBTi. This is with the intention of incentivizing companies to commit and set science-based targets.

ISS ESG's Carbon Risk Rating data assesses companies' capacity to manage future climate change related challenges and opportunities arising from the transition to a low-carbon economy. The risk rating considers companies' risk profiles, industry-specific challenges, companies' positive impact and ability to seize opportunities. STOXX uses this forward-looking CO_2 risk analysis to overweigh climate leaders while laggards are underweighted.

ISS ESG's Carbon Budget data helps assess companies' alignment with different scenarios. This Carbon Budget data is used in the weighing process of the STOXX Climate Transition Benchmark Indices to and ensure the indices are aligned with the IEA Sustainable Development Scenario (SDS) pathway until 2050.

STOXX Climate Transition Benchmark Indices
EURO STOXX Climate Transition Benchmark
EURO STOXX Total Market Climate Transition Benchmark
STOXX Europe 600 Climate Transition Benchmark
STOXX Global 1800 Climate Transition Benchmark
STOXX USA 500 Climate Transition Benchmark
STOXX USA 900 Climate Transition Benchmark

Universe: The index universe is defined by all the stocks included in the corresponding STOXX Benchmark Index, as observed on the review effective date.

Weighting scheme: The index is price-weighted with weighting factors determined according to an optimization process to meet the EU CTB recommendations

[53] https://sciencebasedtargets.org/; the SBTi is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), the World Wide Fund for Nature (WWF), and one of the We Mean Business Coalition commitments

[54] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

22. STOXX CTB AND STOXX PAB INDICES

Base value and date: 100 on Mar 19, 2018
Index types and currencies: Price, Net and Gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar, except for the STOXX USA 500 Climate Transition Benchmark and STOXX USA 900 Climate Transition Benchmark Indices, which rely on the STOXX Americas calendar

22.1.2. INDEX REVIEW

Selection list:
The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date, a set of exclusionary criteria are applied.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Controversy Ratings:
STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).

Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

Tobacco:
STOXX will exclude companies that ISS ESG identifies to be Tobacco Producers (0% revenue threshold).

The remaining securities in the universe list are screened for the following fundamental values (i and ii) and ISS ESG carbon and climate related indicators (iii to ix):

22. STOXX CTB AND STOXX PAB INDICES

i. 3-month Average Daily Traded Volume (ADTV) in EUR

ii. Enterprise value including cash (EVIC) based on the fiscal year data for the end of the last calendar year

iii. Emissions data: Scope 1, Scope 2 and Scope 3 emissions
The GHG Protocol Corporate Standard classifies companies' greenhouse gas (GHG) emissions as direct and indirect emissions[55]. Direct emissions, also known as Scope 1 emissions, refer to GHG waste produced and consumed by the reporting entity. For instance, on-site generation and use of energy is tracked under Scope 1. In contrast, indirect emissions, comprised of Scope 2 and Scope 3 emissions, occur as a consequence of the reporting company, but are generated by another entity. Scope 2 includes acquired/ purchased energy brought into the company's reporting boundary as a form of: electricity, steam, heating and cooling, and the rest of the indirect emissions form Scope 3 emissions. Any emissions associated with upstream and downstream processes, excluding Scope 2 emissions, are accrued towards Scope 3. Business travel, processing of sold products, transportation and distribution are all examples of Scope 3 emissions[56].

iv. Carbon Risk Rating: ISS ESG evaluates companies' capacity to cope with future challenges related to climate change and to seize opportunities arising from a transition to a low-carbon economy. This data will be used to overweigh climate leaders, and climate laggards will be underweighted.

v. Carbon Budget: ISS ESG Carbon Budget data helps assess companies' alignment with different scenarios. STOXX will use this Carbon Budget data in the weighing process of the STOXX Climate Transition Benchmark Indices and to ensure the indices are aligned with the IEA Sustainable Development Scenario (SDS) pathway until 2050.

The ISS ESG scenario analysis combines the IEA scenario with the Sectoral Decarbonization Approach (SDA) by allocating a share of a global carbon budget to every company based on its market share and the IEA/SDA emissions scenario associated with its sector.

vi. UN SDGs: the ISS ESG SDG Impact Rating identifies companies' positive and negative impact towards the UN Sustainable Development Goals (UN SDGs) across three pillars: Product & Services, Operations and Controversies. STOXX will use the dataset to minimize index exposure to obstructions in the 4 environmental related UN SDGs, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, SDG 14 Life Below Water and SDG 15 Life On Land., by screening out companies identified to have significant obstruction in these areas

vii. Percentage of revenues from green sources: revenues coming from renewable energy sources such as: wind, solar, hydro, biomass and geothermal sources. Nuclear Power is also considered as a green revenue source. In addition to these, the definition of green revenues extends to revenues that contribute to UN Sustainable Development Goal (UN SDG) 13, Climate Action[57].

viii. Percentage of revenues from brown sources: any revenues from fossil fuels (coal, oil, gas, Arctic drilling, hydraulic fracturing and oil sands) and the provision of supporting products or services is considered as brown revenue. The definition of brown revenues also

[55] https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf
[56] http://www.ghgprotocol.org/sites/default/files/ghgp/standards/Scope3_Calculation_Guidance_0.pdf

22. STOXX CTB AND STOXX PAB INDICES

extends to revenues that are obstructive to UN Sustainable Development Goal (UN SDG) 13, Climate Action.

Green and brown energy revenue shares will be used in the construction of the indices to ensure the total green share / brown revenue share of the STOXX Climate Transition Benchmark Indices is at least equivalent to that of the underlying benchmarks' green to brown revenue shares.

ix. Science-based Climate Targets: ISS ESG tracks securities that have disclosed science-based targets in line with the level of decarbonization required to keep global temperature increase below 2˚C. STOXX will use this data to identify which of the following three groups companies fall into:
   a. companies with concrete targets and emission reduction targets verified by the SBTi
   b. companies that have committed with the SBTi but do not yet have approved science-based targets. Committed companies have 24 months to have their targets approved and published by the SBTi
   c. companies that have not committed with SBTi

   Securities with targets verified by the SBTi will be overweighed in the index. Securities with no commitments or no SBTi approved targets will be subjected to incremental underweighting and will not be eligible for selection starting 2025 and 2030 respectively.

If any of the i to vi fields are unavailable for a security, the company will not be eligible for selection. Additionally, if a security does not have green or brown revenue share data, STOXX will assume the revenue share in these areas to be zero. STOXX will assume that a security is not committed if no science-based climate target data is available for it.

The selection list is made of all the remaining stocks that fulfil the condition below:

- Liquidity requirements: 3-month ADTV equal to or exceeding 3 million EUR
- STOXX will exclude companies that ISS ESG assesses to have significant obstruction to the UN Sustainable Development Goals (SDGs) 12, 13, 14 and 15

Composition list:
The final composition list comprises all the securities that fulfil the requirements listed above. The securities' weights are derived through an optimization process and designed to meet the following requirements:

EU CTB Minimum requirements	STOXX Climate Transition Benchmark Indices
Minimum Scope 1+2+3 GHG intensity reduction compared to the corresponding STOXX Benchmark Index The GHG intensity of a security is calculated as: $\frac{Scope\ 1 + Scope\ 2 + Scope\ 3\ GHG\ Emissions}{Enterprise\ Value\ including\ Cash\ (in\ MEUR)}$	At least 40% (includes a 10% buffer)
Year-on-year self-decarbonization per annum relative to the levels at inception in accordance with the global decarbonization trajectory implied by IPCC's 1.5°C scenario with no or limited overshoot	At least 7% on average per annum since index launch, after taking in consideration any inflation in enterprise values

22. STOXX CTB AND STOXX PAB INDICES

Minimum exposure to sectors highly exposed to climate change issues compared to the underlying STOXX Benchmark Index These sectors are identified as "High Climate Impact" based on NACE section codes.[58]	At least equal
Corporate target setting (CTS)	The Corporate target setting score aims to ensure that companies with Science Based Target are overweighed and that: - by 2025, all companies in the index are committed to reducing their GHG emissions, and - by 2030, all companies in the index have SBTi approved science-based targets In more details: 1. Companies that have science-based targets approved and reported through the Science Based Target initiative and have reduced their total GHG emission intensity (Scope 1,2 and 3 emissions) by an average of at least 7% per annum for at least 3 consecutive years will have their weights increased by 1/3 2. Companies that have science-based targets approved and reported through the Science Based Target initiative but have not fulfilled the above carbon reduction criteria will have their weights increased by 1/5 3. Companies that are committed to reducing their GHG emissions but do not yet have science-based targets approved by the Science Based Target initiative will have their weights reduced by Y/10 where Y is the number of years since 2020 4. Companies that are not committed to reducing their GHG emissions will have their weight reduced by Y/5 where Y is the number of years since 2020

Additional considerations	STOXX Climate Transition Benchmark Indices
Alignment with ISS ESG scenario alignment approach for the IEA Sustainable Development Scenario (SDS) pathway	The emissions pathway of the indices must be below the carbon budget for the SDS pathway of the current year and 2050
Carbon Risk Rating tilt	Climate leaders are overweighed, and climate laggards are underweighted
Carbon Budget risk tilt	Companies that are well positioned to meet their carbon budget are overweighed
Minimum green share / brown share ratio compared to the underlying STOXX Benchmark Index	At least equivalent

[58] Stocks in the NACE Section codes: A, B, C, D, E, F, G, H, L are classified as "High Climate Impact" and stocks in the NACE section codes: I, J, K, M, N, O, P, Q, R, S, T, U as "Low Climate Impact". Further information regarding NACE can be found on https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE)

22. STOXX CTB AND STOXX PAB INDICES

Diversification	Exposure to a single NACE Section is within 5% of the of the underlying STOXX Benchmark Index exposure If the underlying benchmark's exposure in any of the NACE Sections is greater than 30%, an additional maximum exposure constraint on the NACE Division[59] weights will be imposed for the CTB index. In this case, the STOXX CTB Index exposure to a single NACE Division (within the NACE Section) cannot exceed the underlying STOXX Benchmark Index exposure by higher than 5% Country exposure is within 5% of the country weight in the underlying benchmark
Weight capping	Maximum weight: 4.5% Minimum weight: index dependent

Weighting and capping factors:
The weights are derived though an optimization process with the goal to have a portfolio which is in line or beyond the decarbonization trajectory from the IPCC's 1.5°C scenario and that overweighs companies with a clear and proved evidence-based carbon reduction target as verified by SBTi.

Target weight calculations:
The target weight is defined according to the free-float market capitalization subject to the corporate target setting and carbon risk rating multipliers, as follows:

$$w_i = \frac{ffmcap_i \cdot CTS_i * CR_i}{\sum_j^n ffmcap_j \cdot CTS_j * CR_j}$$

Where:

CTS_i = (1 + 1/3) if a company has verified science-based targets in accordance to the SBTi and has reduced its GHG intensity by an average of at least 7% per annum for at least 3 consecutive years

= (1 + 1/5) if a company has verified science-based targets in accordance to the SBTi but has not fulfilled the above GHG intensity reduction criteria

= (1 – min(1, Y/10)) if a company is committed to reducing its GHG emissions but does not have science-based targets approved by the SBTi

= (1 – min(1, Y/5)) if a company is not committed to reducing its GHG emissions

Y number of years since 2020. Y is 0 for 2020 and earlier years

N number of components in the index

CR_i = (1 + CR_z_i) if CR_z_i >0

= $(1 - CR_z_i)^{-1}$ if CR_z_i <=0

CR_z_i = CRR_z_i - CBR_z_i

CRR_z_i= zeta score of the company's Carbon Risk Rating, as defined by ISS ESG

[59] NACE Division is a step lower (more granular) from the NACE Section code

22. STOXX CTB AND STOXX PAB INDICES

CBR_z_i = zeta score of the company's Carbon Budget risk, calculated as

$$CBR_i = \frac{\sum \varphi_j * ln\left(\frac{current\ carbon\ emission_i}{carbon\ budget_{i,j}}\right)}{\sum \varphi_j}$$

Where: $\varphi_j = (1-\lambda) * \lambda^j, \quad j = 0, \dots, 2050 - current\ year$

$\lambda = 0.94$ (standard decay factor[60])

Capped weight calculations:
The capped weights cw_i are derived from target weights via an optimization that minimizes the relative squared difference between the target weights and the capped weights while ensuring that the year-on-year self-decarbonization fulfils the criteria of at least 7% on average starting from 2022 with respect to 2021. The optimization is performed to arrive at the weights subject to constraints to ensure that the composition fulfils the minimum requirements:

$$cw_i = argmin_{cw}\left(\sum_{i=1}^{n}\left(\frac{(cw_i - w_i)^2}{w_i}\right)\cdot\frac{1}{n} + \frac{(Previous\ year's\ GHG\ intensity\ reduction - 0.07)^2}{0.07}\right)$$

The previous year's GHG intensity reduction starting from 2022 with respect to 2021 is calculated as:

$$1 - \left(\frac{Index\ GHG\ Intensity_{current}\ \cdot (Inflation\ Adjustment\ Factor)}{Index\ GHG\ Intensity_{previous\ year-end}}\right)$$

where $Index\ GHG\ Intensity_t = \sum_{i=1}^{n}\left(w_{i,t} \cdot Security\ GHG\ Intensity_{i,t}\right)$ and $w_{i,t}$ is the weight of company i in the index at time t.

In calculating the previous year's GHG intensity reduction, the current GHG intensity is multiplied by the enterprise value inflation adjustment factor[61] in order to reflect the effects of inflation in enterprise values as an increasing average enterprise value of the index constituents could lead to an overall GHG intensity reduction where no actual GHG emissions reductions took place.

The following are the constraints of the optimization:

a) Maximum security weight of 4.5%, and minimum weights set as follows:

Number of constituents in the parent index	Minimum weight constraints
600 or less	0.01%

[60] Standard decay factor, suggested and used by Riskmetrics

[61] The enterprise value inflation adjustment factor is computed by dividing the average enterprise value including cash of the index constituents at the end of calendar year by the average enterprise value including cash of the index constituents at the end of the previous calendar year and has a minimum value of 1

22. STOXX CTB AND STOXX PAB INDICES

Between 600 and 1200	0.005%
1200 or more	0.001%

b) The GHG intensity reduction of the index, $\sum_{i=1}^{n}(cw_i \cdot Security\ GHG\ Intensity_i)$ should be at least 40% when compared to the underlying STOXX Benchmark Index GHG Intensity,

c) Year-on-year GHG intensity reduction of at least 7% starting from 2022 with respect to 2021. The year-on-year carbon reduction included is calculated as:

$$1 - \left(\frac{Index\ GHG\ Intensity_{current} \cdot Cumulative\ Inflation\ Adjustment\ Factor}{Index\ GHG\ Intensity_{2021\ year-end}}\right)^{1/T}$$

where T is the number of years since 2021

d) The green revenue share / brown revenue share of the index, $\frac{\sum_{i=1}^{n}(cw_i \cdot Green\ Revenue\ \%_i)}{\sum_{i=1}^{n}(cw_i \cdot Brown\ Revenue\ \%_i)}$, is at least equivalent to that of the underlying STOXX Benchmark Index

e) The total exposure of components in the “High Climate Impact” according to NACE classification is at least equal to the corresponding STOXX Benchmark Index

f) The exposure to a single NACE Section code is within 5% of the underlying STOXX Benchmark Index exposure

If the underlying STOXX Benchmark Index exposure in any of the NACE Sections is greater than 30%, an additional maximum exposure constraint on the NACE Division weights will be imposed for the CTB index. In this case, the STOXX CTB Index exposure to a single NACE Division (within the NACE Section) cannot exceed the underlying STOXX Benchmark Index exposure by higher than 5%

g) The exposure to a country is within 5% of the STOXX Benchmark Index

h) The emission pathway of the index must be below its carbon budget for the IEA Sustainable Development Scenario (SDS) pathway of the current year and 2050. This is to ensure that the index is aligned with the SDS pathway decarbonization trajectory until 2050

Weighting factors are based on the closing prices in EUR (pi) of the Thursday prior to the second Friday of the review month:
Weighting factor = (1,000,000,000,000 x wi / pi), rounded to the nearest integer value.

Review frequency:
The review is conducted on an annual basis in March. On a quarterly basis in June, September and December, the indices are rebalanced to consider changes in free-float or shares in issue. Furthermore, current components are screened for compliance and involvement. The cut-off date for the underlying data is the last calculation day of February, May, August and November respectively.

22.1.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards

22. STOXX CTB AND STOXX PAB INDICES

Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

22.1.4. SUMMARY

Summary	STOXX Climate Transition Benchmark Indices
Universe	A selection of STOXX Benchmark Indices
Screens	
Baseline Exclusions	Global Standards Screening Controversial Weapons Tobacco producers Significant obstruction to the UN Sustainable Development Goals (SDGs) 12, 13, 14 and 15 Severe (level 5) Controversy Rating
Liquidity Requirements	3-month ADTV equal to or exceeding 3 million EUR
Weighing process: weights derived through an optimization process to meet EU CTB requirements	
Minimum Scope 1+2+3 GHG intensity reduction compared to corresponding STOXX Benchmark Index Scope 1, 2 and 3 emissions, are used across all sectors from the first date of index construction	At least 40% (includes a 10% buffer)
Year-on-year self-decarbonization per annum relative to the levels at inception in accordance with the global decarbonization trajectory implied by IPCC's 1.5°C scenario with no or limited overshoot	At least 7% on average per annum since index launch, after taking in consideration any inflation in enterprise values
Minimum green share / brown share ratio compared to the underlying STOXX Benchmark Index	At least equivalent
Minimum exposure of sectors highly exposed to climate change compared to the underlying STOXX Benchmark Index	At least equal

22. STOXX CTB AND STOXX PAB INDICES

Corporate target setting (CTS)

Securities' free float market cap weights tilted with CTS score to favor securities with science-based targets. CTS scores assigned as follows:

CTS score	2020	2021	…	2025	…	2029	2030 and later
Committed, has SBTi verified targets, and reduces GHG emission (>= 7%/annum for 3 years)	1+1/3 = 4/3						
Committed, has SBTi verified targets, but does not reduce GHG emissions by 7% per annum	1+1/5 = 6/5						
Committed but does not have SBTi approved targets	1	9/10	…	5/10	…	1/10	0
Not committed	1	4/5	..	0			

Additionally, Carbon Budget and Carbon Risk score and will be used to tilt the weights further. Tilt factor obtained as follows:

CR_i = (1 + CR_z_i) if CR_z_i >0

= (1 - CR_z_i)$^{-1}$ if CR_z_i <=0

CR_z_i = CRR_z_i - CBR_z_i

CRR_z_i= zeta score of the company's Carbon Risk Rating, as defined by ISS ESG

CBR_z_i = zeta score of the company's Carbon Budget risk, calculated as

$$CBR_i = \frac{\sum \varphi_j * ln\left(\frac{current\ carbon\ emission_i}{carbon\ budget_{i,j}}\right)}{\sum \varphi_j}$$

Where: $\varphi_j = (1-\lambda) * \lambda^j, j = 0, \dots\ ,\ 2050 - current\ year$

$\lambda = 0.94$ (standard decay factor[62])

$w_i = \frac{ffmcap_i \cdot CTS_i * CR_i}{\sum_j^n ffmcap_j \cdot CTS_j * CR_j}$; where w_i is the weight of security i

Diversification

Exposure to a single NACE Section is within 5% of the of the underlying STOXX Benchmark Index exposure

If the underlying benchmark's exposure in any of the NACE Sections is greater than 30%, an additional maximum exposure constraint on the NACE Division[63] weights will be imposed for the CTB index. In this case, the STOXX CTB Index exposure to a single NACE Division (within the NACE Section) cannot exceed the underlying STOXX Benchmark Index exposure by higher than 5%

Country exposure is within 5% of the country weight in the underlying benchmark

Weight Capping

Maximum weight: 4.5%

Minimum weight: index dependent

[62] Standard decay factor, suggested and used by Riskmetrics

[63] NACE Division is a step lower (more granular) from the NACE Section code

22. STOXX CTB AND STOXX PAB INDICES

Selection and Weighing Frequency	
Review and Rebalancing	Review is conducted on an annual basis in March, and rebalanced quarterly in June, September and December

22. STOXX CTB AND STOXX PAB INDICES

22.2. STOXX PARIS-ALIGNED BENCHMARK INDICES

22.2.1. OVERVIEW

The STOXX Paris-Aligned Benchmark (STOXX PAB) Indices track the performance of liquid securities from a selection of STOXX Benchmark Indices. The indices[64] are constructed to follow the EU Paris-aligned Benchmark (EU PAB) requirements outlined in the Commission Delegated Regulation (EU) 2020/1818 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks[65]. The indices are designed to help investors align investments with the overall long-term global warming target of the Paris Agreement.

Companies identified as non-compliant based on Sustainalytics Global Standards Screening (GSS) assessment, are involved in Controversial Weapons or display a Severe (Category 5) Controversy Rating, as identified by Sustainalytics are not eligible for selection. Tobacco Producers, as identified by ISS ESG, are also not eligible. Securities that generate revenues above a certain threshold from coal, oil and gas exploration or processing activities are excluded. Additionally, securities that derive higher than 10% of their revenues from thermal coal-based power generation, or higher than 50% from power generation with carbon intensity of lifecycle emissions higher than 100gCO2e/kWh are not considered for selection. Furthermore, STOXX will exclude companies that ISS ESG assesses to have significant obstruction in the following UN SDGs: SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, SDG 14 Life Below Water and SDG 15 Life On Land.

The weighing process follows an optimization process to meet the minimum requirements detailed in the Commission Delegated Regulation (EU) 2020/1818. The STOXX Paris-Aligned Benchmark Indices aim to reduce their greenhouse gases (GHG) emission intensity by at least 50% when compared to their underlying benchmarks. Additionally, they are designed to meet the year on year 7% decarbonization target. Scope 1, Scope 2 and Scope 3 emissions are used in the total emission considerations[66]. All of these emissions, including Scope 3, are used across all sectors from the first date of index construction.

The methodology ensures that the STOXX PAB index exposure to ‘High Climate Impact sectors’, sectors that are key to low-carbon transition, is not underweighted relative to the investment universe. STOXX will classify the eligible securities into two sectoral groups: ‘High Climate Impact’ and ‘Low Climate Impact’. This is based on the securities’ NACE industry classification[67]. The securities in the STOXX Paris-Aligned Benchmark Indices are weighted such that the total weight

---

[64] Regulation (EU) 2019/2089 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R2089

[65] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R1818

[66] Scope 1, Scope 2 and Scope 3 data obtained from ISS ESG. As a first step, ISS ESG collects all publicly available self-reported greenhouse gas emissions data from corporate disclosures such as CDP and CSR reports. Once self-reported emissions data from all available sources is collected, the data is tested for trustworthiness. This is done through a combination of quantitative and qualitative analysis.

[67] Stocks in the NACE Section codes: A, B, C, D, E, F, G, H, L are classified as “High Climate Impact” and stocks in the NACE section codes: I, J, K, M, N, O, P, Q, R, S, T, U as “Low Climate Impact”. Further information regarding NACE can be found on https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE)

22. STOXX CTB AND STOXX PAB INDICES

of the high climate impact components is at least equal to the total high climate impact weight in the corresponding STOXX Benchmark Index.

ISS ESG tracks companies that have disclosed science-based targets with the Science Based Targets initiative (SBTi)[68]. This comprises a list of securities that are setting greenhouse gas emission reduction targets in line with the goals of the Paris Agreement, i.e. to keep "global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius."[69] STOXX will use this information to identify which of these three groups companies belong to: (a) companies with concrete targets and emission reduction targets verified by SBTi, (b) companies that have committed to the SBTi but do not yet have approved targets, and (c) those that have not yet committed with the SBTi. The STOXX Paris-Aligned Benchmark Indices overweigh companies with SBTi approved targets, and even more so those with SBTi approved targets and consistent 7% or more reduction in annual GHG intensity. Moreover, STOXX will allow up to 10 years of transition time for securities to commit and have their science-based targets approved and published by the SBTi. Starting in March 2021, securities that have not committed to the science-based initiatives will be underweighted incrementally and will not be eligible for selection starting in March 2025. Similarly, securities that are committed but do not have SBTi verified targets will be subjected to incremental underweighting (March 2021 to March 2030). From March 2030, the STOXX Paris-Aligned Benchmark Indices will only include companies that have their targets approved and published by the SBTi. This is with the intention of incentivizing companies to commit and set science-based targets.

ISS ESG's Carbon Risk Rating data assesses companies' capacity to manage future climate change related challenges and opportunities arising from the transition to a low-carbon economy. The risk rating considers companies' risk profiles, industry-specific challenges, companies' positive impact and ability to seize opportunities. STOXX uses this forward-looking CO_2 risk analysis to overweigh climate leaders while laggards are underweighted.

ISS ESG's Carbon Budget data helps assess companies' alignment with different scenarios. This Carbon Budget data is used in the weighing process of the STOXX Paris-Aligned Benchmark Indices and to ensure the indices are aligned with the IEA Sustainable Development Scenario (SDS) pathway until 2050.

STOXX Paris-Aligned Benchmark Indices
EURO STOXX Paris-Aligned Benchmark
EURO STOXX Total Market Paris-Aligned Benchmark
STOXX Europe 600 Paris-Aligned Benchmark
STOXX Global 1800 Paris-Aligned Benchmark
STOXX USA 500 Paris-Aligned Benchmark
STOXX USA 900 Paris-Aligned Benchmark

Universe: The index universe is defined by all the stocks included in the corresponding STOXX Benchmark Index, as observed on the review effective date.

---

[68] https://sciencebasedtargets.org/; the SBTi is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), the World Wide Fund for Nature (WWF), and one of the We Mean Business Coalition commitments

[69] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

22. STOXX CTB AND STOXX PAB INDICES

Weighting scheme: The index is price-weighted with weighting factors determined according to an optimization process to meet the EU PAB recommendations

Base value and date: 100 on Mar 19, 2018

Index types and currencies: Price, Net and Gross return in EUR and USD

Dissemination calendar: STOXX Europe calendar, except for the STOXX USA 500 Paris-Aligned Benchmark and STOXX USA 900 Paris-Aligned Benchmark Indices, which rely on the STOXX Americas calendar

22.2.2. INDEX REVIEW

Selection list:
The review cut-off date is the last dissemination day of the month preceding the review month of the index, and upon this date, a set of exclusionary criteria are applied.

Global Standards Screening:
STOXX will exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

Controversial Weapons:
STOXX will exclude the companies that Sustainalytics identifies to be involved with controversial weapons.

The following weapons are considered controversial: anti-personnel mines, biological and chemical weapons, cluster weapons, depleted uranium, nuclear weapons and white phosphorus weapons.

The criteria for involvement are:
» Internal production or sale
» The ultimate holding company owns >10% of voting rights of an involved company
» >10% of voting rights of a company is owned by the involved company

Controversy Ratings:
STOXX will exclude companies that Sustainalytics identifies to have a Controversy Rating of Category 5 (Severe).

Sustainalytics assesses companies' involvement in incidents with negative environmental, social and governance (ESG) implications. Controversy involvement is one key measure of ESG performance. A controversy is defined as an event or aggregation of events relating to an ESG topic. An event is assessed on its severity on a scale of 1 to 5 (1- Low, 2- Moderate, 3- Significant, 4- High, 5- Severe). The highest Event rating under a controversy indicator, automatically becomes the Controversy Rating for a given company.

Tobacco:

22. STOXX CTB AND STOXX PAB INDICES

STOXX will exclude companies that ISS ESG identifies to be Tobacco Producers (0% revenue threshold).

The remaining securities in the universe list are screened for the following fundamental values (i and ii) and ISS ESG carbon and climate related indicators (iii to xiii):

i. 3-month Average Daily Traded Volume (ADTV) in EUR
ii. Enterprise value including cash (EVIC) based on the fiscal year data for the end of the last calendar year
iii. Emissions data: Scope 1, Scope 2 and Scope 3 emissions
The GHG Protocol Corporate Standard classifies companies' greenhouse gas (GHG) emissions as direct and indirect emissions[70]. Direct emissions, also known as Scope 1 emissions, refer to GHG waste produced and consumed by the reporting entity. For instance, on-site generation and use of energy is tracked under Scope 1. In contrast, indirect emissions, comprised of Scope 2 and Scope 3 emissions, occur as a consequence of the reporting company, but are generated by another entity. Scope 2 includes acquired/ purchased energy brought into the company's reporting boundary as a form of: electricity, steam, heating and cooling, and the rest of the indirect emissions form Scope 3 emissions. Any emissions associated with upstream and downstream processes, excluding Scope 2 emissions, are accrued towards Scope 3. Business travel, processing of sold products, transportation and distribution are all examples of Scope 3 emissions[71].
iv. Percentage of revenues from coal: this looks at the securities' revenue generated from coal exploration, production (excluding power generation), distribution, and supporting products and services. Power generation revenue share is considered separately and detailed in vi.
v. Percentage of revenues from fossil fuel exploration, production (excluding power generation), distribution and provision of supporting products and services: this looks at companies' revenue share in fossil fuels, including coal, oil, gas, Arctic drilling, hydraulic fracturing and oil sands. Power generation revenue share is considered separately and detailed in vii.
vi. Thermal coal-based power generation revenues: this looks at percentage of revenues derived from power generation coming solely from thermal coal.
vii. Power Generation revenue percentage coming from coal, oil and gas: electricity generation lifecycle assessment shows that GHG emissions coming from coal, oil and natural gas exceed 100 gCO_2e/kWh; similar assessment on renewable energy and nuclear power sources shows that the lifecycle GHG emissions is well below 100 gCO_2e/kWh[72]. For this data point, ISS ESG considers coal, oil and gas-based power generation revenues.
viii. UN SDGs: the ISS ESG SDG Impact Rating identifies companies' positive and negative impact towards the UN Sustainable Development Goals (UN SDGs) across three pillars: Product & Services, Operations and Controversies. STOXX will use the dataset to minimize index exposure to obstructions in the 4 environmental related UN SDGs, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, SDG 14 Life Below Water and SDG 15 Life On Land., by screening out companies identified to have significant obstruction in these areas.

[70] https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf
[71] http://www.ghgprotocol.org/sites/default/files/ghgp/standards/Scope3_Calculation_Guidance_0.pdf
[72] https://www.ipcc.ch/site/assets/uploads/2018/03/SRREN_Full_Report-1.pdf

22. STOXX CTB AND STOXX PAB INDICES

ix. Carbon Risk Rating: ISS ESG evaluates companies' capacity to cope with future challenges related to climate change and to seize opportunities arising from a transition to a low-carbon economy. This data will be used to overweigh climate leaders, and climate laggards will be underweighted.

x. Carbon Budget: ISS ESG Carbon Budget data helps assess companies' alignment with different scenarios. STOXX will use this Carbon Budget data in the weighing process of the STOXX Paris-Aligned Benchmark Indices and to ensure the indices are aligned with the IEA Sustainable Development Scenario (SDS) pathway until 2050.

The ISS ESG scenario analysis combines the IEA scenario with the Sectoral Decarbonization Approach (SDA) by allocating a share of a global carbon budget to every company based on its market share and the IEA/SDA emissions scenario associated with its sector.

xi. Percentage of revenues from green sources: revenues coming from renewable energy sources such as: wind, solar, hydro, biomass and geothermal sources. Nuclear Power is also considered as a green revenue source. In addition to these, the definition of green revenues extends to revenues that contribute to UN Sustainable Development Goal (SDG) 13, Climate Action.

xii. Percentage of revenues from brown sources: any revenues from fossil fuels (coal, oil, gas, Arctic drilling, hydraulic fracturing and oil sands) and the provision of supporting products or services is considered as brown revenue. The definition of brown revenues also extends to revenues that are obstructive to UN Sustainable Development Goal (SDG) 13, Climate Action.

Green and brown energy revenue shares will be used in the construction of the indices to ensure the total green share / brown revenue share of the STOXX Paris-Aligned Benchmark Indices is at least four times that of the underlying benchmarks' green to brown revenue shares.

xiii. Science-based Climate Targets: ISS ESG tracks securities that have disclosed science-based targets in line with the level of decarbonization required to keep global temperature increase below 2°C. STOXX will use this data to identify which of the following three groups companies fall into:

a. companies with concrete targets and emission reduction targets verified by the SBTi
b. companies that have committed with the SBTi but do not yet have approved science-based targets. Committed companies have 24 months to have their targets approved and published by the SBTi
c. companies that have not committed with SBTi

Securities with targets verified by the SBTi will be overweighed in the index. Securities with no commitments or no SBTi approved targets will be subjected to incremental underweighting and will not be eligible for selection starting 2025 and 2030 respectively.

If any of the i to x fields are unavailable for a security, the company will not be eligible for selection. Additionally, if a security does not have green or brown revenue share data, STOXX will assume the revenue share in these areas to be zero. STOXX will assume that a security is not committed if no science-based climate target data is available for it.

The selection list is made of all the remaining stocks that fulfil the conditions below:

- Liquidity requirements: 3-month ADTV equal to or exceeding 3 million EUR
- Activity exclusions: Companies that generate revenues above the specific thresholds with respect to the activities below are not eligible for selection:

22. STOXX CTB AND STOXX PAB INDICES

  - STOXX will exclude companies that ISS ESG identifies to have 1% or higher revenues from coal exploration, production (excluding power generation), distribution and supporting product and services
  - STOXX will exclude companies that ISS ESG identifies to have 10% or higher revenues from fossil fuel exploration, production (excluding power generation), distribution and supporting products and services
  - STOXX will exclude companies that ISS ESG identifies to have 10% or higher revenues from thermal coal-based power generation
  - STOXX will exclude companies that ISS ESG identifies to have 50% or higher revenues from power generation with carbon intensity of lifecycle GHG emissions higher than 100g CO_2e/kWh
- STOXX will exclude companies that ISS ESG assesses to have significant obstruction to the UN Sustainable Development Goals (SDGs) 12, 13, 14 and 15

Composition list:
The final composition list comprises all the securities that fulfil the requirements listed above. The securities' weights are derived through an optimization process and designed to meet the following requirements:

EU PAB Minimum requirements	STOXX Paris-Aligned Benchmark Indices
Minimum Scope 1+2+3 GHG intensity reduction compared to the corresponding STOXX Benchmark Index The GHG intensity of a security is calculated as: $\frac{Scope\ 1 + Scope\ 2 + Scope\ 3\ GHG\ Emissions}{Enterprise\ Value\ including\ Cash\ (in\ MEUR)}$	At least 60% (includes a 10% buffer)
Year-on-year self-decarbonization per annum relative to the levels at inception in accordance with the global decarbonization trajectory implied by IPCC's 1.5°C scenario with no or limited overshoot	At least 7% on average per annum since index launch, after taking in consideration any inflation in enterprise values
Minimum exposure to sectors highly exposed to climate change issues compared to the underlying STOXX Benchmark Index These sectors are identified as "High Climate Impact" based on NACE section codes.[73]	At least equal
Corporate target setting (CTS)	The Corporate target setting score aims to ensure that companies with Science Based Target are overweighed and that: - by 2025, all companies in the index are committed to reducing their GHG emissions, and

[73] Stocks in the NACE Section codes: A, B, C, D, E, F, G, H, L are classified as "High Climate Impact" and stocks in the NACE section codes: I, J, K, M, N, O, P, Q, R, S, T, U as "Low Climate Impact". Further information regarding NACE can be found on https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE)

22. STOXX CTB AND STOXX PAB INDICES

- by 2030, all companies in the index have SBTi approved science-based targets

In more details:

1. Companies that have science-based targets approved and reported through the Science Based Target initiative and have reduced their total GHG emission intensity (Scope 1,2 and 3 emissions) by an average of at least 7% per annum for at least 3 consecutive years will have their weights increased by 1/3
2. Companies that have science-based targets approved and reported through the Science Based Target initiative but have not fulfilled the above carbon reduction criteria will have their weights increased by 1/5
3. Companies that are committed to reducing their GHG emissions but do not yet have science-based targets approved by the Science Based Target initiative will have their weights reduced by Y/10 where Y is the number of years since 2020
4. Companies that are not committed to reducing their GHG emissions will have their weight reduced by Y/5 where Y is the number of years since 2020

Additional considerations	STOXX Paris-Aligned Benchmark Indices
Alignment with ISS ESG scenario alignment approach for the IEA Sustainable Development Scenario (SDS) pathway	The emissions pathway of the indices must be below the carbon budget for the SDS pathway of the current year and 2050
Carbon Risk Rating tilt	Climate leaders are overweighed, and climate laggards are underweighted
Carbon Budget risk tilt	Companies that are well positioned to meet their carbon budget are overweighed
Minimum green share / brown share ratio compared to the underlying STOXX Benchmark Index	At least 4 times
Diversification	Exposure to a single NACE Section is within 5% of the of the underlying STOXX Benchmark Index exposure If the underlying benchmark's exposure in any of the NACE Sections is greater than 30%, an additional maximum exposure constraint on the NACE Division[74] weights will be imposed for the PAB index. In this case, the STOXX PAB Index exposure to a single NACE Division (within the NACE Section) cannot exceed the underlying STOXX Benchmark Index exposure by higher than 5% Country exposure is within 5% of the country weight in the underlying benchmark
Weight capping	Maximum weight: 4.5% Minimum weight: index dependent

Weighting and capping factors:
The weights are derived though an optimization process with the goal to have a portfolio which is in line or beyond the decarbonization trajectory from the IPCC's 1.5°C scenario and that

[74] NACE Division is a step lower (more granular) from the NACE Section code

22. STOXX CTB AND STOXX PAB INDICES

overweighs companies with a clear and proved evidence-based carbon reduction target as verified by SBTi.

Target weight calculations:
The target weight is defined according to the free-float market capitalization subject to the corporate target setting and carbon risk rating multipliers, as follows:

$$w_i = \frac{ffmcap_i \cdot CTS_i * CR_i}{\sum_j^n ffmcap_j \cdot CTS_j * CR_j}$$

Where:

CTS_i = (1 + 1/3) if a company has verified science-based targets in accordance to the SBTi and has reduced its GHG intensity by an average of at least 7% per annum for at least 3 consecutive years

= (1 + 1/5) if a company has verified science-based targets in accordance to the SBTi but has not fulfilled the above GHG intensity reduction criteria

= (1 – min(1, Y/10)) if a company is committed to reducing its GHG emissions but does not have science-based targets approved by the SBTi

= (1 – min(1, Y/5)) if a company is not committed to reducing its GHG emissions

Y number of years since 2020. Y is 0 for 2020 and earlier years

N number of components in the index

CR_i = (1 + CR_z_i) if CR_z_i >0

= $(1 - CR_z_i)^{-1}$ if CR_z_i <=0

CR_z_i = CRR_z_i - CBR_z_i

CRR_z_i= zeta score of the company's Carbon Risk Rating, as defined by ISS ESG

CBR_z_i = zeta score of the company's Carbon Budget risk, calculated as

$$CBR_i = \frac{\sum \varphi_j * ln\left(\frac{current\ carbon\ emission_i}{carbon\ budget_{i,j}}\right)}{\sum \varphi_j}$$

Where: $\varphi_j = (1-\lambda) * \lambda^j, \quad j = 0, \dots, 2050 - current\ year$

$\lambda = 0.94$ (standard decay factor[75])

Capped weight calculations:
The capped weights cw_i are derived from target weights via an optimization that minimizes the relative squared difference between the target weights and the capped weights while ensuring that the year-on-year self-decarbonization fulfils the criteria of at least 7% on average starting from

[75] Standard decay factor, suggested and used by Riskmetrics

22. STOXX CTB AND STOXX PAB INDICES

2022 with respect to 2021. The optimization is performed to arrive at the weights subject to constraints to ensure that the composition fulfils the minimum requirements:

$$cw_i = argmin_{cw}\left(\sum_{i=1}^{n}\left(\frac{(cw_i - w_i)^2}{w_i}\right)\cdot\frac{1}{n} + \frac{(Previous\ year's\ GHG\ intensity\ reduction - 0.07)^2}{0.07}\right)$$

The previous year's GHG intensity reduction (starting from 2022 with respect to 2021) is calculated as:

$$1 - \left(\frac{Index\ GHG\ Intensity_{current}\ \cdot (Inflation\ Adjustment\ Factor)}{Index\ GHG\ Intensity_{previous\ year-end}}\right)$$

where $Index\ GHG\ Intensity_t = \sum_{i=1}^{n}\left(w_{i,t}\cdot Security\ GHG\ Intensity_{i,t}\right)$ and $w_{i,t}$ is the weight of company i in the index at time t.

In calculating the previous year's GHG intensity reduction, the current GHG intensity is multiplied by the enterprise value inflation adjustment factor[76] in order to reflect the effects of inflation in enterprise values as an increasing average enterprise value of the index constituents could lead to an overall GHG intensity reduction where no actual GHG emissions reductions took place.

The following are the constraints of the optimization:

a) Maximum security weight of 4.5%, and minimum weights set as follows:

Number of constituents in the parent index	Minimum weight constraints
600 or less	0.01%
Between 600 and 1200	0.005%
1200 or more	0.001%

b) The GHG intensity reduction of the index, $\sum_{i=1}^{n}(cw_i \cdot Security\ GHG\ Intensity_i)$ should be at least 60% when compared to the underlying STOXX Benchmark Index GHG Intensity

c) Year-on-year GHG intensity reduction of at least 7% starting from 2022 with respect to 2021. The year-on-year carbon reduction included is calculated as:

$$1 - \left(\frac{Index\ GHG\ Intensity_{current}\ \cdot Cumulative\ Inflation\ Adjustment\ Factor}{Index\ GHG\ Intensity_{2021\ year-end}}\right)^{1/T}$$

where *T* is the number of years since 2021

[76] The enterprise value inflation adjustment factor is computed by dividing the average enterprise value including cash of the index constituents at the end of calendar year by the average enterprise value including cash of the index constituents at the end of the previous calendar year and has a minimum value of 1

22. STOXX CTB AND STOXX PAB INDICES

d) The green revenue share / brown revenue share of the index, $\frac{\sum_{i=1}^{n}(cw_i \cdot Green\ Revenue\ \%_i)}{\sum_{i=1}^{n}(cw_i \cdot Brown\ Revenue\ \%_i)}$, is at least 4 times that of the underlying STOXX Benchmark Index

e) The total exposure of components in the "High Climate Impact" according to NACE classification is at least equal to the corresponding STOXX Benchmark Index

f) The exposure to a single NACE Section code is within 5% of the underlying STOXX Benchmark Index exposure

If the underlying STOXX Benchmark Index exposure in any of the NACE Sections is greater than 30%, an additional maximum exposure constraint on the NACE Division weights will be imposed for the PAB index. In this case, the STOXX PAB Index exposure to a single NACE Division (within the NACE Section) cannot exceed the underlying STOXX Benchmark Index exposure by higher than 5%

g) The exposure to a country is within 5% of the STOXX Benchmark Index

h) The emission pathway of the index must be below its carbon budget for the IEA Sustainable Development Scenario (SDS) pathway of the current year and 2050. This is to ensure that the index is aligned with the SDS pathway decarbonization trajectory until 2050

Weighting factors are based on the closing prices in EUR (p_i) of the Thursday prior to the second Friday of the review month:

Weighting factor = (1,000,000,000,000 x w_i / p_i), rounded to the nearest integer value.

Review frequency:
The review is conducted on an annual basis in March. On a quarterly basis in June, September and December, the indices are rebalanced to consider changes in free-float or shares in issue. Furthermore, current components are screened for compliance and involvement. The cut-off date for the underlying data is the last calculation day of February, May, August and November respectively.

22.2.3. ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: In case a company which is an index constituent increases its ESG Controversy Rating to Category 5 and becomes non-compliant based on the Sustainalytics Global Standards Screening assessment, the respective constituent will be deleted from the index. The deletion will take place two dissemination days after the announcement, i.e. at the open of the 3rd dissemination day. The constituent's weight will be distributed among the remaining constituents.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX Calculation Guide available on stoxx.com

22. STOXX CTB AND STOXX PAB INDICES

22.2.4. SUMMARY

Summary	STOXX Paris-Aligned Benchmark Indices
Universe	A selection of STOXX Benchmark Indices
Screens	
Baseline Exclusions	Global Standards Screening Controversial Weapons Tobacco producers Significant obstruction to the UN Sustainable Development Goals (SDGs) 12, 13, 14 and 15 Severe (level 5) Controversy Rating
Liquidity Requirements	3-month ADTV equal to or exceeding 3 million EUR
Activity Exclusions	Revenues from Coal activities: 1% or higher Revenues from Fossil Fuel activities: 10% or higher Revenues from power generation coming from Coal: 10% or higher Revenues from power generation coming from Coal, Oil & Gas: 50% or higher
Weighing process: weights derived through an optimization process to meet EU PAB requirements	
Minimum Scope 1+2+3 GHG intensity reduction compared to corresponding STOXX Benchmark Index Scope 1, 2 and 3 emissions, are used across all sectors from the first date of index construction	At least 60% (includes a 10% buffer)
Year-on-year self-decarbonization per annum relative to the levels at inception in accordance with the global decarbonization trajectory implied by IPCC's 1.5°C scenario with no or limited overshoot	At least 7% on average per annum since index launch, after taking in consideration any inflation in enterprise values
Minimum green share / brown share ratio compared to the underlying STOXX Benchmark Index	At least 4 times
Minimum exposure of sectors highly exposed to climate change compared to the underlying STOXX Benchmark Index	At least equal
Corporate target setting (CTS)	Securities' free float market cap weights tilted with CTS score to favor securities with science-based targets. CTS scores assigned as follows:

CTS score	2020	2021	…	2025	…	2029	2030 and later
Committed, has SBTi verified targets, and reduces GHG	1+1/3 = 4/3						

22. STOXX CTB AND STOXX PAB INDICES

emission (>= 7%/annum for 3 years)							
Committed, has SBTi verified targets, but does not reduce GHG emissions by 7% per annum	1+1/5 = 6/5						
Committed but does not have SBTi approved targets	1	9/10	…	5/10	…	1/10	0
Not committed	1	4/5	..	0			

Additionally, Carbon Budget and Carbon Risk score and will be used to tilt the weights further. Tilt factor obtained as follows:

CR_i = (1 + CR_z_i) if CR_z_i >0

= (1 - CR_z_i)$^{-1}$ if CR_z_i <=0

CR_z_i = CRR_z_i - CBR_z_i

CRR_z_i= zeta score of the company's Carbon Risk Rating, as defined by ISS ESG

CBR_z_i = zeta score of the company's Carbon Budget risk, calculated as

$$CBR_i = \frac{\sum \varphi_j * ln\left(\frac{current\ carbon\ emission_i}{carbon\ budget_{i,j}}\right)}{\sum \varphi_j}$$

Where: $\varphi_j = (1-\lambda) * \lambda^j, j = 0, \ldots, 2050 - current\ year$

$\lambda = 0.94$ (standard decay factor[77])

$w_i = \frac{ffmcap_i \cdot CTS_i * CR_i}{\sum_j^n ffmcap_j \cdot CTS_j * CR_j}$; where w_i is the weight of security i

Diversification	Exposure to a single NACE Section is within 5% of the of the underlying STOXX Benchmark Index exposure If the underlying benchmark's exposure in any of the NACE Sections is greater than 30%, an additional maximum exposure constraint on the NACE Division[78] weights will be imposed for the PAB index. In this case, the STOXX PAB Index exposure to a single NACE Division (within the NACE Section) cannot exceed the underlying STOXX Benchmark Index exposure by higher than 5% Country exposure is within 5% of the country weight in the underlying benchmark
Weight Capping	Maximum weight: 4.5% Minimum weight: index dependent
Selection and Weighing Frequency	
Review and Rebalancing	Review is conducted on an annual basis in March, and rebalanced quarterly in June, September and December

[77] Standard decay factor, suggested and used by Riskmetrics

[78] NACE Division is a step lower (more granular) from the NACE Section code