

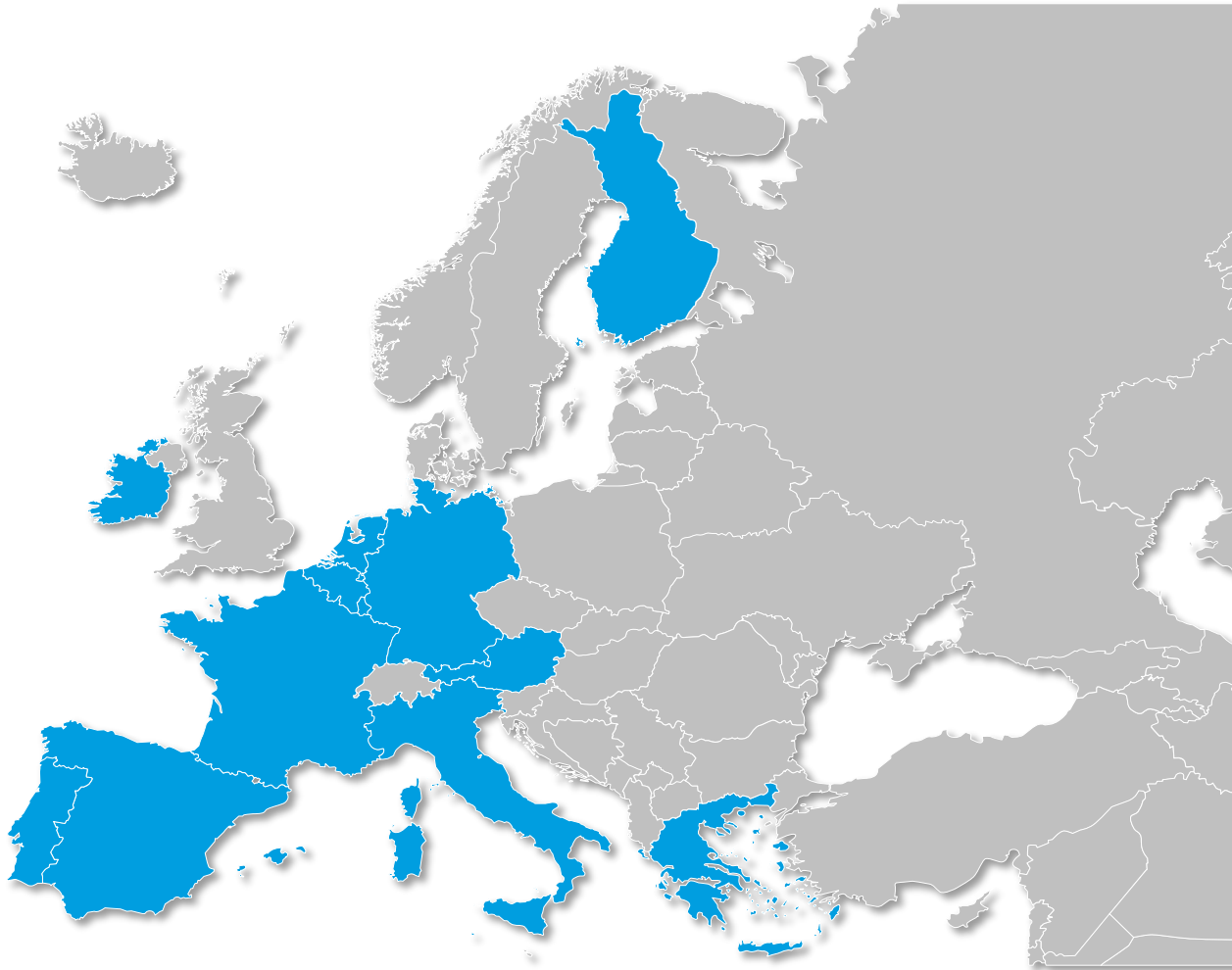
# EURO STOXX 50® Corporate Bond Index

April, 2018



# 1. EURO STOXX 50<sup>®</sup> - ICONIC BLUE-CHIP EUROZONE EQUITY INDEX

# EURO STOXX 50<sup>®</sup> is Europe's leading equity index



## EURO STOXX 50<sup>®</sup>

- » Launched 1998
- » 50 blue-chip companies from 11 Eurozone countries
- » Representative and highly liquid
- » Underlying for financial products
- » Serves as benchmark

# Outstanding methodology ensures well-balanced supersector representation

## Key facts

- » 50 largest companies from the Eurozone
- » Superior selection method for companies
- » Captures about 60% of total free-float supersector leaders
- » Quarterly adjustments to ensure timely representation of markets
- » Fully rules-based and transparent concept without any subjectivity
- » AUM in ETFs: \$40 bn<sup>1)</sup>
- » 51,163 Structured Products issued in 2018 YTD<sup>2)</sup>

## Current index constituents



## 2. EURO STOXX 50<sup>®</sup> CORPORATE BOND INDEX

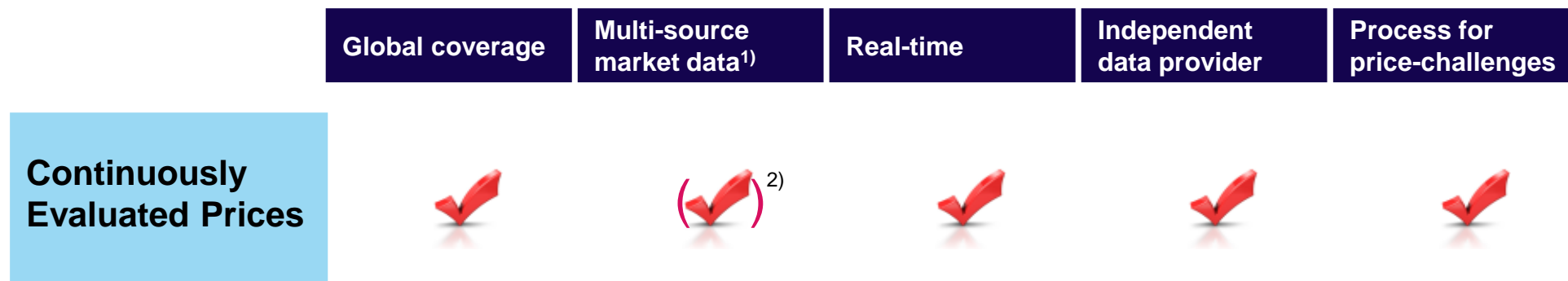
# The corporate bond index tracks the performance of EUR-denominated bonds issued by the EURO STOXX 50® companies

## Index methodology

<b>Underlying bond universe</b>	» Corporate bonds from companies <sup>1)</sup> that are constituents of EURO STOXX 50® index at the time of the rebalancing
<b>Bond selection criteria</b>	<ul style="list-style-type: none"><li>» Issuer Type: Corporate bonds, denominated in EUR</li><li>» Bond Type: Fixed and zero-coupon bonds</li><li>» Rating: Investment Grade (consolidated rating BBB or higher)</li><li>» Time to maturity: At least 15 months measured from the respective re-balancing date</li><li>» Amount outstanding: Minimum EUR 750 mn</li></ul>
<b>Calculation methodology</b>	<ul style="list-style-type: none"><li>» Formulas acc. to the international accepted EFFAS principles of fixed income indices</li><li>» Index weights calculated according to market cap of selected bonds, capped per issuer (20%) and industry sector (40%)</li><li>» Calculated every minute in real-time, between 9:00am and 5:15pm Frankfurt time (GMT+1)<sup>2)</sup></li></ul>
<b>Index types, sub-indices and data sources</b>	<ul style="list-style-type: none"><li>» Index types: Price Index, Total Return Index</li><li>» Sub-indices: Main hedged and unhedged currency, maturity, rating and industry versions<sup>3)</sup></li><li>» Pricing source: Continuous evaluated prices from Interactive Data Corporation (IDC)</li><li>» Rating sources: Standard &amp; Poor's and Moody's</li><li>» Reference data sources: IDC and Bloomberg</li></ul>
<b>Review</b>	» Index composition and weights are reviewed quarterly

# Continuous evaluated prices reach the goal of global data coverage and address bond market liquidity issues

The optimal bond pricing source for indexing



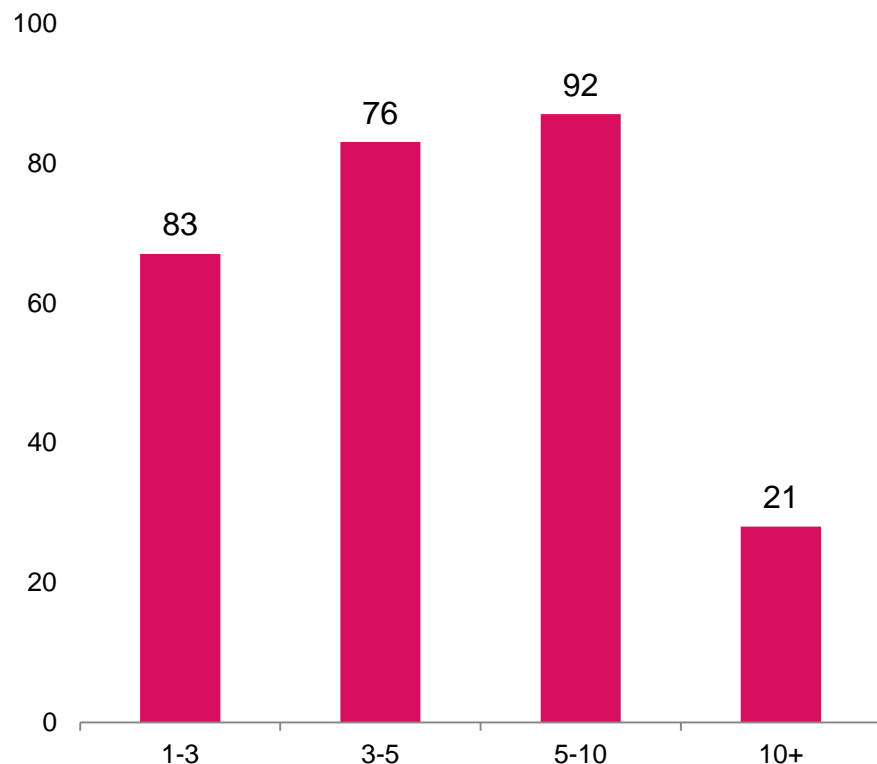
## Continuously evaluated prices are optimal, because:

- » Given the current reality of liquidity in the bond markets, global coverage is ensured
- » Market data from many relevant trading venues is collected and, where applicable, enriched with human analysis
- » Continuously updated index calculation endorses high level service for our clients
- » Fixed income high-profile evaluators from an independent provider ensure quality and minimize room for manipulation
- » A challenge process in place allows, if necessary, to understand the price origination and helps for improvements
- » Regulatory compliance is ensured

# 272 constituents from 30 issuing companies currently qualify for the index

## Overview

### Number of bonds within maturity bucket



### Top holdings<sup>1)</sup>

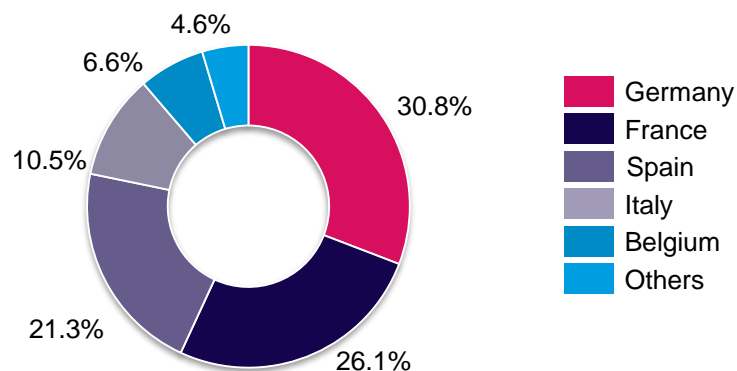
Rank	Issuer	Number of bonds	Weight
1	Banco Santander	26	9.55%
2	BNP Paribas SA	24	8.72%
3	Anheuser-Busch Inbev SA	13	6.64%
4	Volkswagen AG	17	6.43%
5	Daimler AG	17	5.89%
6	Bayerische Motoren Werke AG	19	5.55%
7	Telefonica AG	13	5.50%
8	Deutsche Bank AG	14	4.71%
9	Bco Bilbao Vizcaya Argentaria SA	12	4.68%
10	Societe Generale	15	4.50%
...	..	..	..
30	Unibail Rodamco SE	1	0.23%



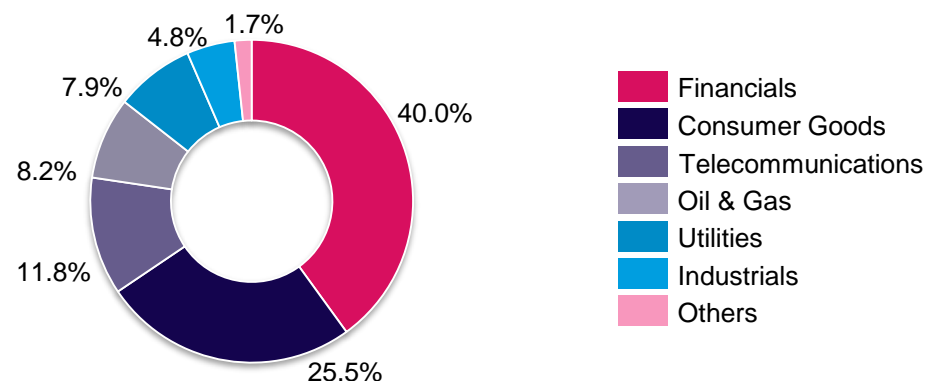
# The index offers diversified geographical, rating and industry sector allocation

Composition key figures<sup>1)</sup>

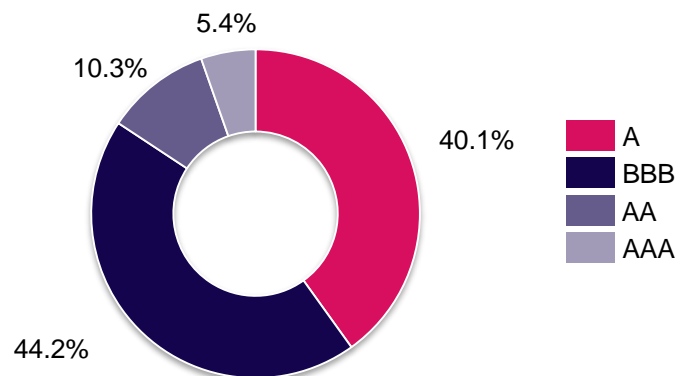
## Geographical allocation



## Industry sector allocation



## Rating allocation

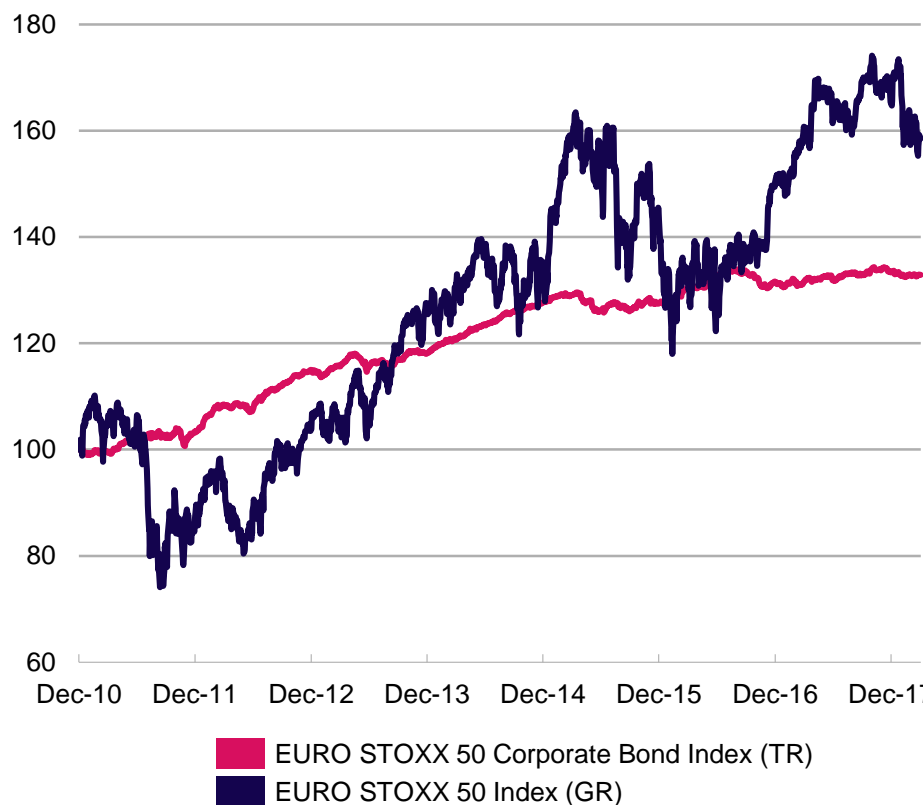


## Weighted average index analytics

Weighted Average Bid <b>Yield to Maturity</b>	0.974
Weighted Average Bid <b>Duration</b>	5.011
Weighted Average Bid <b>Modified Duration</b>	4.963
Weighted Average Bid <b>Convexity</b>	0.396
Weighted Average <b>Remaining Time to Maturity</b>	5.380
Weighted Average <b>Coupon</b>	2.214

# The combination of the EQ and BI charts the development of the two asset classes, providing a sound analysis of the financial health of Eurozone blue-chip companies

## Performance<sup>1)</sup> comparison vs. benchmark



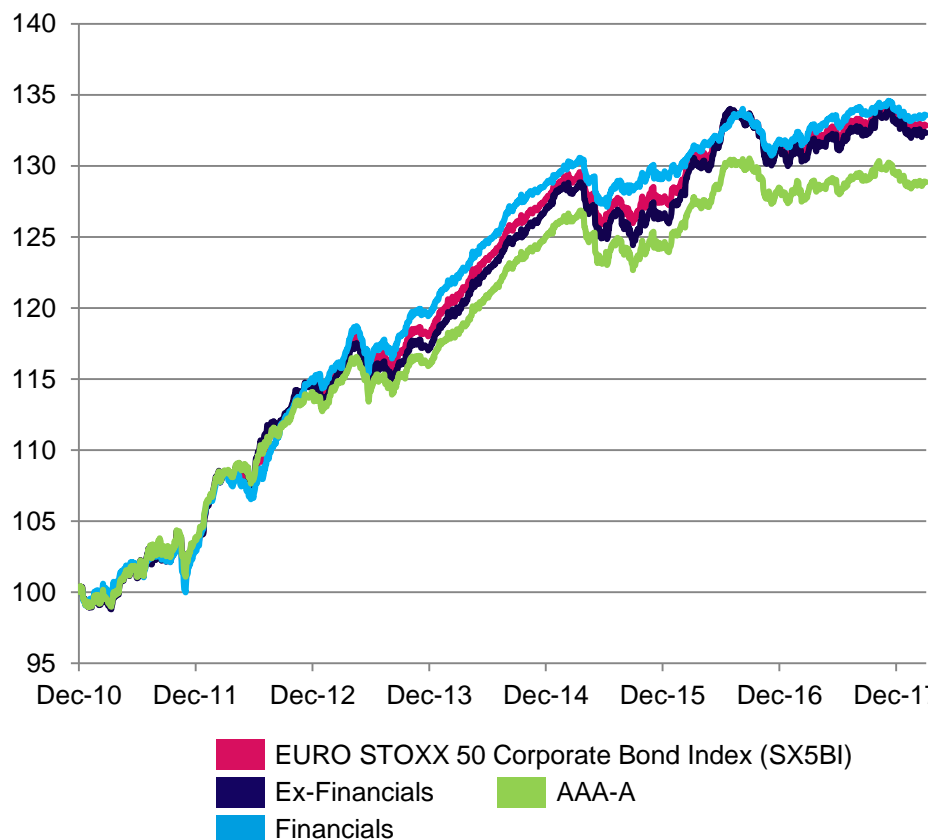
## Descriptive statistics<sup>1)</sup>

	EURO STOXX 50 Corporate Bond Index	EURO STOXX 50 Index
Return 1y (ann.)	0.81%	-0.62%
Return 3y (ann.)	0.98%	-0.02%
Return 5y (ann.)	2.82%	8.84%
Actual Return Overall	32.85%	58.54%
Volatility 1y (ann.)	1.59%	11.85%
Volatility 3y (ann.)	1.94%	19.19%
Volatility 5y (ann.)	1.92%	18.33%
Volatility Overall (ann.)	2.27%	20.48%
Sharpe Ratio 1y <sup>2)</sup>	0.74	0.04
Sharpe Ratio 3y <sup>2)</sup>	0.66	0.11
Sharpe Ratio 5y <sup>2)</sup>	1.53	0.56
Correlation 1y	1.00	-0.02
Correlation 3y	1.00	-0.07
Correlation 5y	1.00	-0.03
Maximum Drawdown	3.29%	32.70%

# Different industry and credit quality versions complement the index family for various investor profiles

## Industry and Rating Variations<sup>1)</sup>

### Performance comparison vs. benchmarks



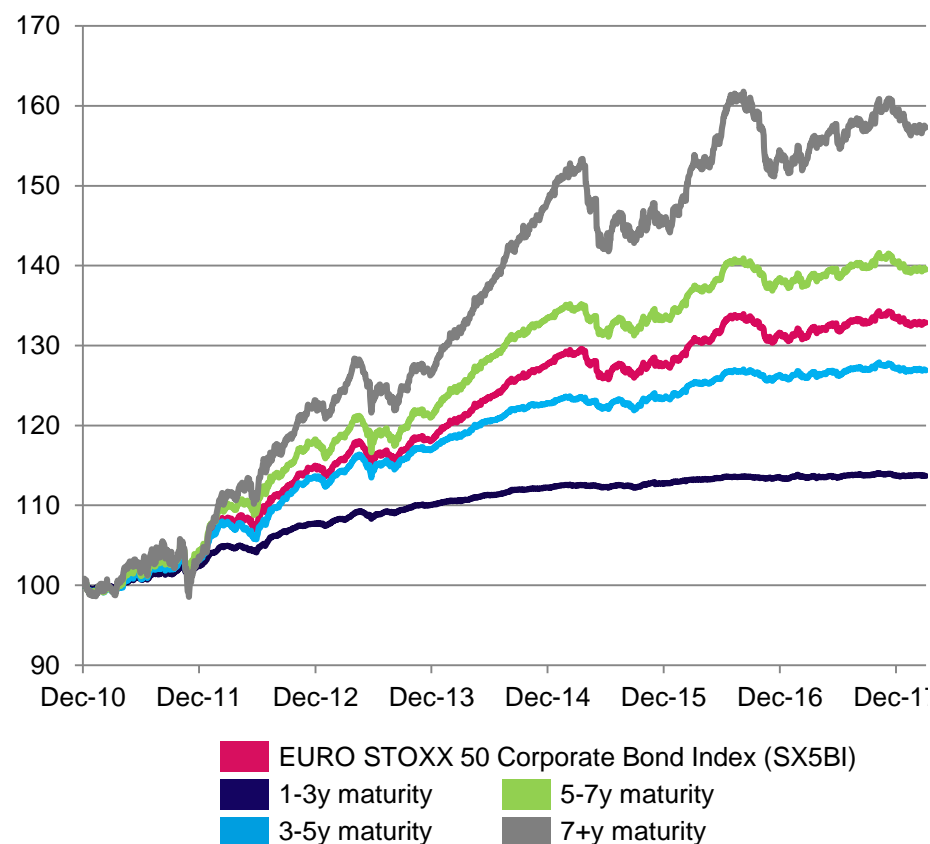
### Descriptive statistics<sup>1)</sup>

	SX5BI	Ex-Financials	Financials	AAA-A
Return 1y (ann.)	0.81%	0.84%	0.76%	0.33%
Return 3y (ann.)	0.98%	1.04%	0.89%	0.68%
Return 5y (ann.)	2.82%	2.78%	2.90%	2.36%
Actual Return Overall	32.85%	32.35%	33.57%	28.88%
Volatility 1y (ann.)	1.59%	1.88%	1.19%	1.56%
Volatility 3y (ann.)	1.94%	2.22%	1.59%	2.05%
Volatility 5y (ann.)	1.92%	2.14%	1.66%	1.99%
Volatility Overall (ann.)	2.27%	2.47%	2.06%	2.32%
Sharpe Ratio 1y <sup>2)</sup>	0.74	0.65	0.95	0.45
Sharpe Ratio 3y <sup>2)</sup>	0.66	0.61	0.75	0.48
Sharpe Ratio 5y <sup>2)</sup>	1.53	1.36	1.81	1.25
Correlation 1y	1.00	1.00	0.97	1.00
Correlation 3y	1.00	0.99	0.97	0.99
Correlation 5y	1.00	0.99	0.97	0.99
Maximum Drawdown	3.29%	3.44%	3.56%	3.31%

# Different maturity versions allow investors to pick the portfolio duration of their choice

## Maturity Buckets<sup>1)</sup>

### Performance comparison vs. benchmarks



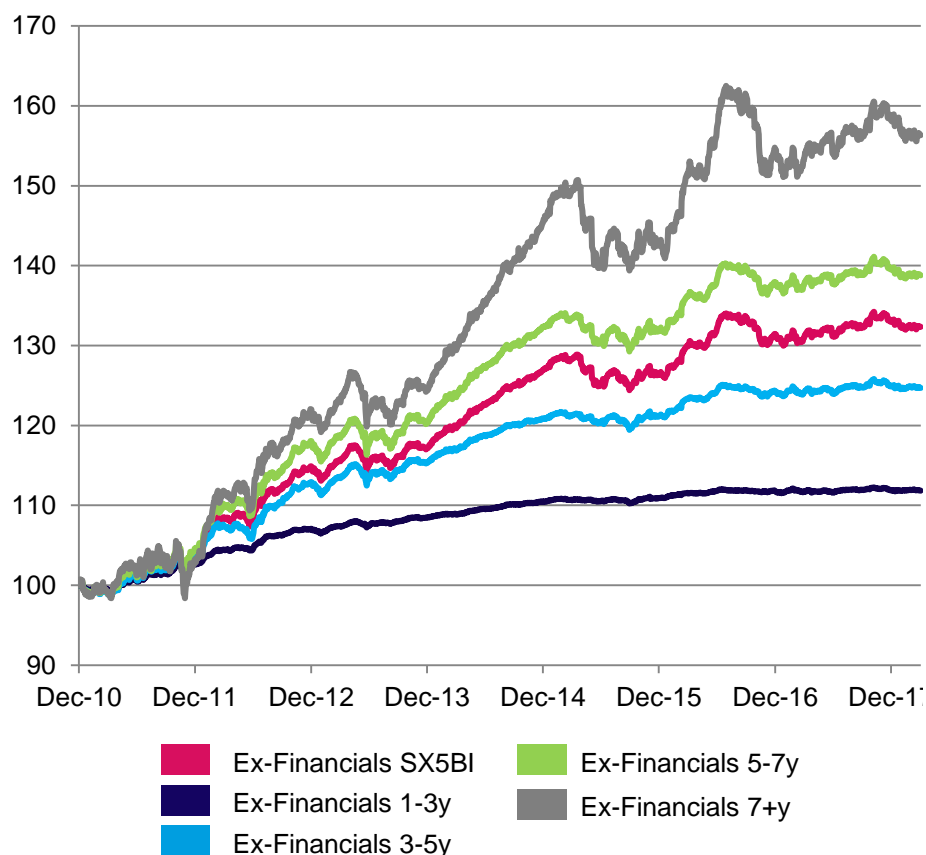
### Descriptive statistics<sup>1)</sup>

	SX5BI	1-3	3-5	5-7	7+
Return 1y (ann.)	0.81%	0.10%	0.43%	0.75%	1.66%
Return 3y (ann.)	0.98%	0.37%	0.98%	1.23%	1.16%
Return 5y (ann.)	2.82%	1.00%	2.15%	3.33%	4.86%
Actual Return Overall	32.85%	13.67%	26.91%	39.52%	57.31%
Volatility 1y (ann.)	1.59%	0.46%	1.05%	1.83%	3.38%
Volatility 3y (ann.)	1.94%	0.45%	1.17%	2.19%	4.51%
Volatility 5y (ann.)	1.92%	0.50%	1.29%	2.34%	4.24%
Volatility Overall (ann.)	2.27%	0.78%	1.76%	2.86%	4.71%
Sharpe Ratio 1y <sup>2)</sup>	0.74	1.00	0.76	0.62	0.61
Sharpe Ratio 3y <sup>2)</sup>	0.66	1.44	1.09	0.70	0.34
Sharpe Ratio 5y <sup>2)</sup>	1.53	2.30	1.77	1.47	1.17
Correlation 1y	1.00	0.82	0.96	0.99	0.98
Correlation 3y	1.00	0.73	0.94	0.99	0.98
Correlation 5y	1.00	0.77	0.95	0.99	0.98
Maximum Drawdown	3.29%	1.13%	2.78%	4.09%	7.56%

# The ex-financials version comes in four different maturity versions allowing investors to pick their preferred combination

## Maturity Buckets<sup>1)</sup> - Ex-Financials

### Performance comparison vs. benchmarks



### Descriptive statistics<sup>1)</sup>

	Ex-Fin SX5BI	Ex-Fin 1-3	Ex-Fin 3-5	Ex-Fin 5-7	Ex-Fin 7+
Return 1y (ann.)	0.84%	0.05%	0.35%	0.66%	1.68%
Return 3y (ann.)	1.04%	0.36%	0.96%	1.36%	1.53%
Return 5y (ann.)	2.78%	0.83%	1.93%	3.24%	4.96%
Actual Return Overall	32.35%	11.84%	24.71%	38.80%	56.33%
Volatility 1y (ann.)	1.88%	0.51%	1.13%	1.92%	3.70%
Volatility 3y (ann.)	2.22%	0.51%	1.24%	2.33%	4.87%
Volatility 5y (ann.)	2.14%	0.51%	1.33%	2.41%	4.49%
Volatility Overall (ann.)	2.47%	0.77%	1.81%	2.95%	4.91%
Sharpe Ratio 1y <sup>2)</sup>	0.65	0.81	0.64	0.54	0.57
Sharpe Ratio 3y <sup>2)</sup>	0.61	1.28	1.01	0.72	0.40
Sharpe Ratio 5y <sup>2)</sup>	1.36	1.89	1.55	1.39	1.13
Correlation 1y	1.00	0.82	0.95	0.99	0.99
Correlation 3y	1.00	0.74	0.94	0.98	0.98
Correlation 5y	1.00	0.77	0.94	0.98	0.98
Maximum Drawdown	3.44%	0.87%	2.50%	3.87%	7.52%

# APPENDIX

# List of EURO STOXX 50 Corporate Bond Indices available on Reuters and/or Bloomberg

## Price Indices

SX5BPI - EURO STOXX 50 Corporate Bond Price Index EUR  
SX5BPIU - EURO STOXX 50 Corporate Bond Price Index USD  
SX5BPIC - EURO STOXX 50 Corporate Bond Price Index CHF  
SX5BPIG - EURO STOXX 50 Corporate Bond Price Index GBP  
SX5BPIJ - EURO STOXX 50 Corporate Bond Price Index JPY  
SX5B13PI - EURO STOXX 50 Corporate Bond 1-3 Price Index EUR  
SX5B35PI - EURO STOXX 50 Corporate Bond 3-5 Price Index EUR  
SX5B57PI - EURO STOXX 50 Corporate Bond 5-7 Price Index EUR  
SX5B7PI - EURO STOXX 50 Corporate Bond 7+ Price Index EUR  
SX5BFPI - EURO STOXX 50 Corporate Bond Financials Price Index EUR  
SX5BEFPI - EURO STOXX 50 Corporate Bond Ex-Financials Price Index EUR  
SX5BEF13PI - EURO STOXX 50 Corporate Bond Ex-Financials 1-3 Price Index EUR  
SX5BEF35PI - EURO STOXX 50 Corporate Bond Ex-Financials 3-5 Price Index EUR  
SX5BEF57PI - EURO STOXX 50 Corporate Bond Ex-Financials 5-7 Price Index EUR  
SX5BEF7PI - EURO STOXX 50 Corporate Bond Ex-Financials 7+ Price Index EUR  
SX5BAPI - EURO STOXX 50 Corporate Bond AAA-A Price Index EUR  
SX5BPIGH - EURO STOXX 50 Corporate Bond Monthly Hedged Price GBP  
SX5BPIJH - EURO STOXX 50 Corporate Bond Monthly Hedged Price JPY  
SX5BPIUH - EURO STOXX 50 Corporate Bond Monthly Hedged Price USD  
SX5BPICH - EURO STOXX 50 Corporate Bond Monthly Hedged Price CHF

## Total Return Indices

SX5BTR - EURO STOXX 50 Corporate Bond Total Return Index EUR  
SX5BTRU - EURO STOXX 50 Corporate Bond Total Return Index USD  
SX5BTRC - EURO STOXX 50 Corporate Bond Total Return Index CHF  
SX5BTRG - EURO STOXX 50 Corporate Bond Total Return Index GBP  
SX5BTRJ - EURO STOXX 50 Corporate Bond Total Return Index JPY  
SX5B13TR - EURO STOXX 50 Corporate Bond 1-3 Total Return Index EUR  
SX5B35TR - EURO STOXX 50 Corporate Bond 3-5 Total Return Index EUR  
SX5B57TR - EURO STOXX 50 Corporate Bond 5-7 Total Return Index EUR  
SX5B7TR - EURO STOXX 50 Corporate Bond 7+ Total Return Index EUR  
SX5BFTTR - EURO STOXX 50 Corporate Bond Financials Total Return Index EUR  
SX5BEFTTR - EURO STOXX 50 Corporate Bond Ex-Financials Total Return Index EUR  
SX5BEF13TR - EURO STOXX 50 Corporate Bond Ex-Financials 1-3 Total Return Index EUR  
SX5BEF35TR - EURO STOXX 50 Corporate Bond Ex-Financials 3-5 Total Return Index EUR  
SX5BEF57TR - EURO STOXX 50 Corporate Bond Ex-Financials 5-7 Total Return Index EUR  
SX5BEF7TR - EURO STOXX 50 Corporate Bond Ex-Financials 7+ Total Return Index EUR  
SX5BATR - EURO STOXX 50 Corporate Bond AAA-A Total Return Index EUR  
SX5BTRGH - EURO STOXX 50 Corporate Bond Monthly Hedged Total Return GBP  
SX5BTRJH - EURO STOXX 50 Corporate Bond Monthly Hedged Total Return JPY  
SX5BTRUH - EURO STOXX 50 Corporate Bond Monthly Hedged Total Return USD  
SX5BTRCH - EURO STOXX 50 Corporate Bond Monthly Hedged Total Return CHF

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