

## Smart beta : the 360° view

# SMART BETA in Japan

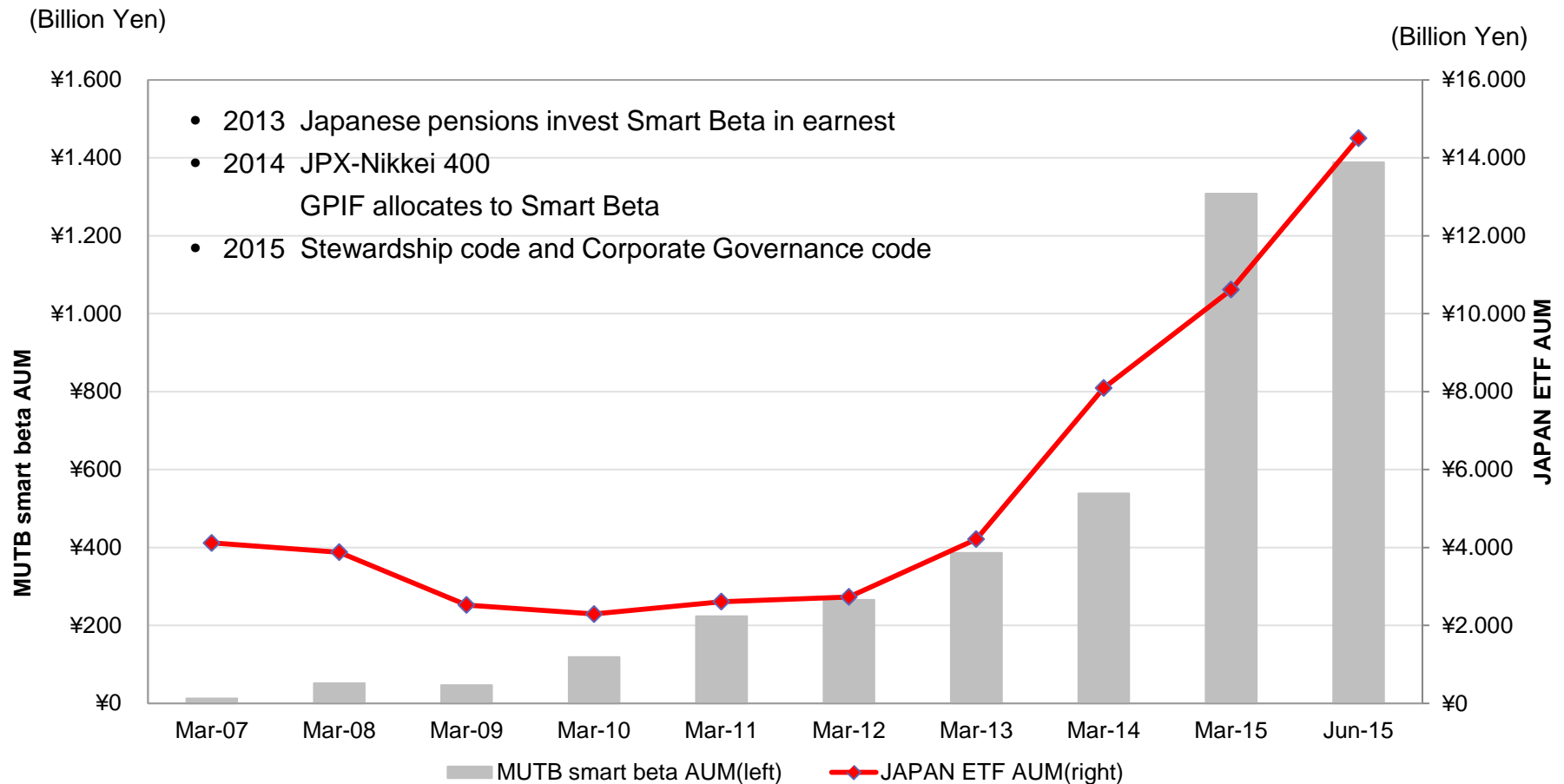
SEPTEMBER 2015



1. Smart Beta in Japan
2. Quality investing in Japan
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# Smart Beta in Japan

- ETF AUM in Japan and smart beta AUM at MUTB are increasing rapidly

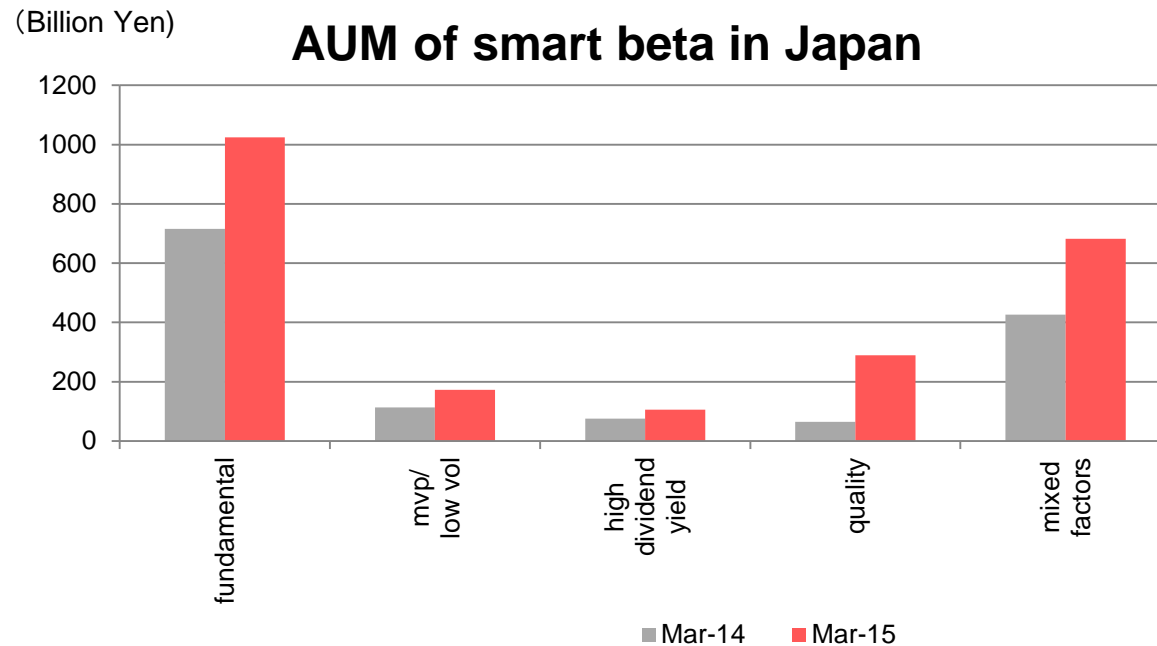


Source: MUTB, The Investment Trusts Association

# Smart Beta in Japan

Top AUM of smart beta in Japan

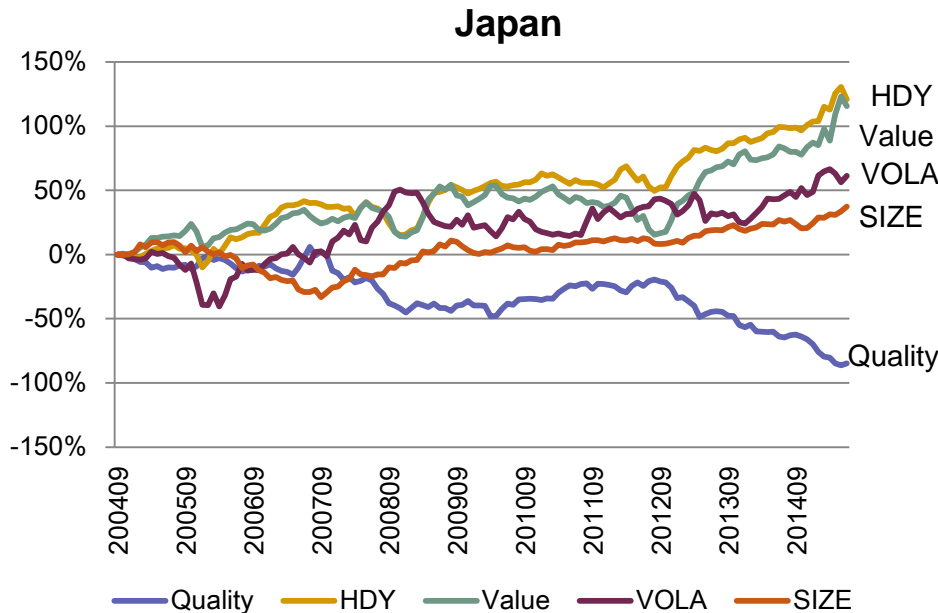
- value (fundamental)
- minimum variance and low volatility
- quality (including JPX-Nikkei400)



Source: R&I, MUTB

# Factor return in Japan

- Value factor has been effective in Japan for a long time.
- Quality factor is not efficient in Japan



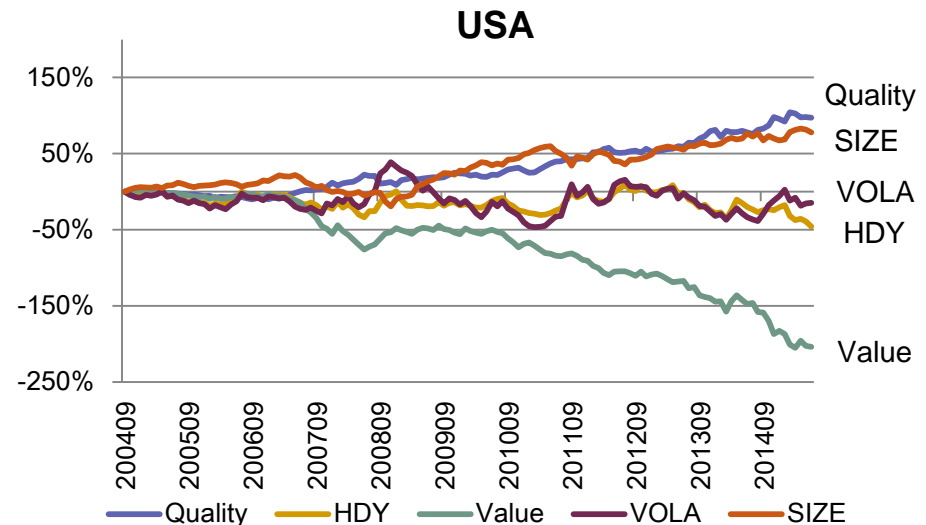
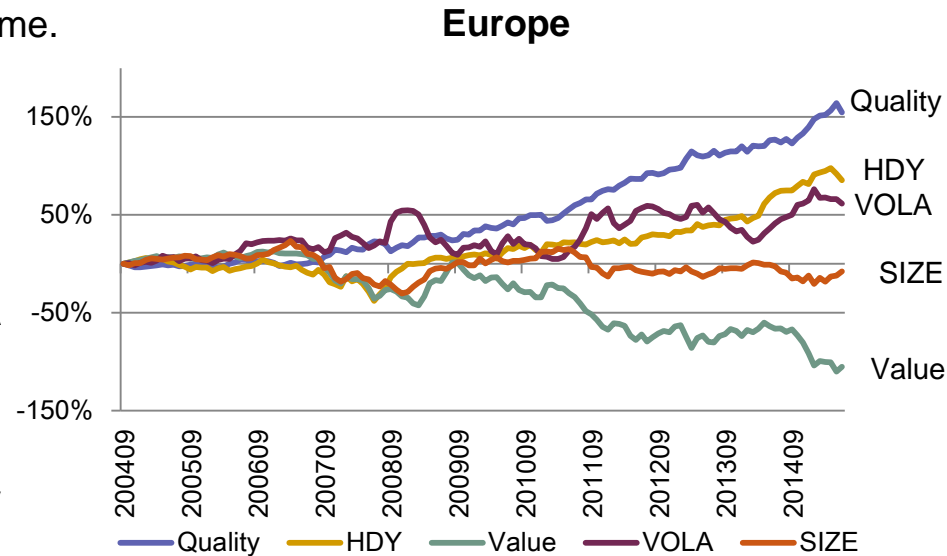
<factor definition>

- Quality (ROE, High-Low)
- Value (P/B Ratio, Low-High)
- SIZE (Market Cap, Small-Big)
- VOLA (Historical Volatility, Low-High)
- HDY (Dividend Yield, High-Low)

data: from Sep 2006 to Jul 2015

Source: MUTB

4



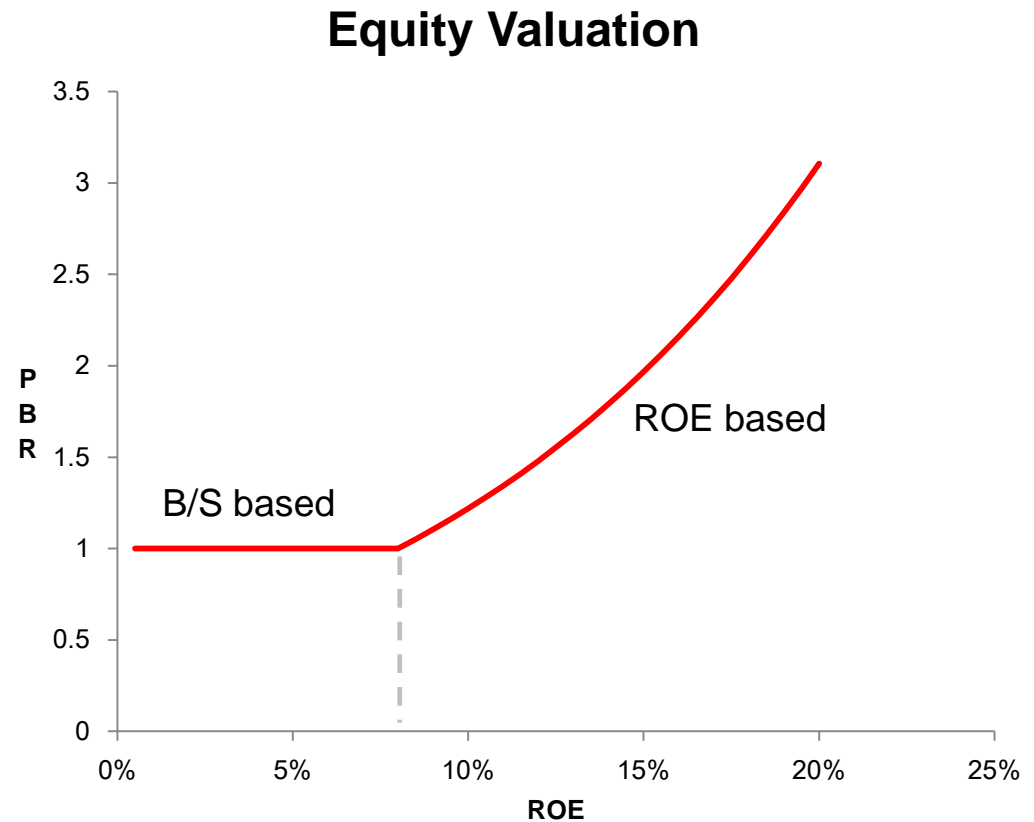
# Challenges to ROE investing in Japan

## Theoretical relation

### <ex> Finite RIM Valuation

#### Assume

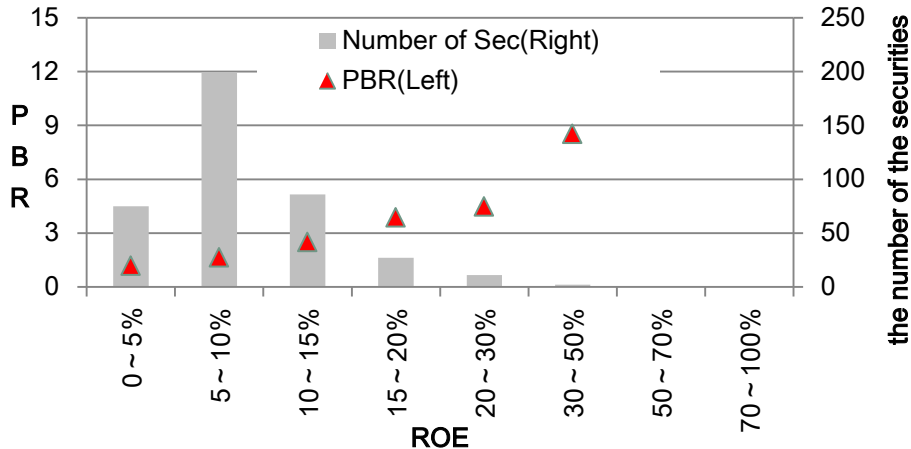
- const. ROE
- $RI > 0$  for 10YR
- cost of equity 8%
- investors optimally stop



# Challenges to ROE investing in Japan

- ROE of many companies in Japan are low
- Stock prices in Japan have been determined by value rather than growth.

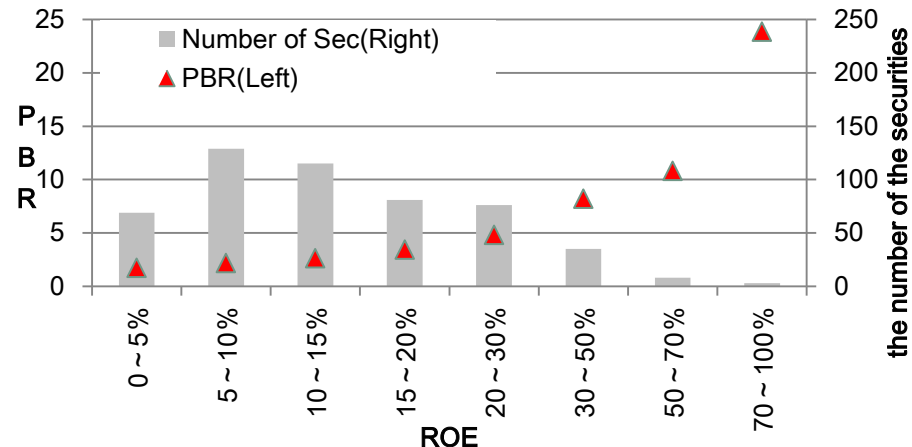
## P/B-ROE in Japan



- ROE used the realized net income and book-value at the latest fiscal period.
- P/B Ratio used the latest book-value and market cap of the data period.
- universe: STOXX global 1800
- data : the end of March 2015

Source: MUTB

## P/B-ROE in Europe



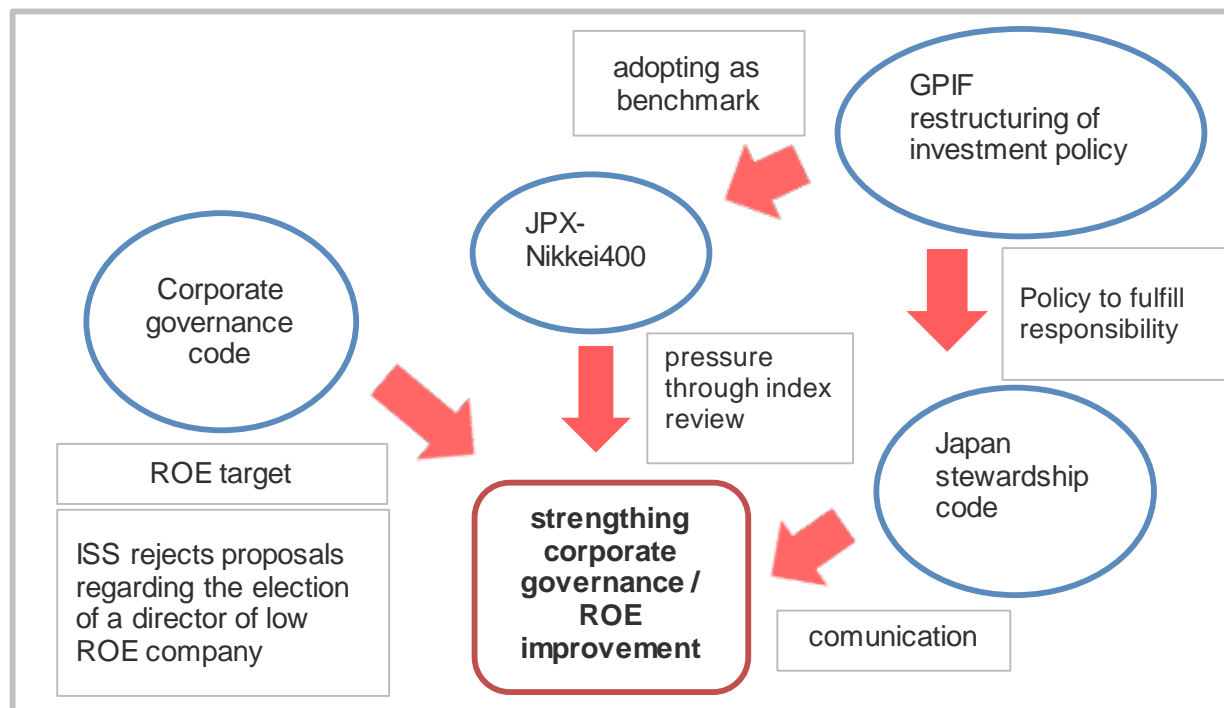
## P/B-ROE in USA



# Change in attitudes towards ROE

- Action by companies on ROE

	investment environment	company's reaction	ROE
1994~1996	• Emergence of a foreign investor	• Prefer to financial solvency by bad-loan problem of bank and fall of the property price	not increased
2005~2008	• A foreign investor included in "Activist" rises more	• Midterm management plan and share buy-back • Prefer to financial solvency by the lehman shock	not increased
2012~	• Abenomics • Japan's Stewardship Code • Japan's Corporate governance Code	• Strongly conscious of ROE management • Setting the target of ROE	increase?

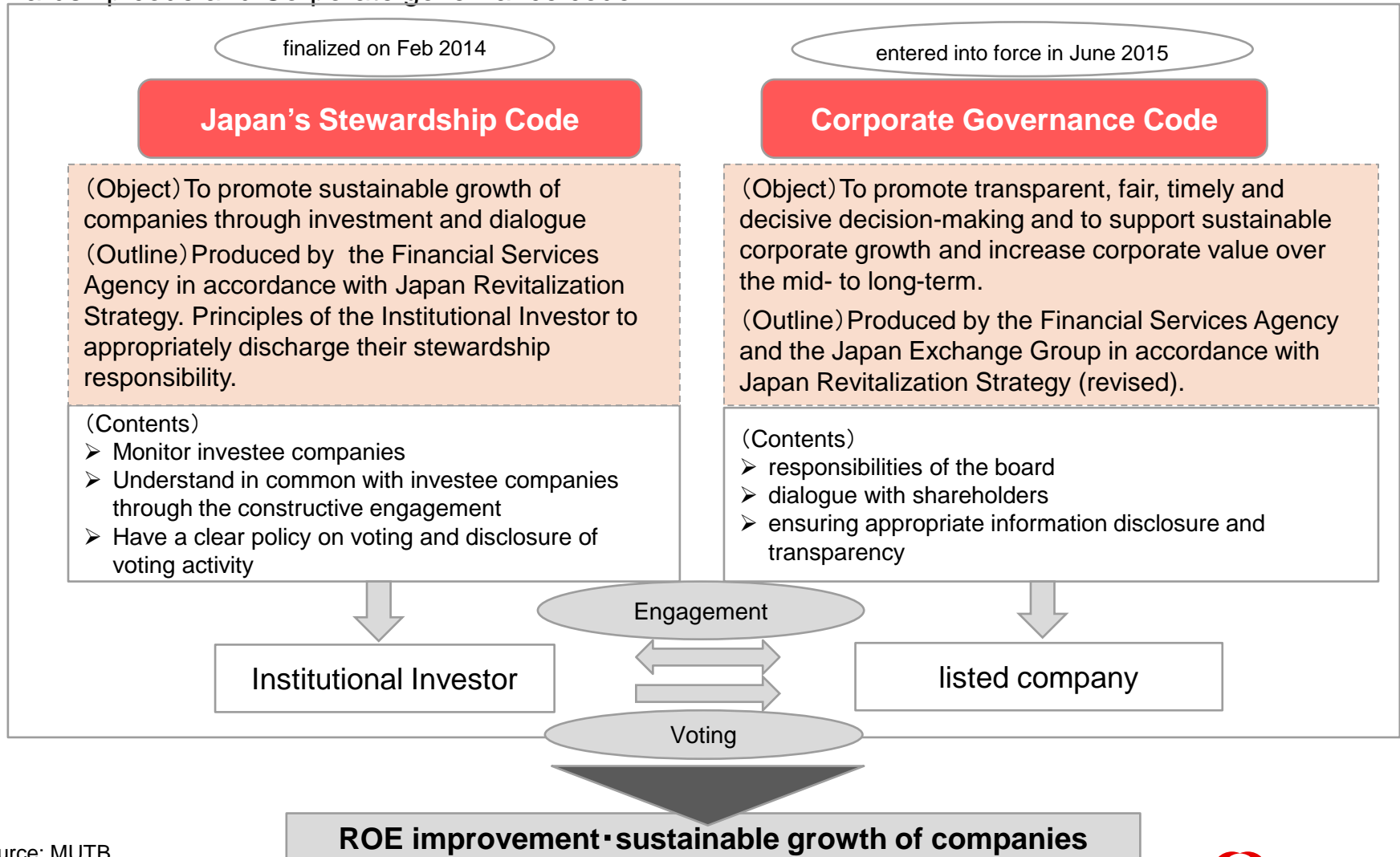


Source: MUTB



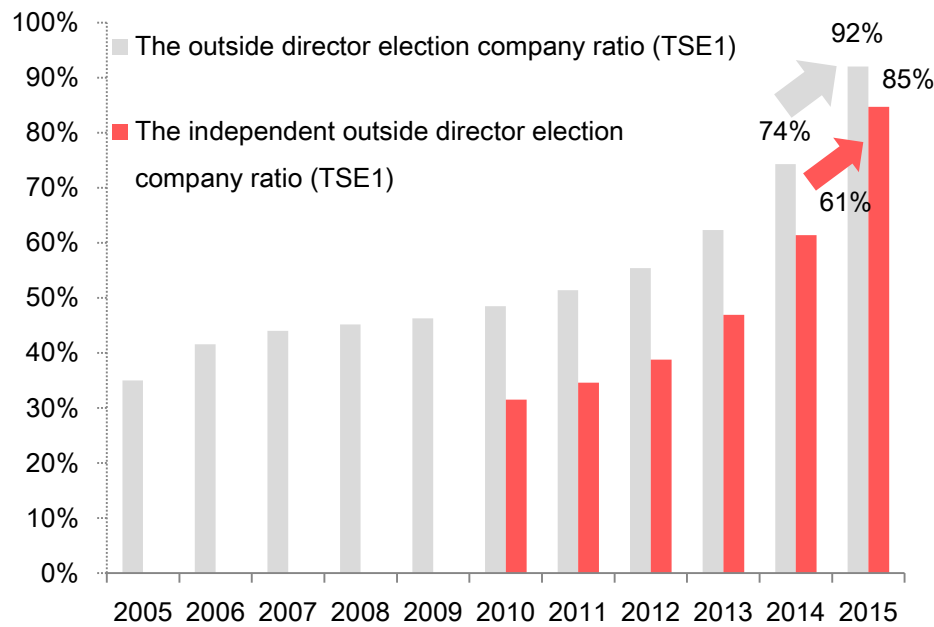
# Change in attitudes towards ROE

## Stewardship code and Corporate governance code



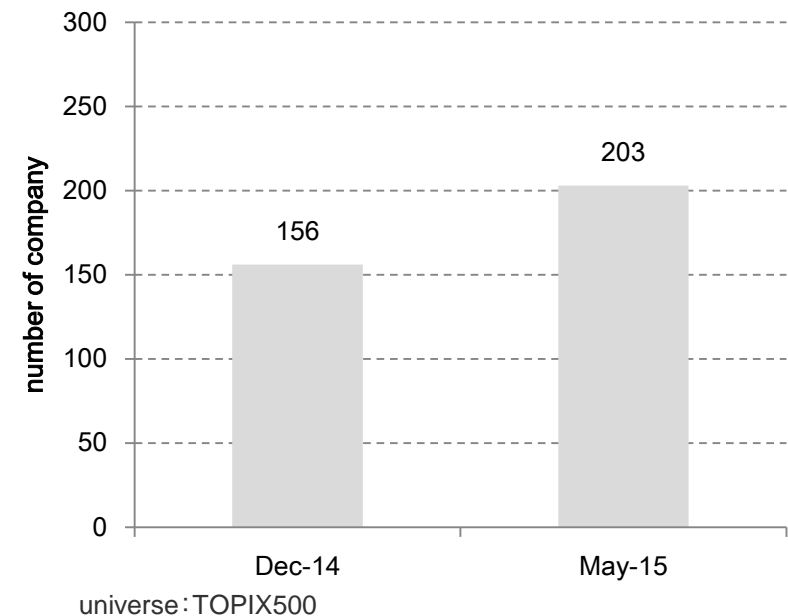
# Change in attitudes towards ROE

- Changes in enterprise behavior
  - Election of outside directors → ratio is rapidly increasing
  - Setting a ROE target → Number of companies is increasing



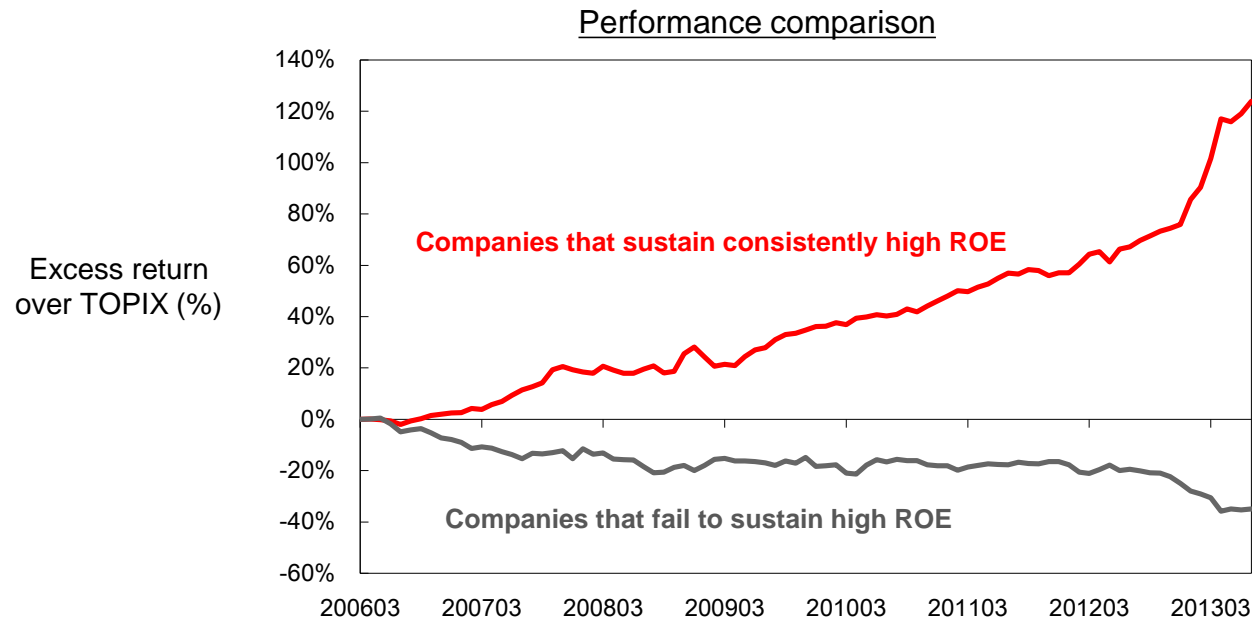
source: MUTB, <http://www.jacd.jp/>,

## Setting a ROE target



# Key to ROE investing

- Companies with consistently high ROE mark positive returns over the mid-to-long term, while those failing to sustain high ROE are likely to produce negative returns.



- Companies that sustain consistently high ROE: Companies that currently have a high ROE in the top 1/3 and remain in the top 1/3 for the next 2 fiscal years.
- Companies that fail to sustain high ROE: Companies that currently have a high ROE in the top 1/3 but are not in the top 1/3 in either or both of the next 2 fiscal years.
- The chart shows cumulative excess returns for each group assuming monthly rebalancing.
- Universe: Top 500 companies by market capitalisation.
- Period: from Mar 2006 to Jul 2013.

Source: FactSet, MUTB

# Key to ROE investing

- Financial health, profitability and business stability are important factors to sustaining high ROE.

## 3 factors to sustain high ROE

### 1. **Financial Health**

Financial strength unlikely to be affected by economic fluctuations

### 2. **Profitability**

Ability to generate cash-flow efficiently with high profitability

### 3. **Business Stability**

Stable business model

Low total debt  
to total capital  
ratio

Cash-Flow  
generation  
ability

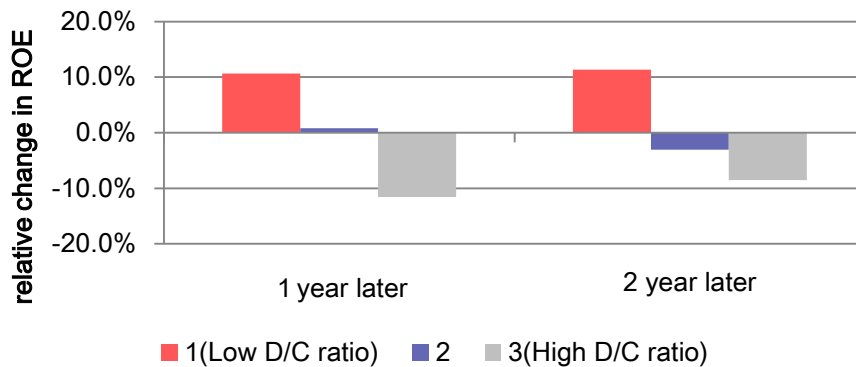
Low earnings  
variability

High ROE  
into the future

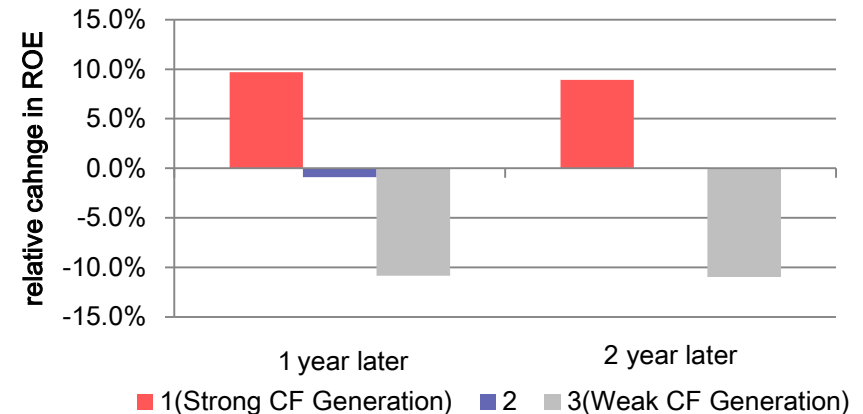
# Key to ROE investing

- At high ROE companies, companies with low D/C ratio, strong cash flow generation ability and low earnings variability are likely to be able to sustain high ROE.

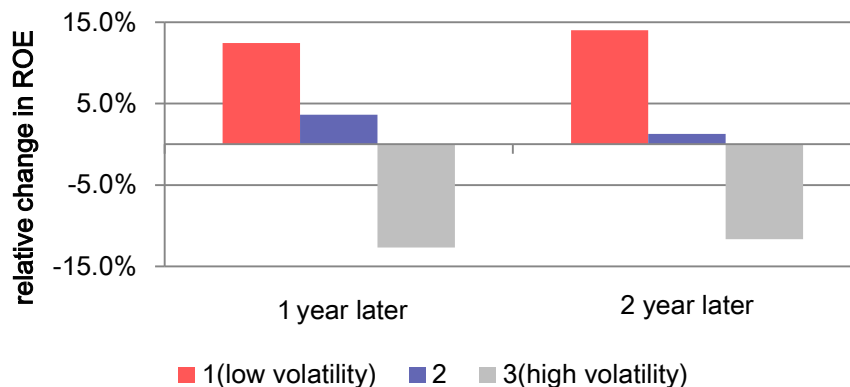
ROE relative change by debt to capital



ROE relative change by cash flow generation ability



ROE relative change by earnings variability



- Companies with current high ROE are divided into 3 groups by each indicator. Relative change in average ROE of group to average ROE of total over next fiscal year and following fiscal year after.
- Universe: STOXX Japan 600.
- Period: from Mar 2006 to Jul 2013.

Source: MUTB

# Key to ROE investing

## Discriminant Analysis

$$y = \alpha + a_1x_1 + a_2x_2 + a_3x_3$$

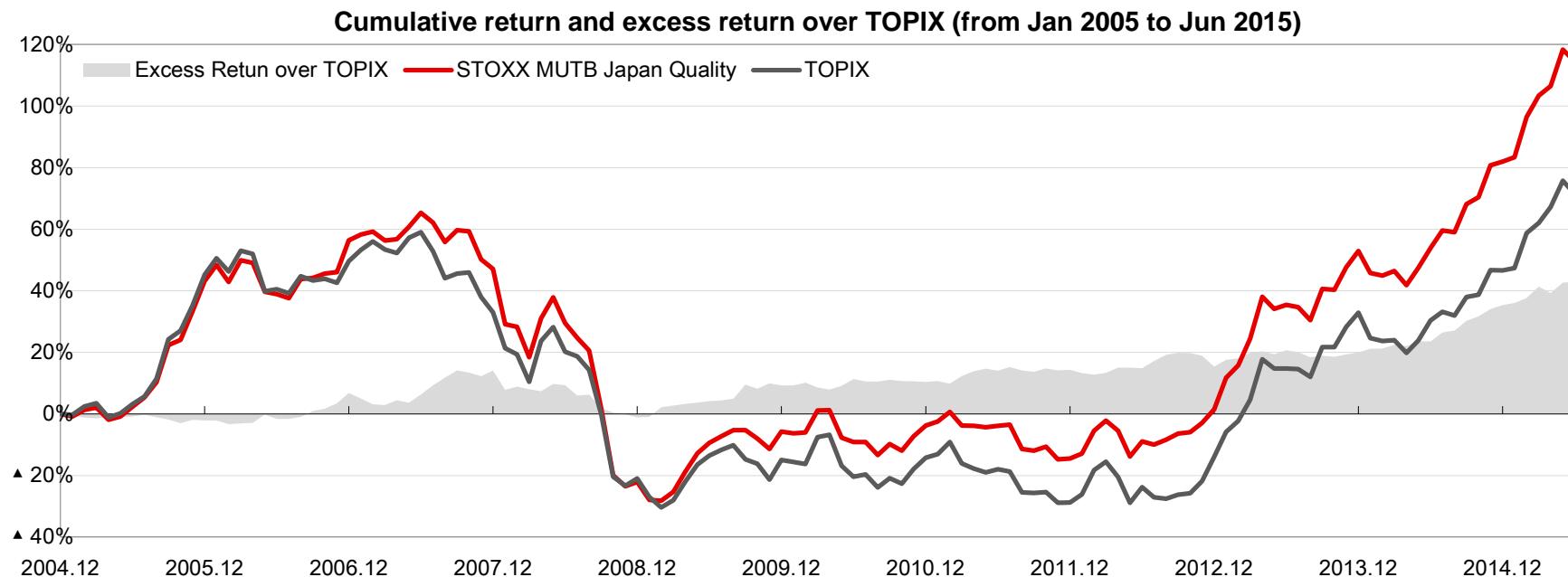
	A	B	C	D	E
Intercept	0.48	0.38	0.54	0.38	0.40
(t value)	(50.99)	(33.19)	(57.22)	(29.15)	(31.93)
Debt to Capital	0.14			-0.02	
(t value)	(8.8)			(-0.97)	
Cashflow generation ability		0.28		0.29	
(t value)		(17.06)		(14.6)	
Earnings variability			0.04	-0.01	
(t value)			(2.15)	(-0.3)	
Combination of 3 indicator					0.28
(t value)					(12.7)
Rsquare	0.0069	0.0255	0.0004	0.0256	0.0143

- $Y$  is 1 when companies that currently have a high ROE in the top 1/3 and remain in the top 1/3 for the next 2 fiscal years and  $y$  is 0 when companies that currently have a high ROE in the top 1/3 but are not in the top 1/3 in either or both of the next 2 fiscal years
- Combination of 3 indicators is average of debt to capital, CF generation and Earnings variability.
- Universe: STOXX Japan 600
- Period: from Mar 2006 to Jul 2013.

Source: STOXX, MUTB

# Efficacy of quality investing

- iSTOXX MUTB Japan Quality 150 has a tendency to achieve higher Sharpe Ratio than TOPIX.

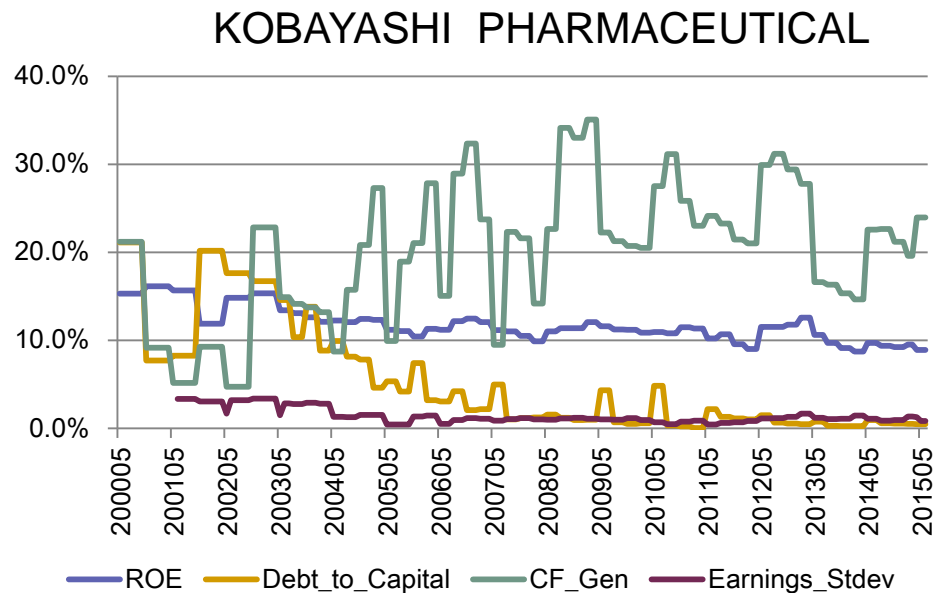
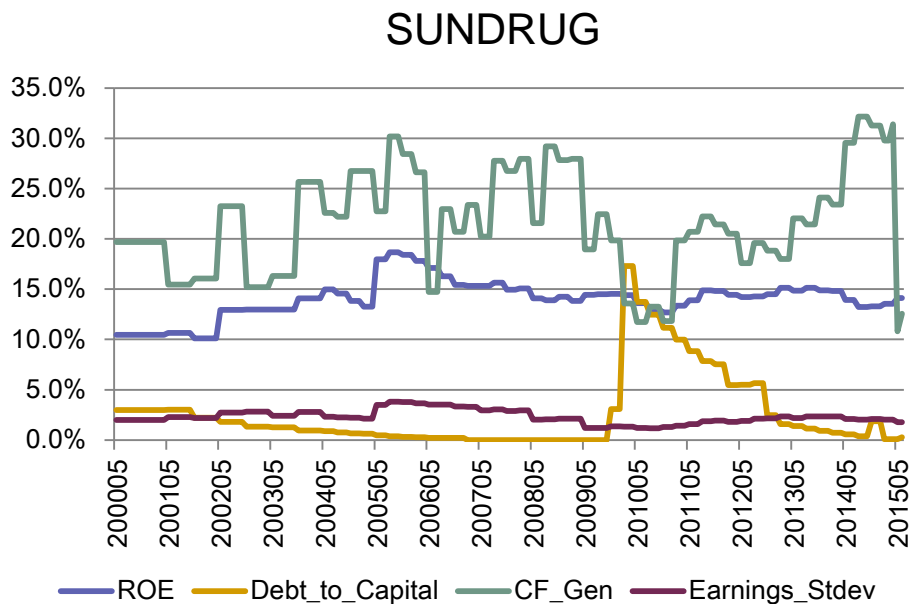


	Annualised Return	Standard Deviation	Sharpe Ratio
iSTOXX MUTB Japan Quality 150	7.5%	17.4%	0.43
TOPIX	5.3%	18.4%	0.29

Performance from Jan 2005 to Jun 2015  
Source: STOXX, MUTB

# Efficacy of quality investing

- Representative examples of companies that have sustained high ROE





# Conclusion

- Smart beta AUM is increasing rapidly.
- Minimum variance is very popular.
- In Japan, value factor has been most efficient and quality has been not so efficient.
- After Abenomics, the company' CEO has been strongly conscious of ROE management.
- To invest in the quality factor, we need to focus on the sustainability of high ROE.
- Financial health, profitability and business stability are important to sustain high ROE.
- By increasing the effective factors (smart beta), we will have many choices to invest and expect the expansion of the investor base and low cost passive funds (ETF).

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