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National Asset-Liability Management Europe

Case study: Making the move into investment grade corporates

Tomas Garbaravičius

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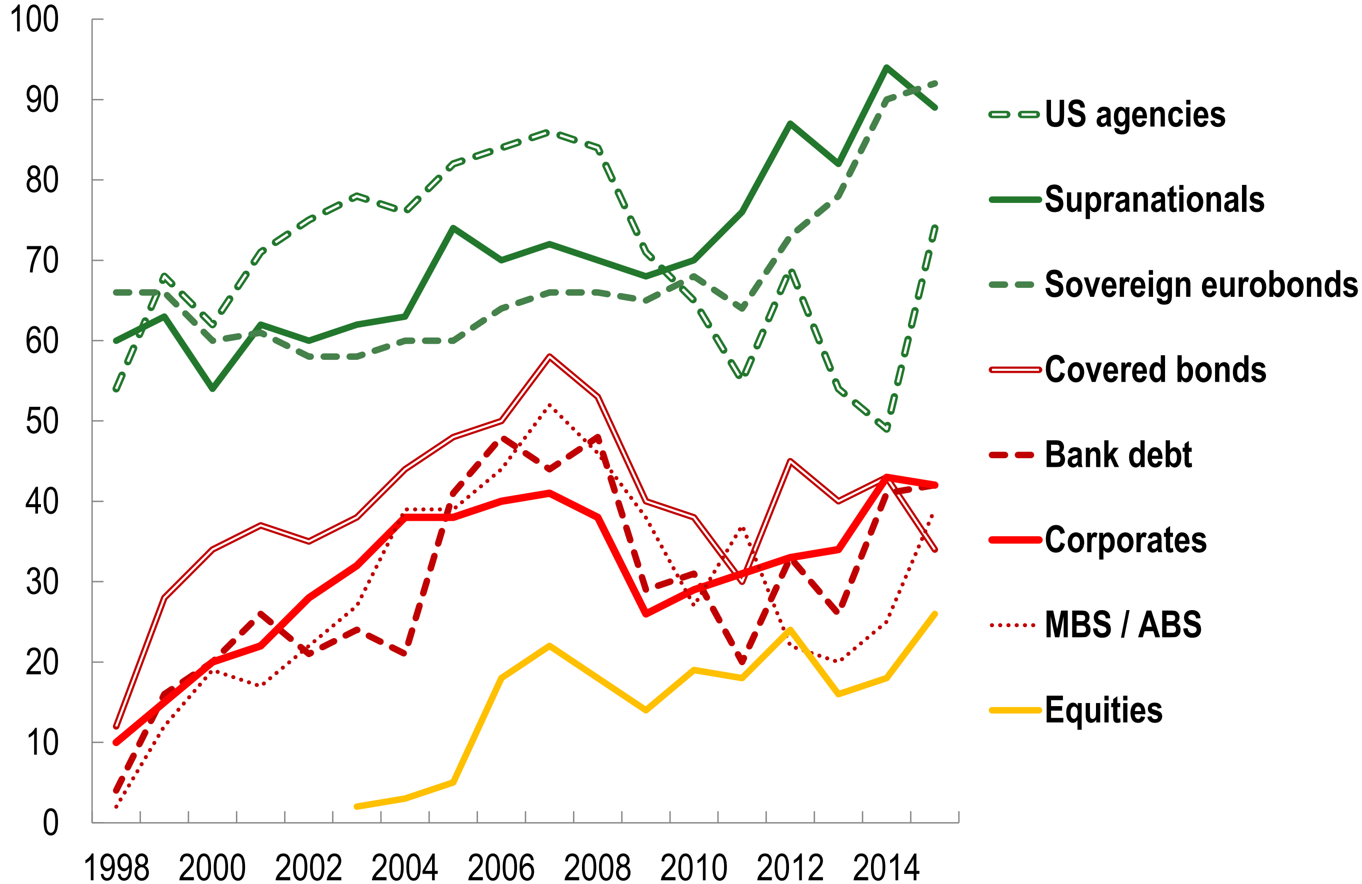
Outline

- The reasoning behind the decision to corporate bonds in the portfolio
- What percentage of the portfolios has been allocated to corporate bonds?
- What benchmarks were introduced?
- How has the portfolio performed?

What asset classes do Central Banks invest in?

% of Central Banks which have approved the asset class



Sources: UBS Central Bank Surveys 1998-2015 and World Bank Treasury.

After starting with safe and liquid assets …

- Central banks start with and have safe investments, such as US Treasuries and Bunds, as a core part of their portfolios
  - safe to invest with long duration, as value goes up during instability episodes
- Then agencies and high-rated covered bonds
  - offer additional yield for largely liquidity risk

… Credit is a natural next step

- **Bank bonds**
  - were popular before the crisis, because of high ratings and bail-out / state support expectations
- **Non-financial corporate bonds**
  - duration is the key risk in safe CB portfolios and it is countercyclical, so cyclical credit spread risk may act as a diversifier
  - operational issues (settlement, taxation, safekeeping) are largely the same as for the asset classes that are already in the portfolio
  - if issuer risk is well-diversified, then difficulties with credit risk management are tolerable

Difficulties with corporate bonds

- **Credit risk estimation and monitoring at an issuer level**
  - active issuer credit risk management is a big drain on resources
- **Transaction handling**
  - the Bank of Lithuania has been working with ~100-200 securities in the investment portfolio, whereas the European corporate bond index used as a strategic benchmark contains 2000+ bonds
- **Reputational risk in case of a corporate issuer default**

Corporate bond investment history

2004

Analysis,
internal discussions
and preparations

Crisis

- Implementation suspended
- Some fire-sales

end-2013

- Part of strategic asset allocation
- Target portfolio size: €400 mn

2007

- First corporate bonds bought
- Only high quality financials allowed, perceived as less risky
- Minimum rating: A
- Issuer limit: €5 mn
- Broad geographic scope
- Target portfolio size: ~ €300 mn
- Implementation started with €50 mn

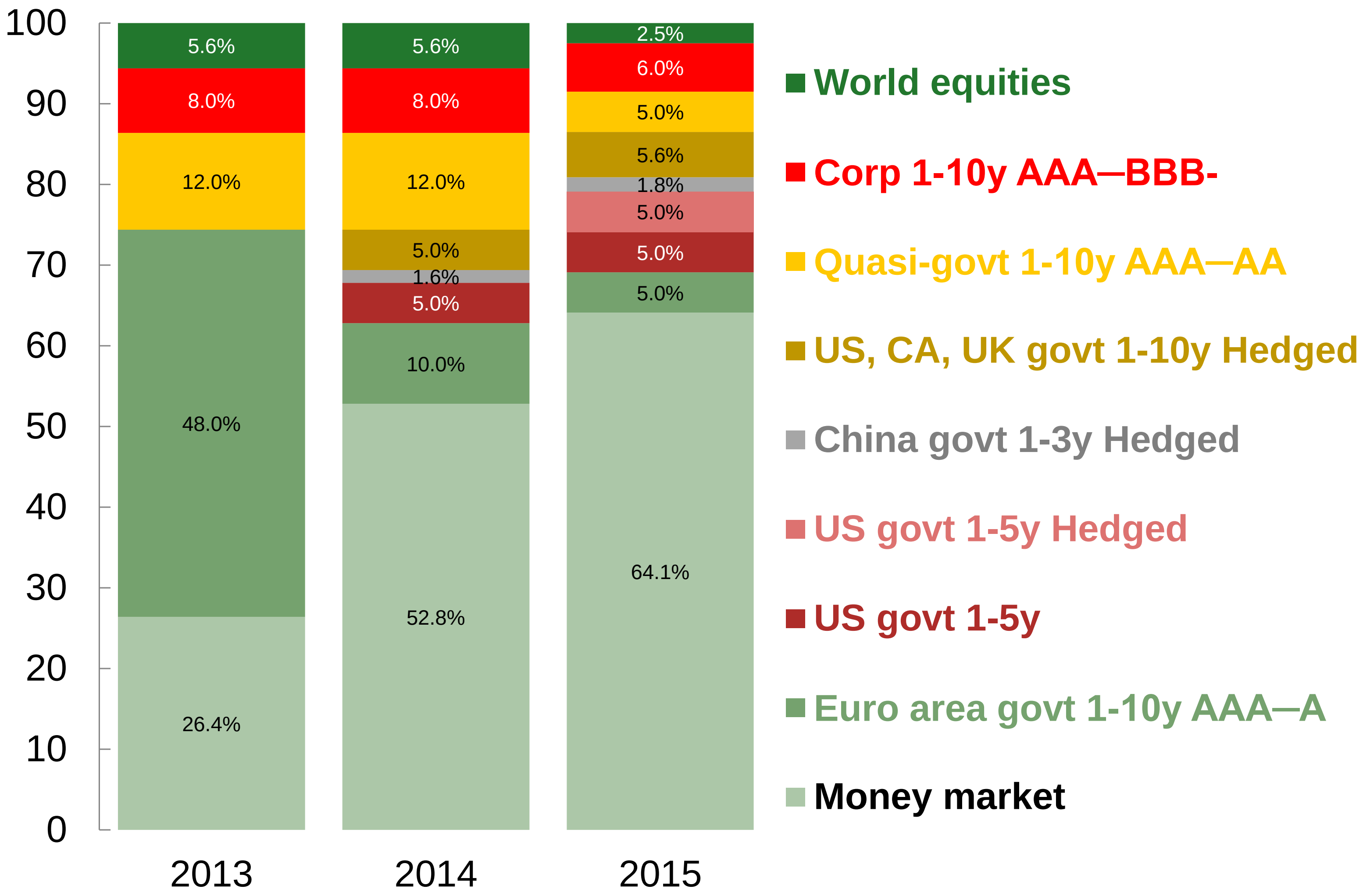
end-2012

- Investments resumed
- Restriction for non-financial bonds abandoned
- Investment grade bonds only
- Portfolio size: ~ €150 mn
- First ETF purchase

Key parameters of the investment framework

- **Investment horizon** — **3-year rolling investment horizon**
  - Bank of Lithuania contribution to the State Budget is based on the average profit over the past 3 years
  - Calendar horizon is always shrinking, whereas rolling is constant
- **Risk tolerance** — **€100 million absolute risk budget**
  - Of which €75 million is for strategic asset allocation (SAA)
  - Economic rather than accounting approach is used to compute risk budget utilisation
- **Currency risk** — **Unhedged up to 15% of portfolio**
- **Eligible assets** — **Government and quasi-government bonds, corporate bonds, equities, FX and IR derivatives**

Strategic asset allocation (SAA)



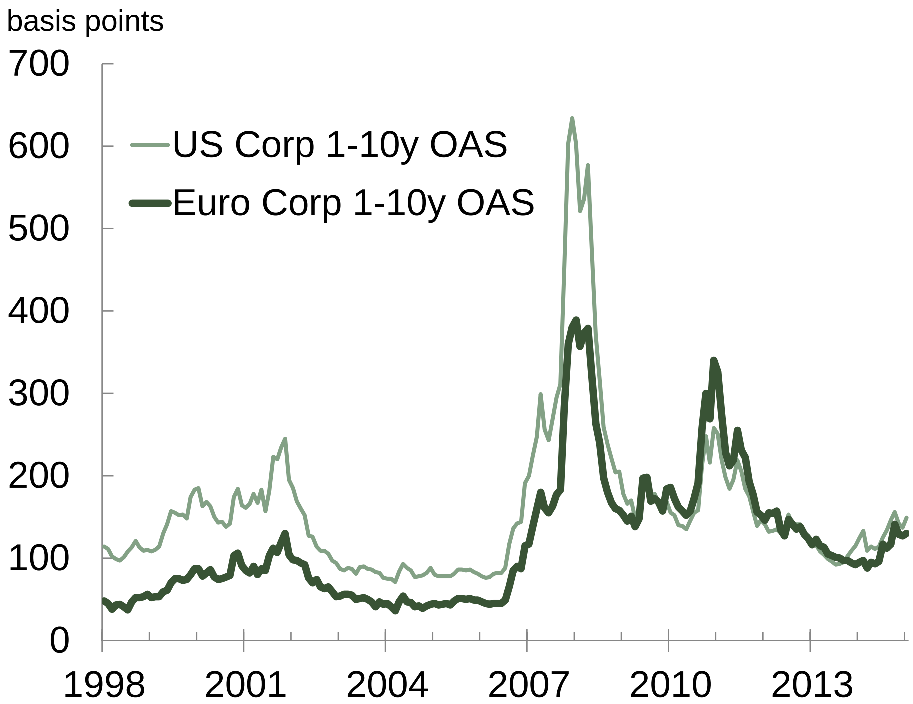
Implementation

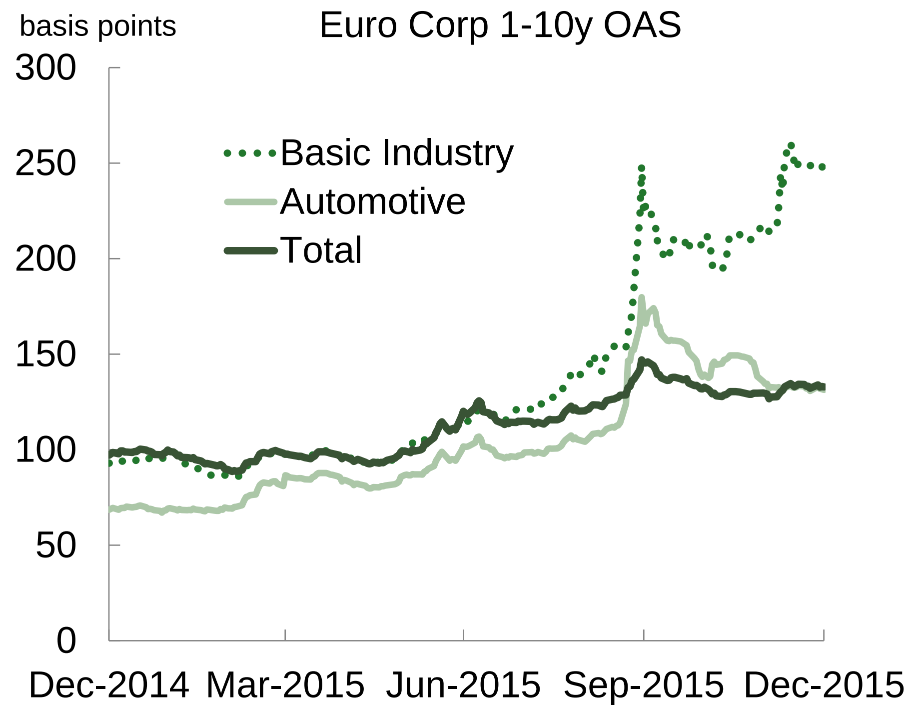
- **ETF selection criteria**
  - physical index replication, daily transparency, liquidity, cost, average rating A-, UCITS
- **Benchmark vs. traded ETFs**
  - underlying indices (Barclays and Markit iBoxx indices) of traded ETFs are not the same as the benchmark (BoAML, 1-10y euro-denominated investment grade bonds) …
  - … but not an issue, since always active positioning, also by using sub-index ETFs: financials vs non-financials, index vs. large cap
  - One trader, a few ETF trades per month (on top of a monthly tactical allocation cycle)

Implementation

- **Liquidity considerations**
  - corporate bond portfolio size is €300 mn and ETF liquidity is sufficient for usual adjustments up to €30 mn
  - it would be useful to complement ETFs with CDS for urgent exposure adjustments in times of ETF illiquidity
- **Significant contribution to total risk**
  - even moderate allocations to equities, unhedged FX risk and corporate bonds “consume” a substantial part of overall risk budget (i.e. estimated *ex ante* one-year VaR)

2015 was a difficult year for credit



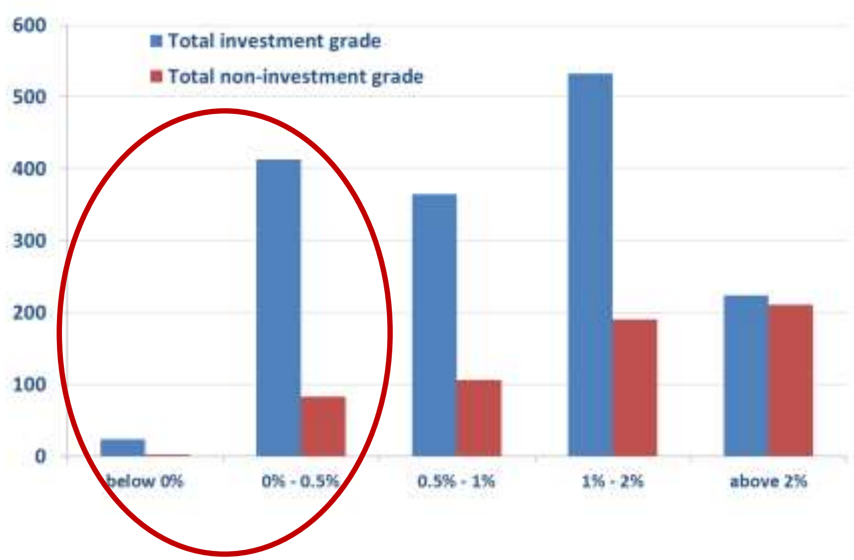


- Problems were concentrated in Basic industry (mining) and Automotive sectors, but some credit spread widening took place for all sectors
- A combination of low interest rates and still relatively low spreads in most sectors means low returns in the period ahead

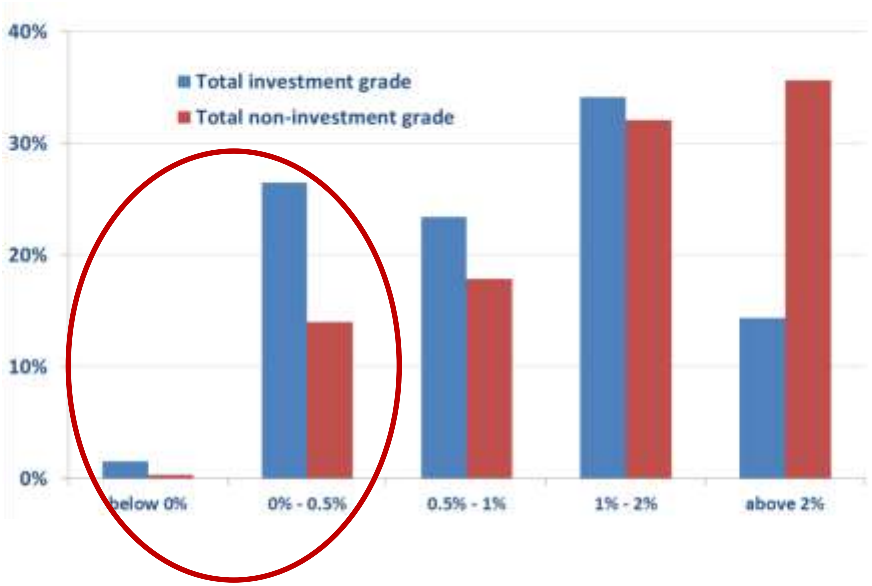
Large room for a repricing?

– **Valuations at levels, which imply too little compensation for default and liquidity risks associated with corporate bonds?**

Number of EU corporate bonds trading at low yields *(number of bonds)*



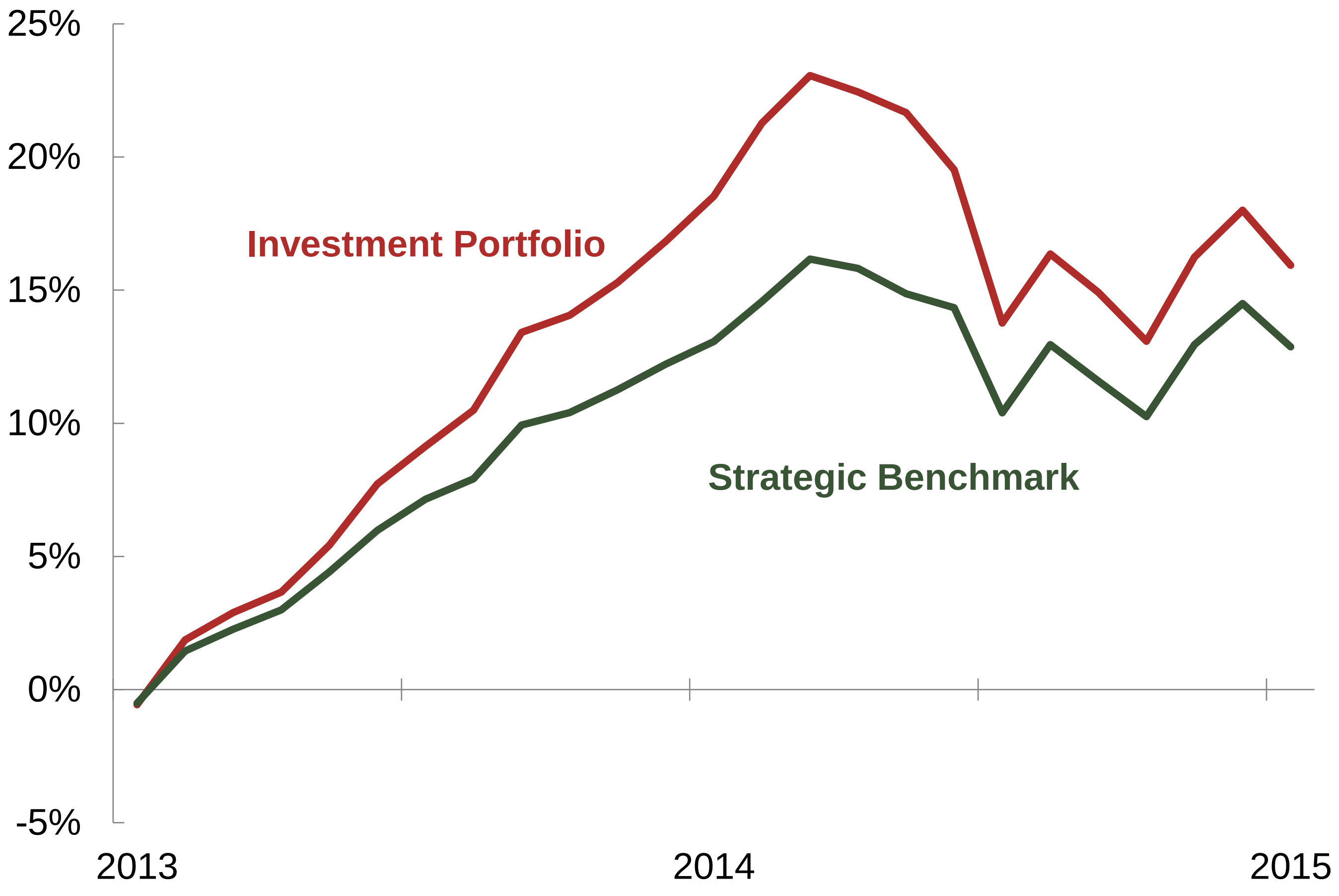
Share of EU corporate bonds trading at low yields *(% of all bonds)*



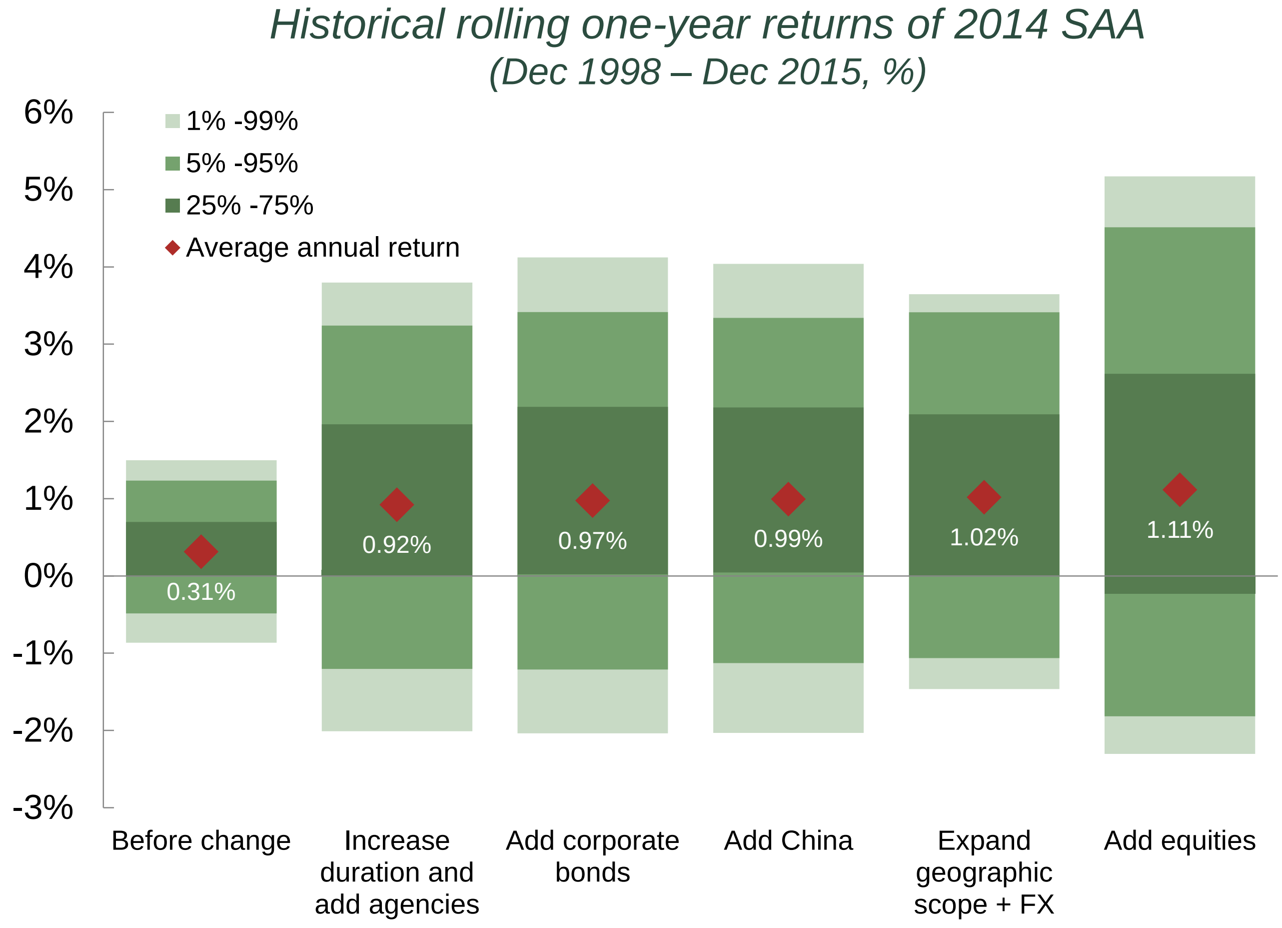
Source: Joint ATC/ASC/FSC Task Force on "Macro-prudential issues and structural change in the low interest rate environment", as based on Bloomberg data on bonds included in the Merrill Lynch corporate bond index and ESRB Secretariat's calculations.
Note: Only bonds with maturity higher than 0.5 year are taken into account. The bonds included into yield buckets present the sum over all rating classes. Non-rated bonds are included in non-investment grade on the chart. Last observation: 17 Feb 2016.

Contribution to returns

Corporate bond return as a proportion of total return, %



Diversification example



– **Distribution of historical rolling on-year returns from Dec 1998 to Dec 2015 against a risk-free investment (German treasury bills)**