



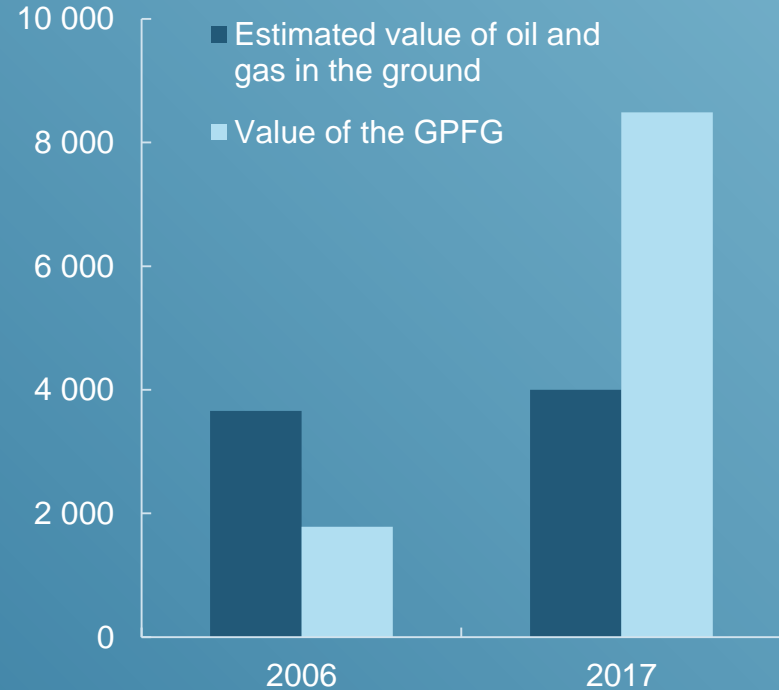
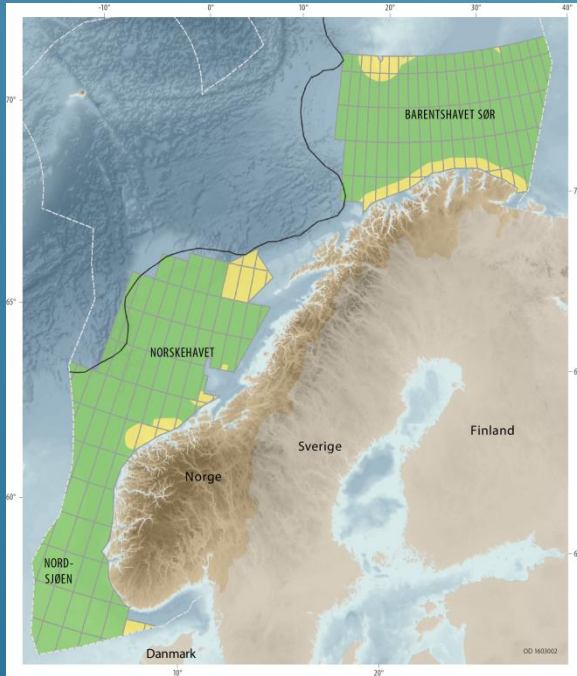
MANAGEMENT OF THE GOVERNMENT PENSION FUND GLOBAL

DEPUTY GOVERNOR EGIL MATSEN

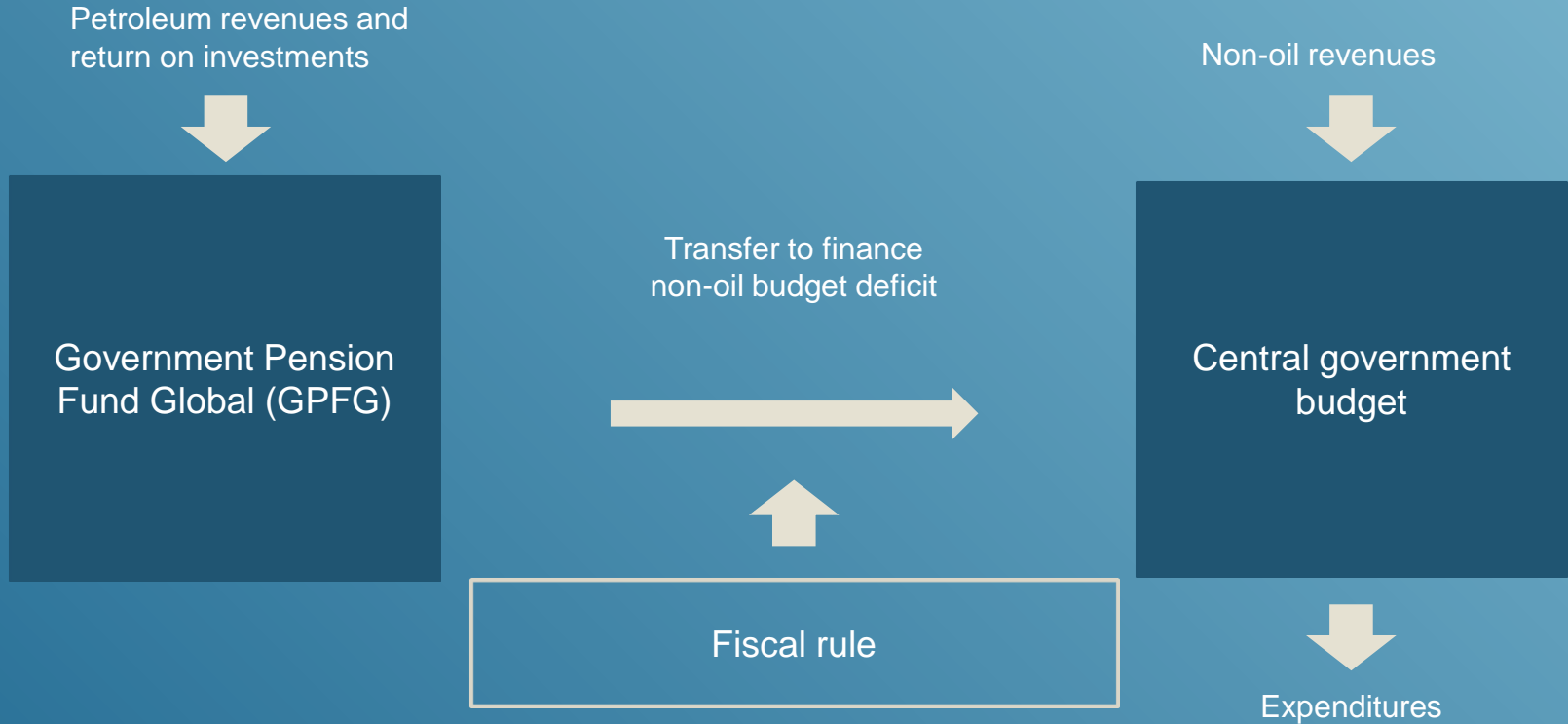
Oslo, 14 June 2018

From natural resources to financial wealth

In billions of NOK

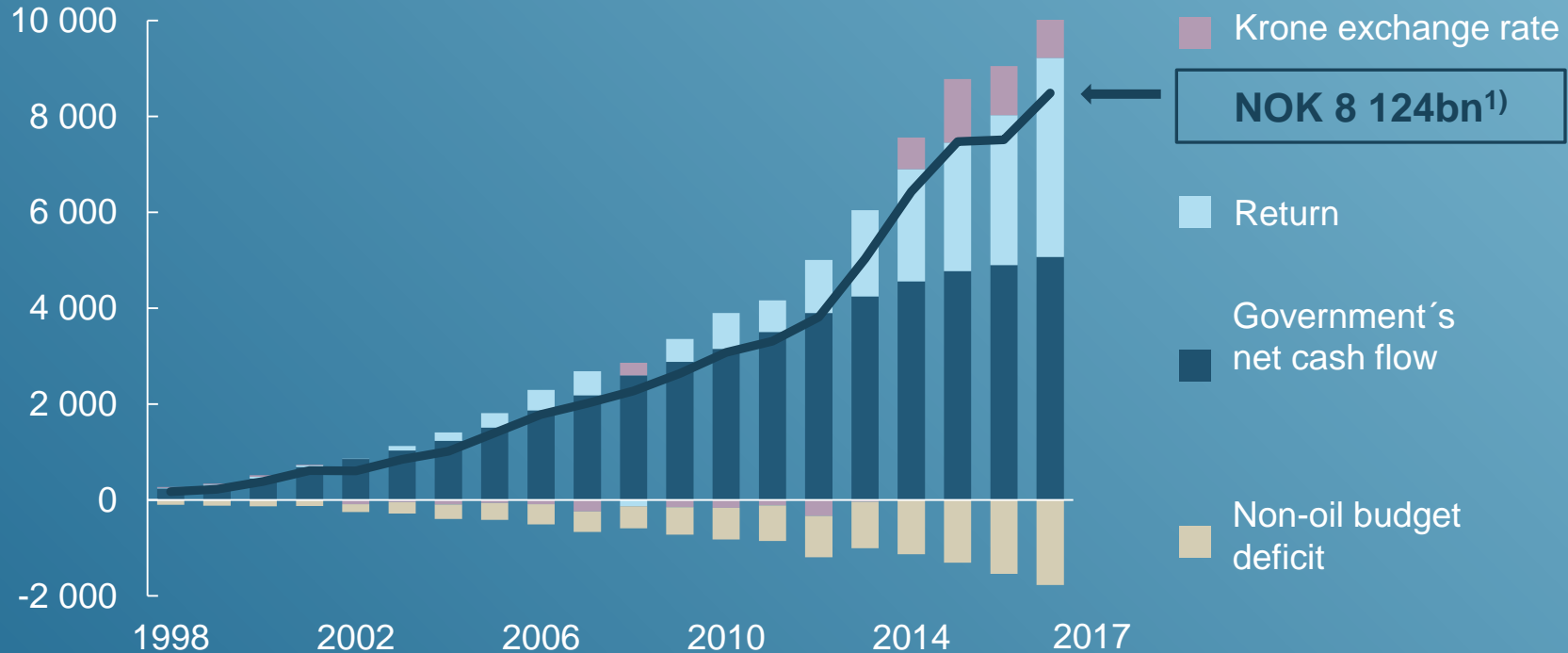


The petroleum fund mechanism



Government Pension Fund Global (GPFG)

Cumulative. In billions of NOK



1) At 31 March 2018.

Sources: Ministry of Finance and Norges Bank



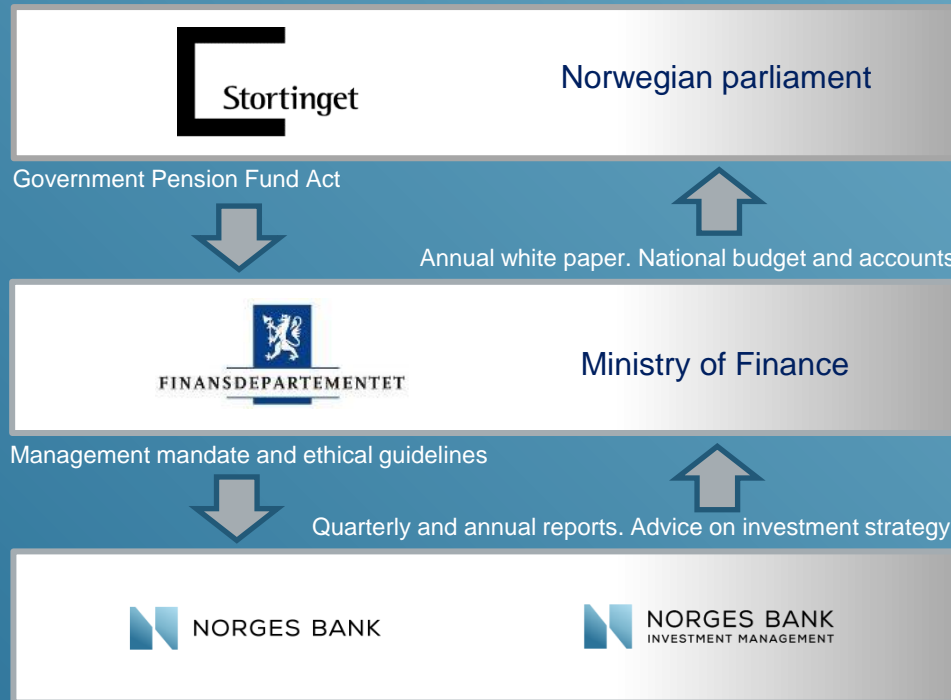
Topics

- Governance
- Investment strategy
- Return and risk
- The role of fixed income in the fund

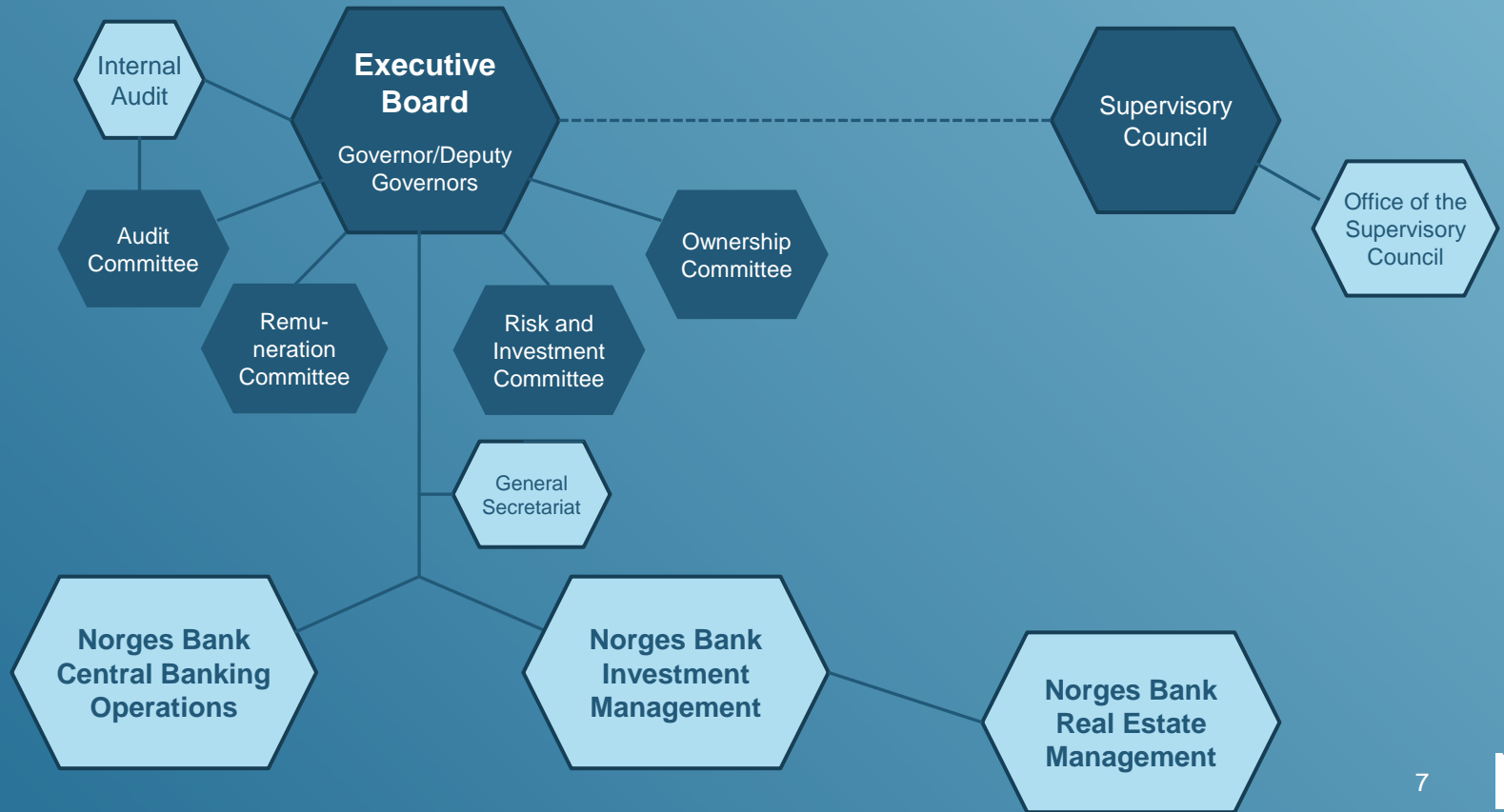


A fund owned by the Norwegian people

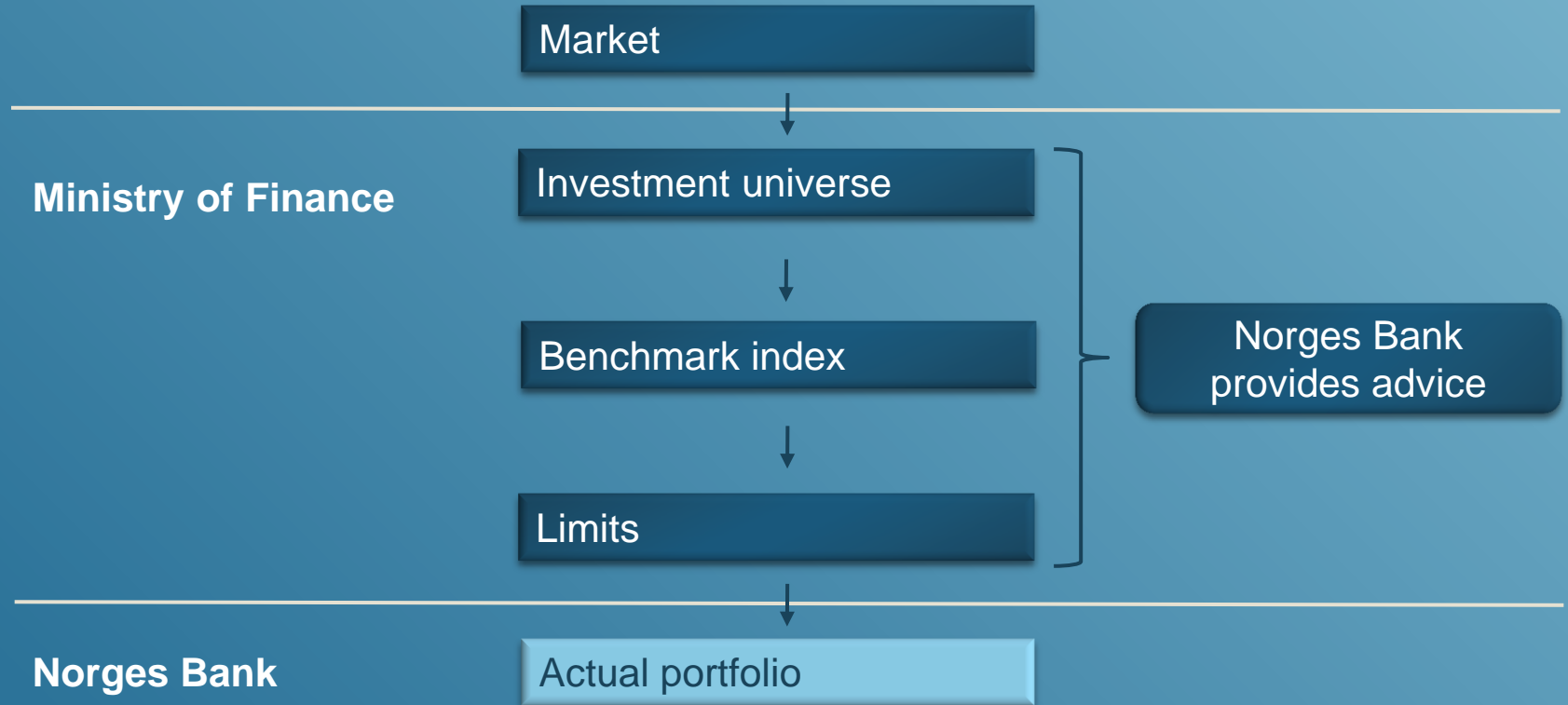
Governance model



Norges Bank's organisation



Management model



Topics

- Governance
- Investment strategy
- Return and risk
- The role of fixed income in the fund



Management objectives

OBJECTIVE

HIGH LONG-TERM RETURN

SUBJECT TO

- Acceptable risk
- Responsible investment
- Cost-effective management
- Transparency



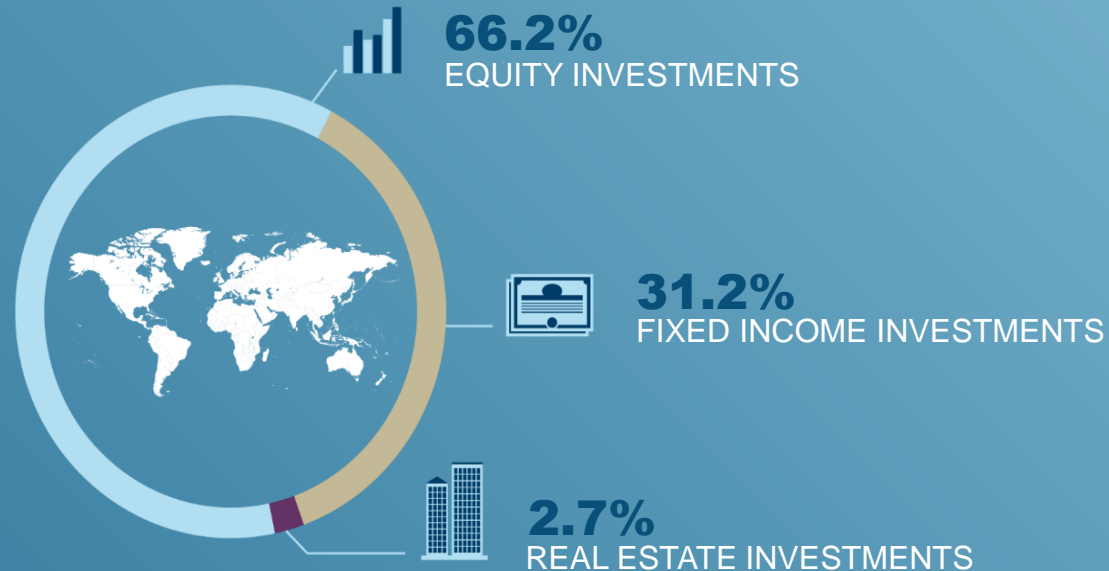
Asset allocation¹⁾

BENCHMARK INDEX

62.5%
EQUITIES
=> increasing to 70%

37.5%
FIXED INCOME
=> decreasing to 30%

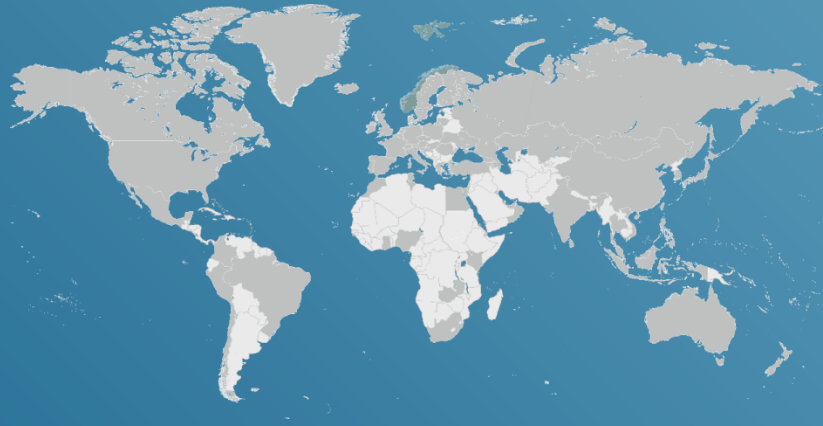
ACTUAL PORTFOLIO



1) At 31 March 2018.
Source: Norges Bank

Global investments¹⁾

72 countries and 49 currencies



36% EUROPE

41% NORTH AMERICA

20% ASIA AND OCEANIA

3% REST OF THE WORLD

Topics

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Return on the GPFG and the benchmark index

Index



1) Calculated for aggregated equity and fixed income investments to end-2016.

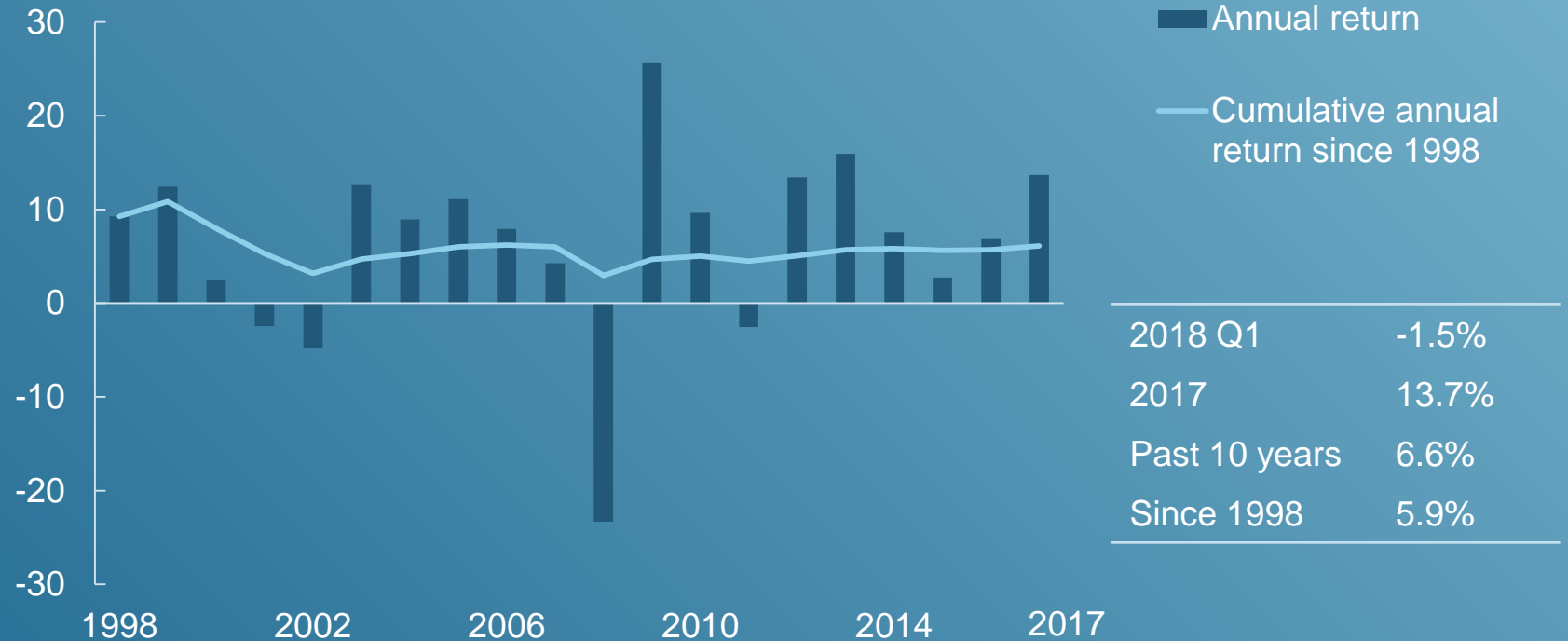
2) Benchmark index for equity and fixed income investments.

Sources: Bloomberg Barclays Indices, FTSE and Norges Bank



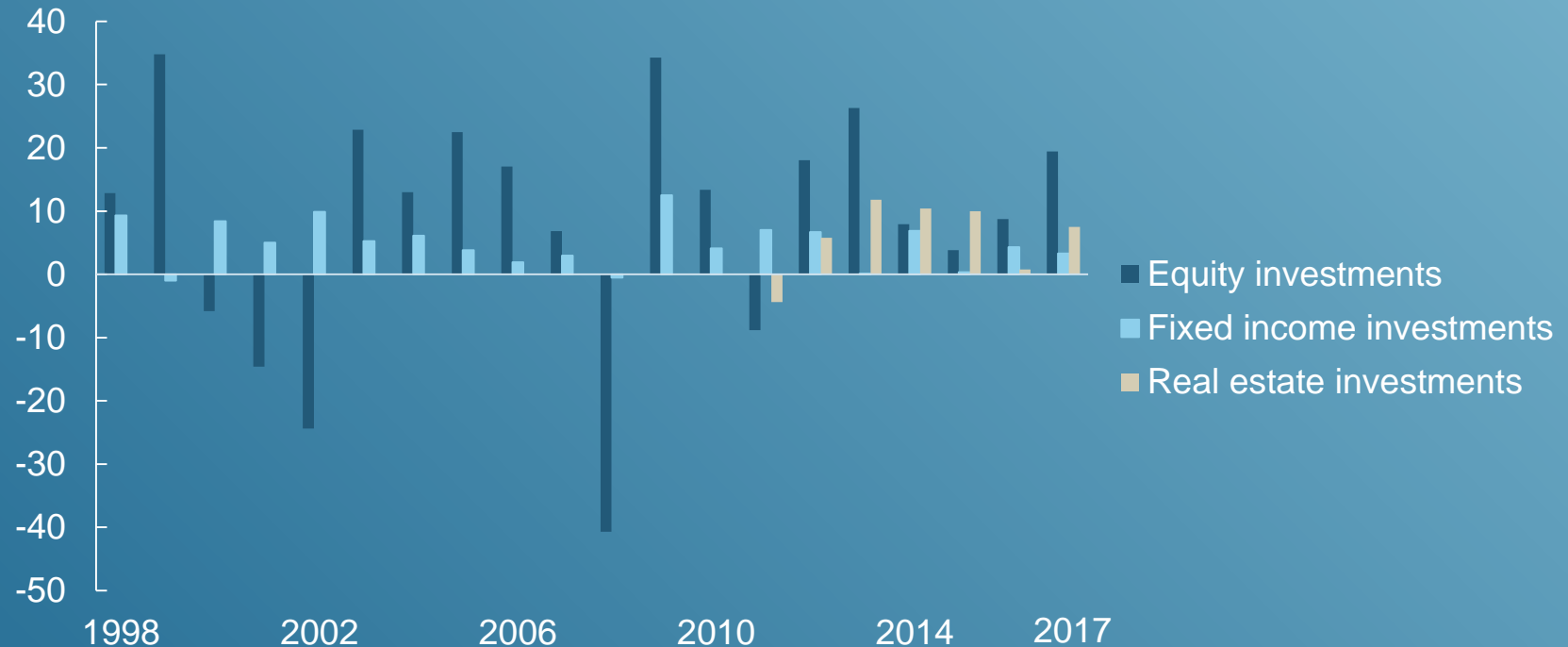
Return

Percent



Return by asset class

In terms of the GPFG's currency basket. Percent



Expected volatility by asset class

Expected volatility. Percent



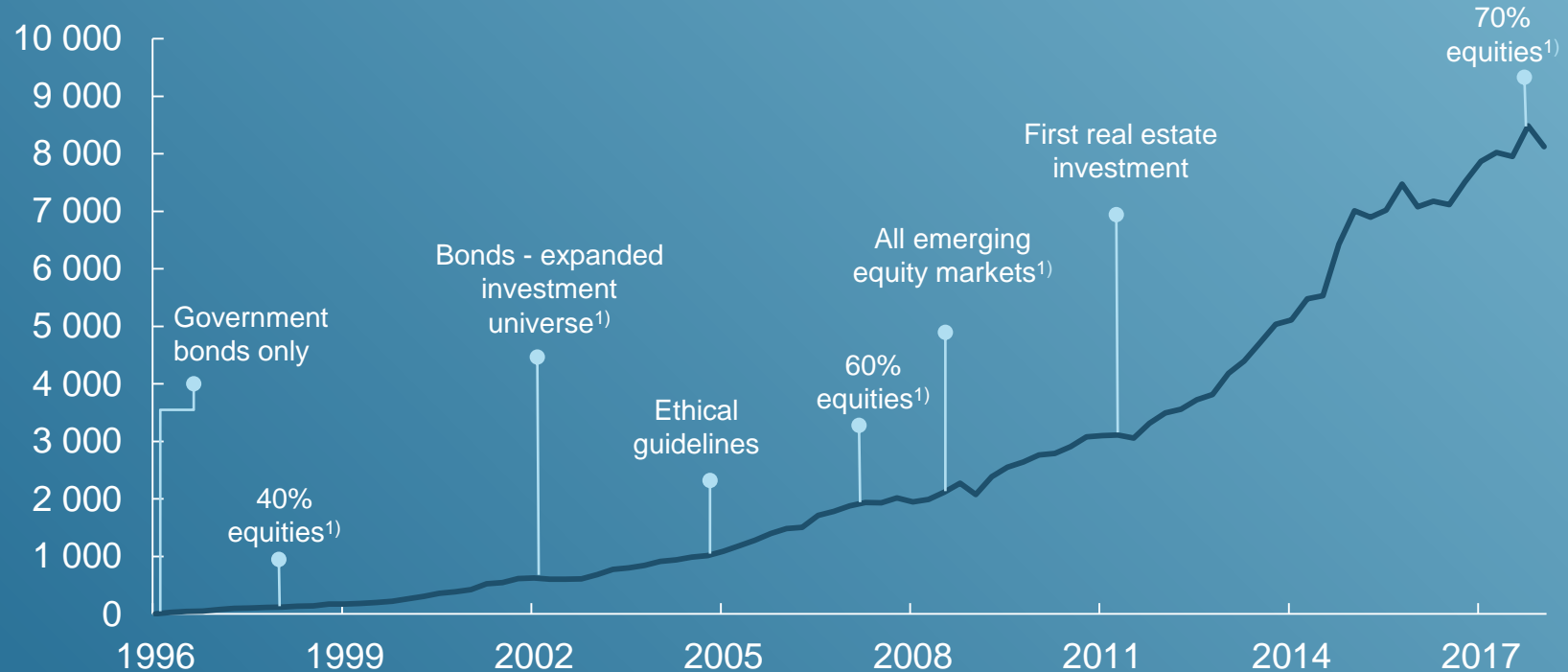
Topics

- Governance
- Investment strategy
- Return and risk
- The role of fixed income in the fund



An evolving investment strategy

GPF. In billions of NOK



1) Timing of strategy decisions.
Source: Norges Bank



The role of fixed income in the Fund

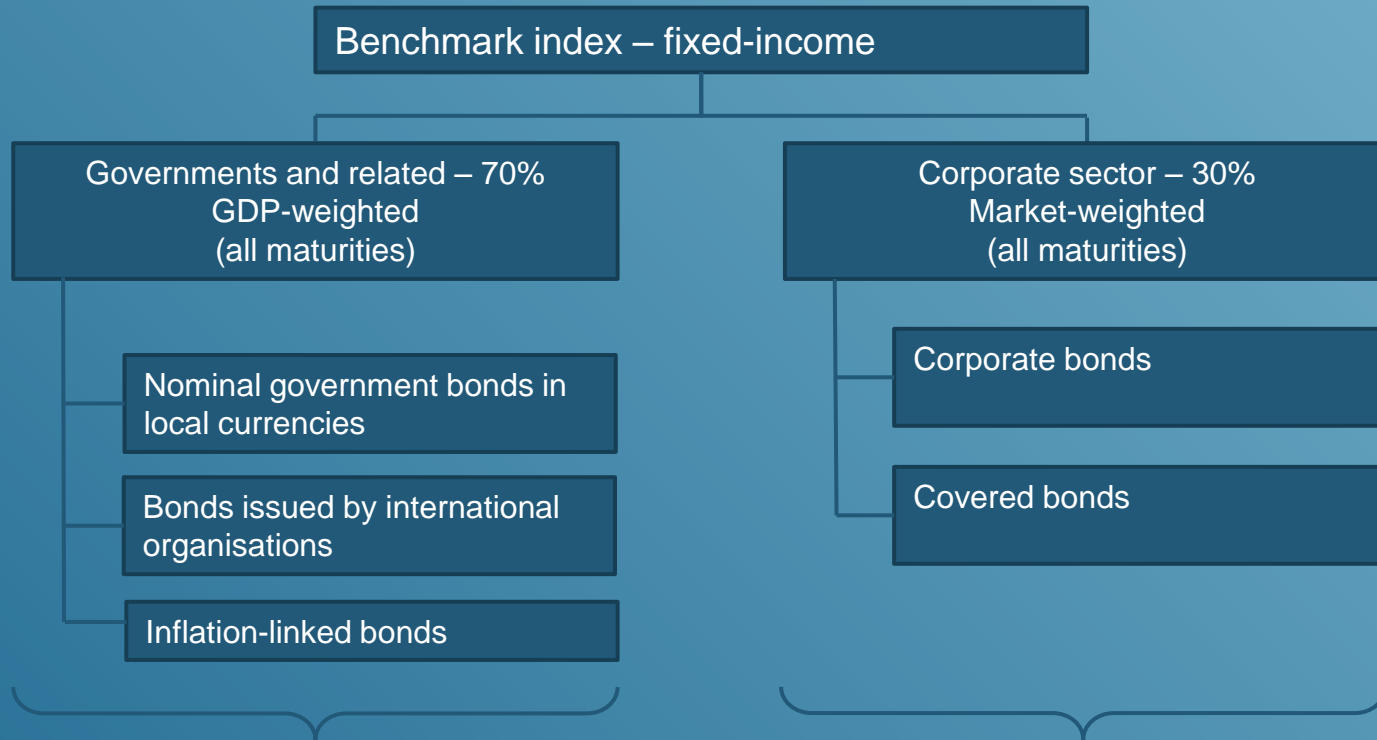
Reduce volatility

Provide liquidity

Earn risk premiums



Fixed-income – current benchmark index



Twenty-two currencies at end-2017 (USD, EUR, GBP, JPY, CAD, SEK, DKK, CHF, AUD, NZD, emerging markets).

Seven currencies (USD, EUR, GBP, CAD, SEK, DKK, CHF),²¹



70% equities. What next for the fixed income strategy?

We have advised the Ministry of Finance (the owner) to develop the bond strategy along three dimensions:¹⁾

1. Duration management
2. Currencies in the benchmark index
3. The role of corporate bonds

1) See Norges Bank (2017): “Bonds in the Government Pension Fund Global”, Letter to the Ministry of Finance, 1 September 2017.



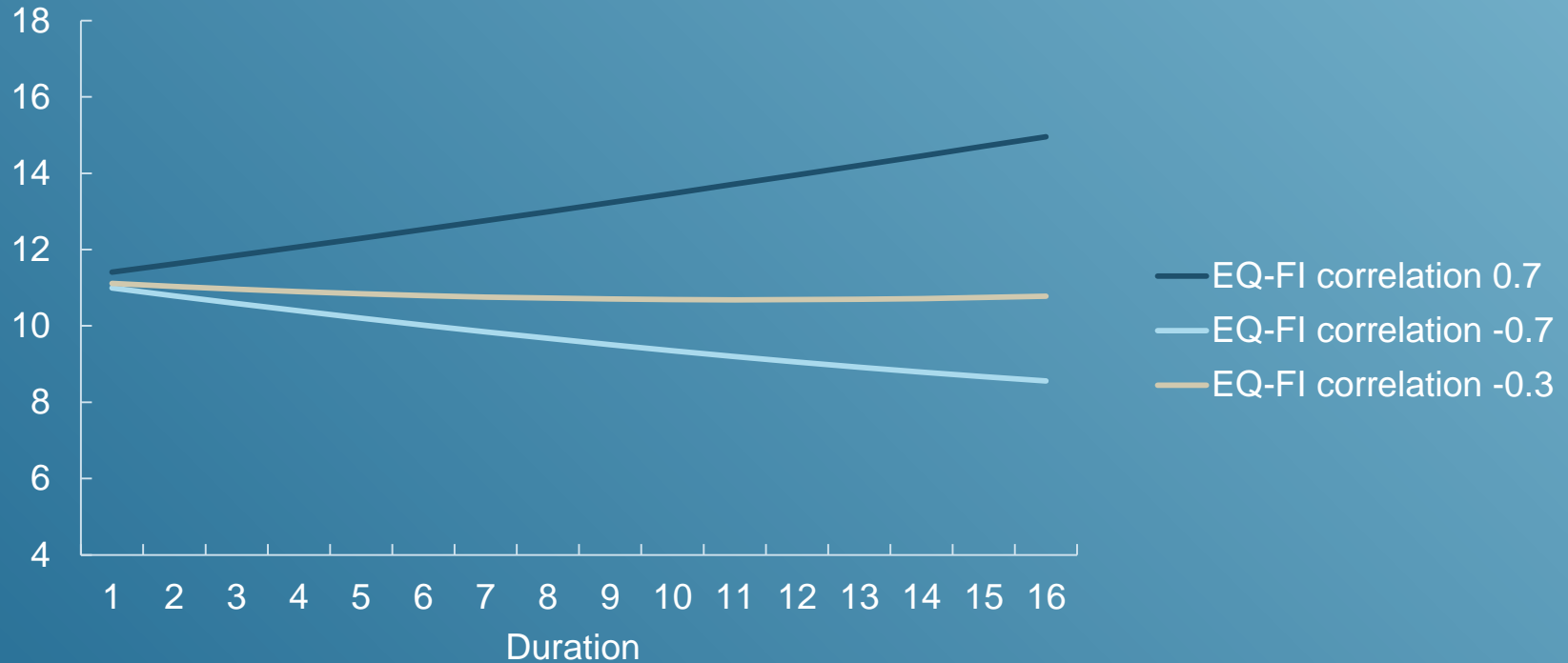
Duration

Barclays Global Aggregate – Treasuries



Duration, correlation and volatility

Portfolio volatility. Percent



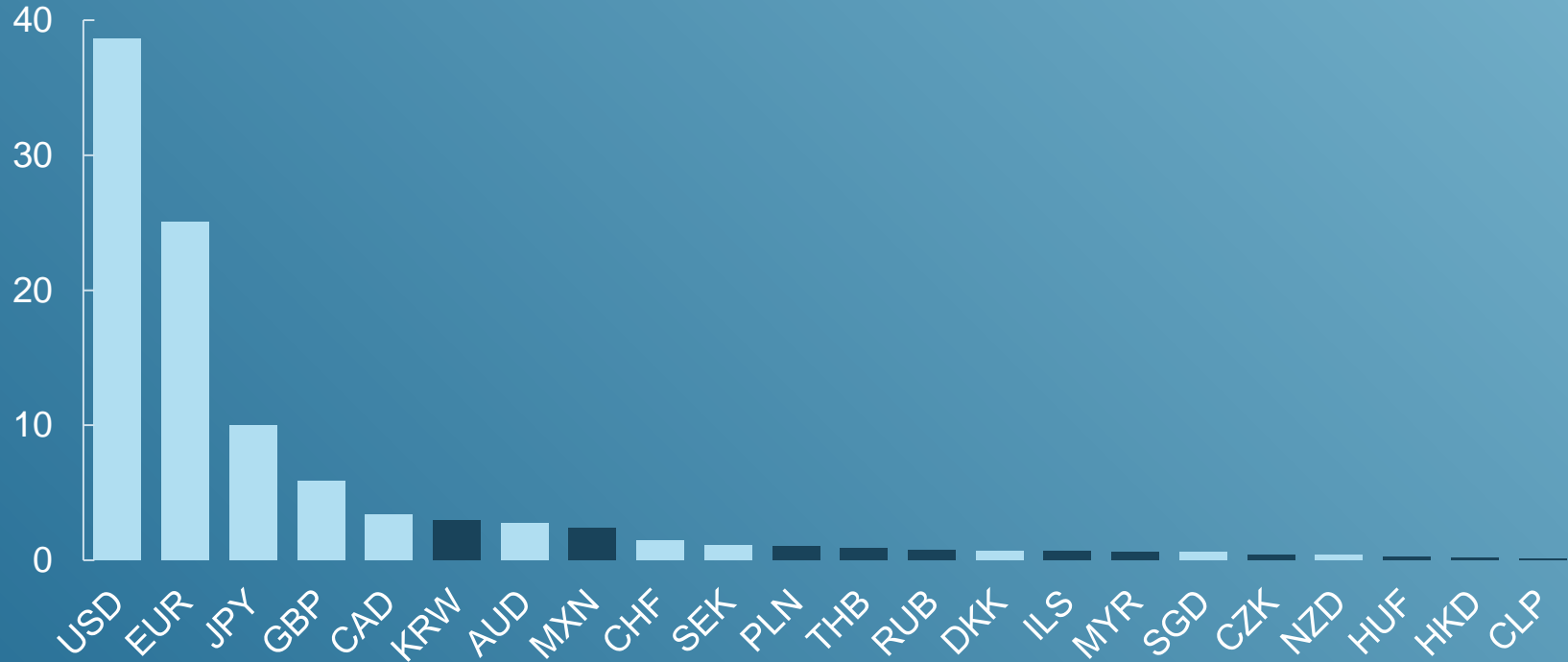
70% equities. What next for the fixed income strategy?

1. Duration management
2. Currencies in the benchmark index
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Currency breakdown

Government bonds in the benchmark index.¹⁾²⁾ Percent

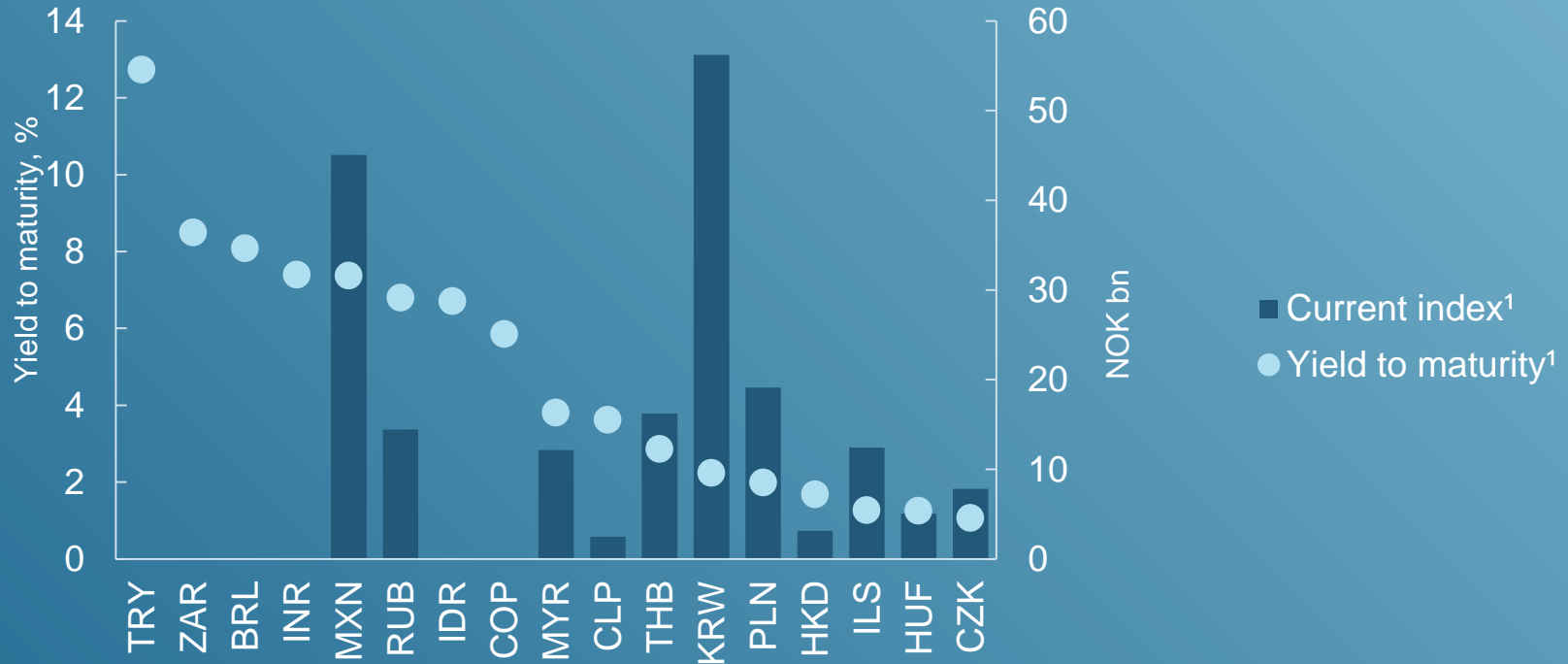


1) At 31 March 2018. 2) Dark blue bars: Emerging markets.
Sources: Barclays and Norges Bank



Currency breakdown

Emerging markets



1) At 30 March 2018.

Sources: Barclays, Bloomberg and Norges Bank



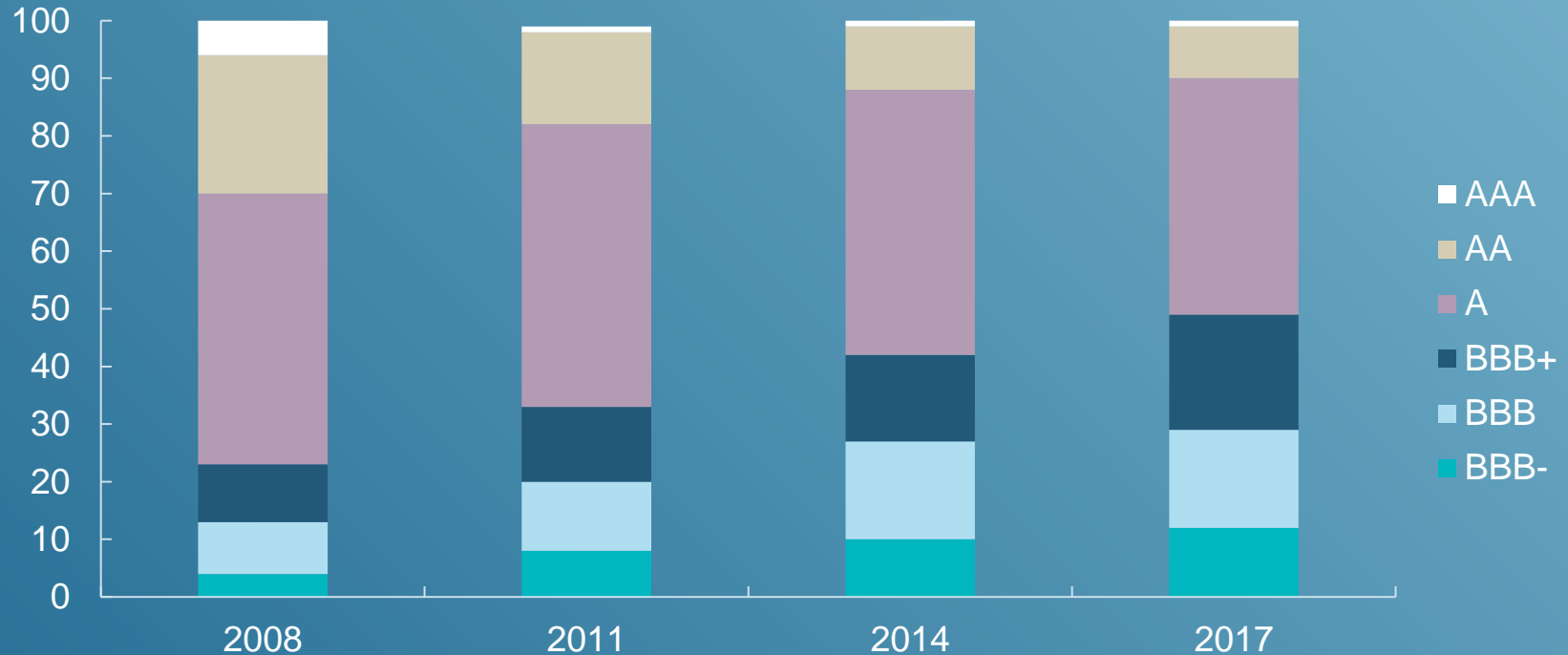
70% equities. What next for the fixed income strategy?

1. Duration management
2. Currencies in the benchmark index
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Reduced credit quality

Rating mix of global corporate investment grade index¹⁾. Percent

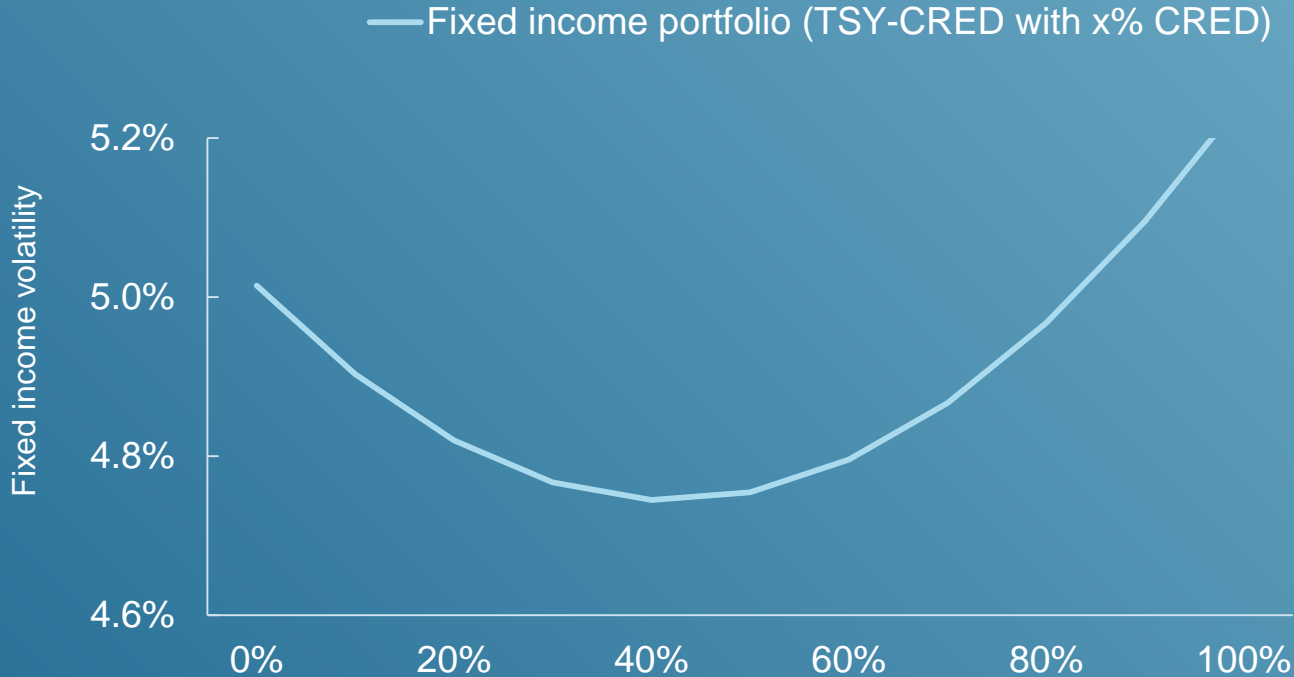


1) Based on Bloomberg/Barclays Global Aggregate Corporate index.
Sources: Bloomberg and Barclays



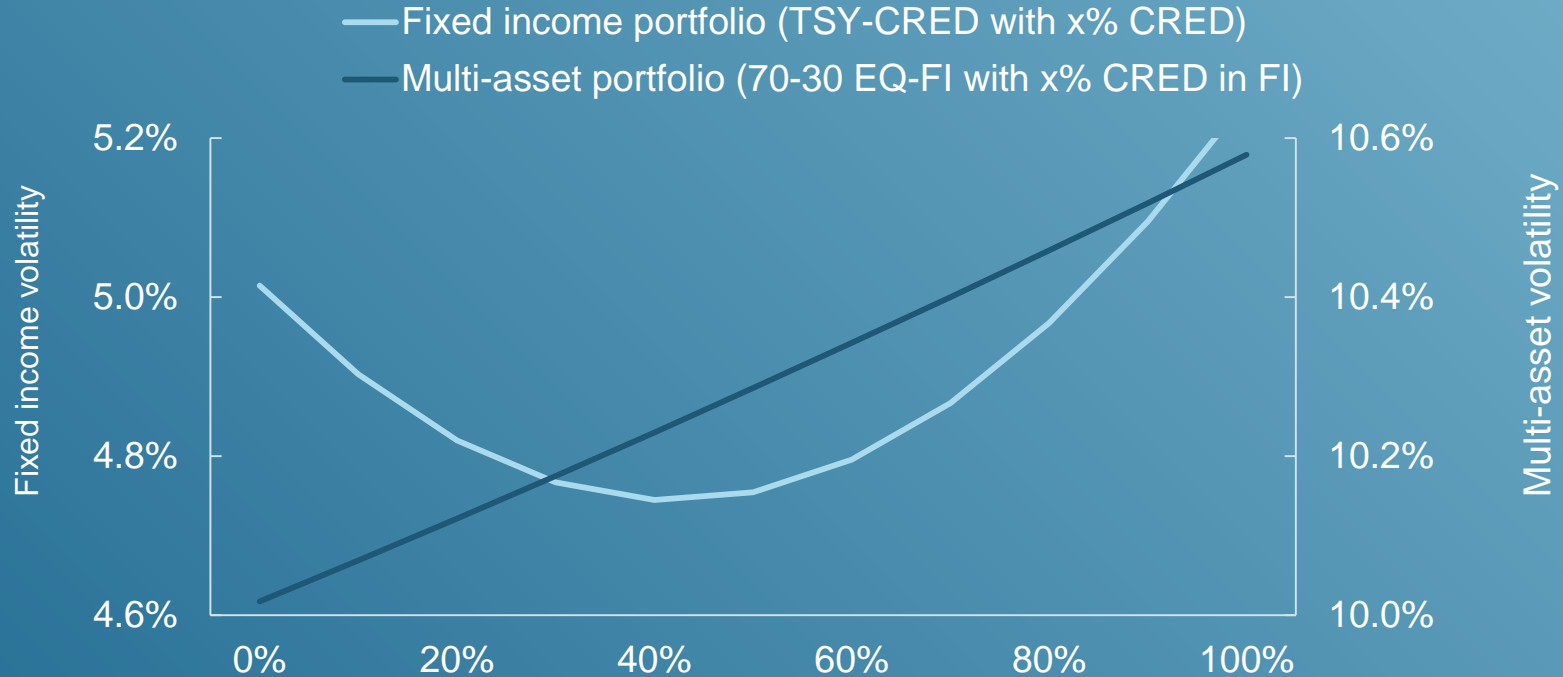
Corporate bonds

Annualised volatility, 1988-2017



Corporate bonds

Annualised volatility, 1988-2017



Different asset allocations – risk and return

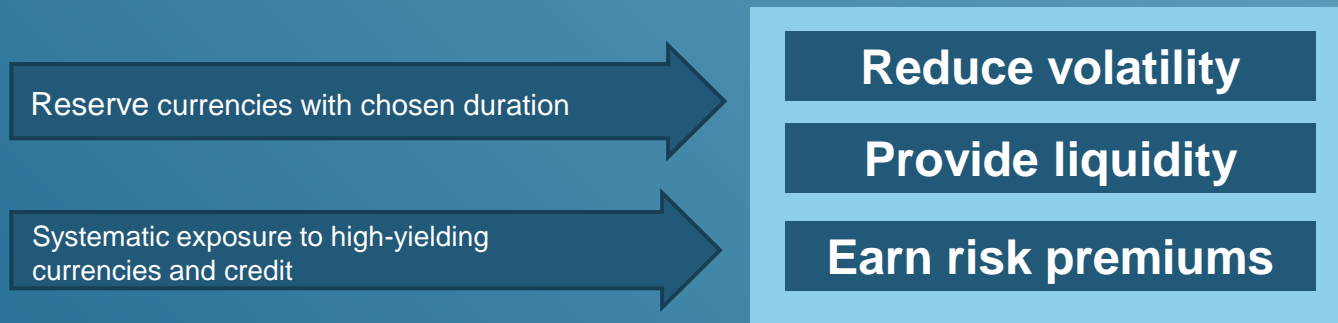
Annualised risk and return statistics for portfolios. 1988-2017

Portfolio	Mean return	Standard deviation	Mean excess return	Sharpe ratio
<i>Panel A: TSY-CRED fixed income portfolio with x% CRED</i>				
0% CRED	6.47	5.01	3.34	0.67
30% CRED	6.64	4.77	3.51	0.74
70% CRED	6.88	4.87	3.74	0.77
100% CRED	7.05	5.25	3.91	0.74
<i>Panel B: 70-30 EQ-FI portfolio where FI is a TSY-CRED portfolio with x% CRED</i>				
0% CRED	9.44	10.02	6.31	0.63
30% CRED	9.49	10.18	6.36	0.63
70% CRED	9.56	10.40	6.43	0.62
100% CRED	9.61	10.58	6.48	0.61



A possible new framework for fixed income

- Volatility reduction and liquidity provision can be achieved with an *index* comprising
 - the main reserve currencies
 - a constraint on duration
 - overlap restrictions
- Systematic *portfolio* strategies to earn risk premiums in credit and EM segments





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