SAVING FOR FUTURE GENERATIONS

DEPUTY GOVERNOR
EGIL MATSEN
Trondheim, 2 November 2017
Contents

- Tool for public saving
- Norges Bank’s management of Norway’s financial wealth
- Return
- Advice – fixed income
From natural resources to financial wealth

Sources: Norwegian Petroleum Directorate, Ministry of Finance and Norges Bank
The petroleum fund mechanism

Petroleum revenues and return on investments

Government Pension Fund Global (GPFG)
NOK 7 952 bn¹)

Transfer to finance non-oil budget deficit

NOK 232 bn²)

Central government budget
NOK 1 286 bn²)

Expenditures

Non-oil revenues

Fiscal rule
(spend the real return on the GPFG over time, estimated at 3%)

Sources: Norges Bank and Ministry of Finance
Transfers to and from the GPFG

In billions of NOK

1) Estimates for 2017 and 2018 from the 2018 National Budget
Source: Norges Bank and Ministry of Finance
A large fund
GPFG. In billions of NOK\(^1\)

1) At 30 September 2017
Source: Norges Bank
Oil revenue spending over the government budget

Structural non-oil deficit. Percent

Source: Ministry of Finance
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Management model

Ministry of Finance

Market

Investment universe

Benchmark index

Limits

Norges Bank

Actual portfolio

Norges Bank provides advice
Management objectives

OBJECTIVE

HIGH LONG-TERM RETURN

SUBJECT TO

- Acceptable risk
- Responsible investment
- Cost-effective management
- Transparency
Global investments
77 countries and 50 currencies

36% EUROPE
42% NORTH AMERICA
18% ASIA AND OCEANIA
4% REST OF THE WORLD

Source: Norges Bank
Asset allocation

STRATEGIC ALLOCATION

62.5%
EQUITIES
(increasing to 70%)

37.5%
FIXED INCOME
(decreasing to 30%)

Source: Norges Bank
# Largest equity holdings

In millions of NOK\(^{1}\)

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple Inc</td>
<td>US</td>
<td>59,074</td>
</tr>
<tr>
<td>Nestlé SA</td>
<td>Switzerland</td>
<td>46,517</td>
</tr>
<tr>
<td>Royal Dutch Shell Plc</td>
<td>UK</td>
<td>43,831</td>
</tr>
<tr>
<td>Alphabet Inc</td>
<td>US</td>
<td>42,645</td>
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<tr>
<td>Microsoft Corp</td>
<td>US</td>
<td>40,403</td>
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<tr>
<td>Novartis AG</td>
<td>Switzerland</td>
<td>36,314</td>
</tr>
<tr>
<td>Roche Holding AG</td>
<td>Switzerland</td>
<td>33,906</td>
</tr>
<tr>
<td>HSBC Holdings Plc</td>
<td>UK</td>
<td>28,666</td>
</tr>
<tr>
<td>Amazon.com Inc</td>
<td>US</td>
<td>28,313</td>
</tr>
<tr>
<td>Facebook Inc</td>
<td>US</td>
<td>28,279</td>
</tr>
</tbody>
</table>

\(^{1}\) At 30 September 2017

Source: Norges Bank
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Return

Percent

1) Figures for 2017 up to 2017 Q3.
Source: Norges Bank

<table>
<thead>
<tr>
<th>Year</th>
<th>Return %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 Q3</td>
<td>3.2%</td>
</tr>
<tr>
<td>2016</td>
<td>6.9%</td>
</tr>
<tr>
<td>Past 10 years</td>
<td>5.7%</td>
</tr>
<tr>
<td>Since 1998</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

Annual return

Accumulated annual return since 1998
Return\(^1\) by asset class

In terms of the GPFG’s currency basket. Percent

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**Return**\(^1\) by asset class

Equity investments
Fixed income investments
Real estate investments

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1) Figures for 2017 up to 2017 Q3
Source: Norges Bank
Return on the GPFG and benchmark index

Index


GPFG¹
Benchmark index²

1) Calculated for aggregated equities and fixed income investments to end-2016. 2) Benchmark index for equities and fixed income investments. Sources: Bloomberg Barclays Indices, FTSE and Norges Bank
Excess return

The GPFG’s annual relative return. Percent

1) Figures for 2017 up to 2017 Q3.
Source: Norges Bank
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Towards a 70% equity allocation

Owner has decided to deviate from the “market portfolio”

Sources: FTSE, Bloomberg Barclays, Factset
Norges Bank is to provide advice

The mandate from the Ministry of Finance:

“The Bank shall advise the Ministry on the investment strategy for the investment portfolio. Advice may be provided on the initiative of the Bank or on request from the Ministry.”

Letter from the Ministry of Finance:

In the light of the increase in the equity allocation to 70%… [the Bank is requested to]:

– assess the breadth and weighting rules of the fixed income benchmark index
– assess whether it is appropriate to change the investment universe for fixed income instruments.
Three roles for fixed income investments
Defined by the owner

1. Reduce volatility
2. Provide liquidity
3. Earn risk premiums

Important risk premiums in the fixed income market:
- Interest rate risk (duration)
- Credit premiums (corporate bonds)
- High-yield government bonds (“carry”)
Exposure to emerging markets and the credit premium in the current fixed income index

- The index is not intended to provide exposure to risk premiums in the bond market

Emerging markets
- Concentrated in a few currencies. Heavily weighed in KRW and MXN
- Not always high-yield, low “carry” premium

Corporate bonds
- Little risk reduction from corporate bonds in a portfolio with 70% equities
- Low expected excess return

- Unbalanced exposure compared with risk premiums in the equities market
Today’s benchmark index – not well-suited to capturing exposure to emerging markets

High degree of currency concentration and inefficient carry

Sources: Bloomberg Barclays and Norges Bank
70% equity allocation – little risk reduction from corporate bonds

Volatility given different portfolio compositions
Fixed income strategy – our advice

1. The benchmark index should capture the most important risk exposures: equity, currency and interest rate risk
   – Needs to be assessed in a 70/30 context

1. The benchmark index should consist of maturity-capped government bonds in USD, EUR and GBP
   – Results in a liquid portfolio that dampens fund volatility with greater certainty

2. Exposure to other risk premiums should be governed by mandate restrictions
   – Results in a portfolio with tailored exposure to credit and emerging market debt
Benchmark index
Defines owner’s desired exposure to market, currency and interest rate risk

70% global equities + 30% maturity capped government bonds in USD, EUR and GBP

For illustrative purposes only
The benchmark index and the portfolio
Investments in government bonds reduce fund volatility and provide liquidity

70% global equities + 30% maturity capped government bonds in USD, EUR and GBP

1. Reduce fund volatility
2. Provide liquidity

For illustrative purposes only
The portfolio could include credit and emerging markets
No changes in relative volatility or other restrictions from the Ministry of Finance

70% global equities + 30% maturity capped government bonds in USD, EUR and GBP

- Tailored equity portfolio
- Corporate bonds
- Bonds in emerging markets
- Tailored government bond portfolio

1. Reduce fund volatility
2. Provide liquidity
3. Earn risk premiums

Same market, currency and interest rate risk

For illustrative purposes only
Portfolio already includes real estate
Overall risk may be managed in the same way as for real estate

70% global equities + 30% maturity capped government bonds in USD, EUR and GBP