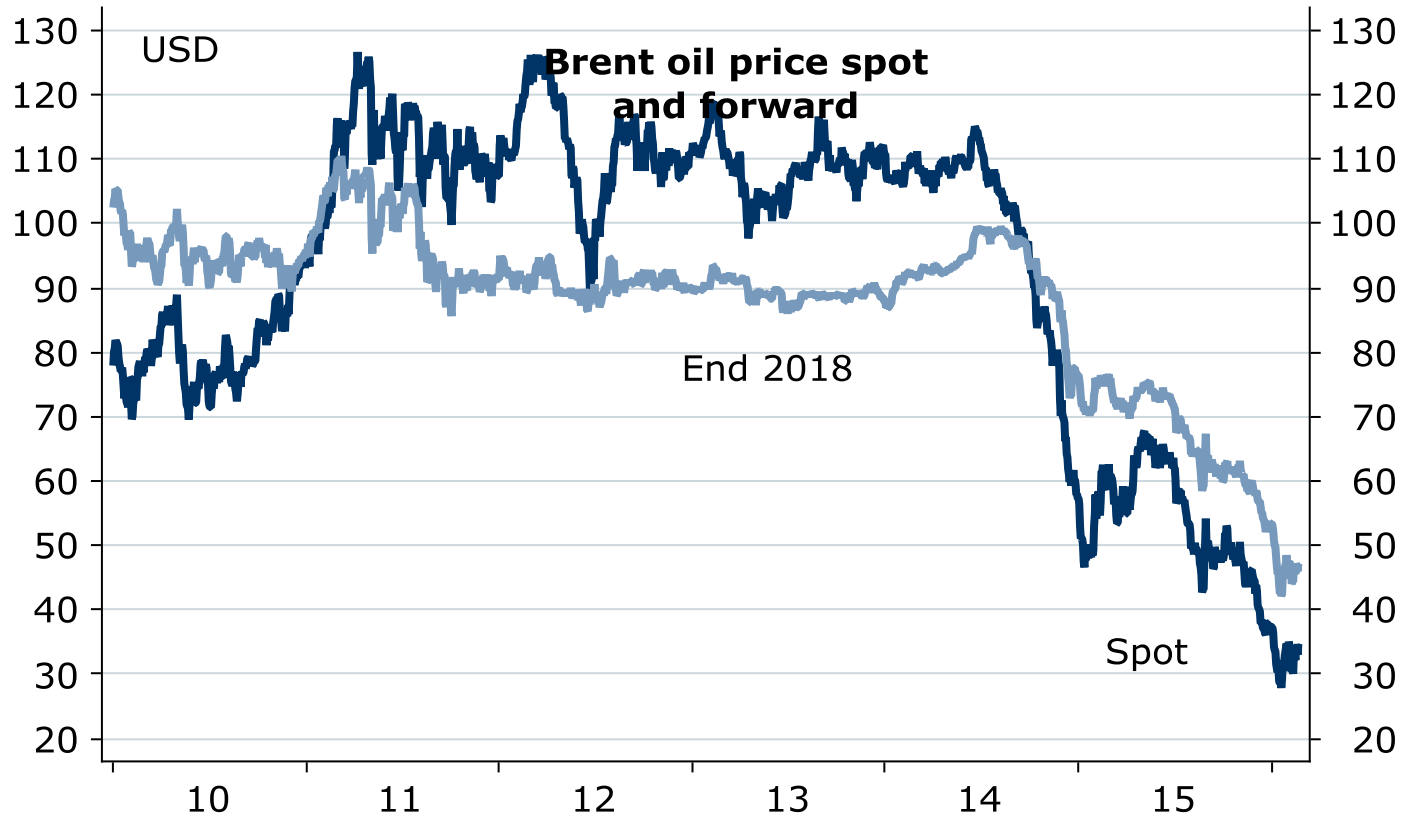


From oil crisis to national crisis?

Kjetil Olsen
March 2016

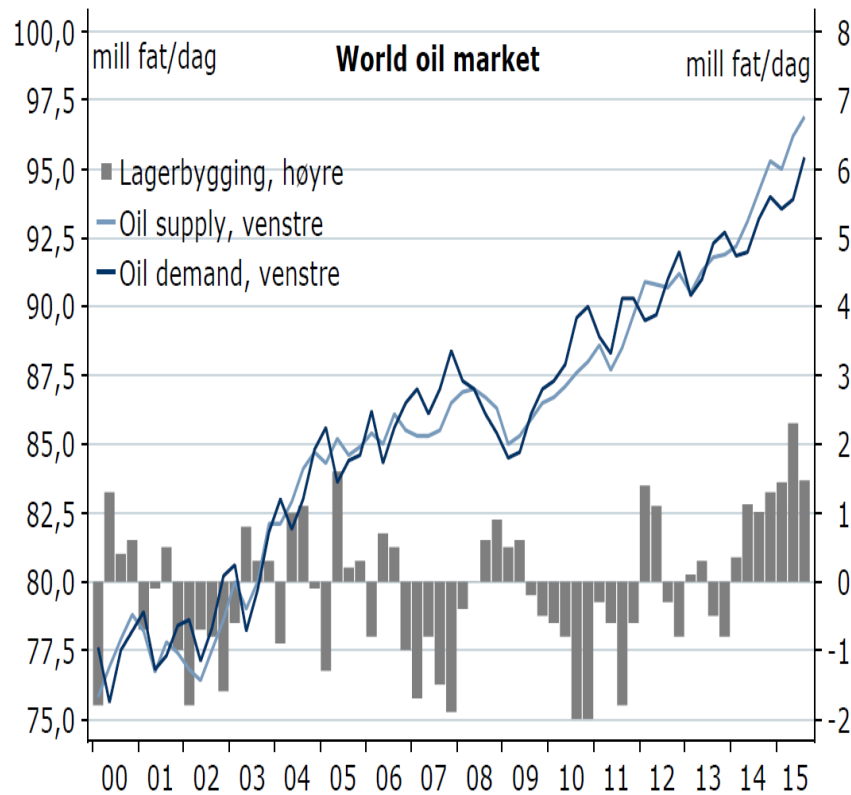
A massive drop in oil prices



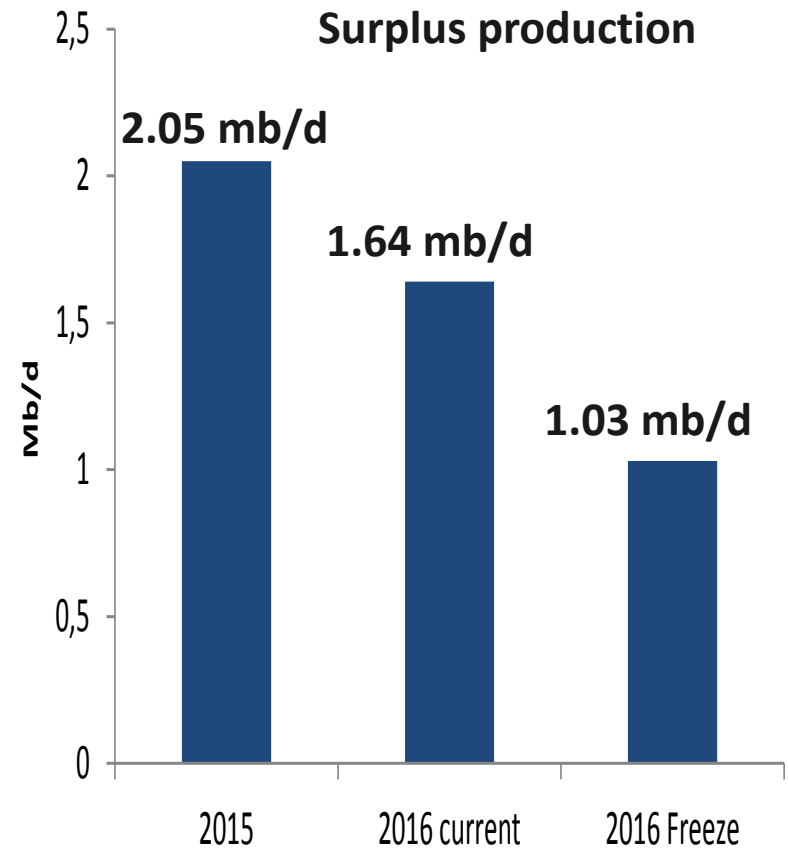
Kilde: Nordea Markets and Macrobond

Too much supply of oil

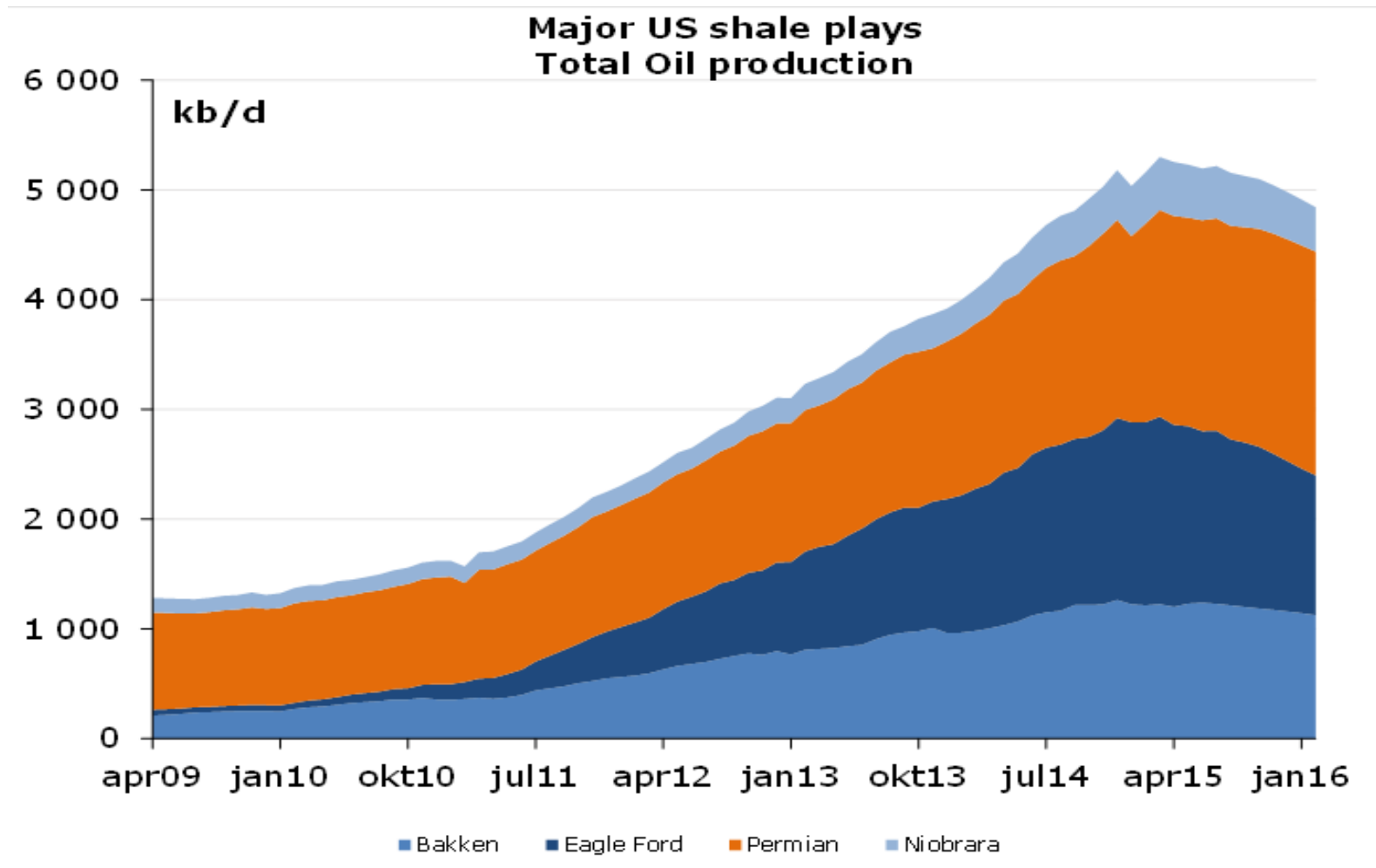
Ubalansen i oljemarkedet vedvarer



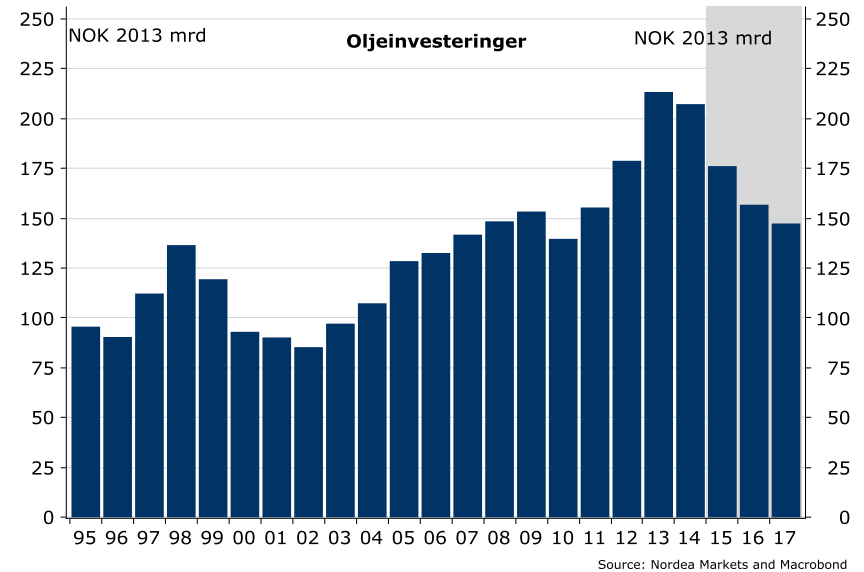
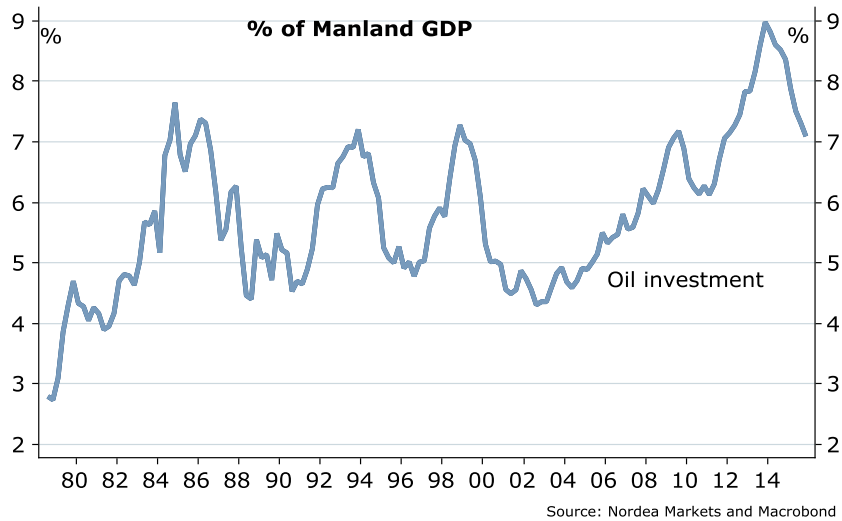
Kilde: Nordea Markets and Macrobond



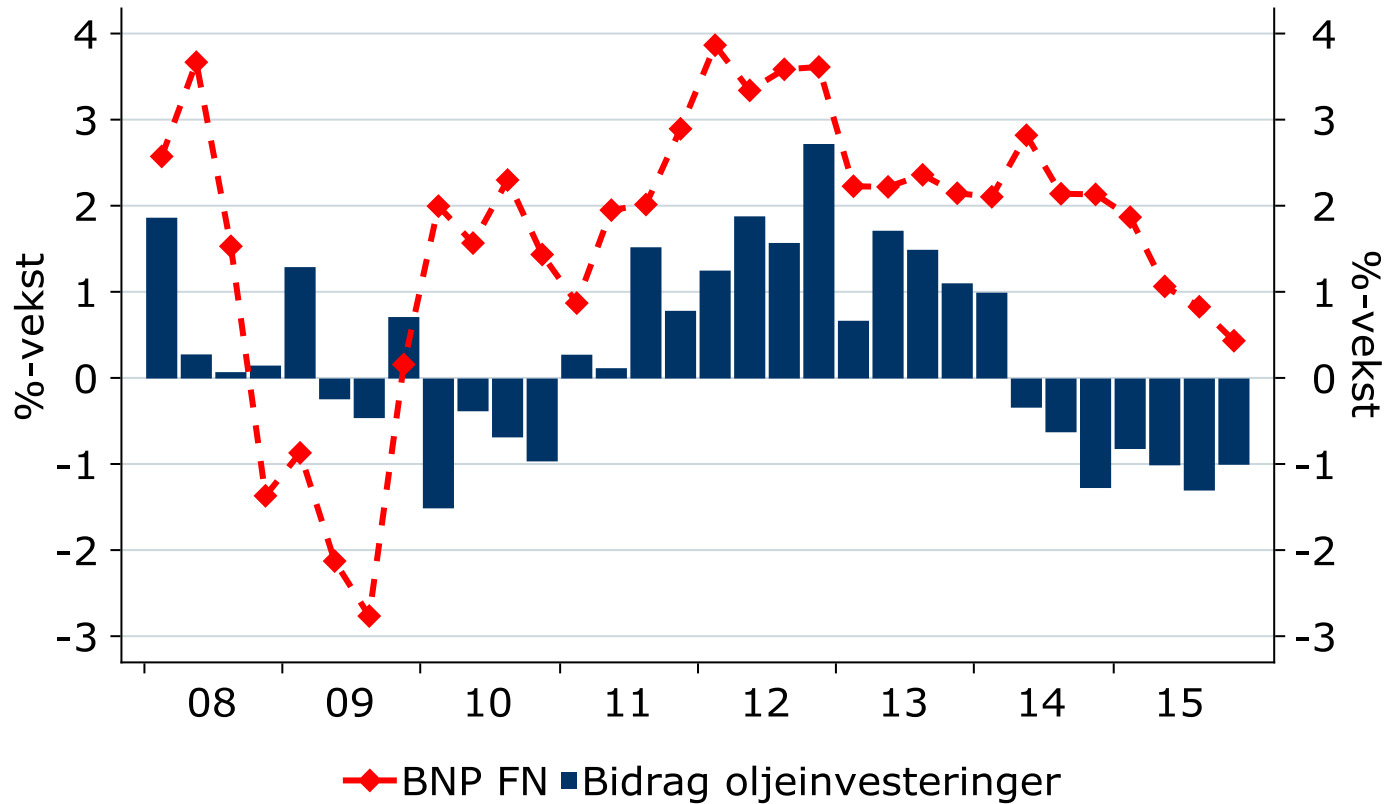
American shale oil the new kid on the block



Norway: Growth engine becomes growth brake

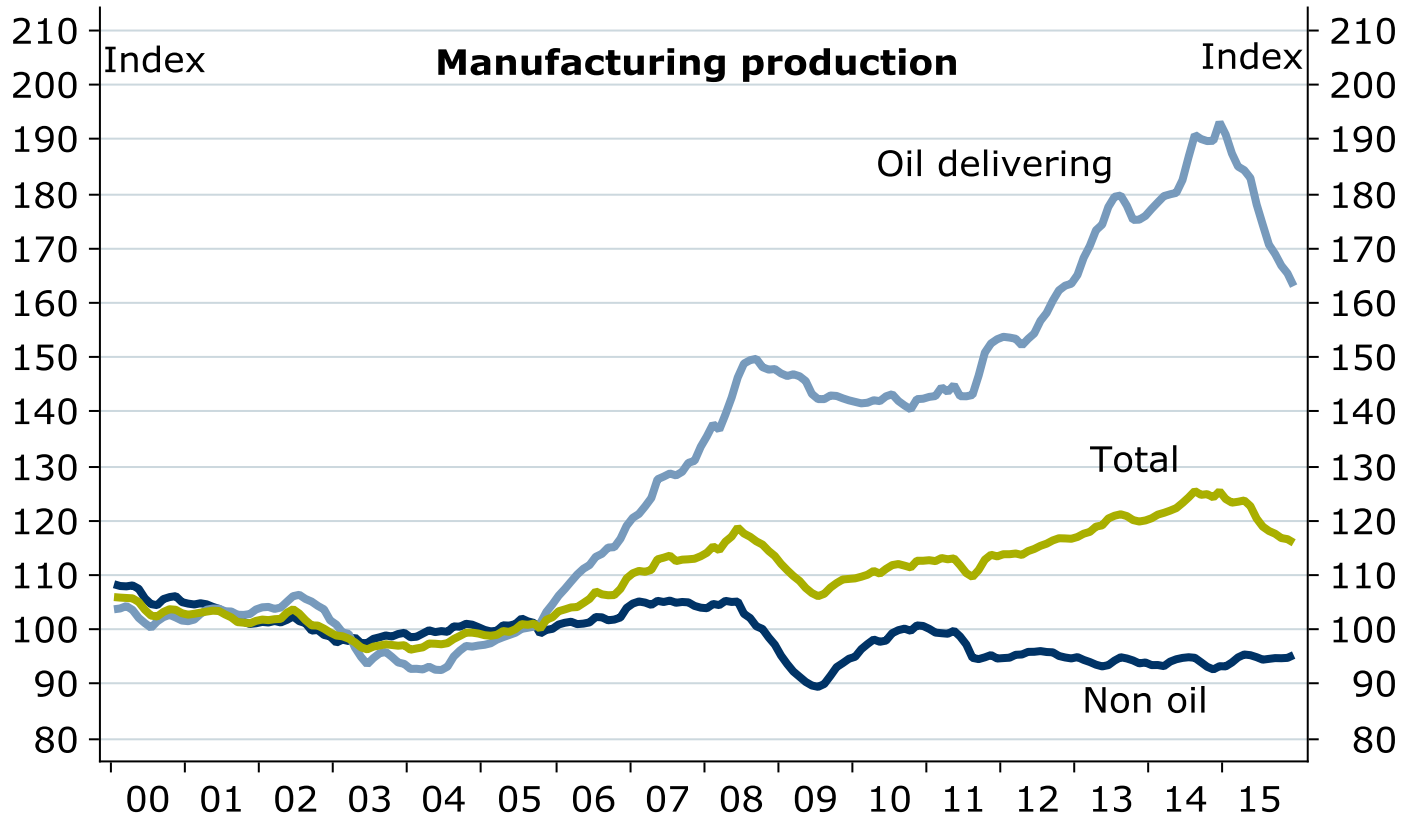


Growth has edged down



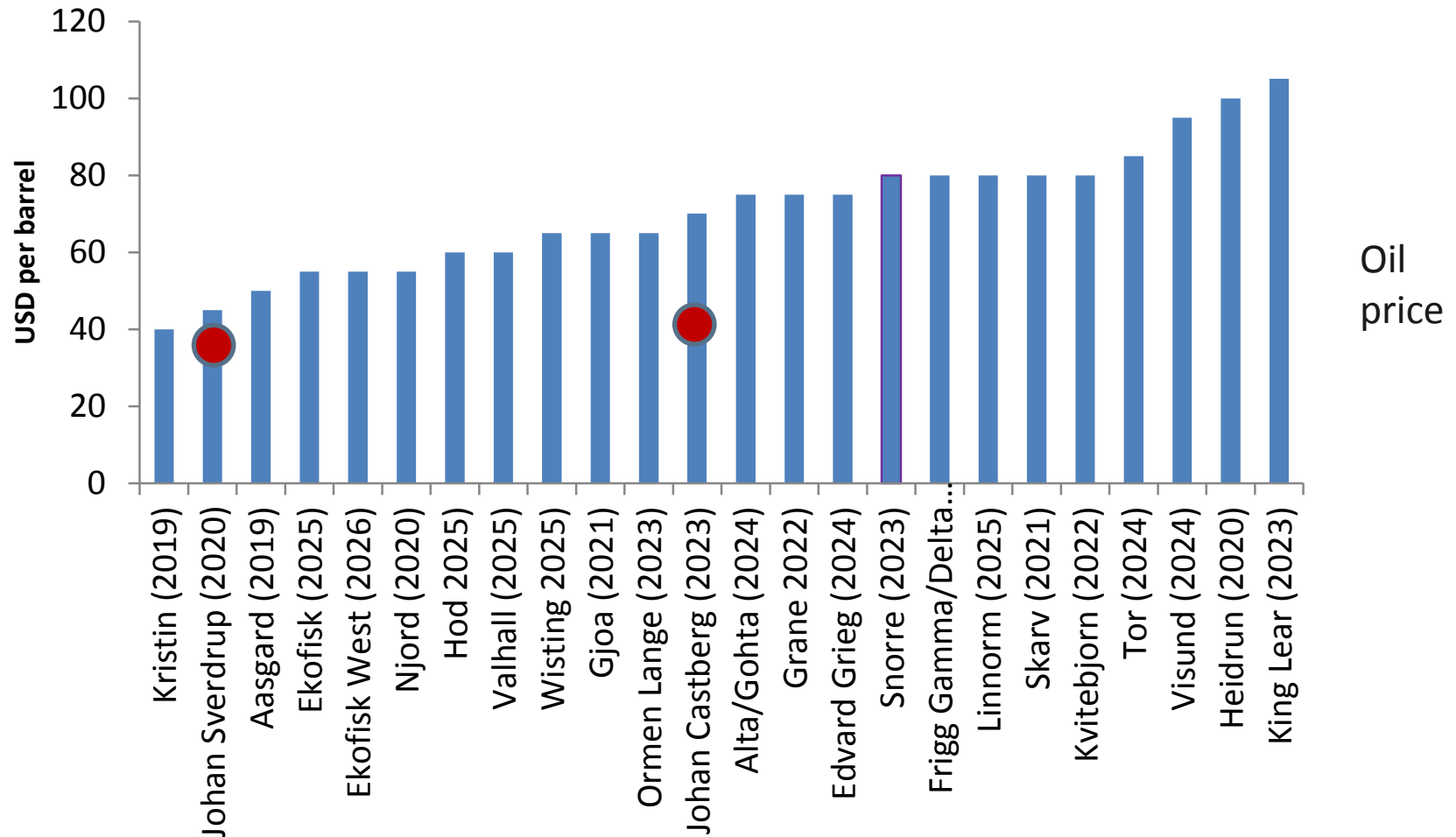
Source: Nordea and Macrobond

Oil weakness hits manufacturing



Source: Nordea Markets and Macrobond

Old breakeven oil price for some new Norwegian oil fields

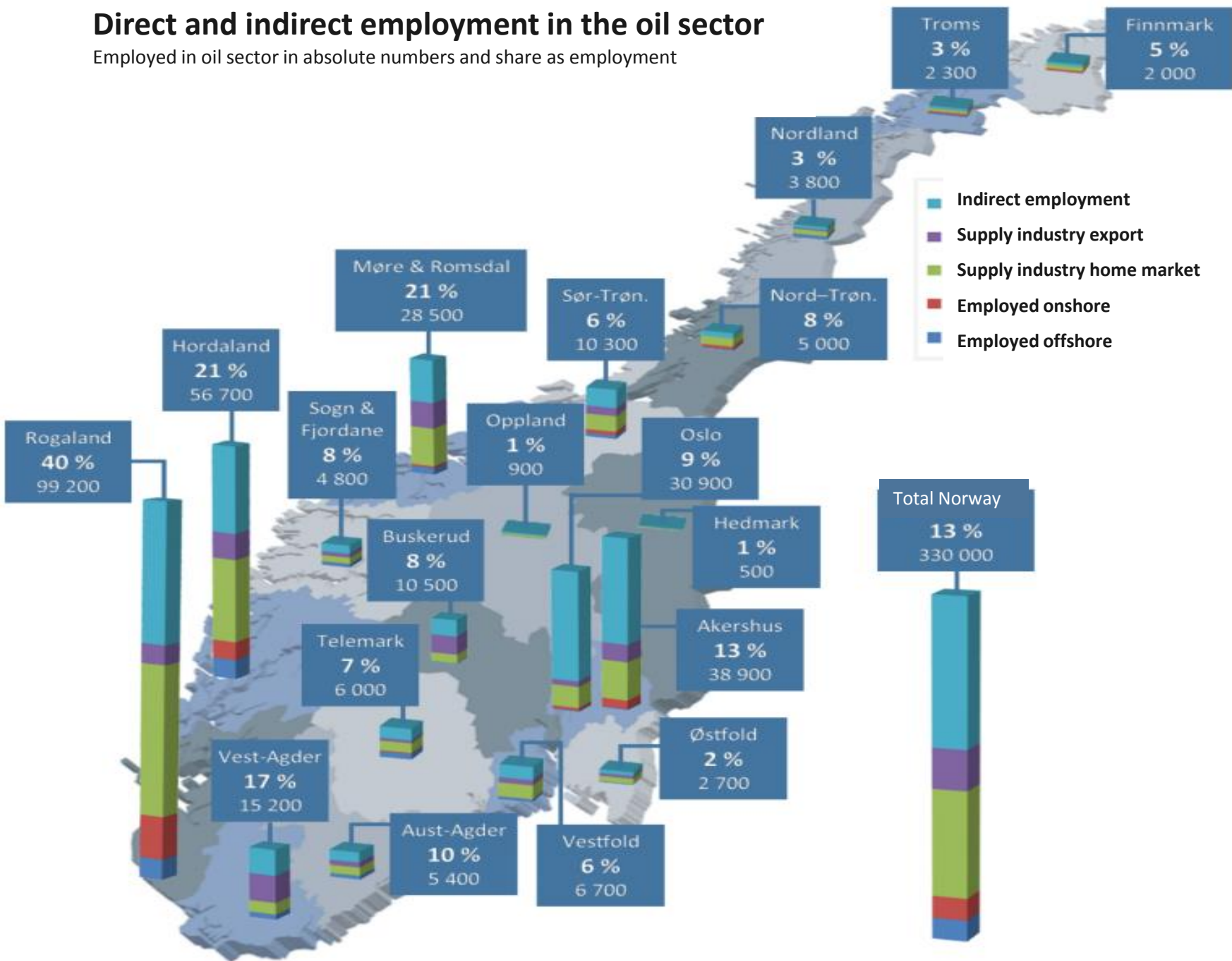


*Expected production year in parentheses

Source: Rystad Energy and Nordea Markets

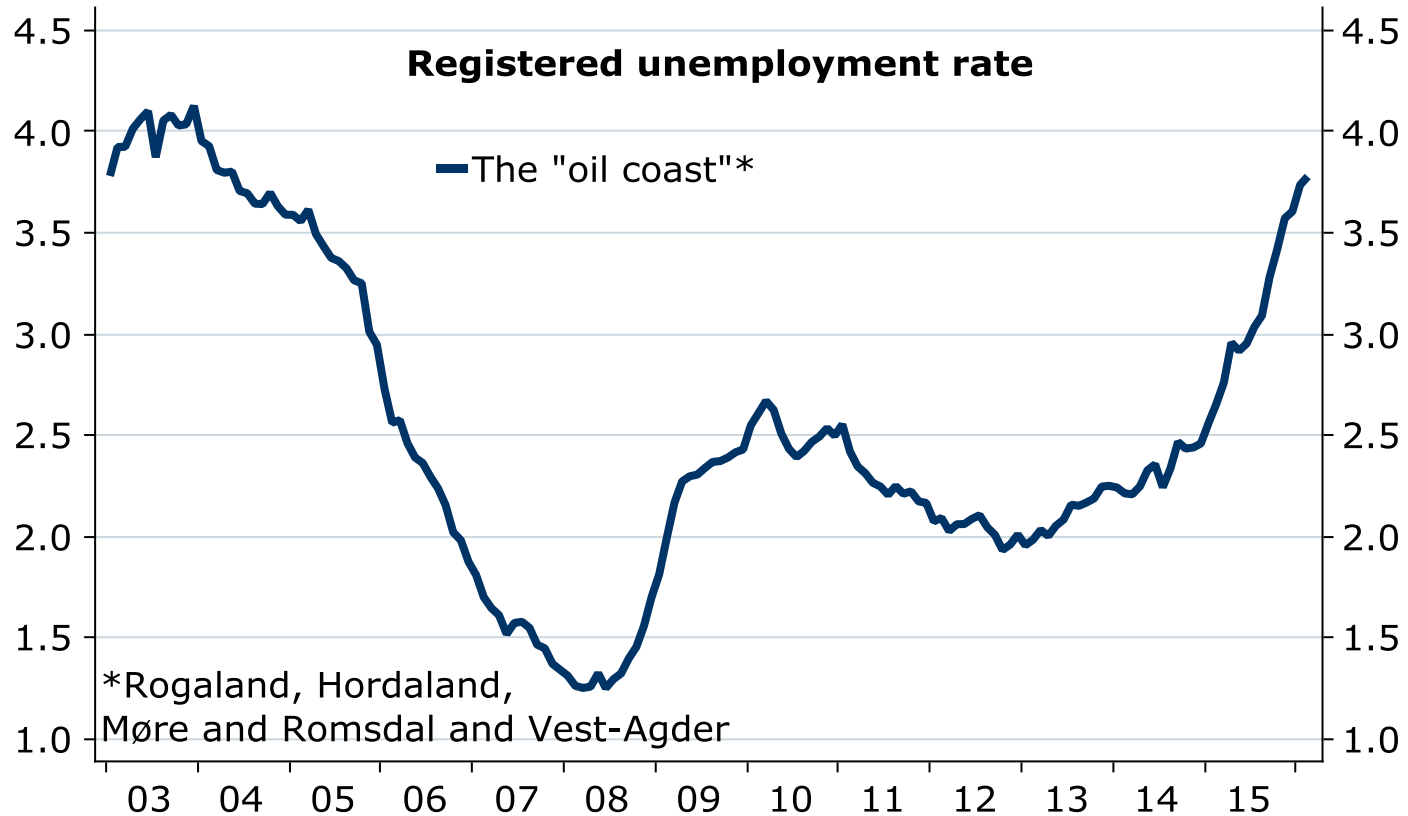
Direct and indirect employment in the oil sector

Employed in oil sector in absolute numbers and share as employment



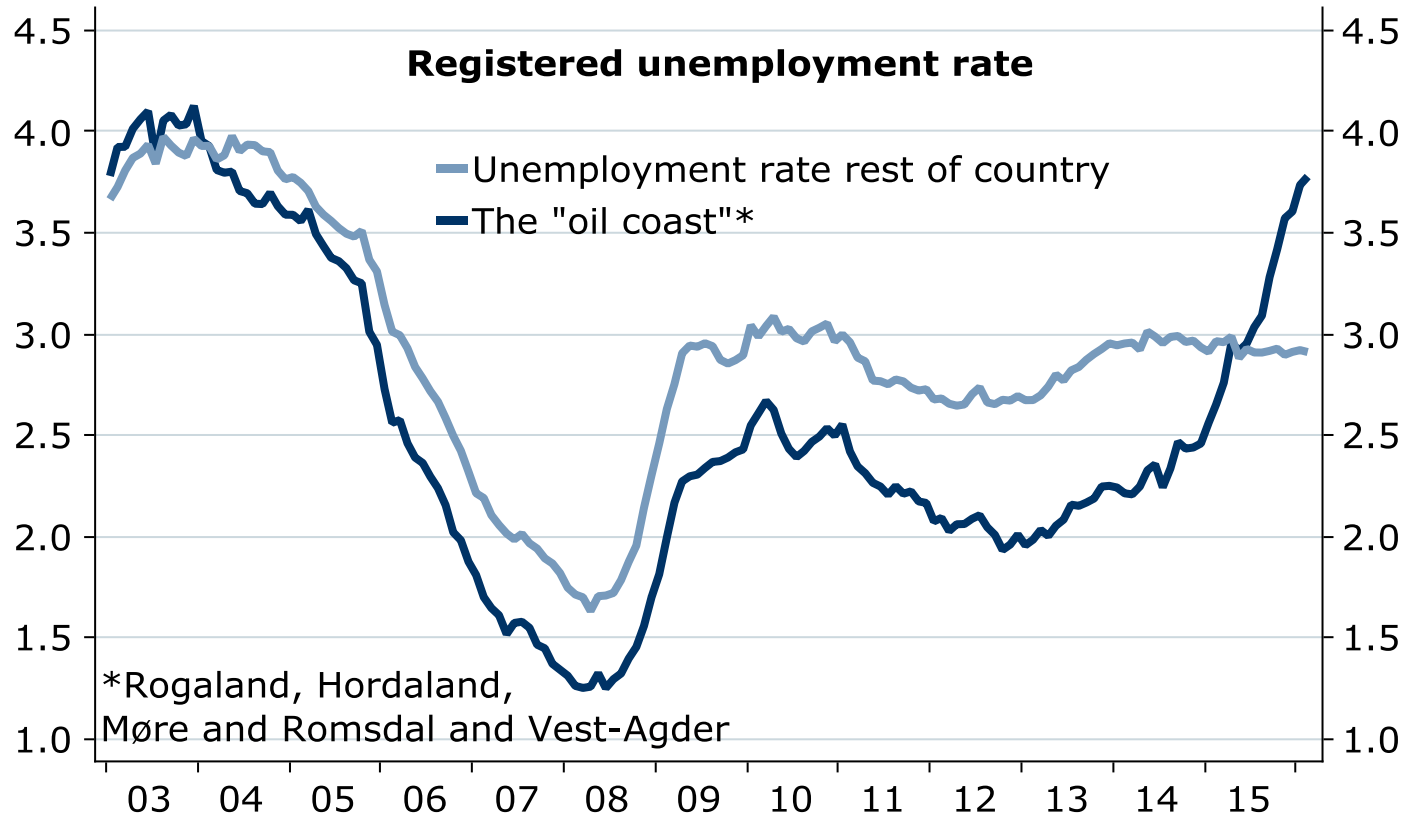
Source: IRIS

Unemployment is increasing



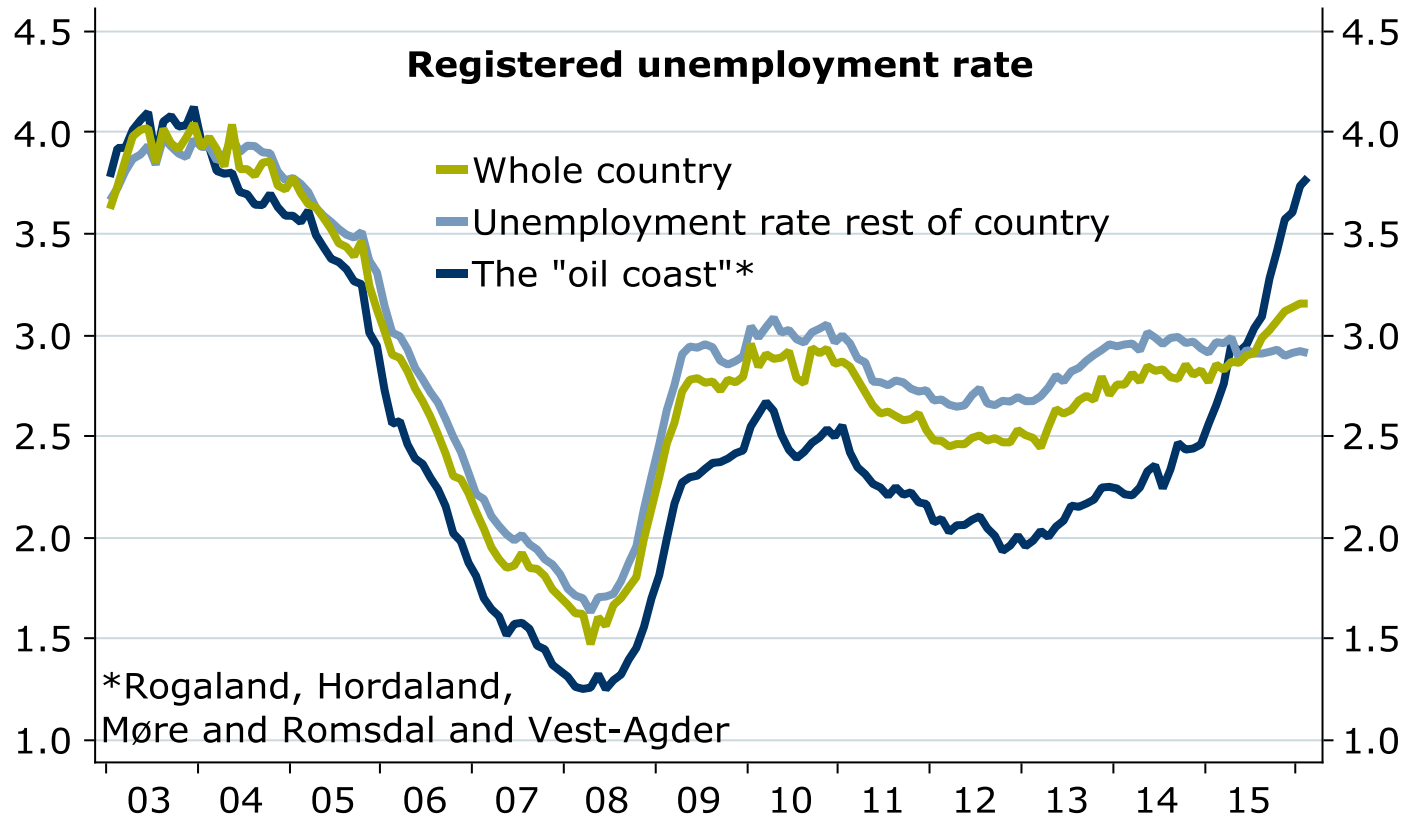
Source: Nordea Markets and Macrobond

Unemployment is increasing



Source: Nordea Markets and Macrobond

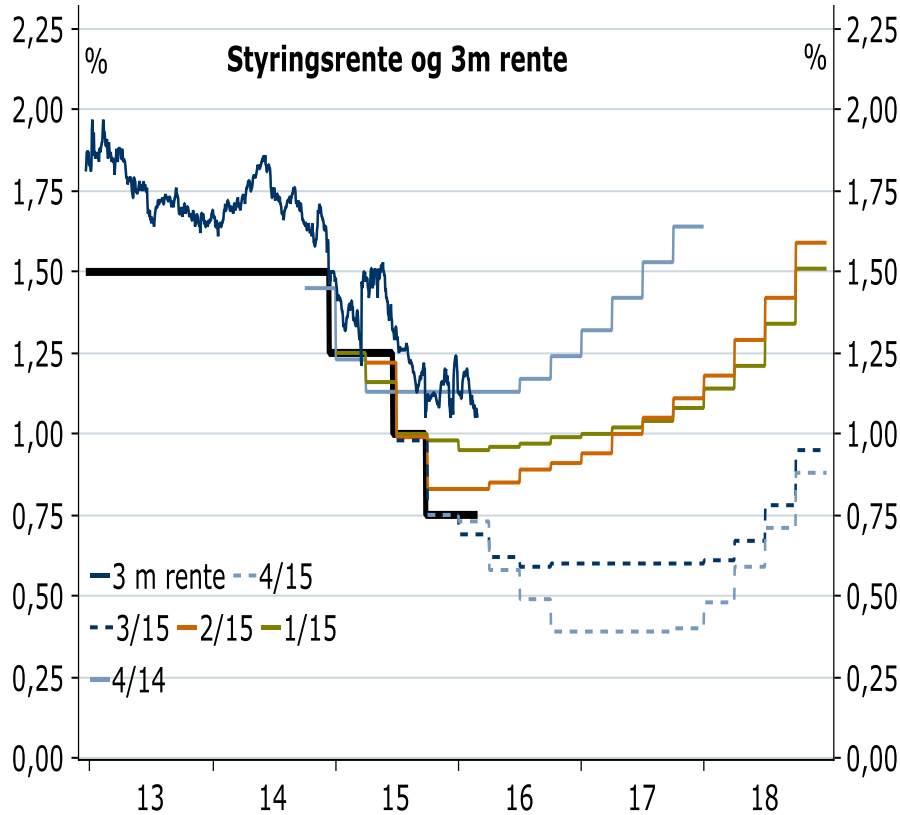
Unemployment is increasing



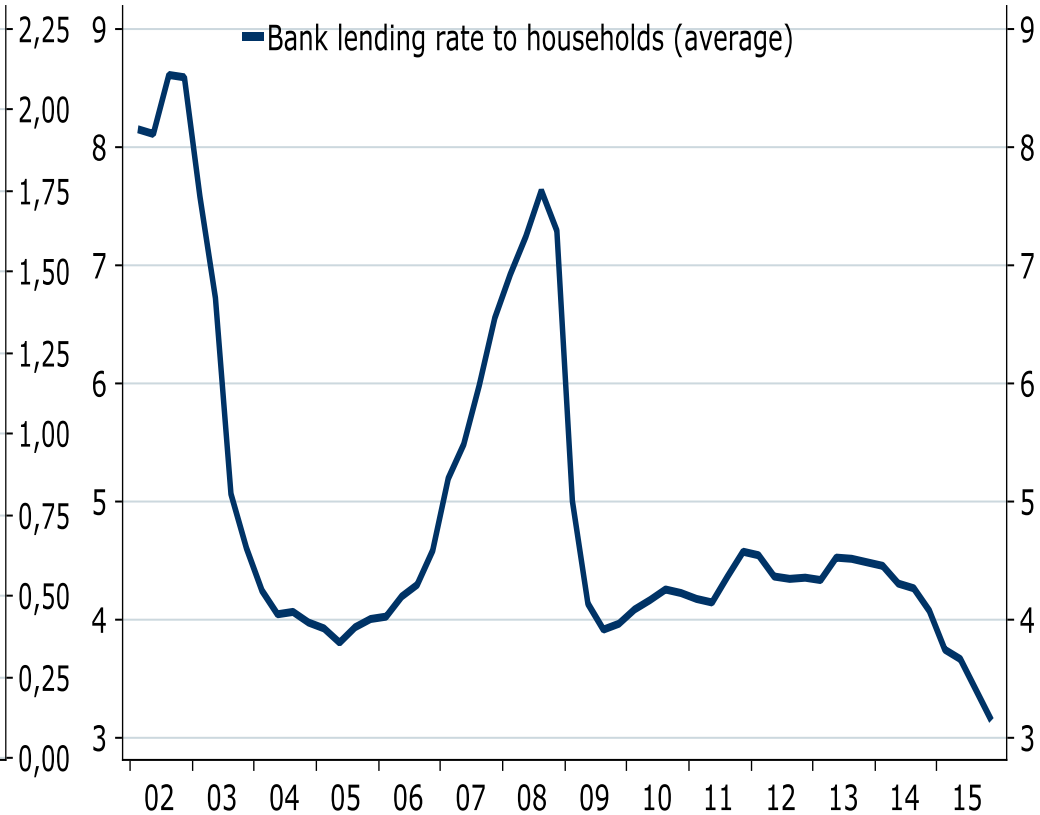
Source: Nordea Markets and Macrobond

3 shock-absorbers

Shock absorber I: Interest rate cuts



Source: Nordea Markets and Macrobond

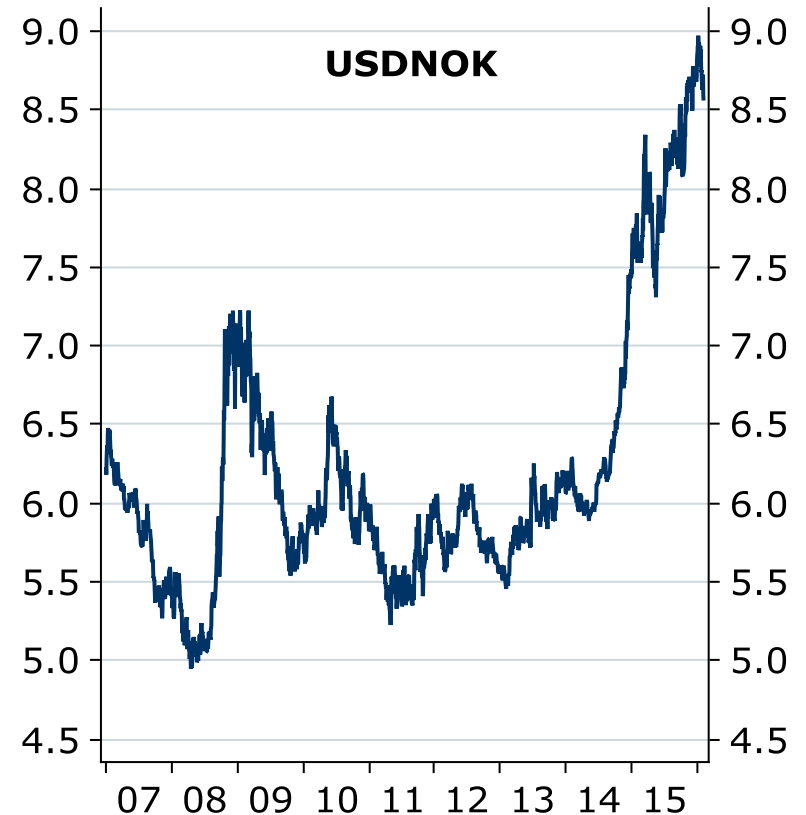


Source: Nordea Markets and Macrobond

Shock absorber II: A weaker NOK



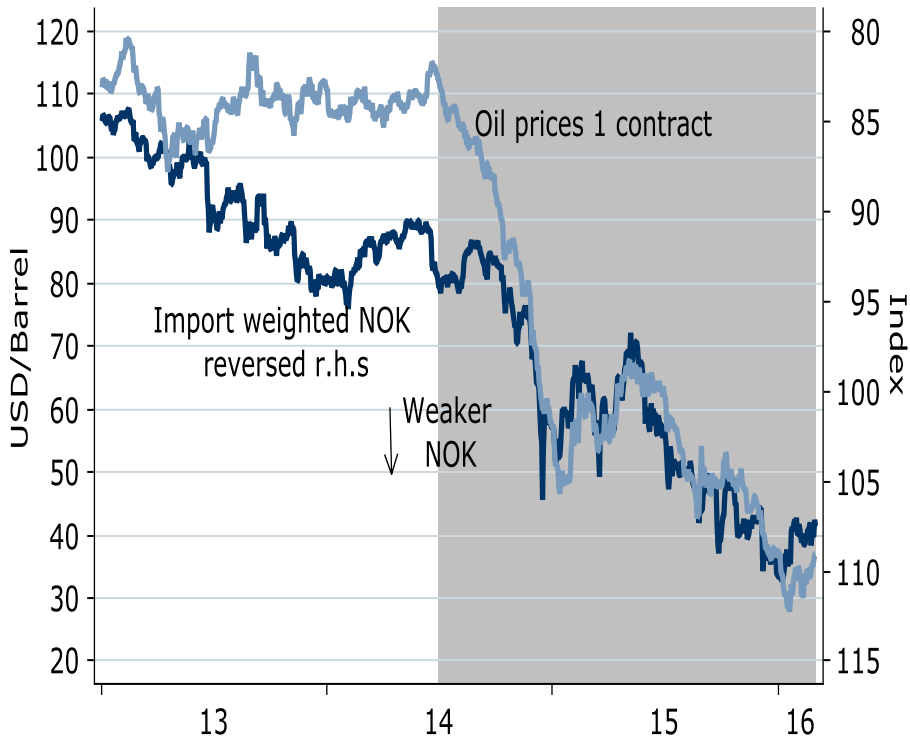
Source: Nordea Markets and Macrobond



Source: Nordea Markets and Macrobond

NOK: Oil price or interest rates?

Oil price and NOK



Source: Nordea Markets and Macrobond

2 year swap Norway versus trading partners and NOK

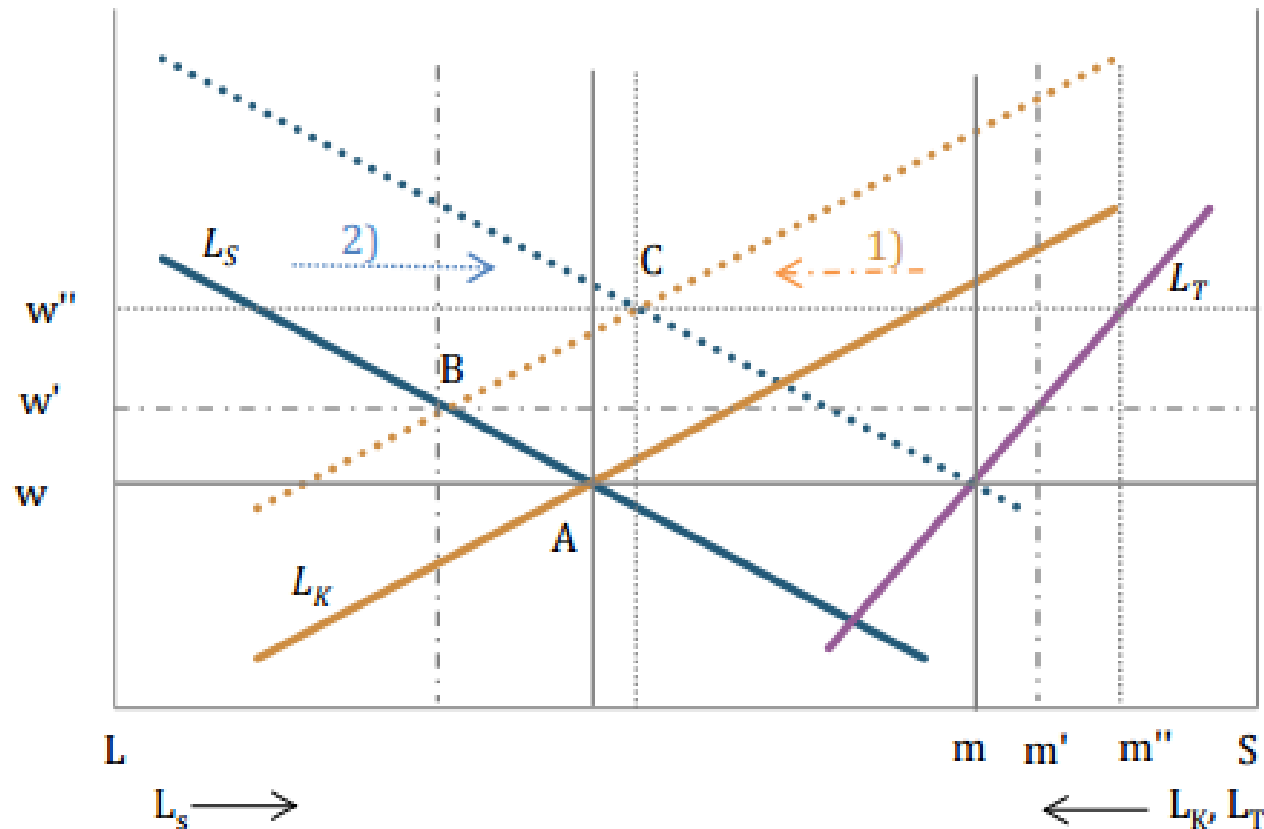


Source: Nordea Markets and Macrobond

«Dutch disease»

1. Resource movement effect
2. Income/spending effect

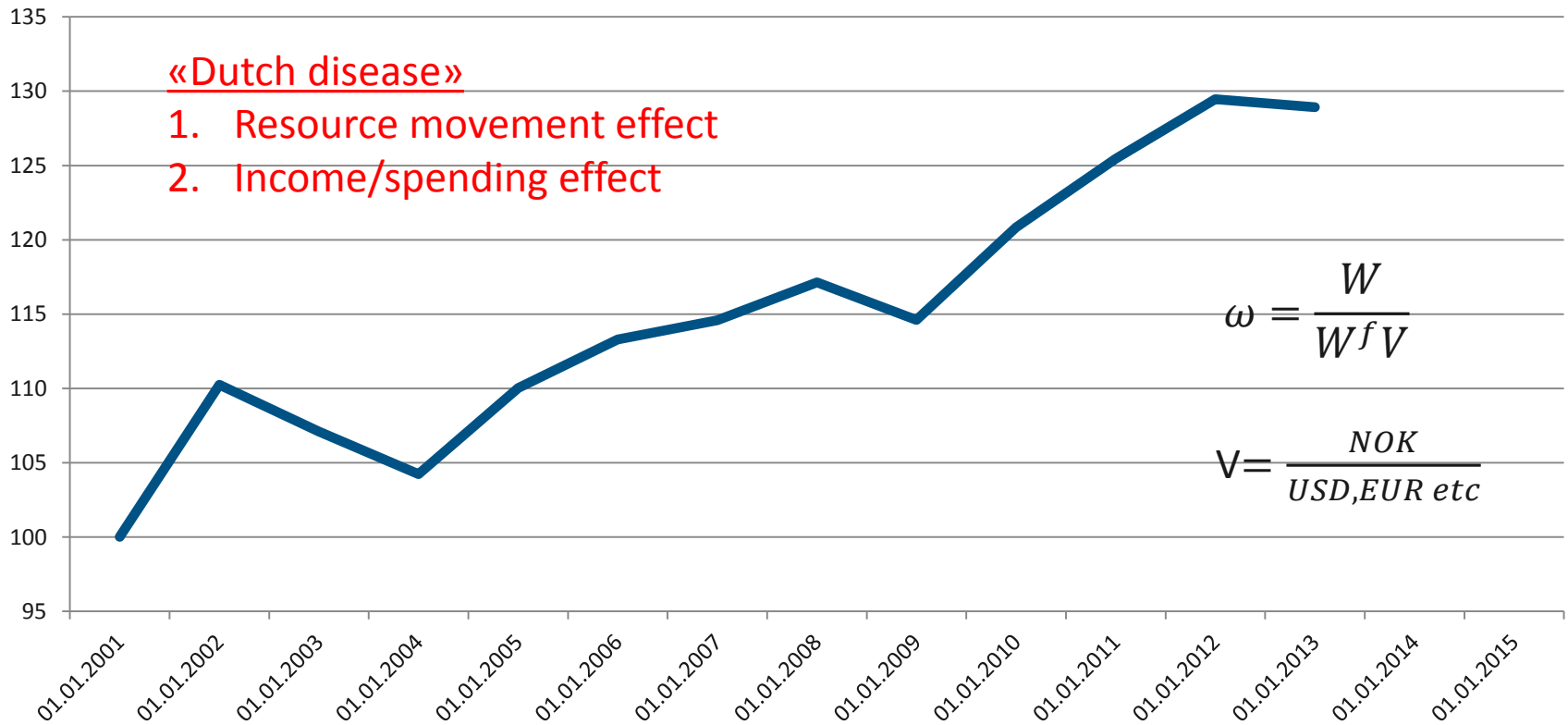
Cordon og Neary (1982)



High oil price increased costs in Norway

Relative wage costs in common currency

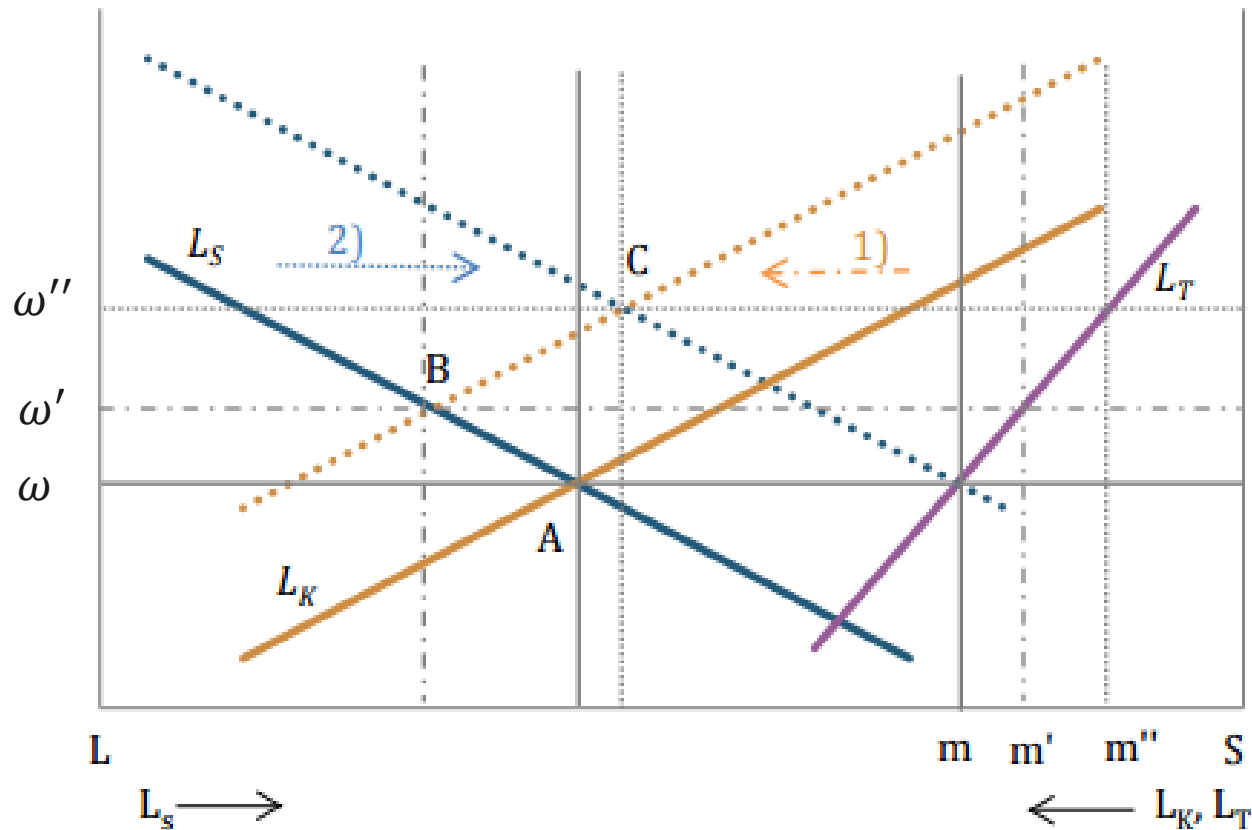
Index 2001=100



«Dutch disease»

1. Resource movement effect
2. Income/spending effect

Cordon og Neary (1982)

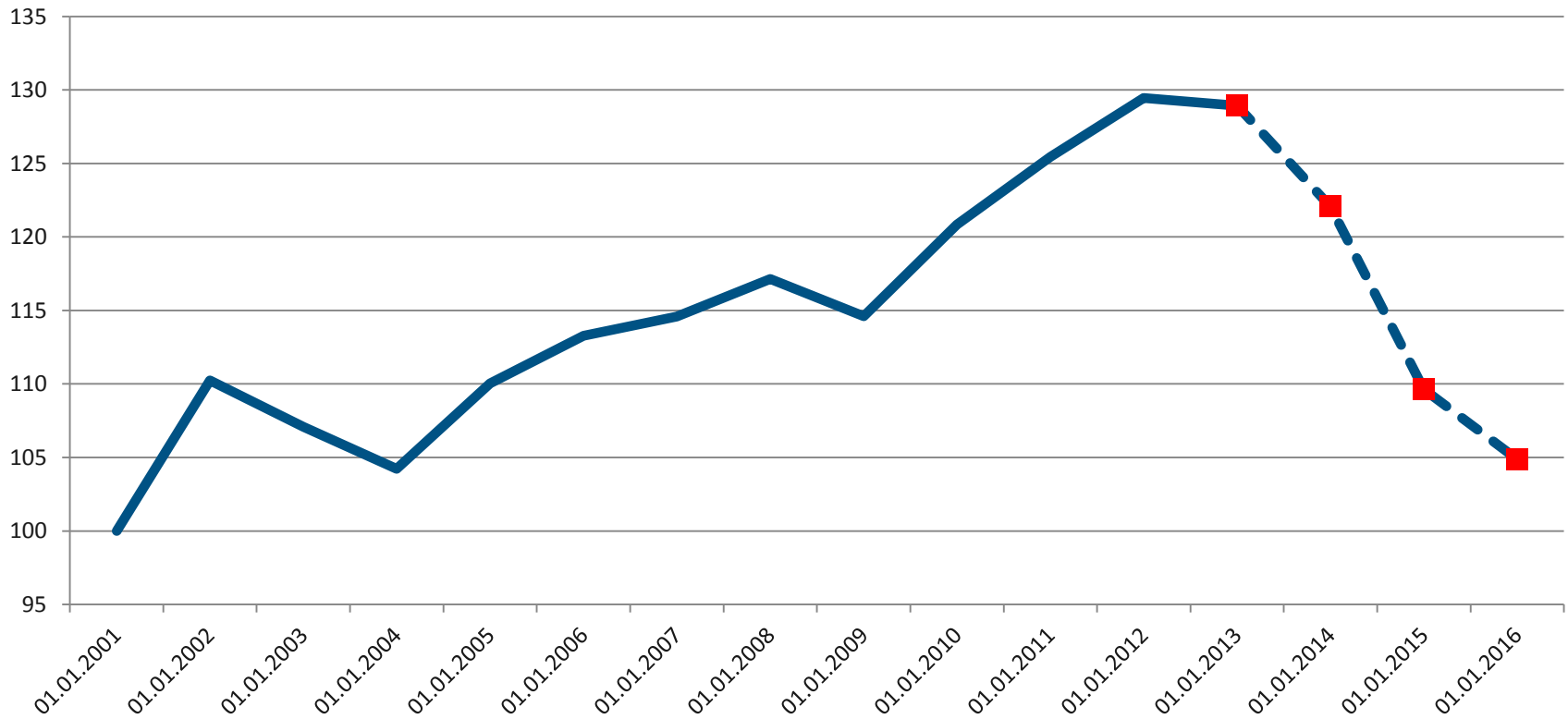


$$\omega = \frac{W}{W^f V}$$

$$V = \frac{NOK}{USD, EUR \text{ etc}}$$

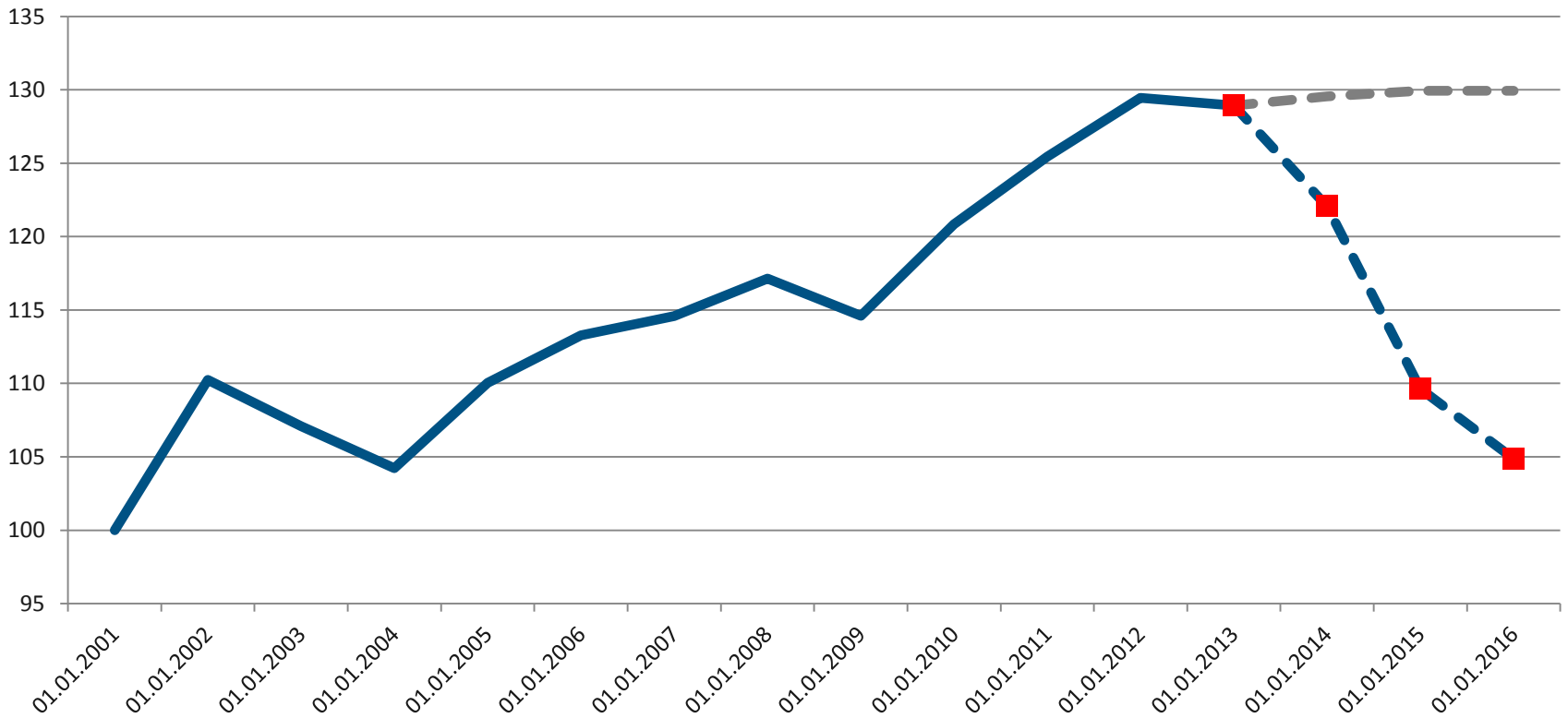
Thank you for a flexible exchange rate

Relative wage costs in common currency
Index 2001=100



If we were Finland

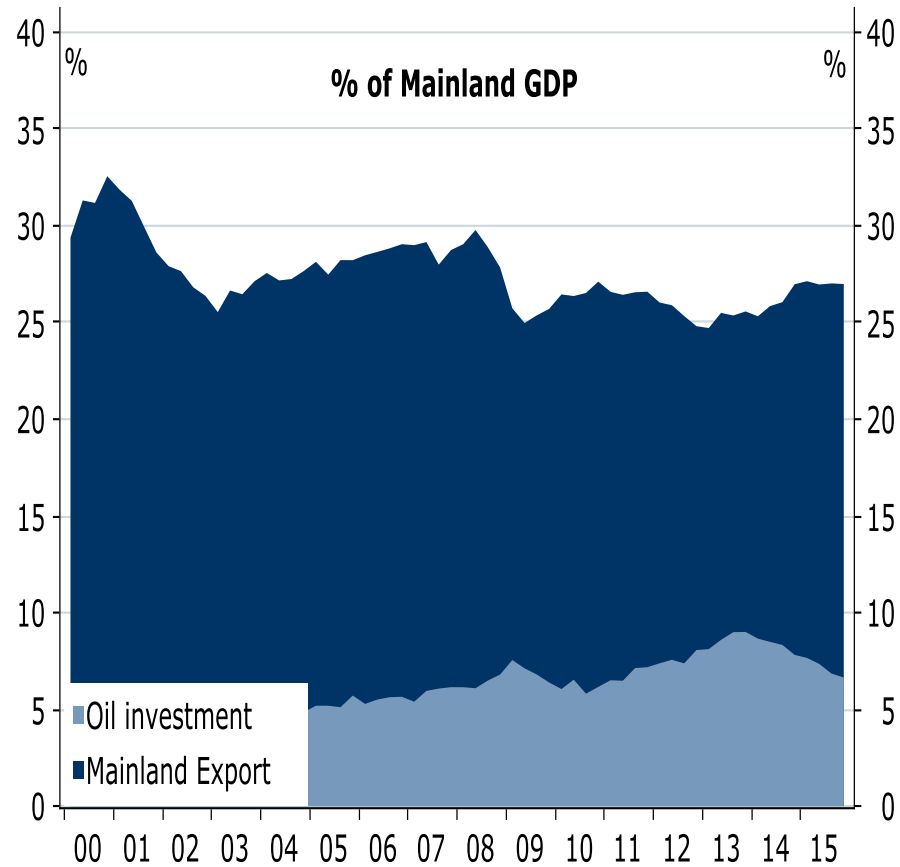
Relative wage costs in common currency
Index 2001=100



Norwegian exporters are happy

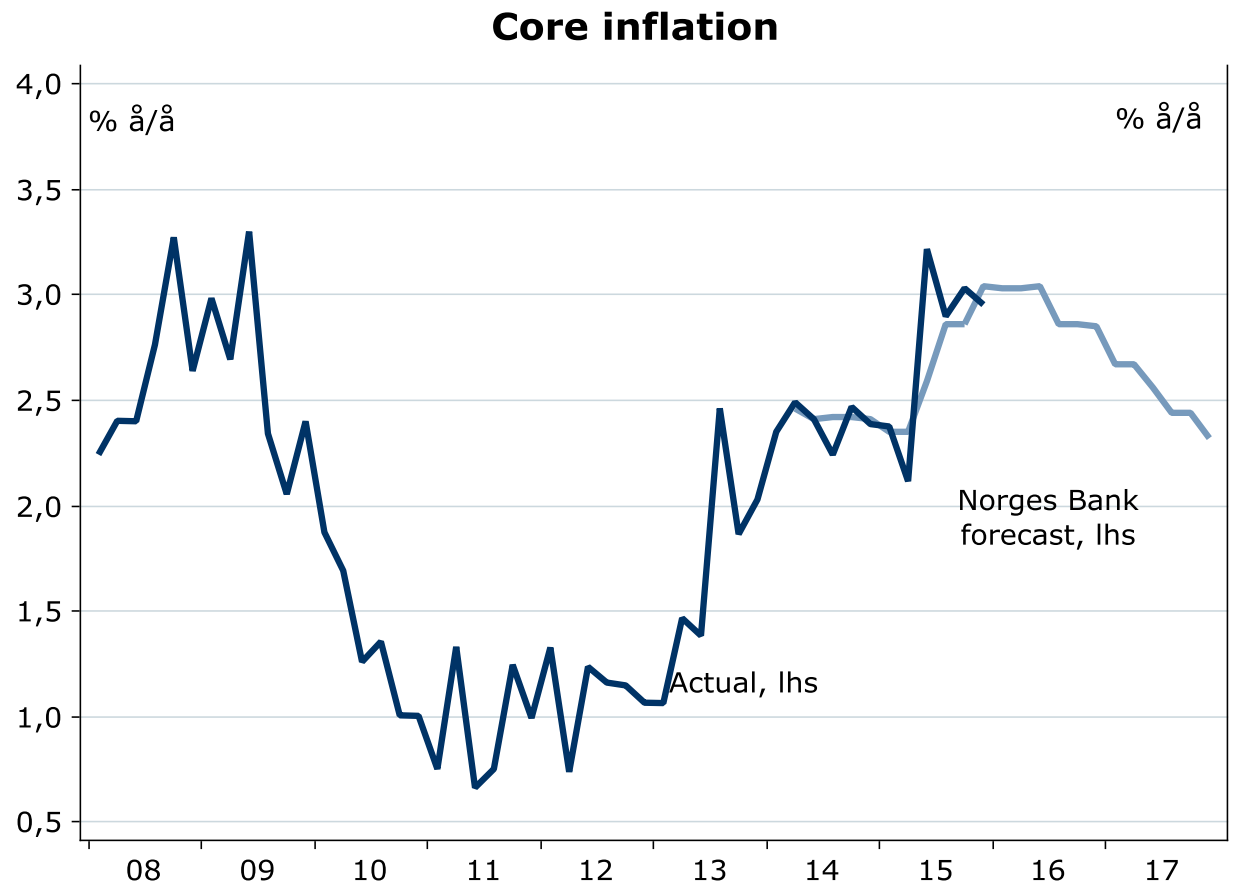


Kilde: Nordea Markets and Macrobond



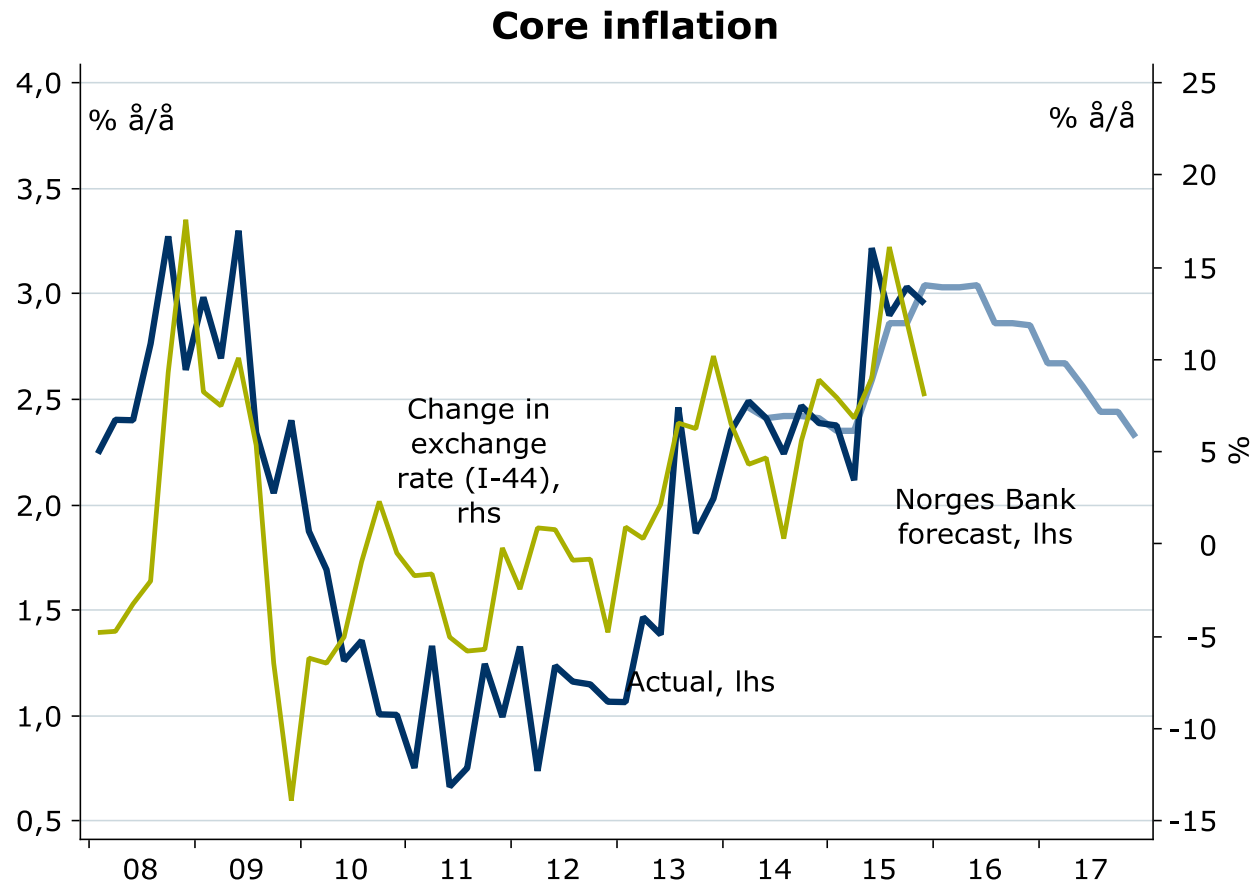
Kilde: Nordea Markets and Macrobond

Why is Norges Bank so calm about high inflation



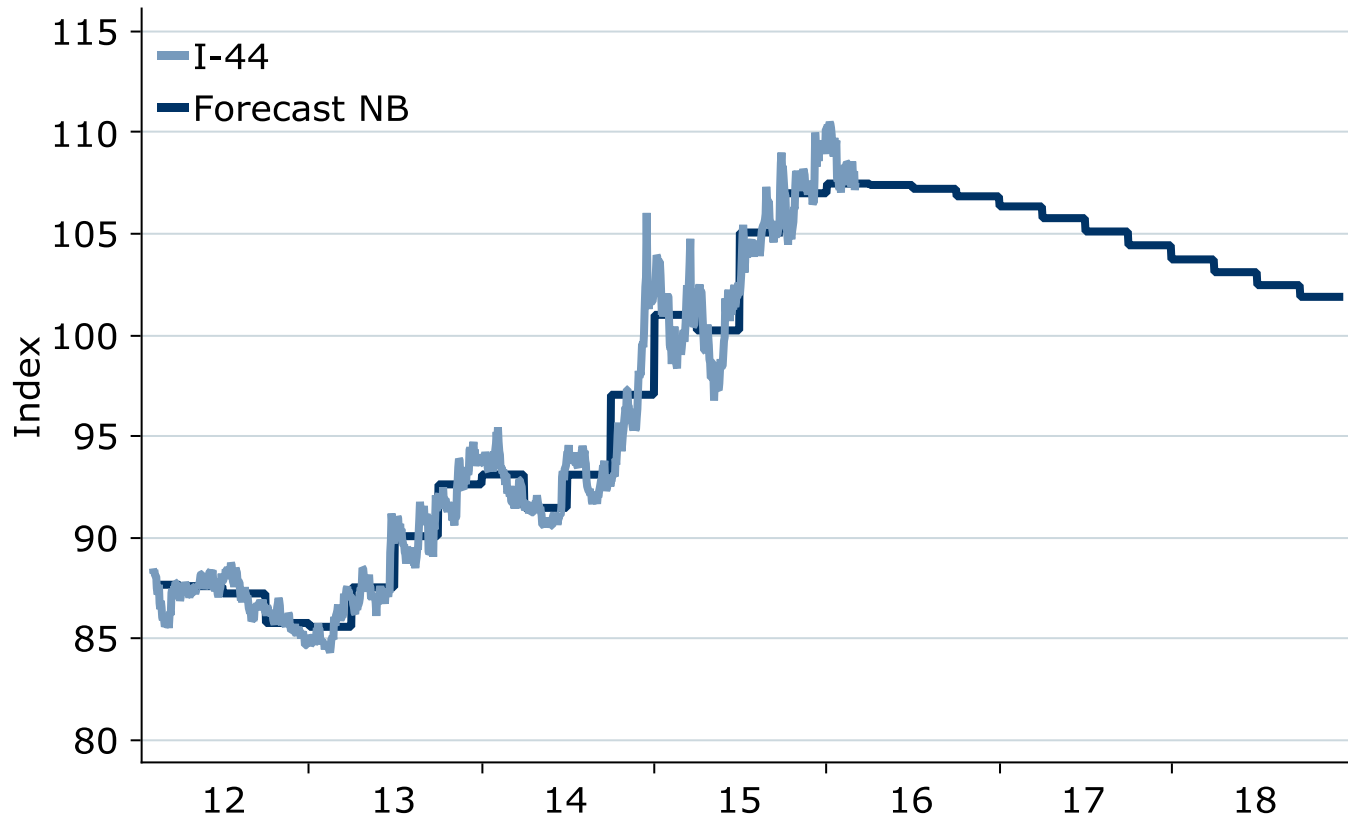
Kilde: Nordea Markets and Macrobond

Why is Norges Bank so calm about high inflation



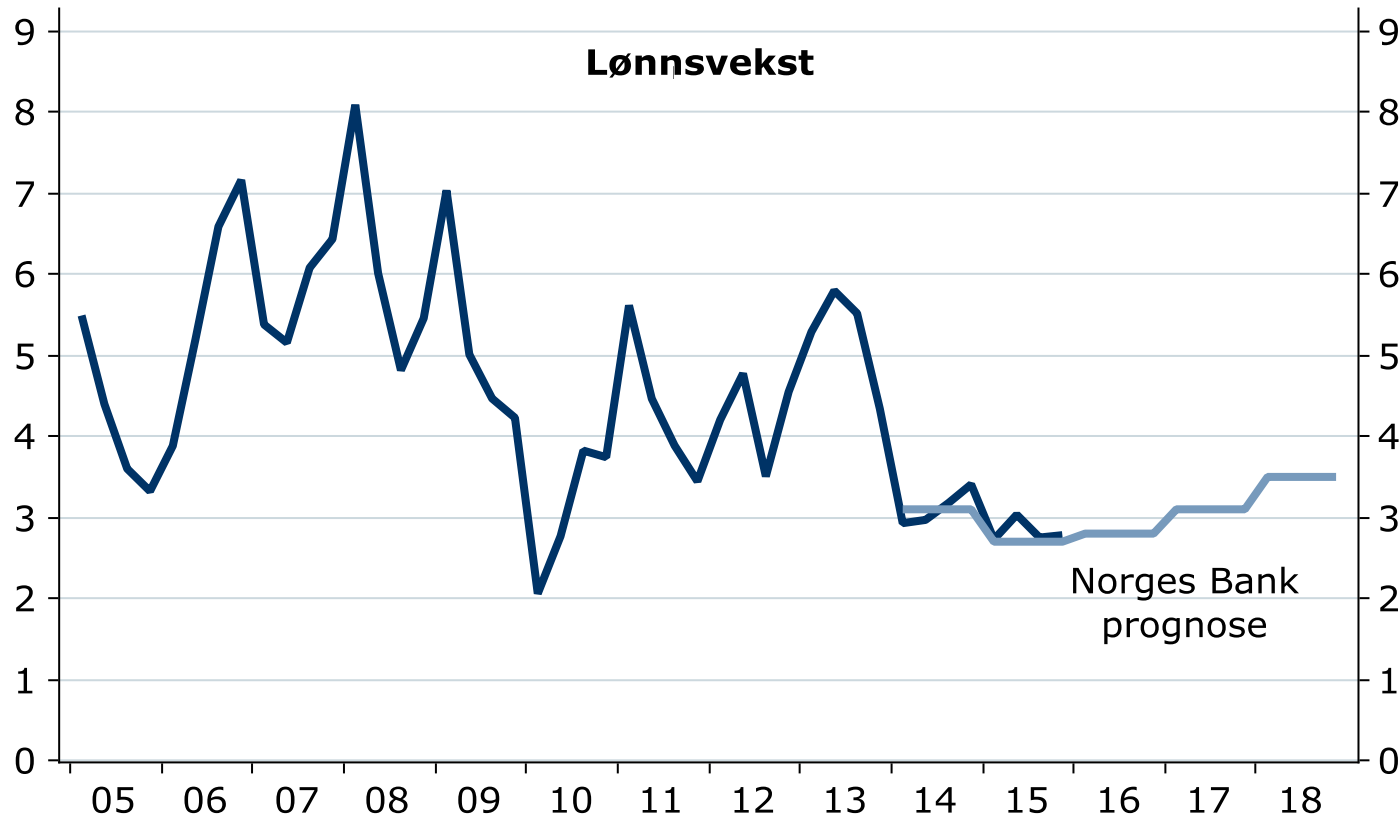
Kilde: Nordea Markets and Macrobond

NOK will not depreciate forever



Kilde: Nordea Markets and Macrobond

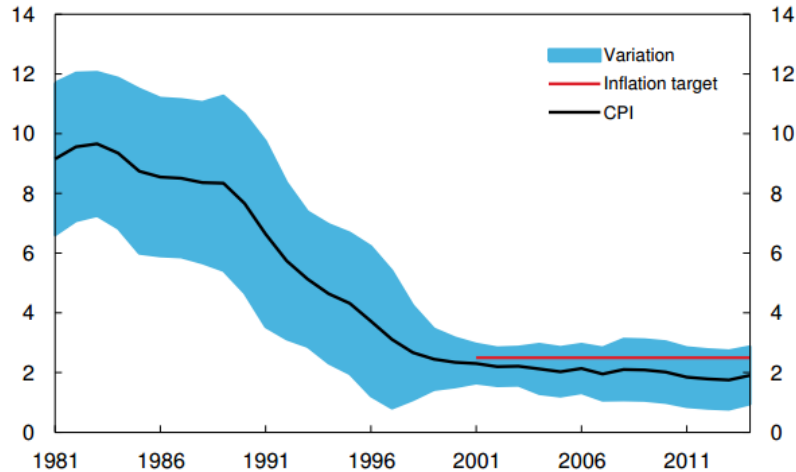
Wage growth will not accelerate to compensate for inflation



Source: Nordea Markets and Macrobond

We have a nominal anchor

Chart 2.1 10-year moving average¹⁾ and variation²⁾ in the CPI.
Annual change. Percent. 1981 – 2014

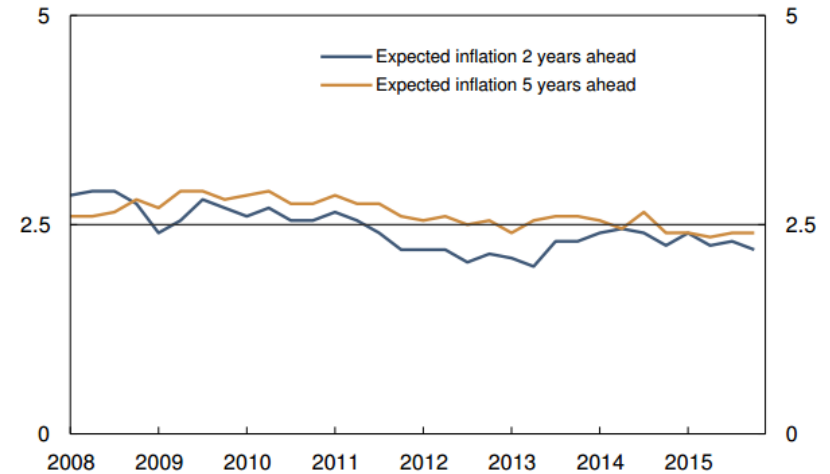


1) The moving average is calculated 10 years back.

2) The band around the CPI is the variation in the CPI in the average period, measured by +/- one standard deviation.

Sources: Statistics Norway and Norges Bank

Chart 2.2 Expected consumer price inflation 2 and 5 years ahead.¹⁾
Percent. 2008 Q1 – 2015 Q4

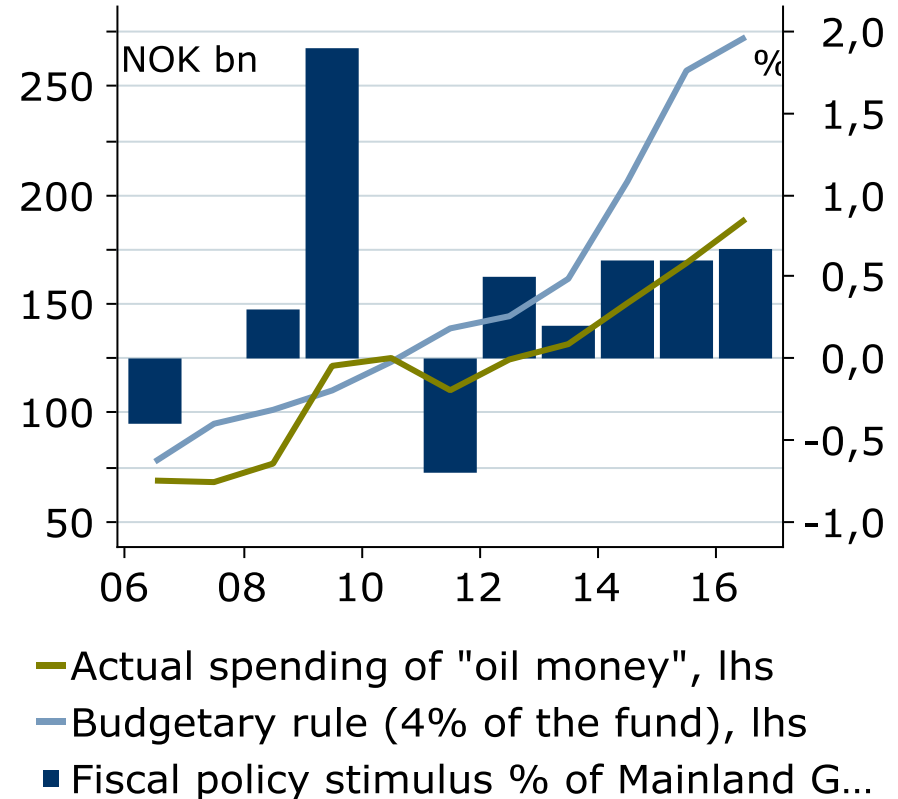


1) Average of expectations of employer/employee organisations and economists in the financial industry and academia.

Sources: Epinion, Opinion, TNS Gallup and Norges Bank

Shock absorber III: Fiscal policy

- The Government Pension Fund currently amounts to NOK 7,000bn (EUR 737bn) which is more than twice the size of the Mainland GDP and equals five annual national budgets.
- The budgetary rule: 4% of the fund (expected real return of the fund) can be spent over the national budget.
- The rule is to ensure that the fund itself would not be tapped.
- Thus the fiscal break even oil price is zero.
- In response to lower oil price public spending has increased. The fiscal policy stimulus is estimated to be 0.7% of the Mainland GDP in 2016.



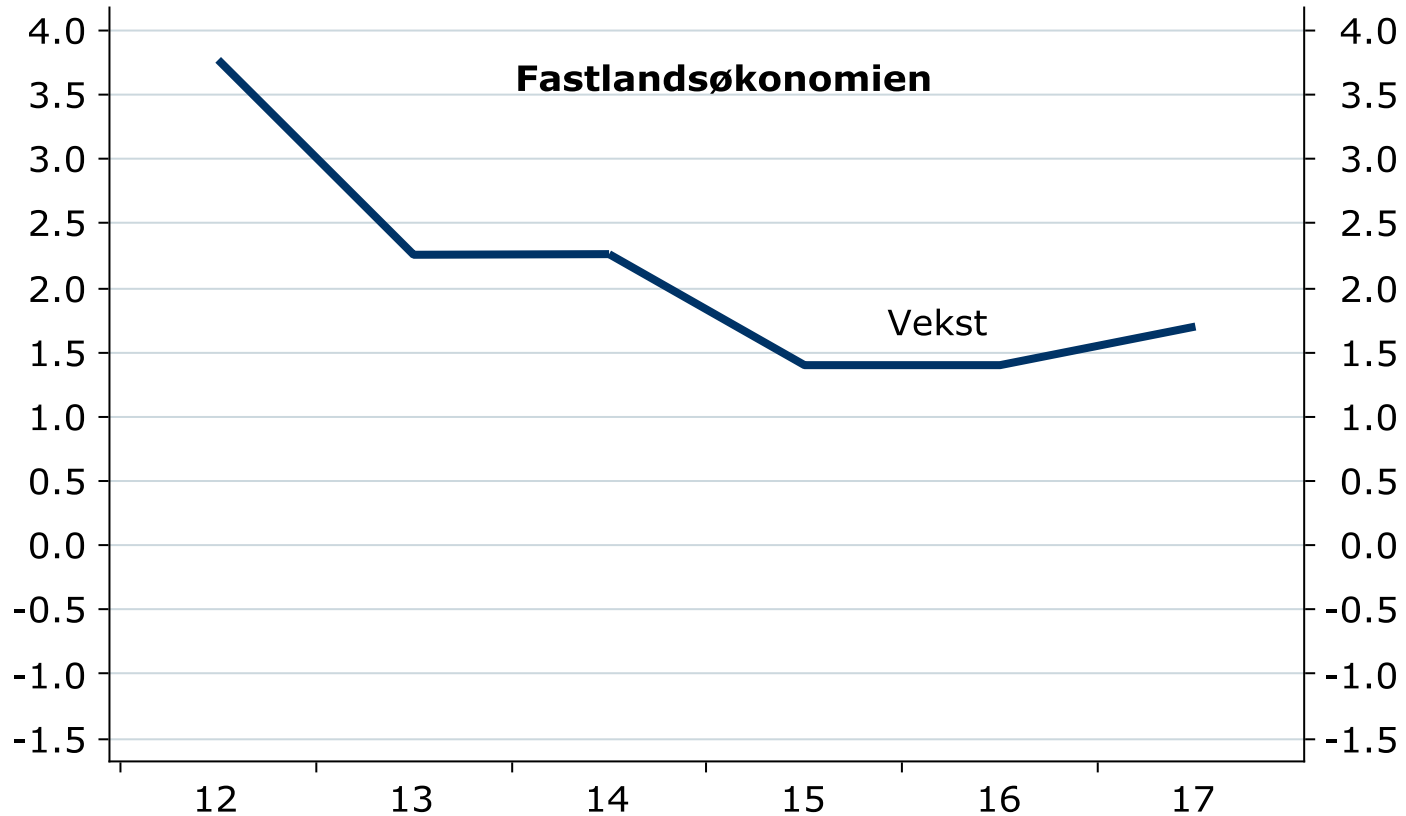
Source: Nordea and Macrobond

Strong growth in public spending



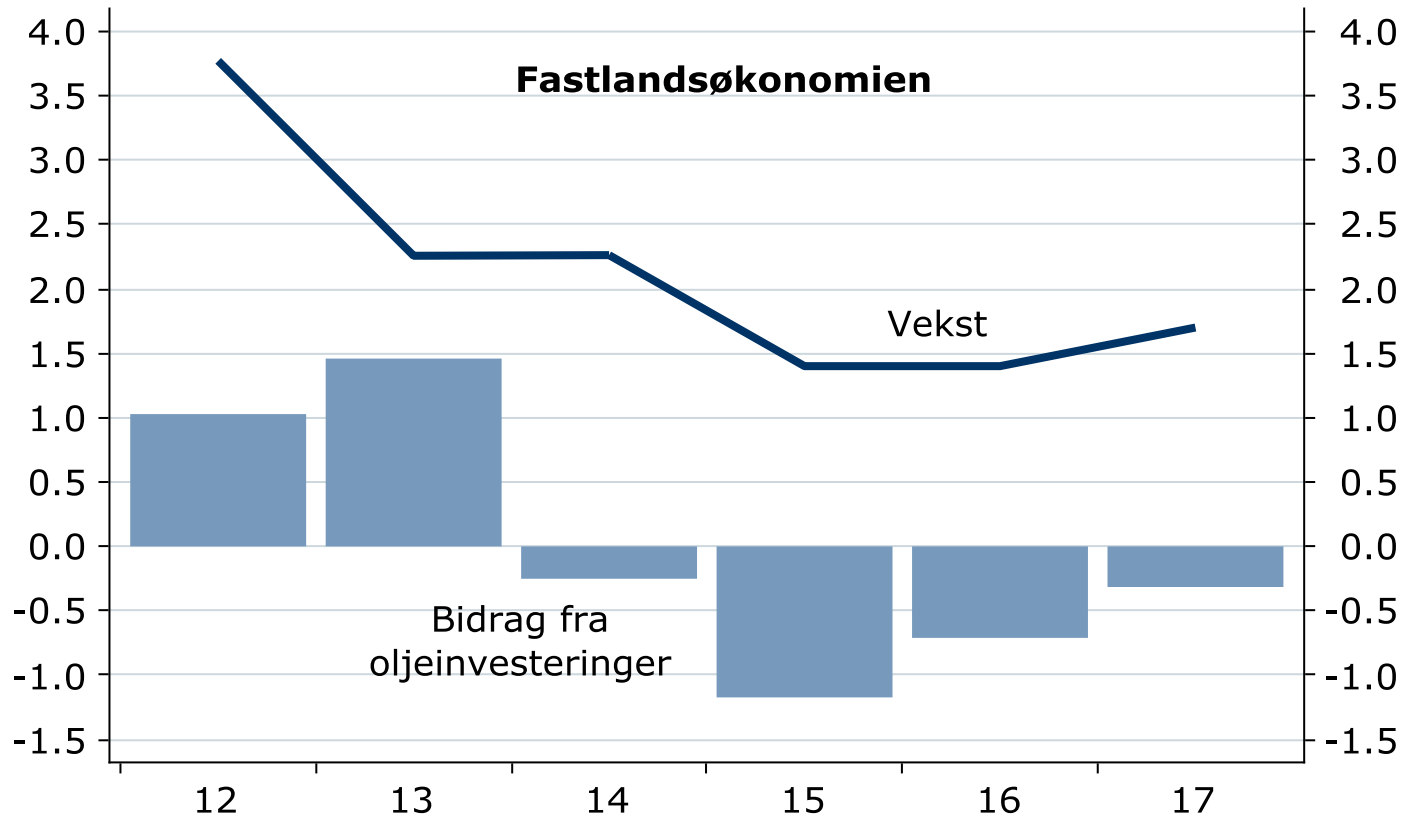
Source: Nordea Markets and Macrobond

Strong counter acting forces



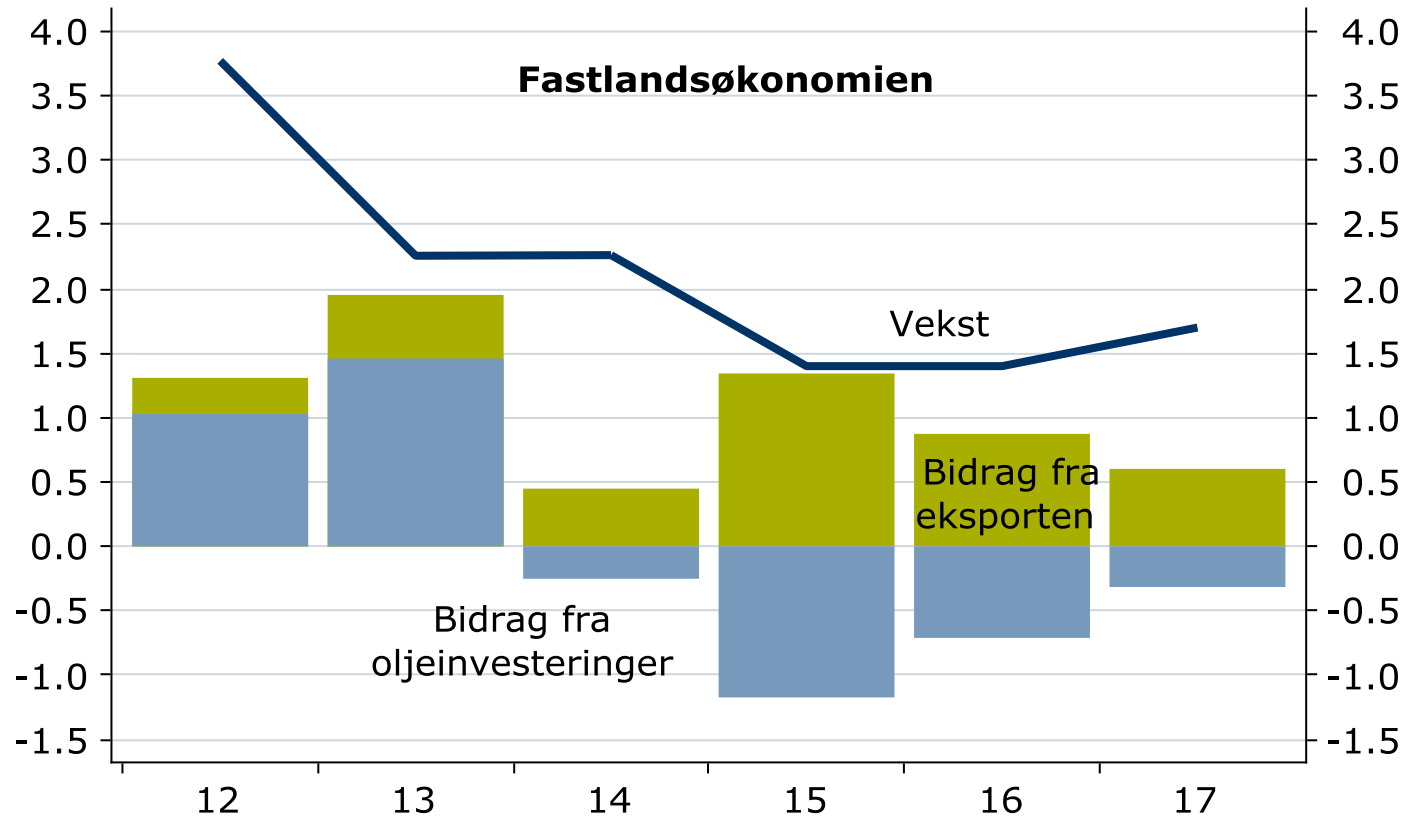
Source: Nordea Markets and Macrobond

Strong counteracting forces



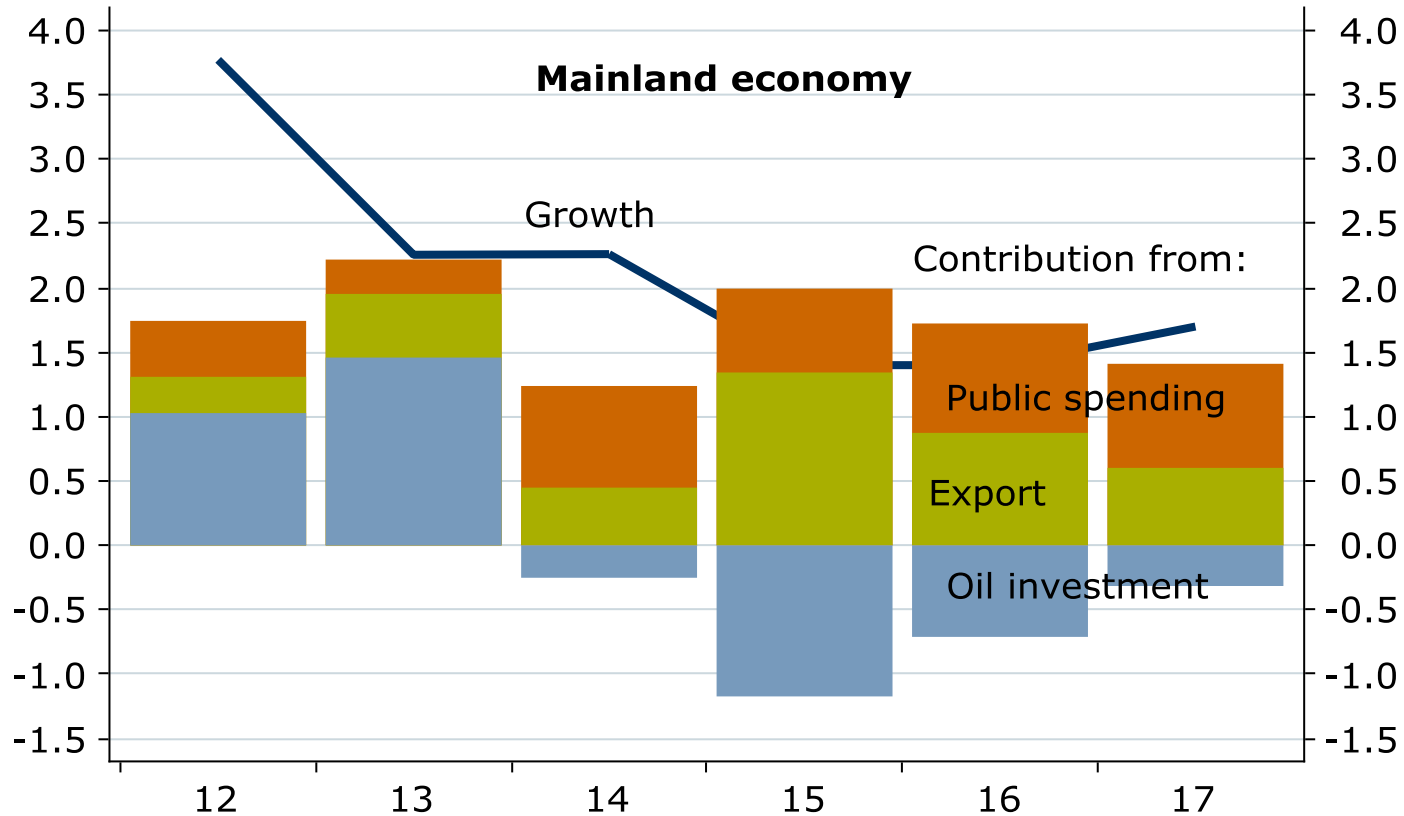
Source: Nordea Markets and Macrobond

Strong counter acting forces



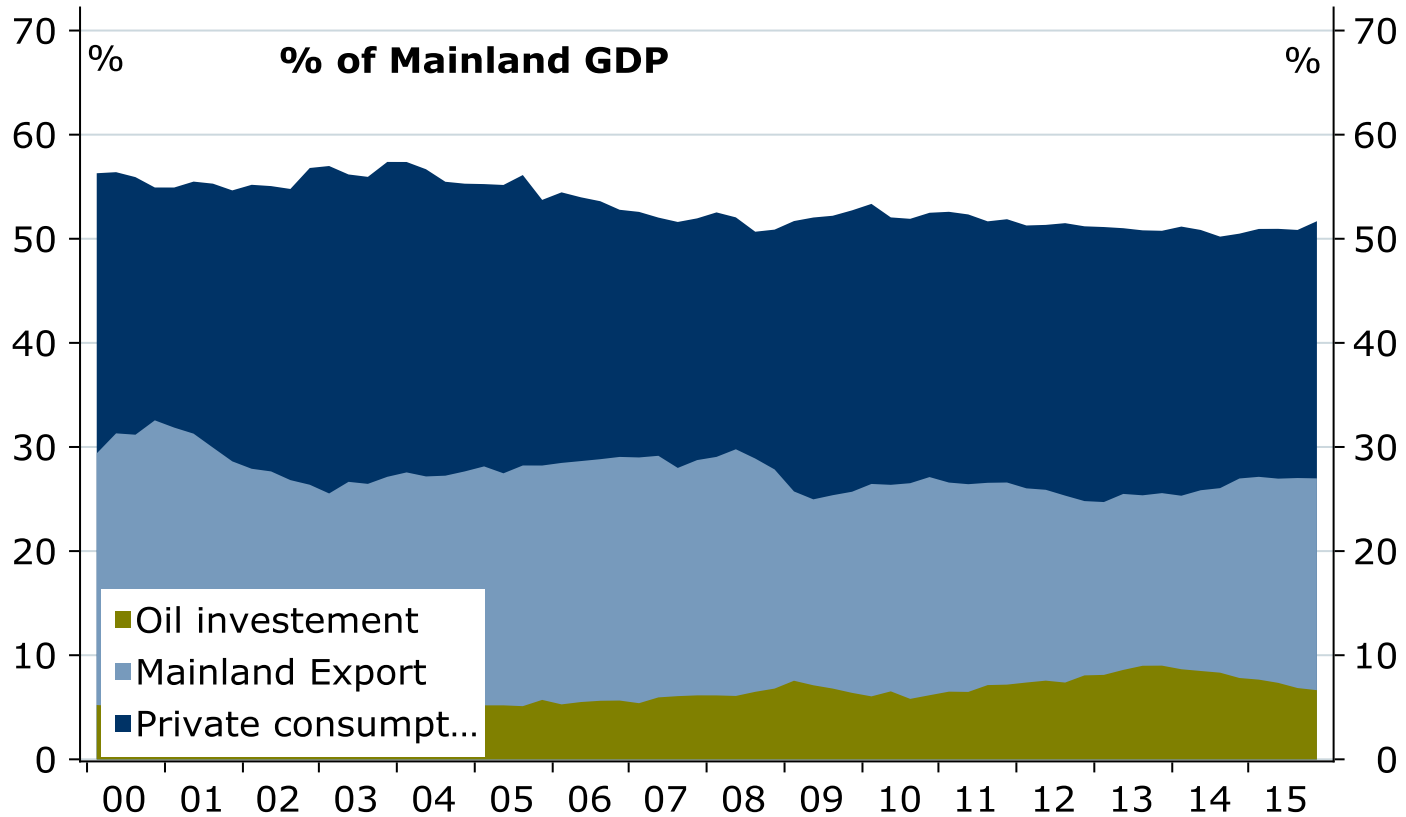
Source: Nordea Markets and Macrobond

Strong counter acting forces



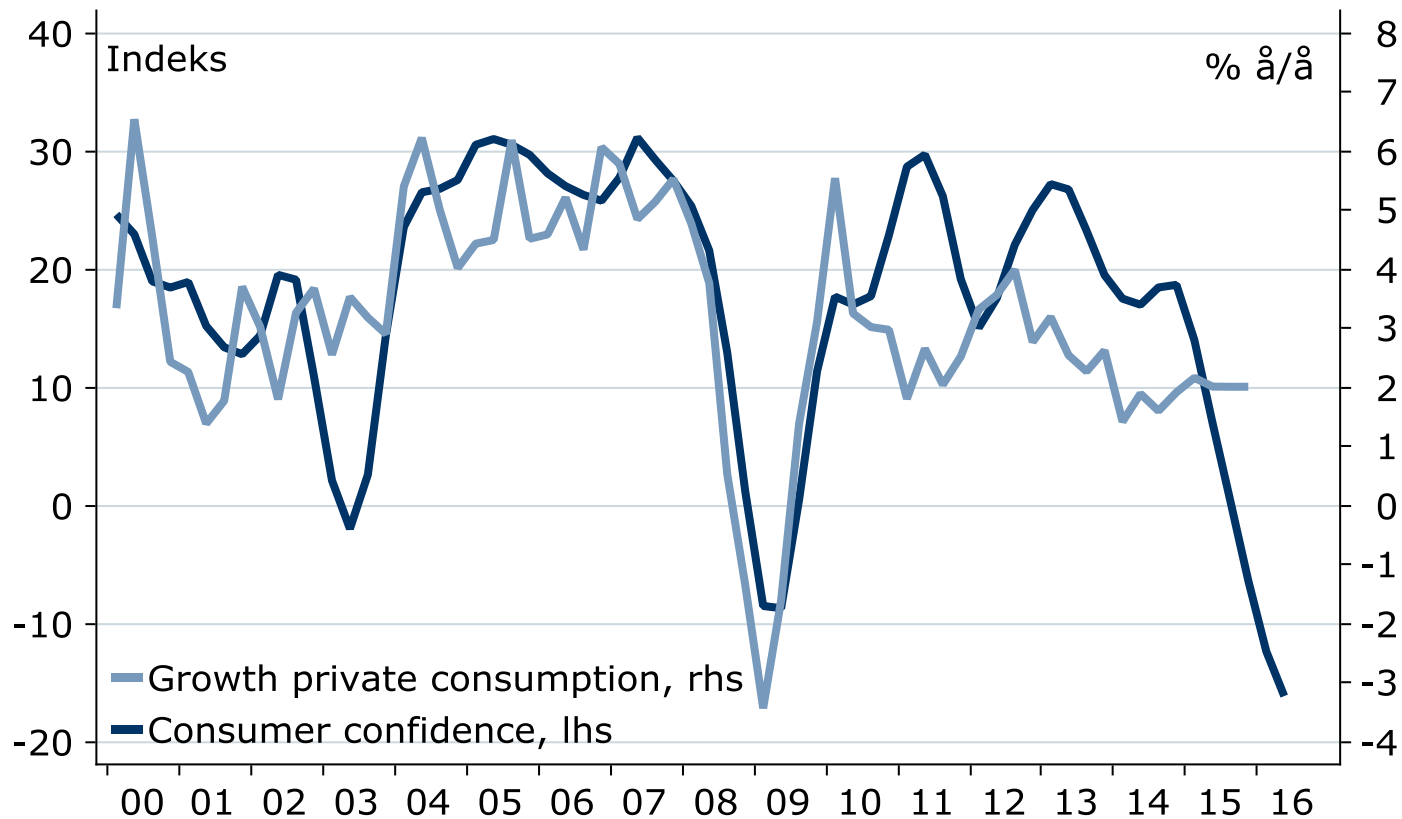
Source: Nordea Markets and Macrobond

Consumers decide



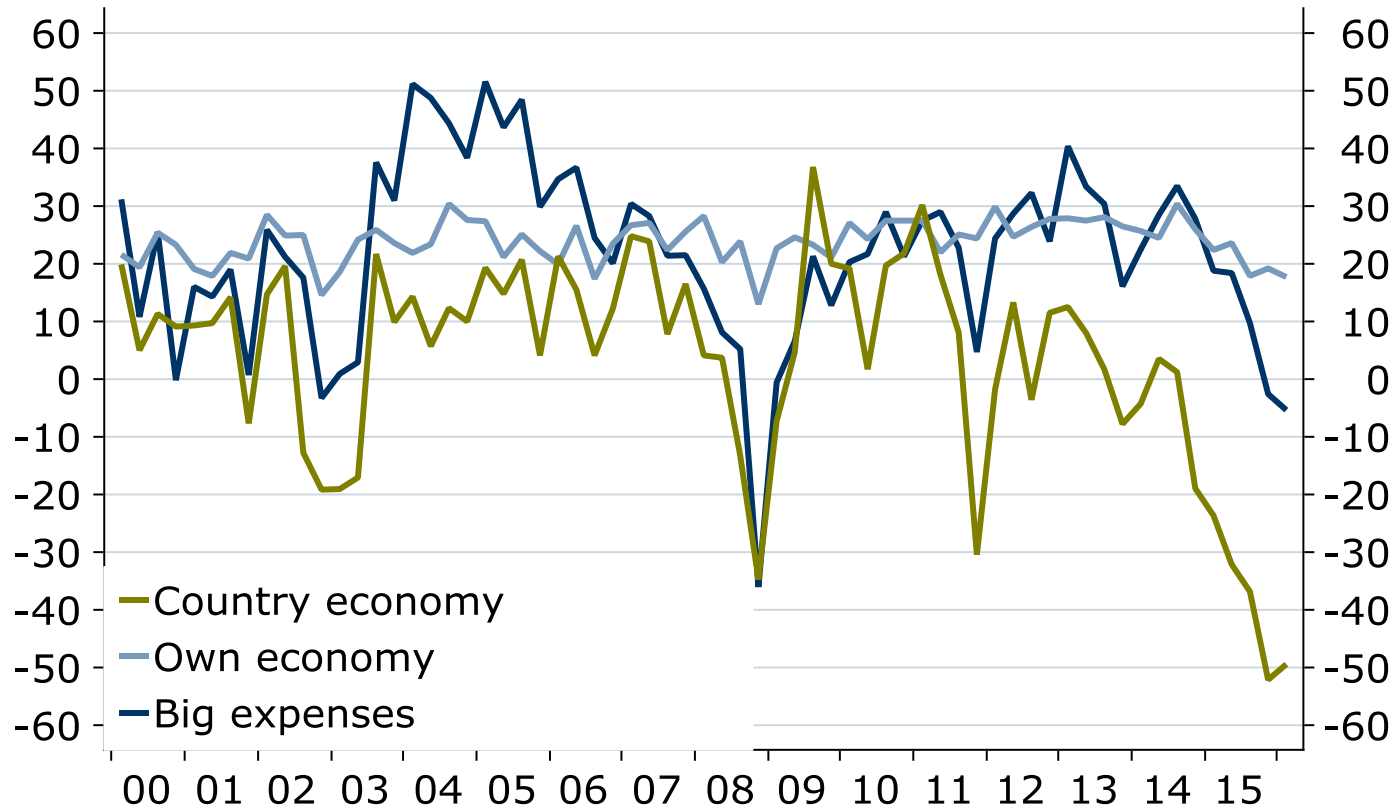
Kilde: Nordea Markets and Macrobond

They say they are afraid...



Kilde: Nordea Markets and Macrobond

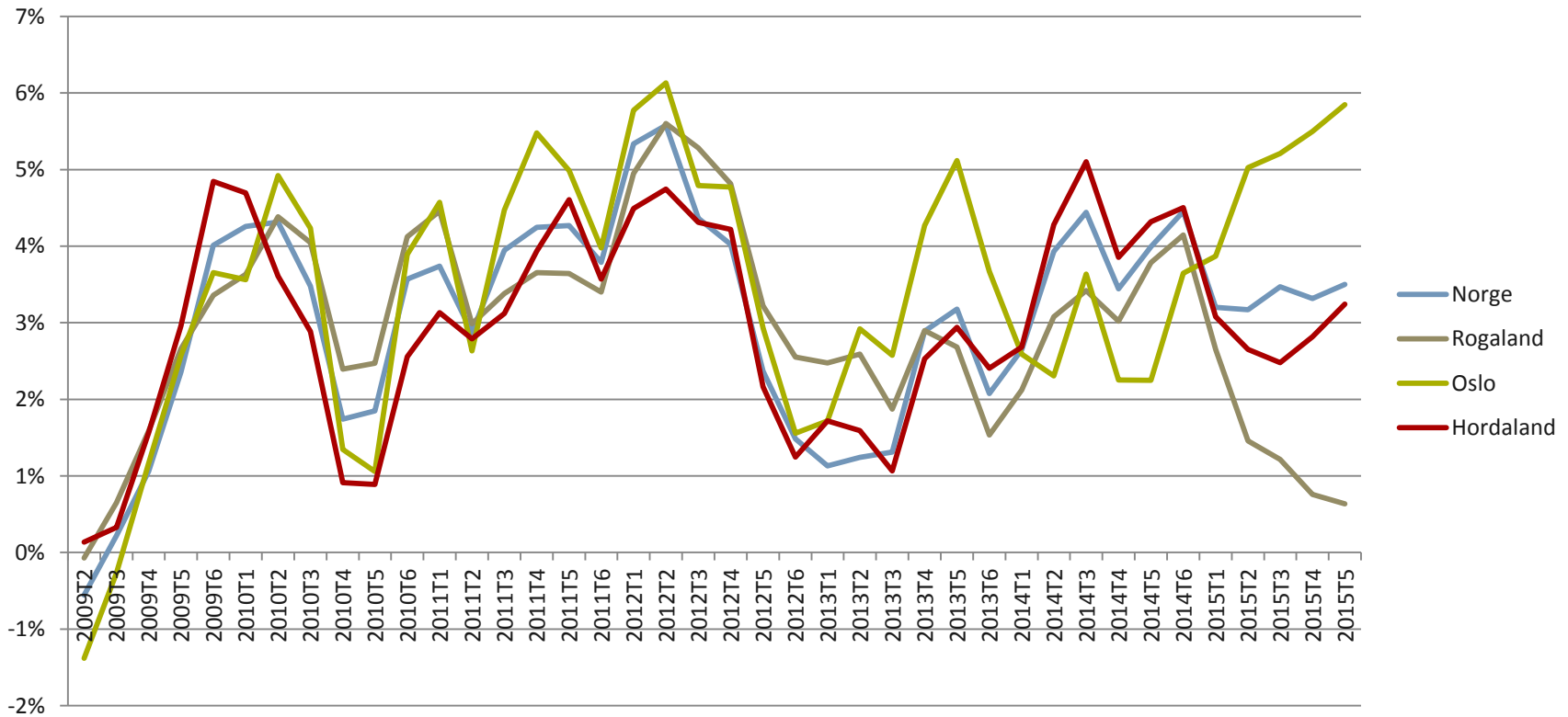
...on behalf of the country



Source: Nordea and Macrobond

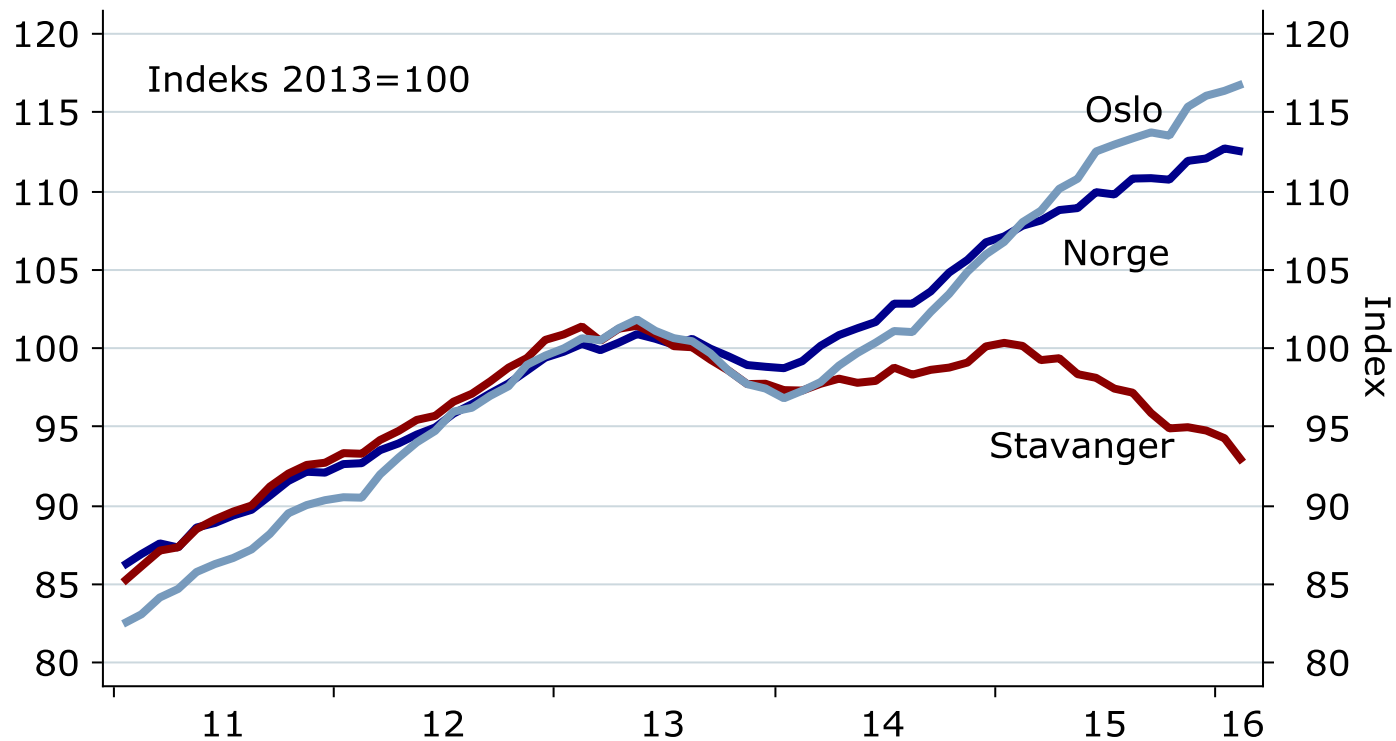
Has the fear spread?

Retail trade %growth (nominal)



Has the fear spread?

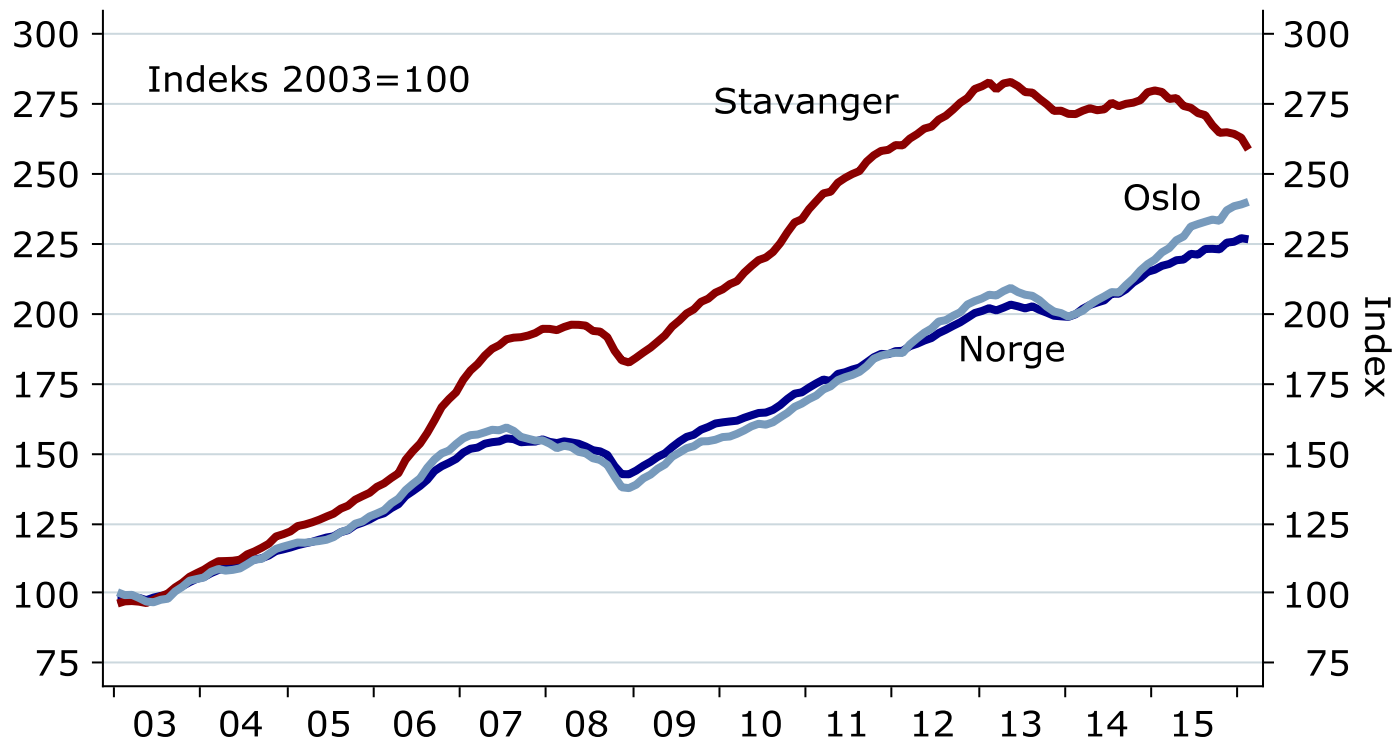
Boligpriser, sesongkorrigert indeks



Kilde: Nordea Markets and Macrobond

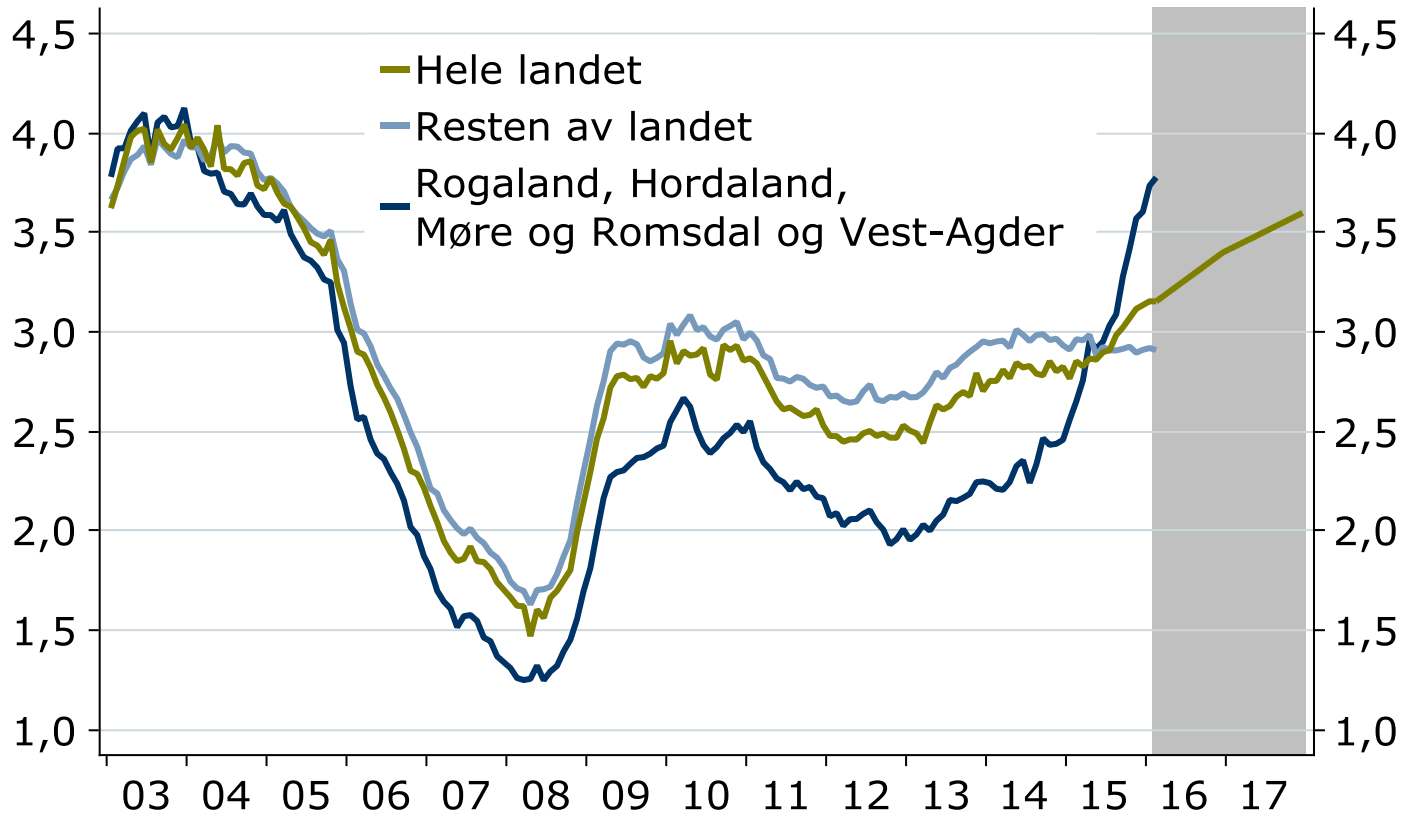
Has the fear spread?

Boligpriser, sesongkorrigert indeks



Kilde: Nordea Markets and Macrobond

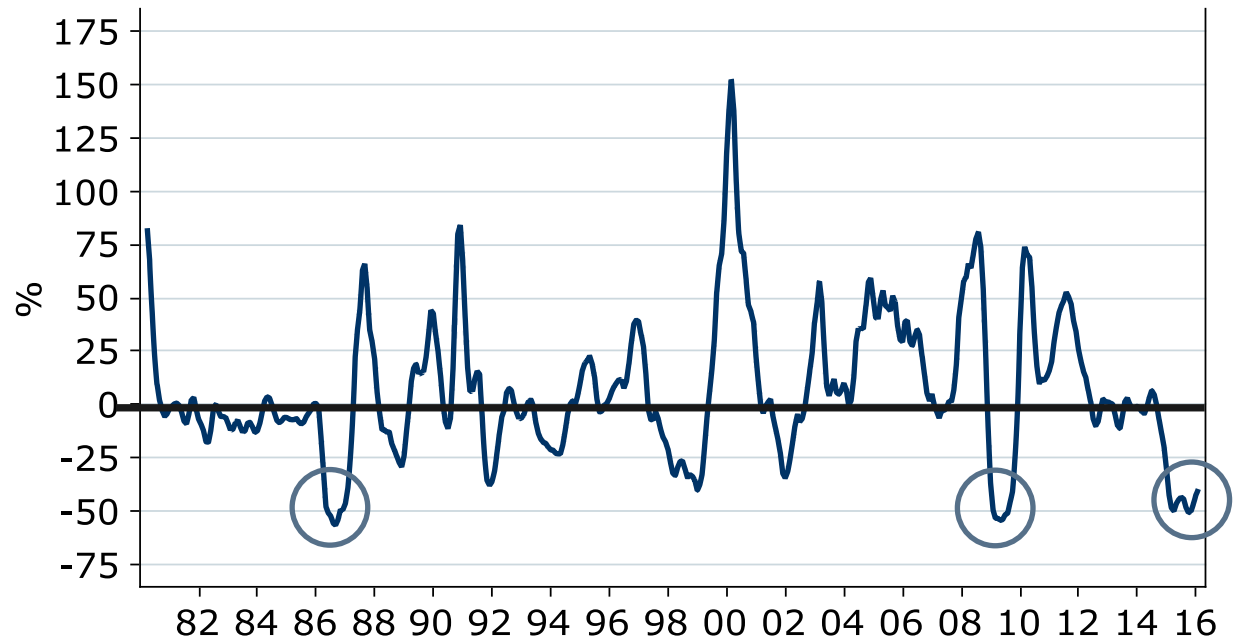
Weak outlook, but no crisis



Source: Nordea and Macrobond

30 years ago, all went wrong – what's the difference now?

Change in oil price y/y



Source: Nordea and Macrobond

Increase in unemployment:

Late 80's : 135 000 persons
(+ banking crisis)

2014-2017: ≈ 30 000 persons

Big policy-institutional differences

Now

- Inflation targeting
 - With a flexible exchange rate
- Inflation expectations anchored at low and stable inflation

Then

- Fixed exchange rate
- Inflation expectations (un)anchored at high and variable inflation

Big policy-institutional differences

Now

- Inflation targeting
 - With a flexible exchange rate
- Inflation expectations anchored at low and stable inflation
- Oil fund = 2 X GDP
 - Fiscal spending rule

Then

- Fixed exchange rate
- Inflation expectations (un)anchored at high and variable inflation
- No oil fund
 - Expenses followed income

Big policy-institutional differences

Now

- Δ Mortgage rate: $-1\frac{1}{2}$ % poeng
- Mortgage rate : 2-3 %
- Real interest rate: 0 %

Then (1986-87)

- Δ Mortgage rate: + 3 % poeng
- Mortgage rate : 17 %
- Real interest rate: 7-8 %

Big policy-institutional differences

Now

- Δ Mortgage rate: $-1\frac{1}{2}$ % poeng
 - Mortgage rate : 2-3 %
 - Real interest rate: 0 %
-
- Δ Relative wage costs: -25%

Then (1986-87)

- Δ Mortgage rate: + 3 % poeng
 - Mortgage rate : 17 %
 - Real interest rate: 7-8 %
-
- Δ Relative wage costs: 0%

Big policy-institutional differences

Now

- Δ Mortgage rate: $-1\frac{1}{2}$ % poeng
- Mortgage rate : 2-3 %
- Real interest rate: 0 %

- Δ Relative wage costs: -25%

- Fiscal policy impulse: $+ \frac{1}{2}$ - $\frac{3}{4}$ % of GDP

Then (1986-87)

- Δ Mortgage rate: $+ 3$ % poeng
- Mortgage rate : 17 %
- Real interest rate: 7-8 %

- Δ Relative wage costs: 0%

- Fiscal policy impulse: $- 1\frac{1}{2}$ -2% of GDP

Big policy-institutional differences

Now

- Δ Mortgage rate: $-1\frac{1}{2}$ % poeng
- Mortgage rate : 2-3 %
- Real interest rate: 0 %

- Δ Relative wage costs: -25%
- Fiscal policy impulse: $+ \frac{1}{2}$ - $\frac{3}{4}$ % of GDP
- Household saving ratio: $+6\%$

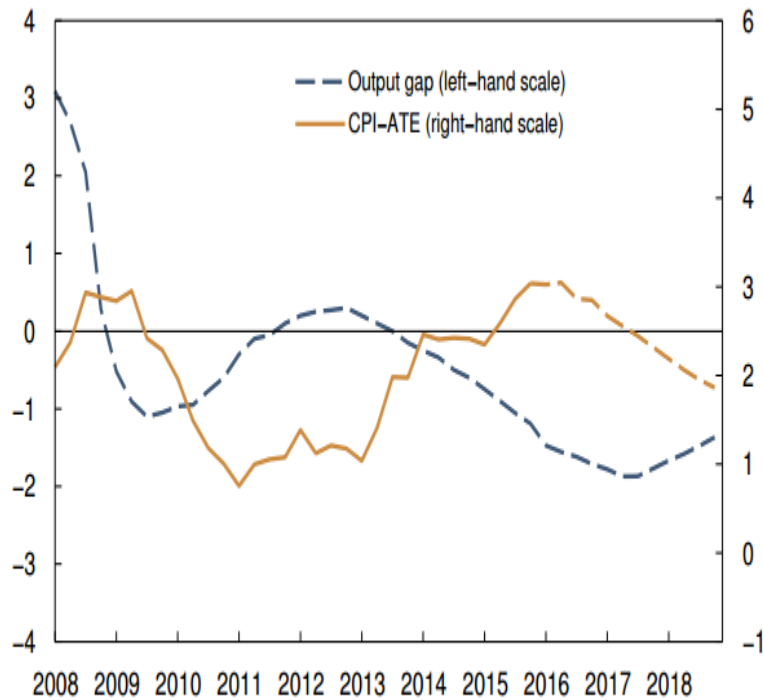
Then (1986-87)

- Δ Mortgage rate: $+ 3$ % poeng
- Mortgage rate : 17 %
- Real interest rate: 7-8 %

- Δ Relative wage costs: 0%
- Fiscal policy impulse: $- 1\frac{1}{2}$ -2% of GDP
- Household saving ratio: $- 5\%$

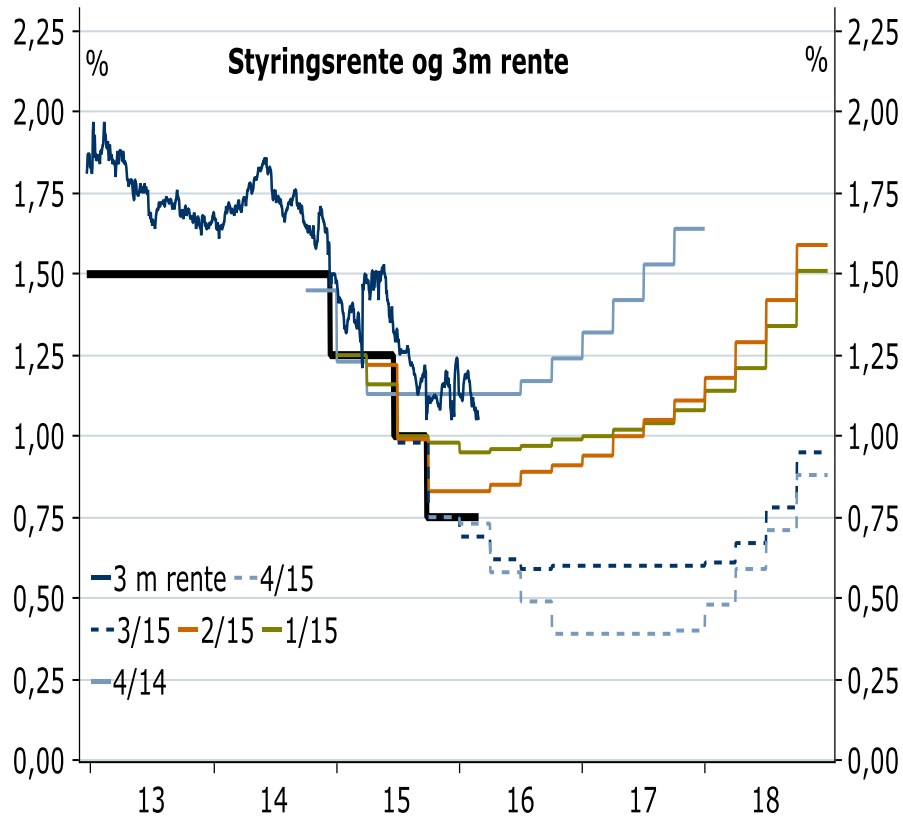
- What will Norges Bank do the week after next?

Chart 2.6 Inflation¹⁾ and output gap in the baseline scenario.
Percent. 2008 Q1 – 2018 Q4



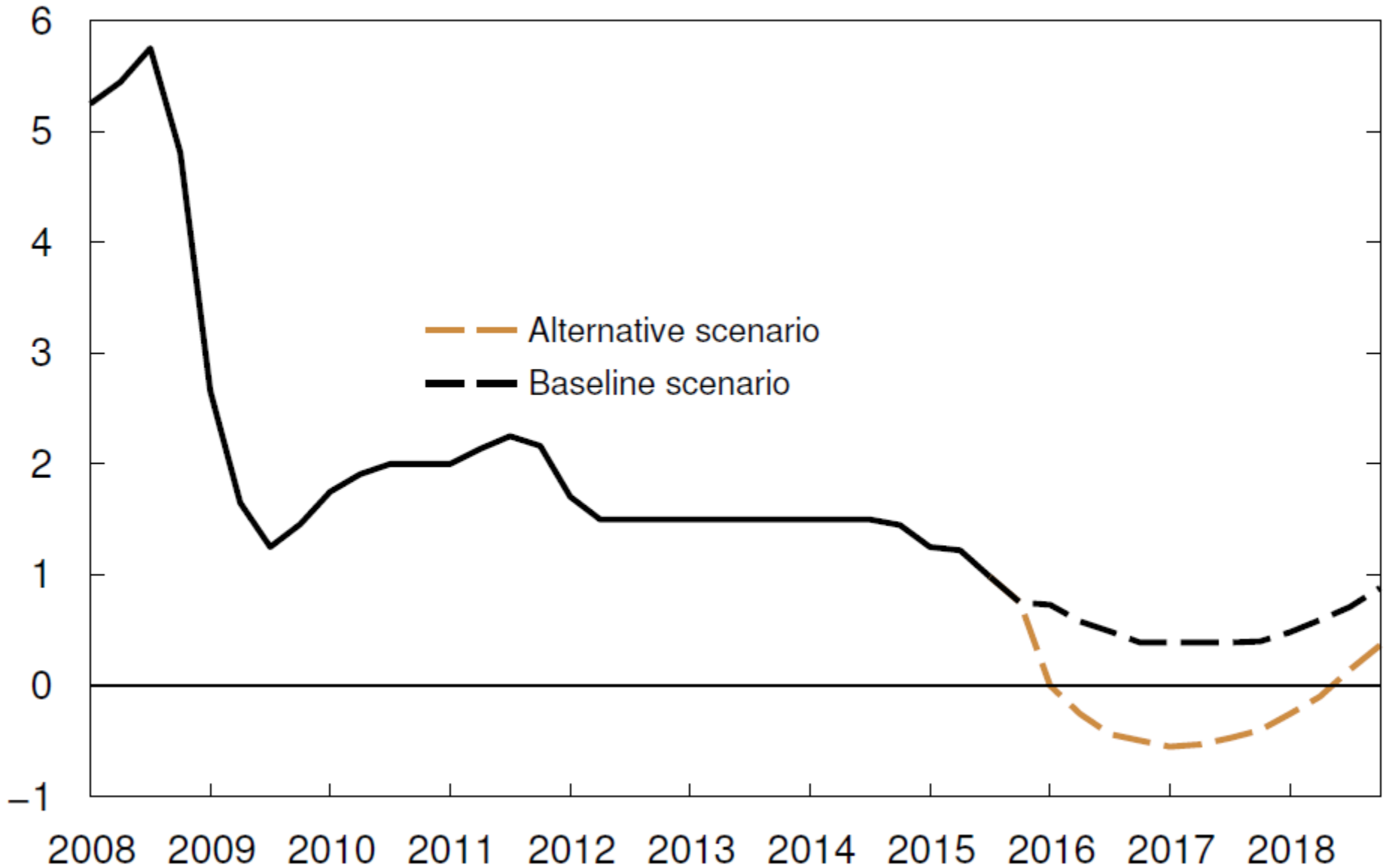
1) CPI adjusted for tax changes and excluding energy products. Projections for 2015 Q4 – 2018 Q4 (broken line).

Sources: Statistics Norway and Norges Bank



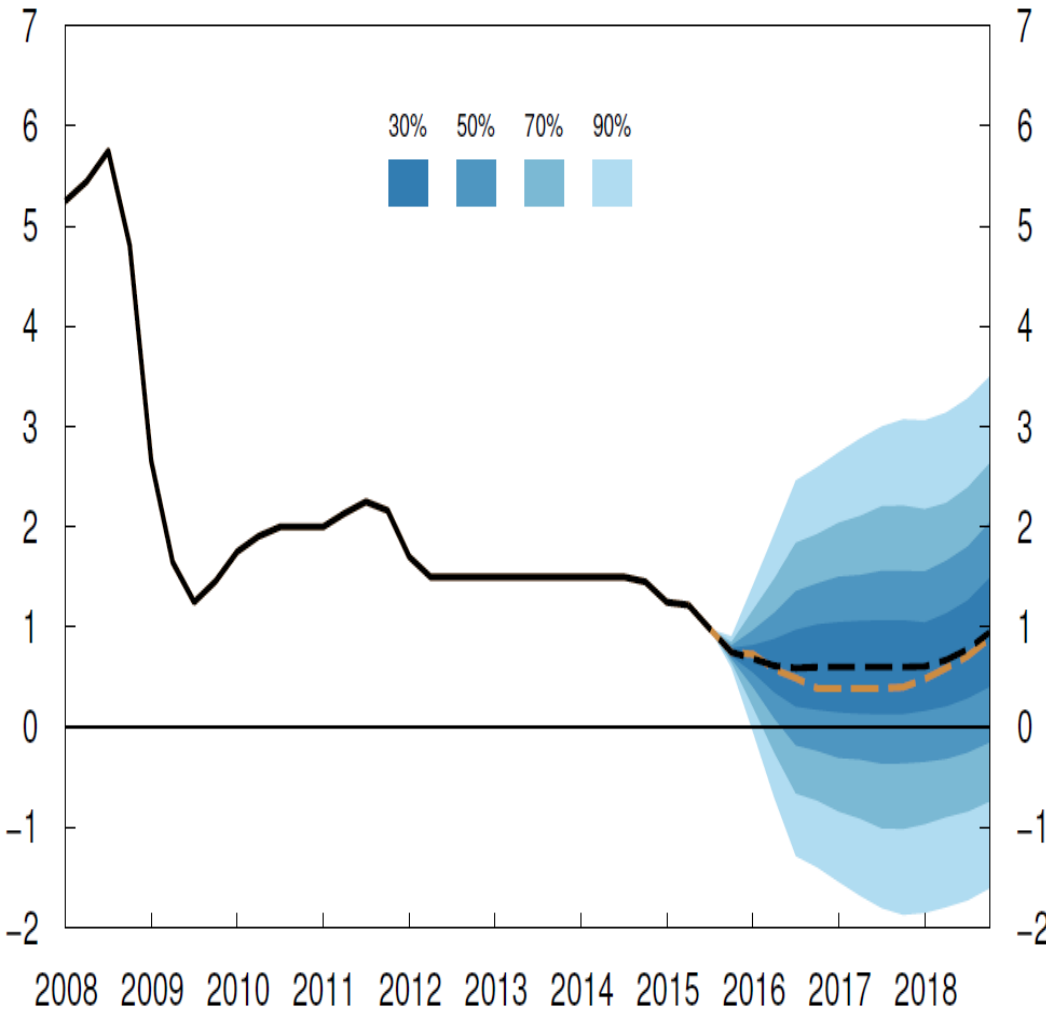
Source: Nordea Markets and Macrobond

Chart 2.21a Key policy rate. Percent. 2008 Q1 – 2018 Q4



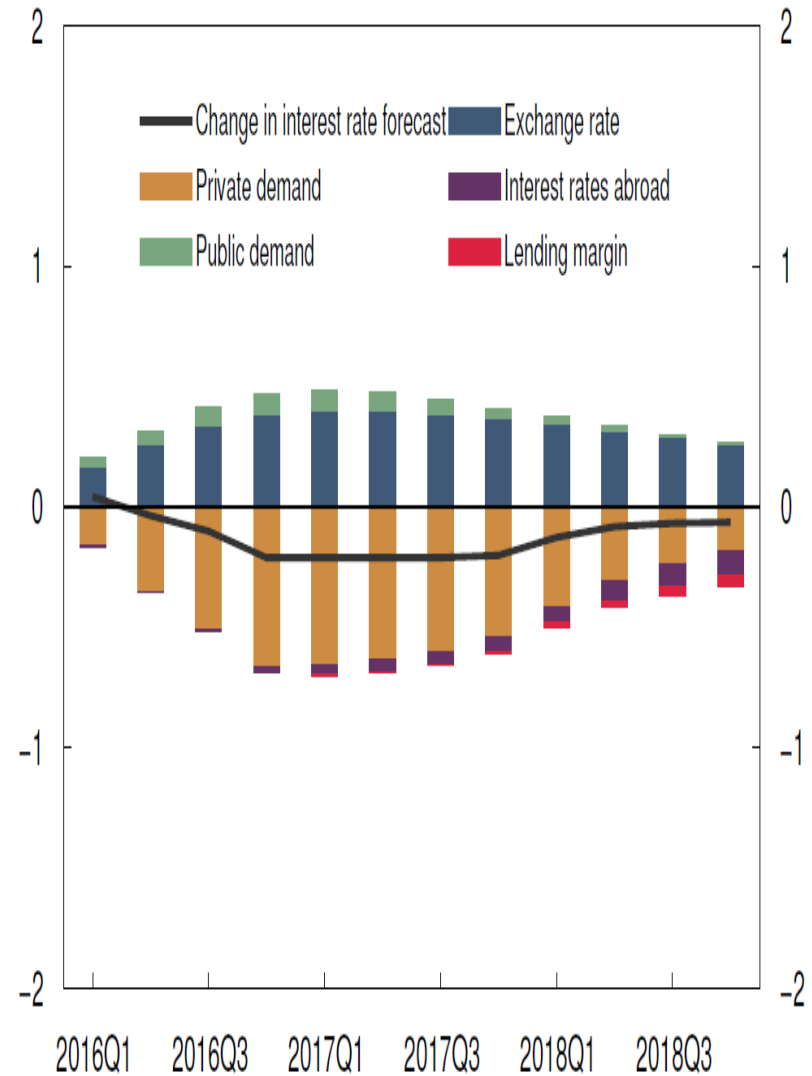
Source: Norges Bank

Chart 2.22 Key policy rate in the baseline scenario with fan chart in MPR 3/15 and key policy rate in the baseline scenario in MPR 4/15 (orange line). Percent. 2008 Q1 – 2018 Q4



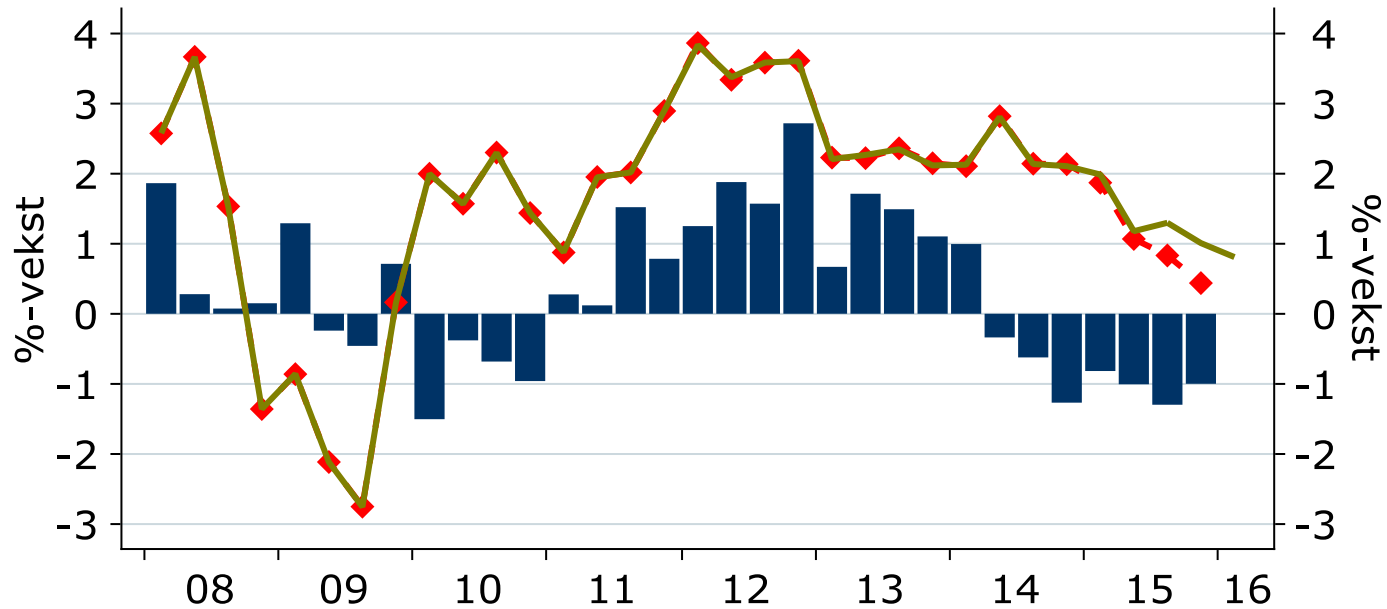
Source: Norges Bank

Chart 2.23 Factors behind changes in the interest rate forecast since MPR 3/15. Cumulative contribution. Percentage points. 2016 Q1 – 2018 Q4



Source: Norges Bank

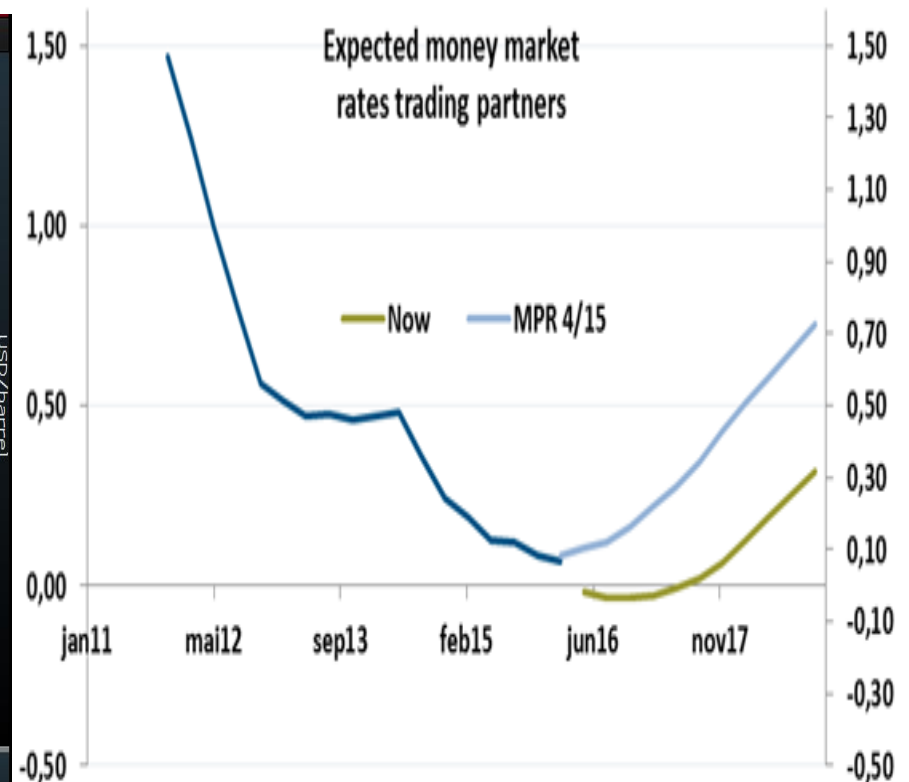
Somewhat lower growth



- Norway, GDP Mainland, Central Bank of Norway, Estimate, Co...
- ◆ BNP FN
- Bidrag oljeinvesteringer

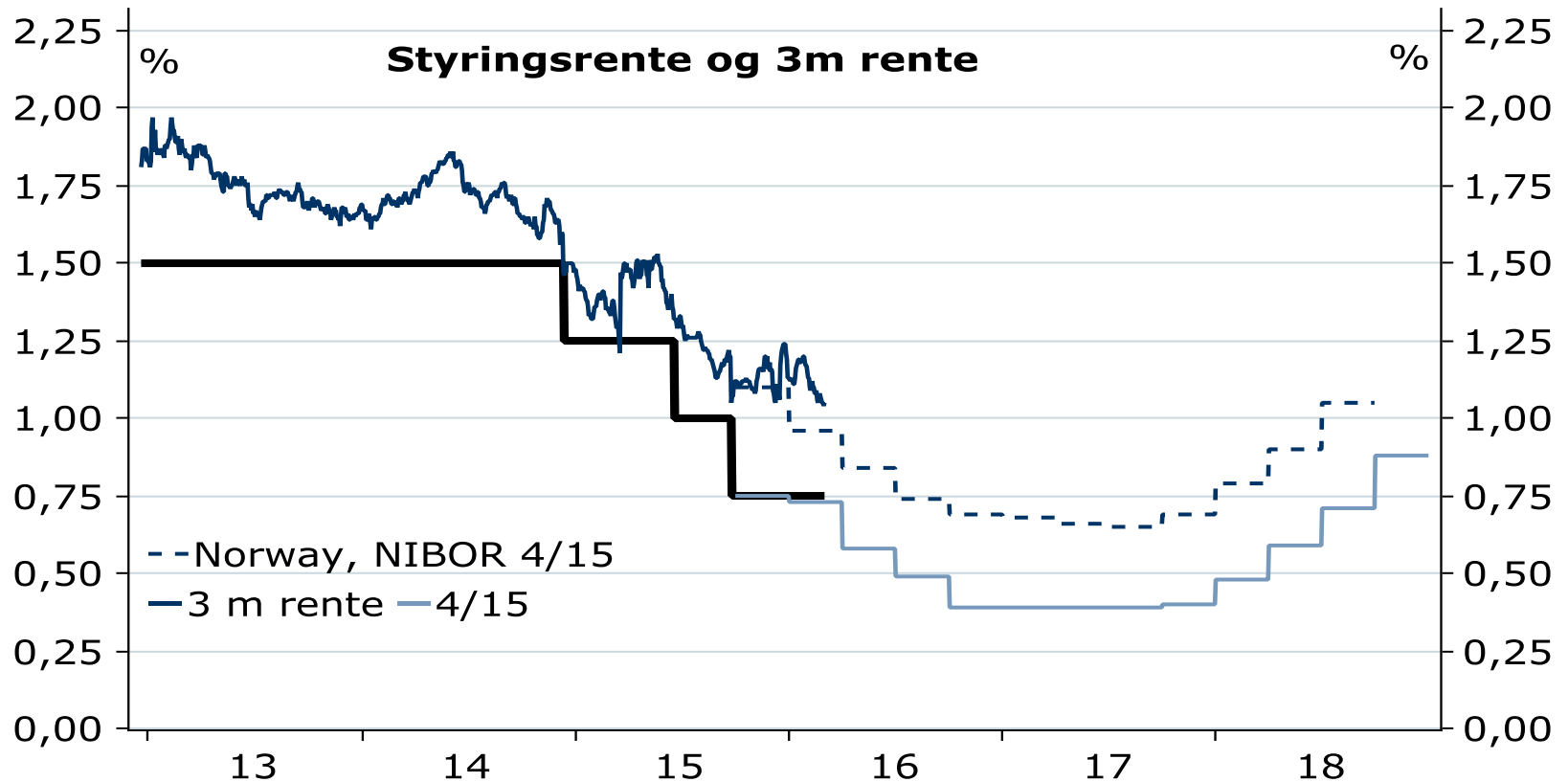
Source: Nordea and Macrobond

Lower oil price and rates abroad



Source: Nordea Markets and Bloomberg

Money market premiums higher

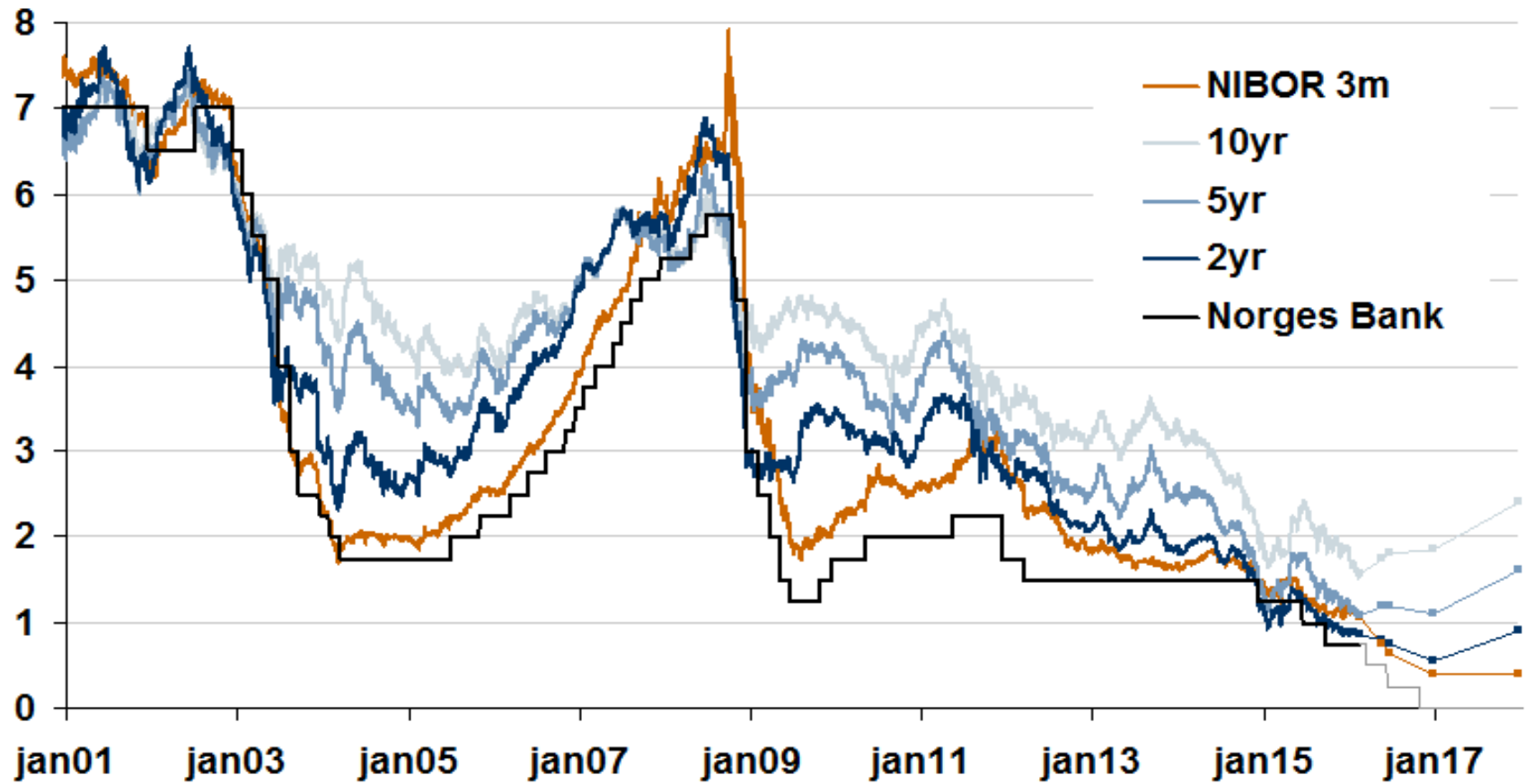


Source: Nordea Markets and Macrobond

Interest rate account

• Inflation now	0
• Wage growth	-
• Norwegian economy now	-
• NOK	0
• Oil price	-
• Interest rates abroad	-
• Money market premiums	-
• SUM	-

Nordea forecasts



Summing up

- **Status norwegian economy:**
 - Oil sector scales down and unemployment increases
 - Two speed economy

- **3 shock-absorbers:**
 - Historic low interest rate
 - Historic weak NOK
 - Public spending

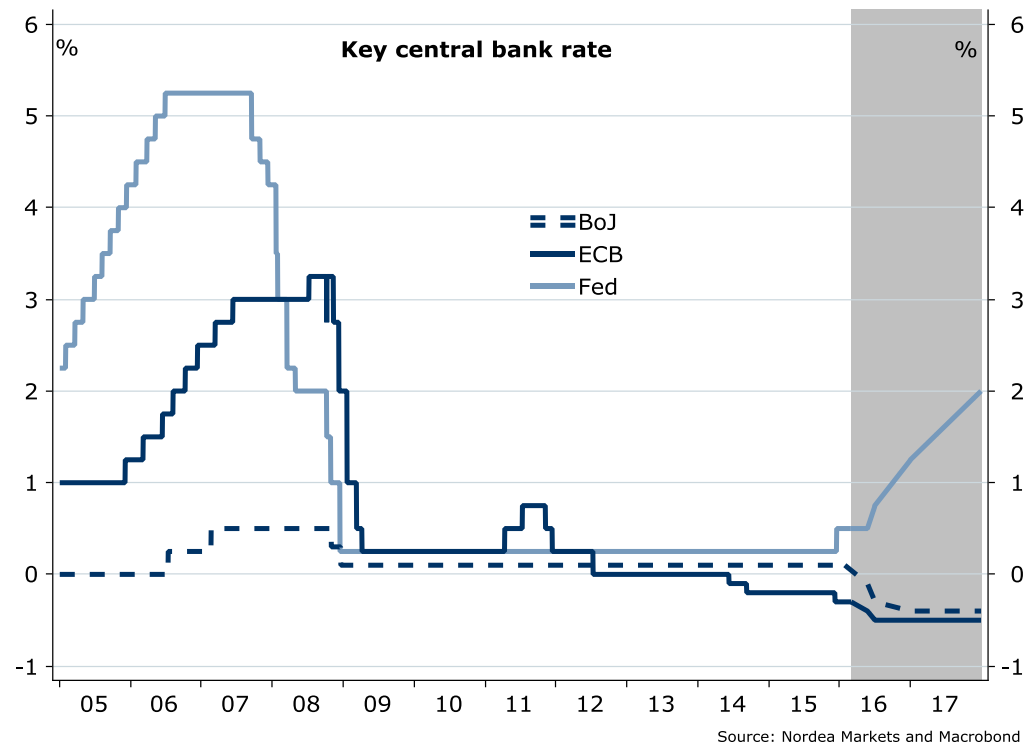
- **30 years ago we DID NOT HAVE ORDER IN OUR OWN HOUSE!**

- **Outlook:**
 - Norges Bank key rate will reach 0
 - Unemployment will increase by another ½ percentage point.
 - No national crisis

Monetary policy divergence, negative rates, QE and market turmoil

Theme: Policy divergence

- US Federal Reserve (Fed) increased rates in December, ending a 7-year period of close to 0 rate
- Fed's main scenario is for further, gradual increases.
- European Central Bank (ECB) and Bank of Japan (BoJ) are planning to go further into negative territory (as is Sweden. Denmark and Switzerland also has negative rates)



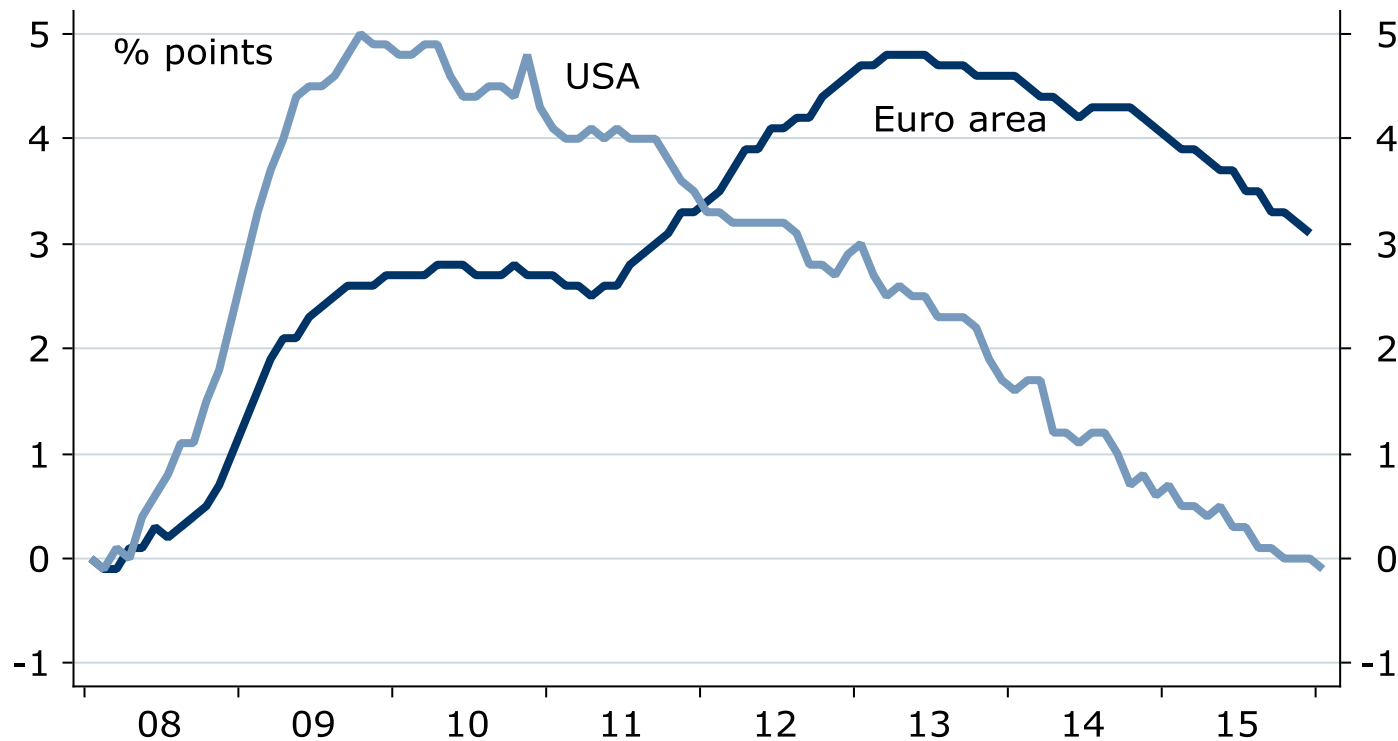
USD per EUR



Kilde: Nordea Markets and Macrobond

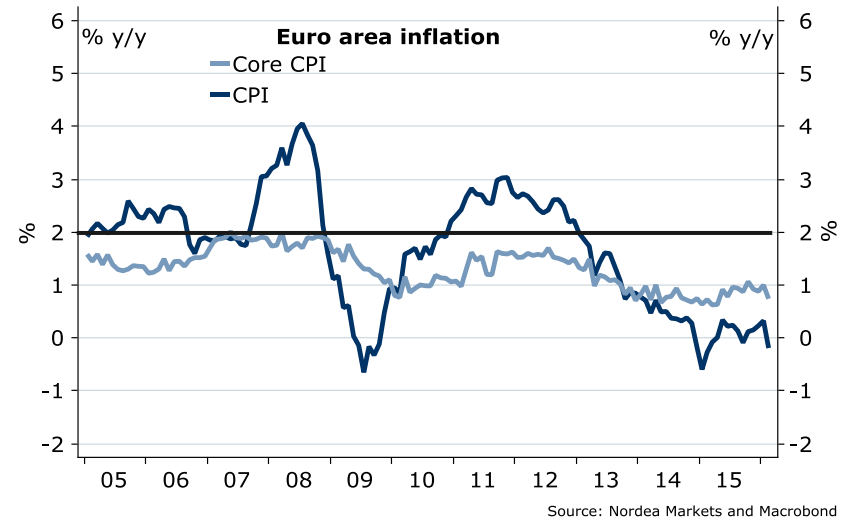
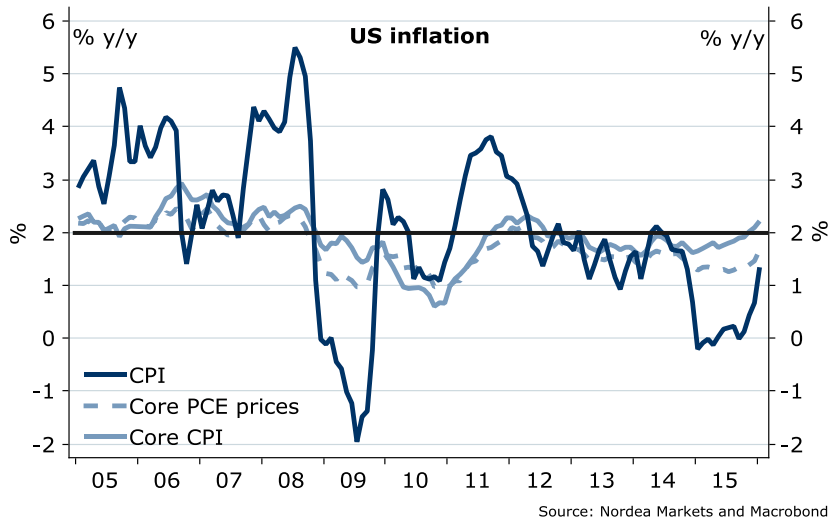
US back to start, Euro area still has a way to go

Change in unemployment

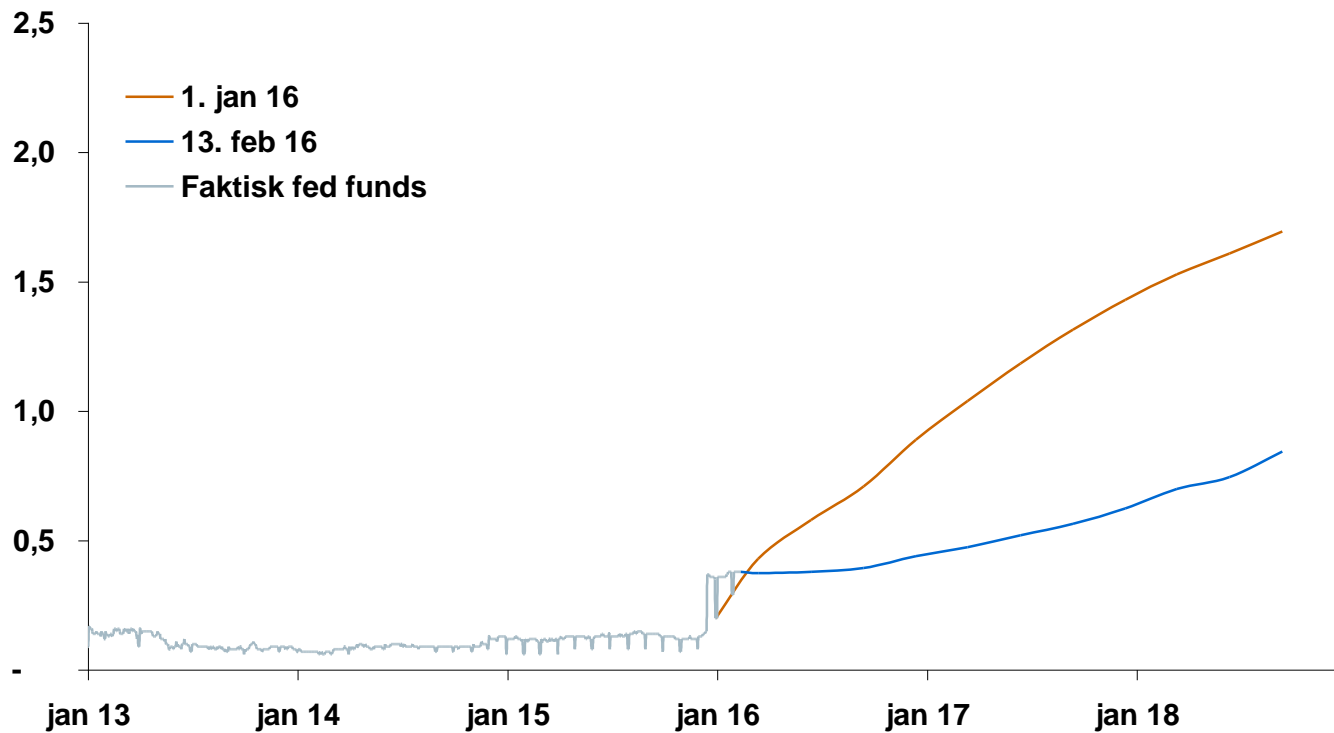


Source: Nordea Markets and Macrobond

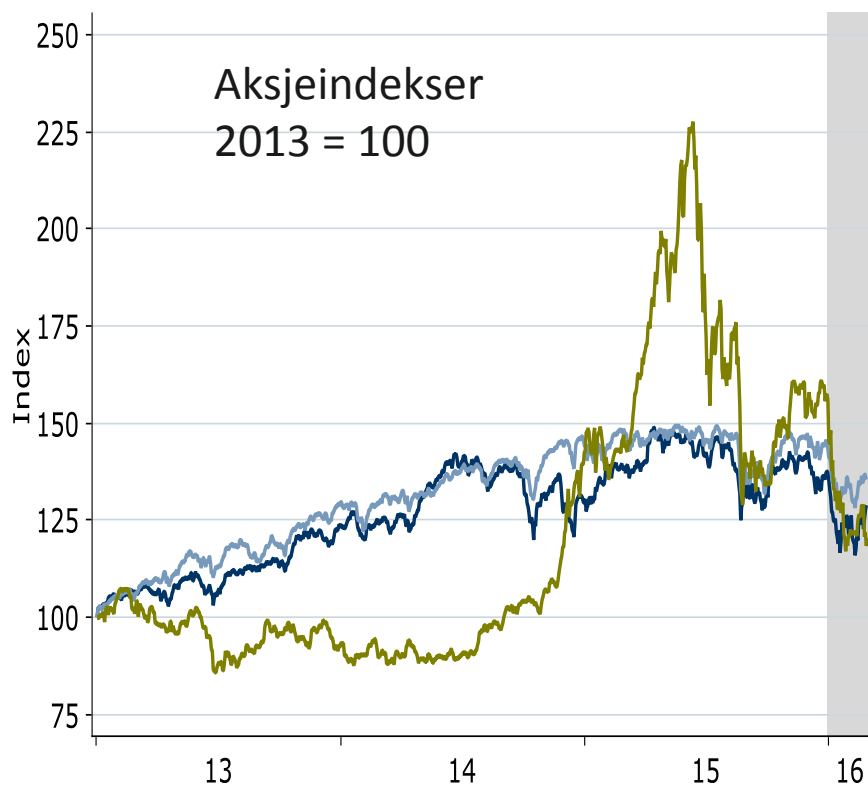
US inflation on the rise, Euro area inflation to low



Market disagrees with Fed

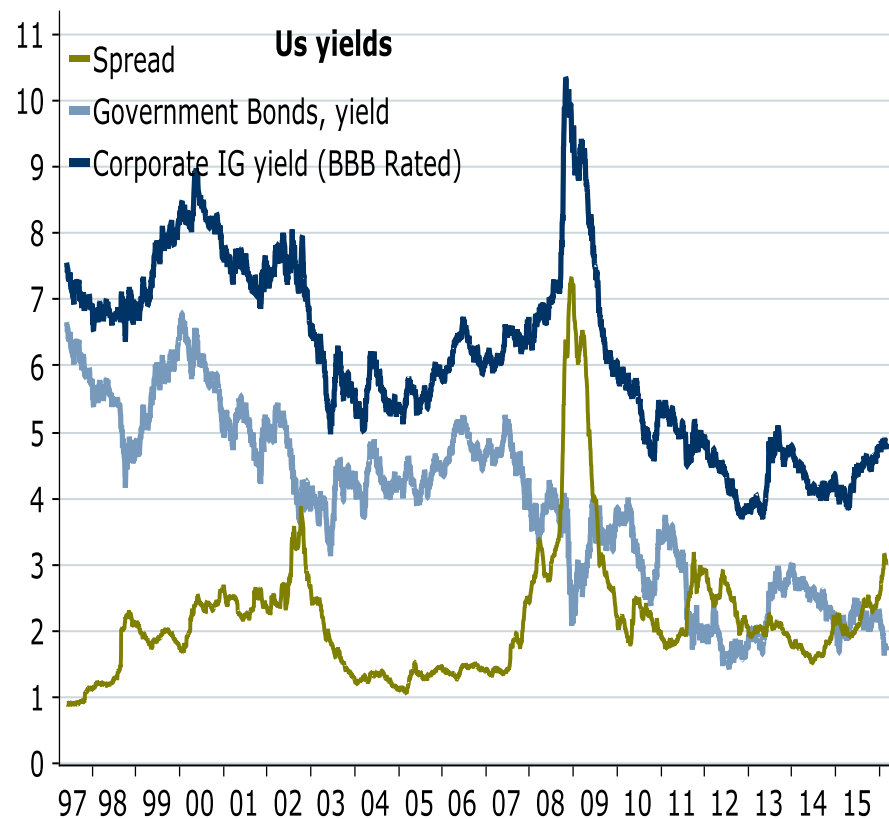


Market turmoil



- China, Shanghai Stock Exchange, Composite Index
- United States, Equity Indices, S&P, 500
- Norway, Oslo Stock Exchange, Benchmark Index (OSEBX)

Source: Nordea and Macrobond



Kilde: Nordea Markets and Macrobond

Bond yield

Bond:

- Sells at: 100\$
- Interest rate (coupon): 5%

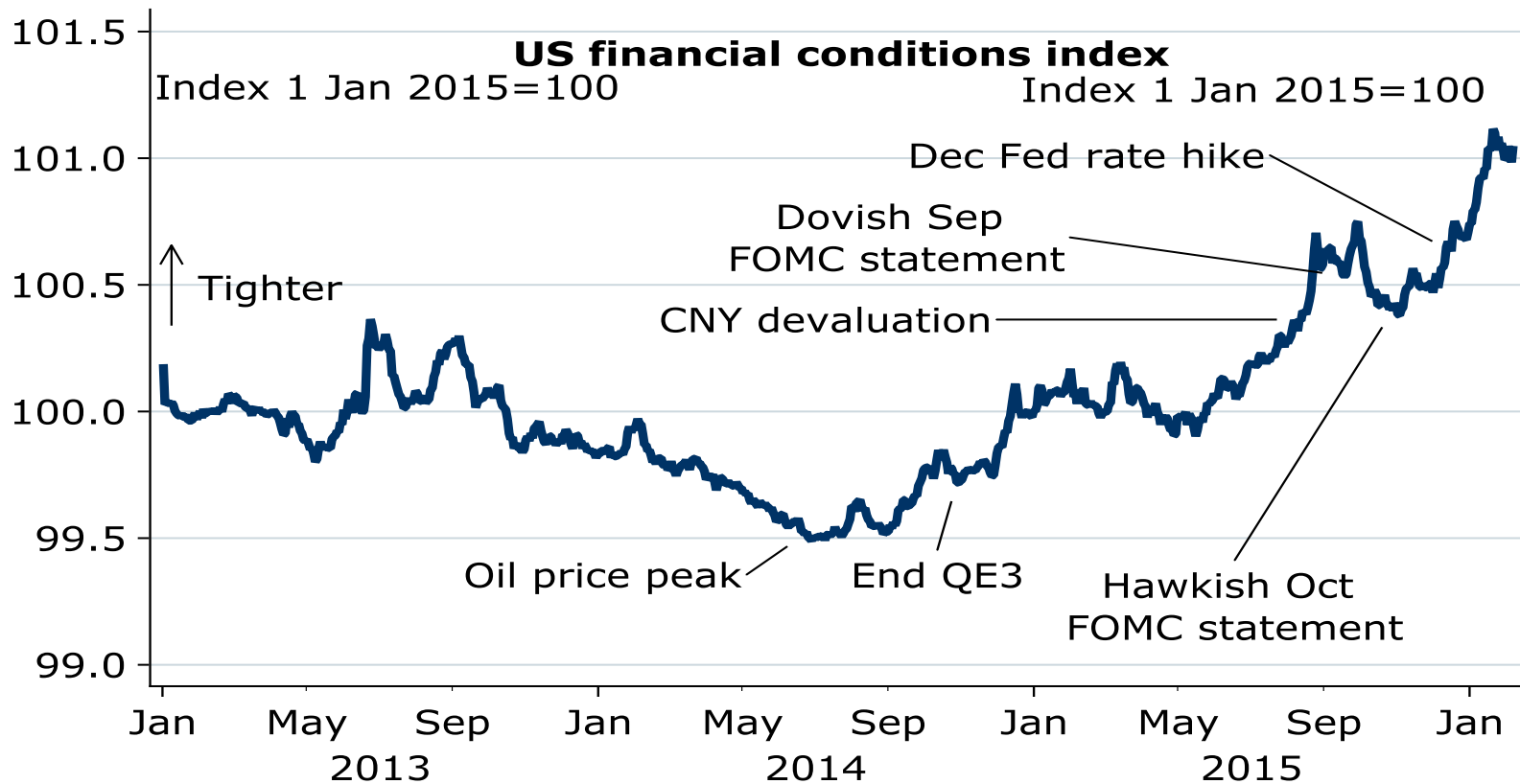
Yield:

- Interest: 5\$
- Yields: $5\$/100\$ = 5\%$

Lets suppose:

- Price falls to 80\$ in the market
- Interest: 5\$
- Yields: $5\$/80\$ = 6,25\%$

Tighter financial conditions



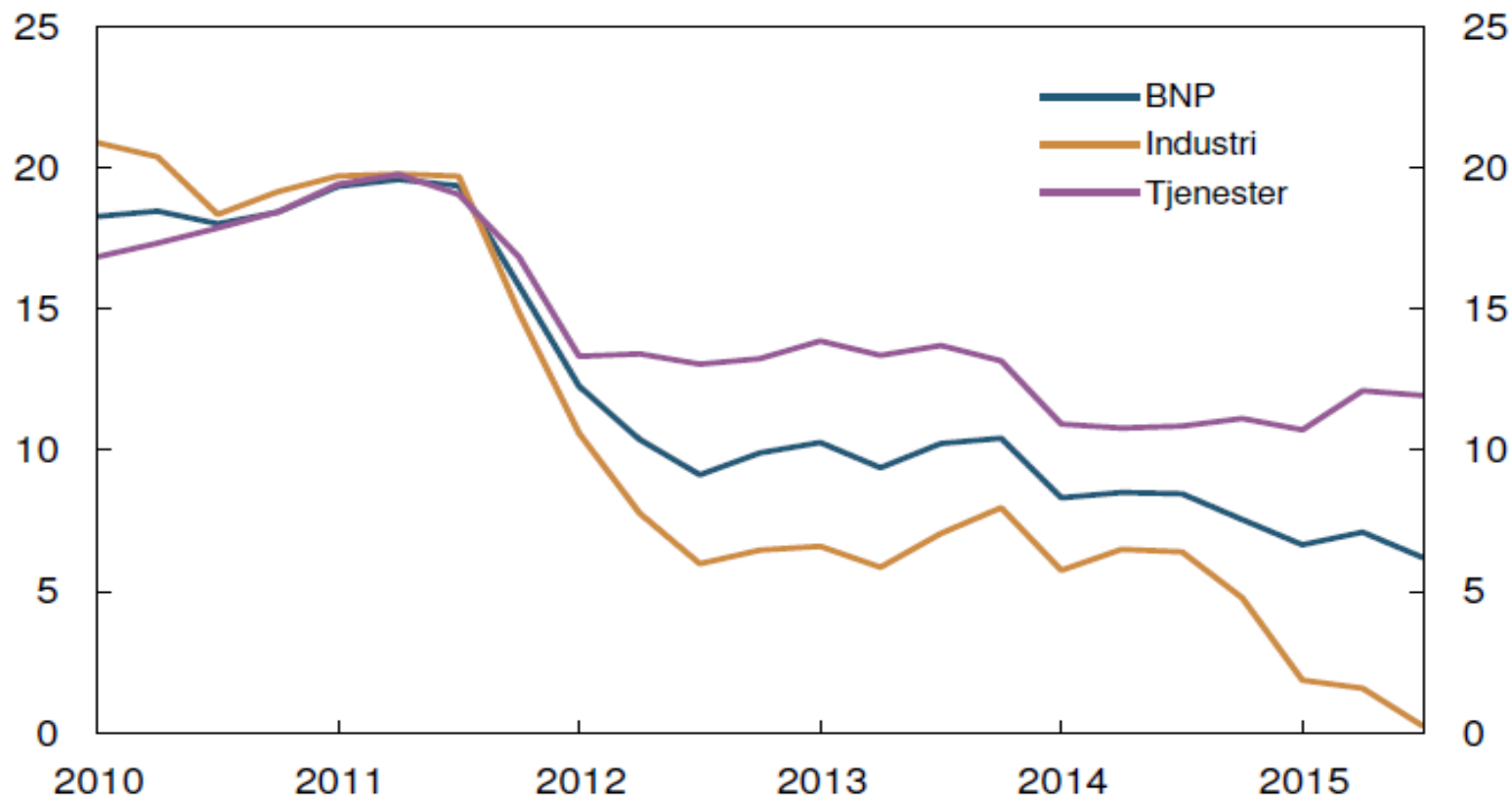
Source: Nordea Markets and Macrobond

Possible reasons for market turmoil

- Uncertainty about China
- Low oil prices
- Bank profitability (low oil price, negative rates)
- Recession fears in US

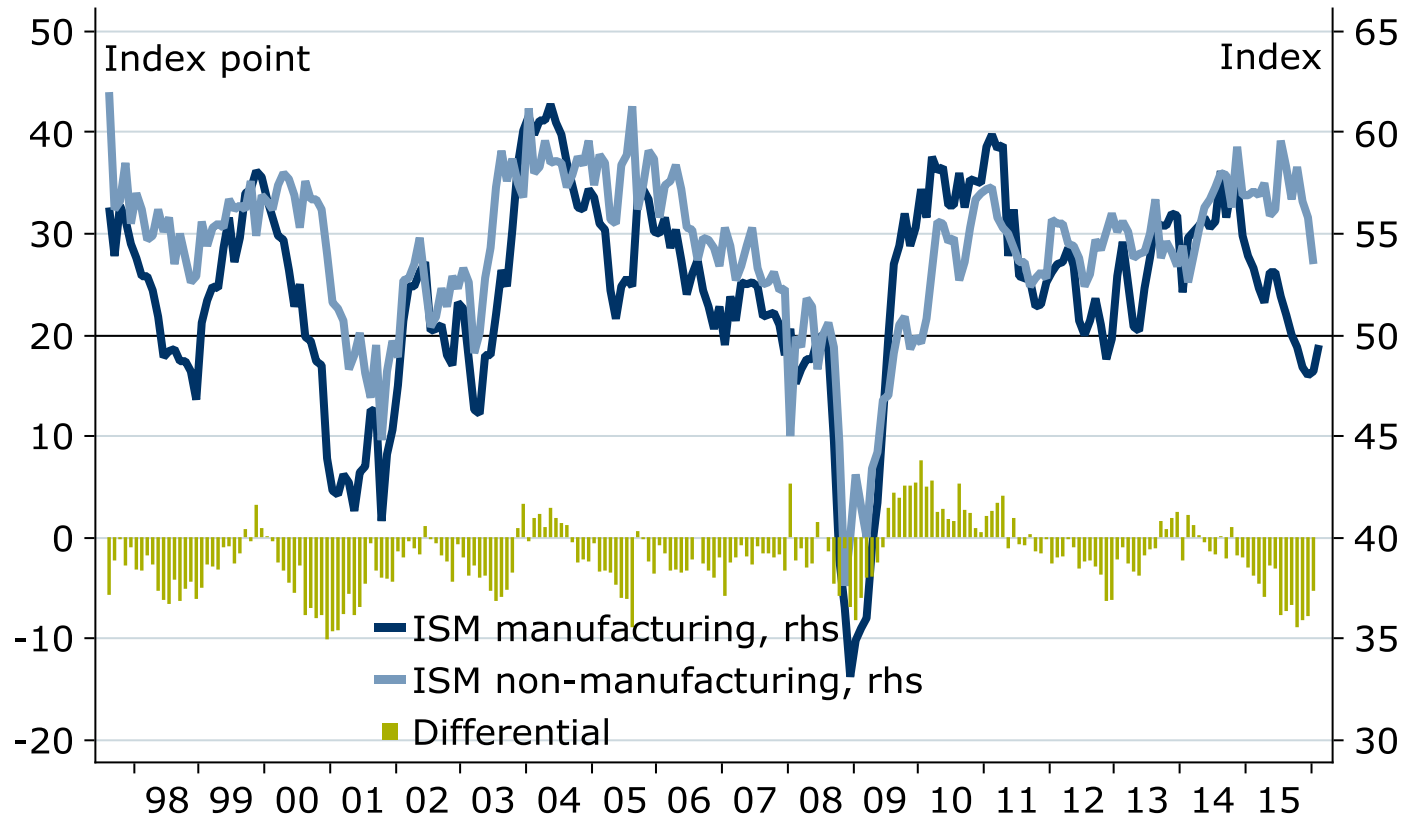
Lower growth in China: Towards a more mature economy

Figur 1.6 BNP i Kina fordelt på næring.
Firekvarterersvekst. Prosent. 1. kv. 2010 – 3. kv. 2015



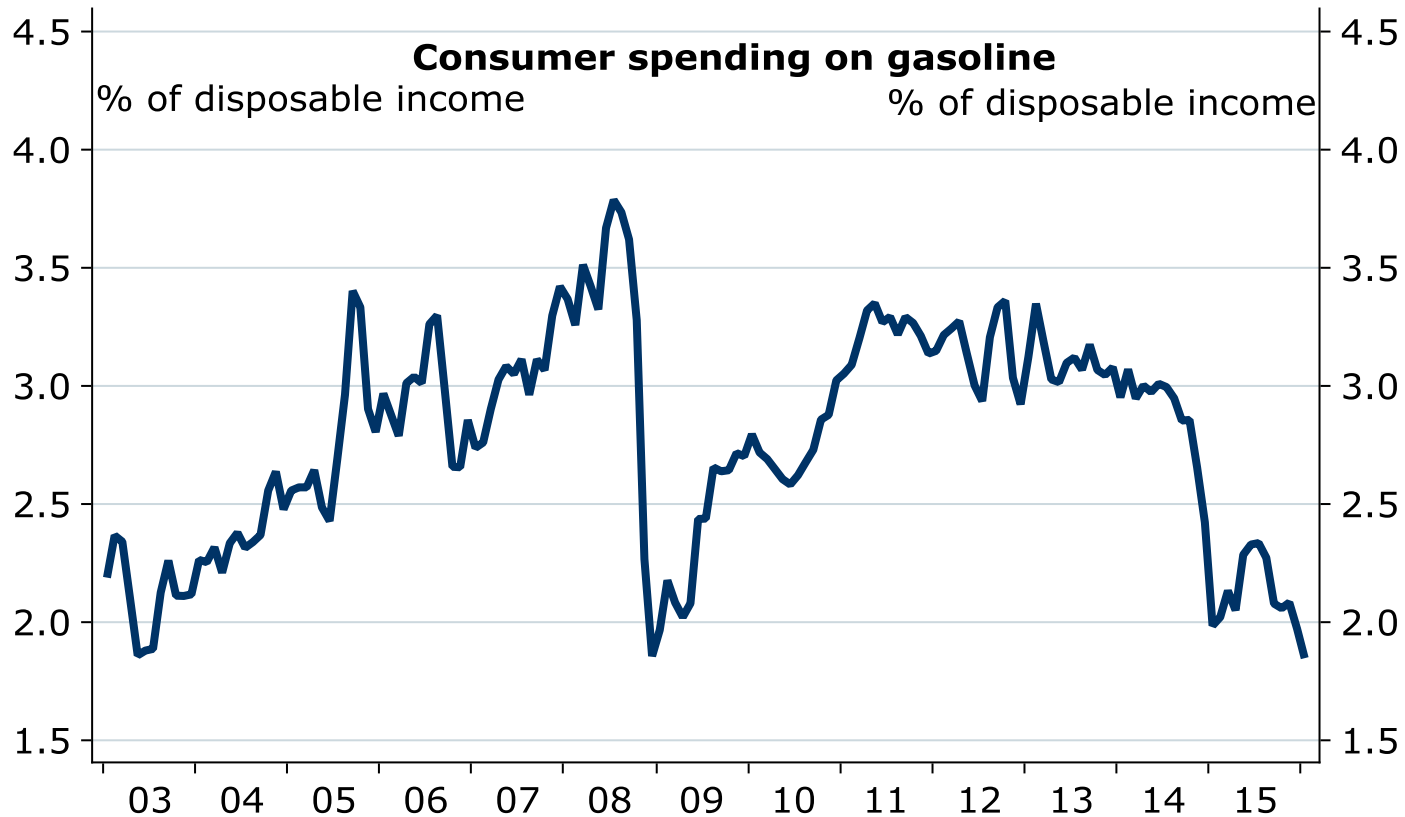
Kilder: CEIC og Norges Bank

US: Weak manufacturing, but service sector is doing ok



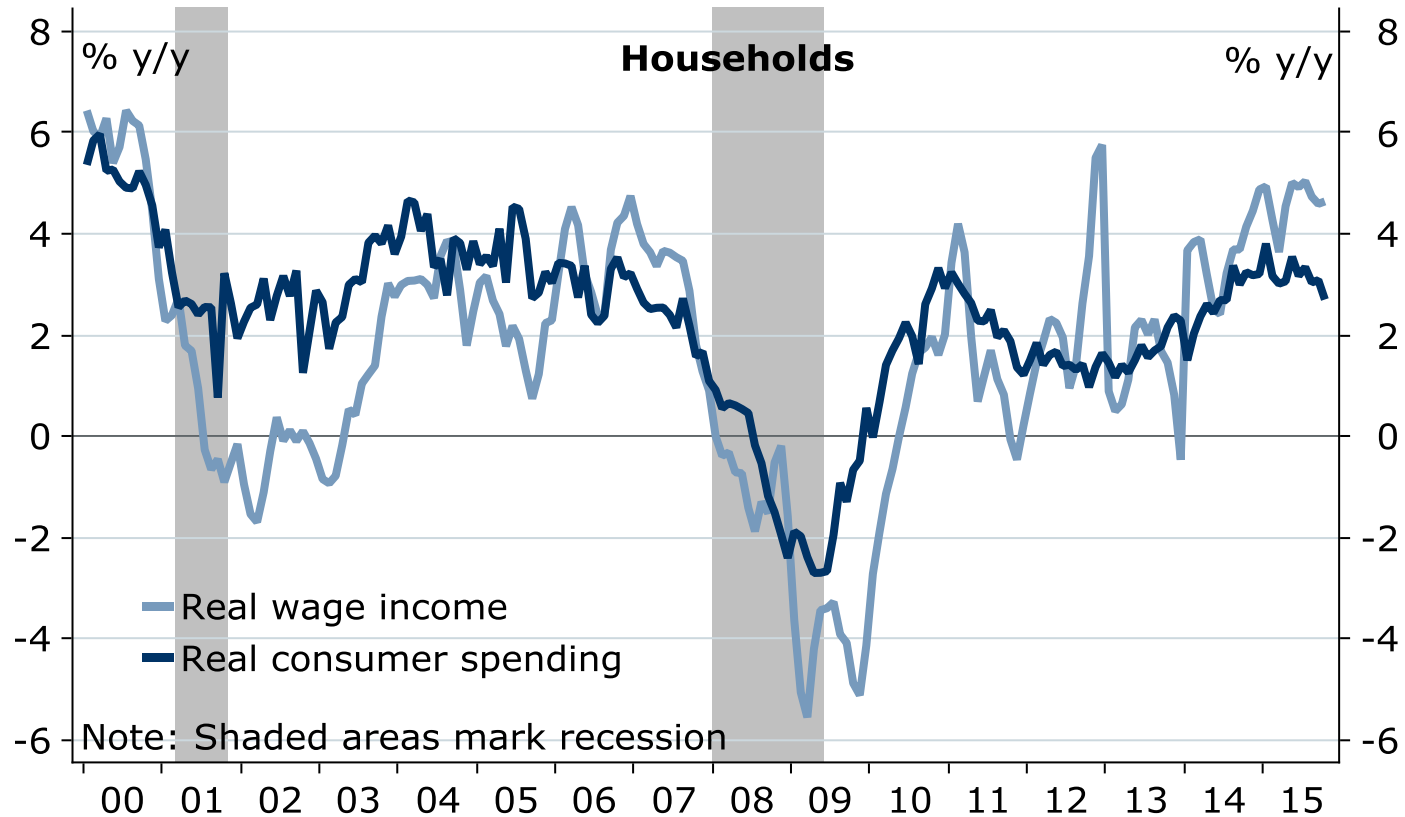
Source: Nordea Markets and Macrobond

Lower gasolin prices: 1 % of disposable income



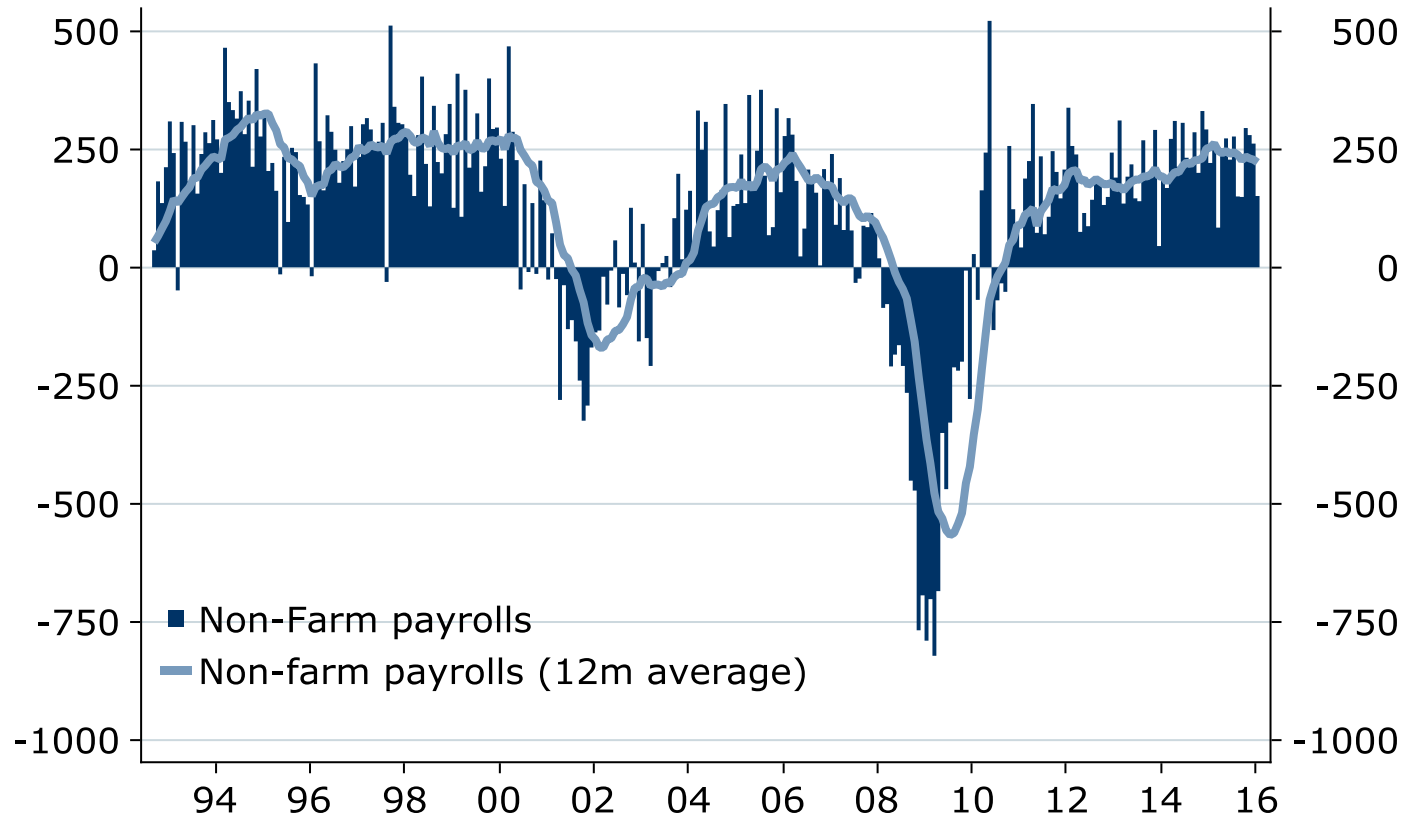
Source: Nordea Markets and Macrobond

Strong growth in private consumption



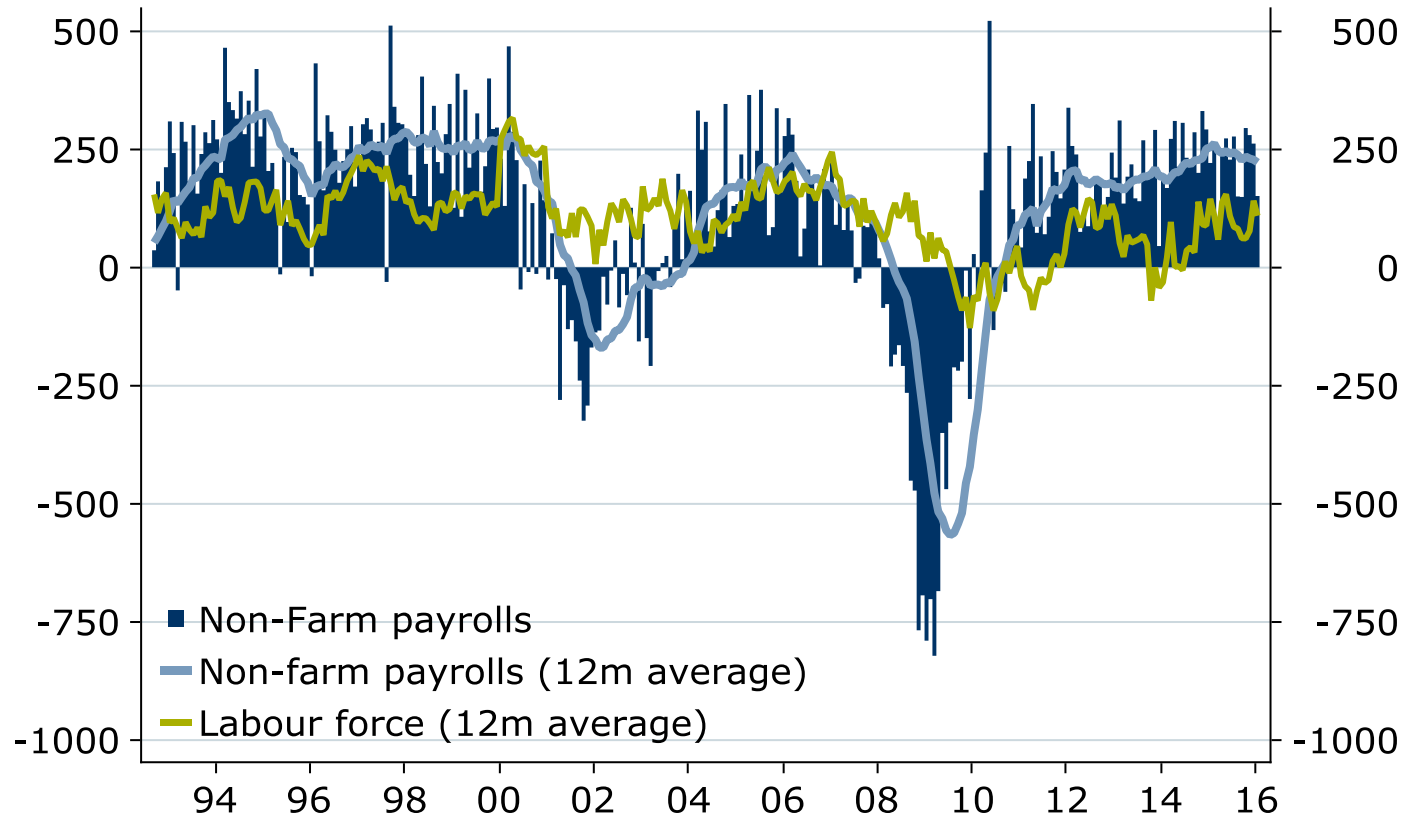
Source: Nordea Markets and Macrobond

Fastest job growth since the 90's



Kilde: Nordea Markets and Macrobond

Fastest job growth since the 90's



Kilde: Nordea Markets and Macrobond

Possible reasons for market turmoil

- Uncertainty about China
- Low oil prices
- Bank profitability (low oil price, negative rates)
- Recession fears in US

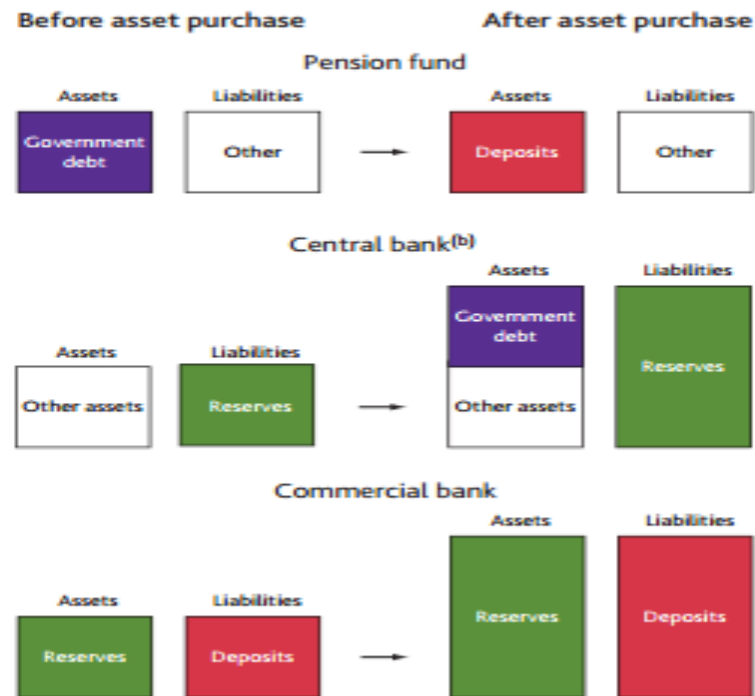
- Are we missing something?

The end of US goodies – are the markets ready for this?

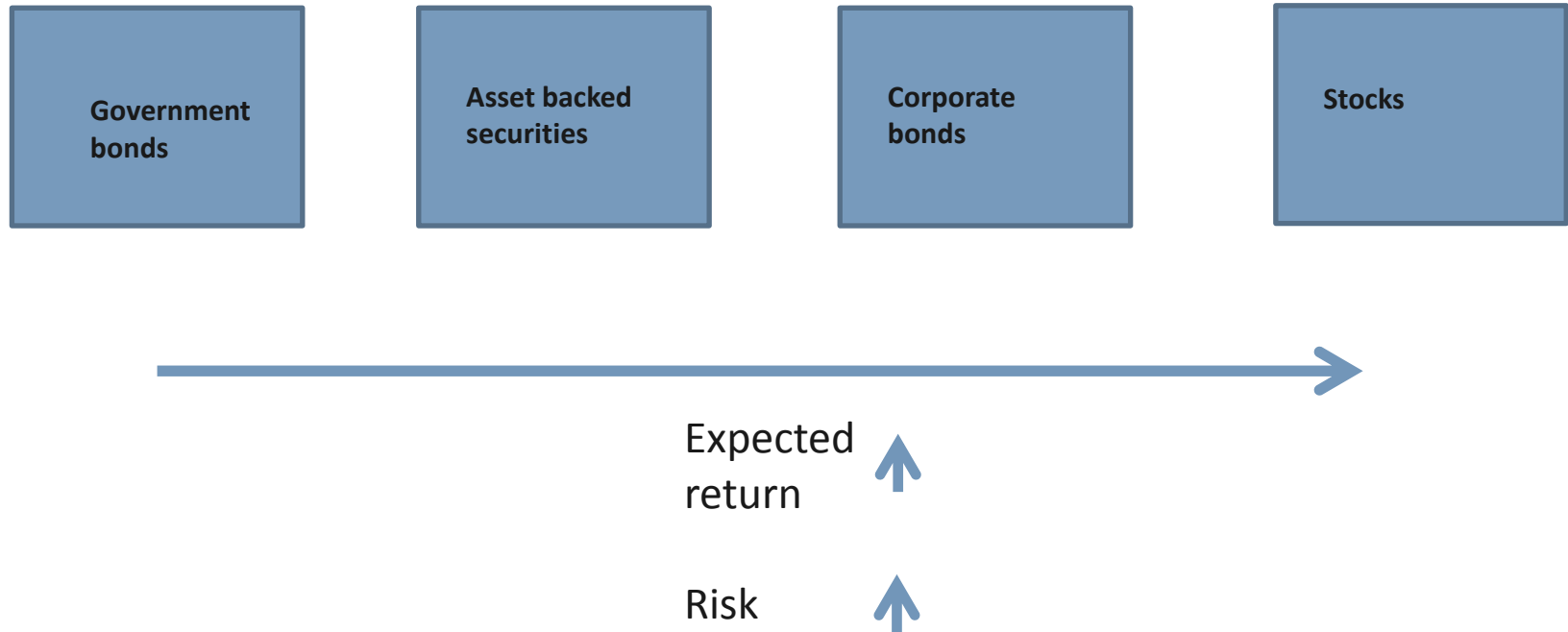


QE: How does it work

Figure 3 Impact of QE on balance sheets^(a)

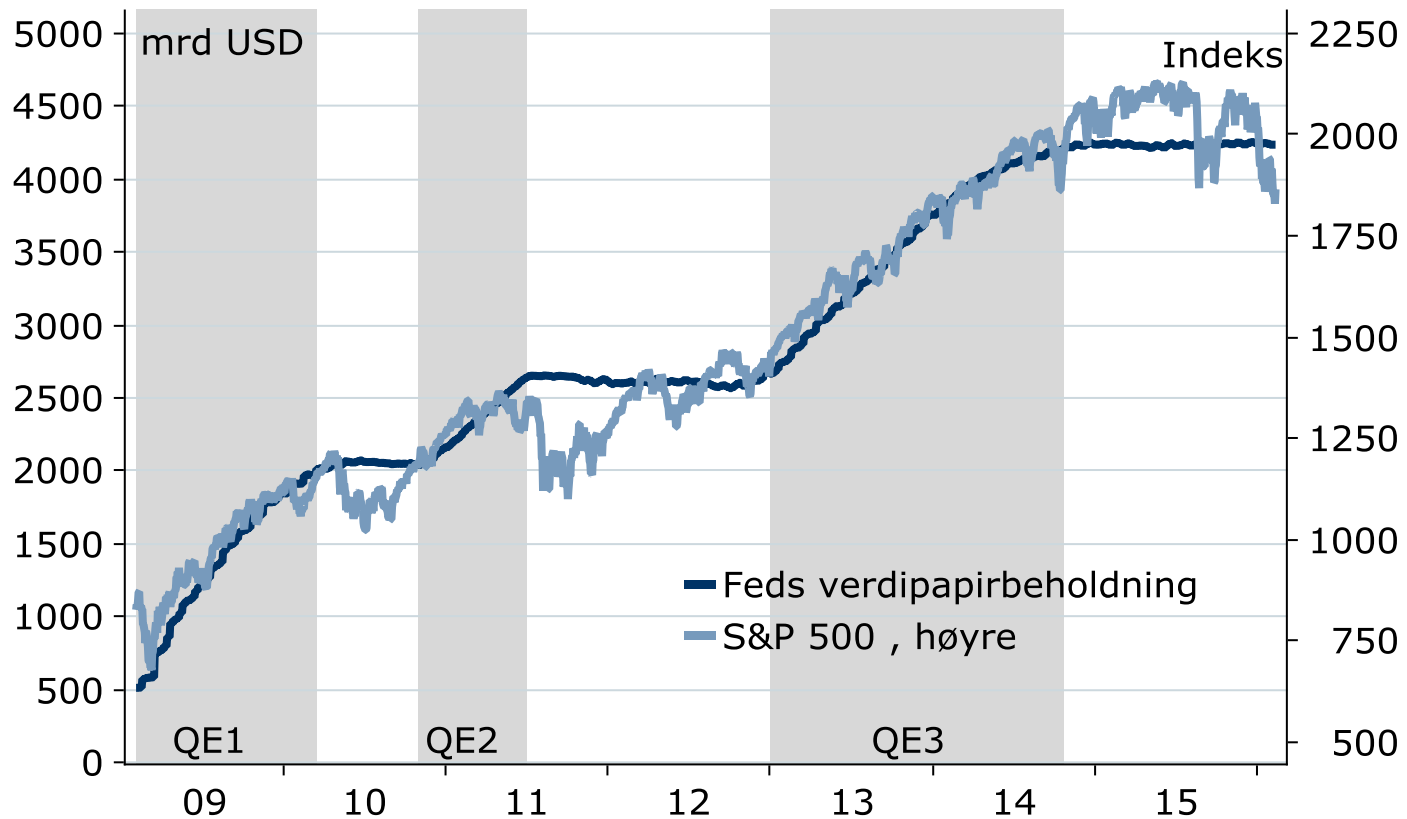


QE: How does it work



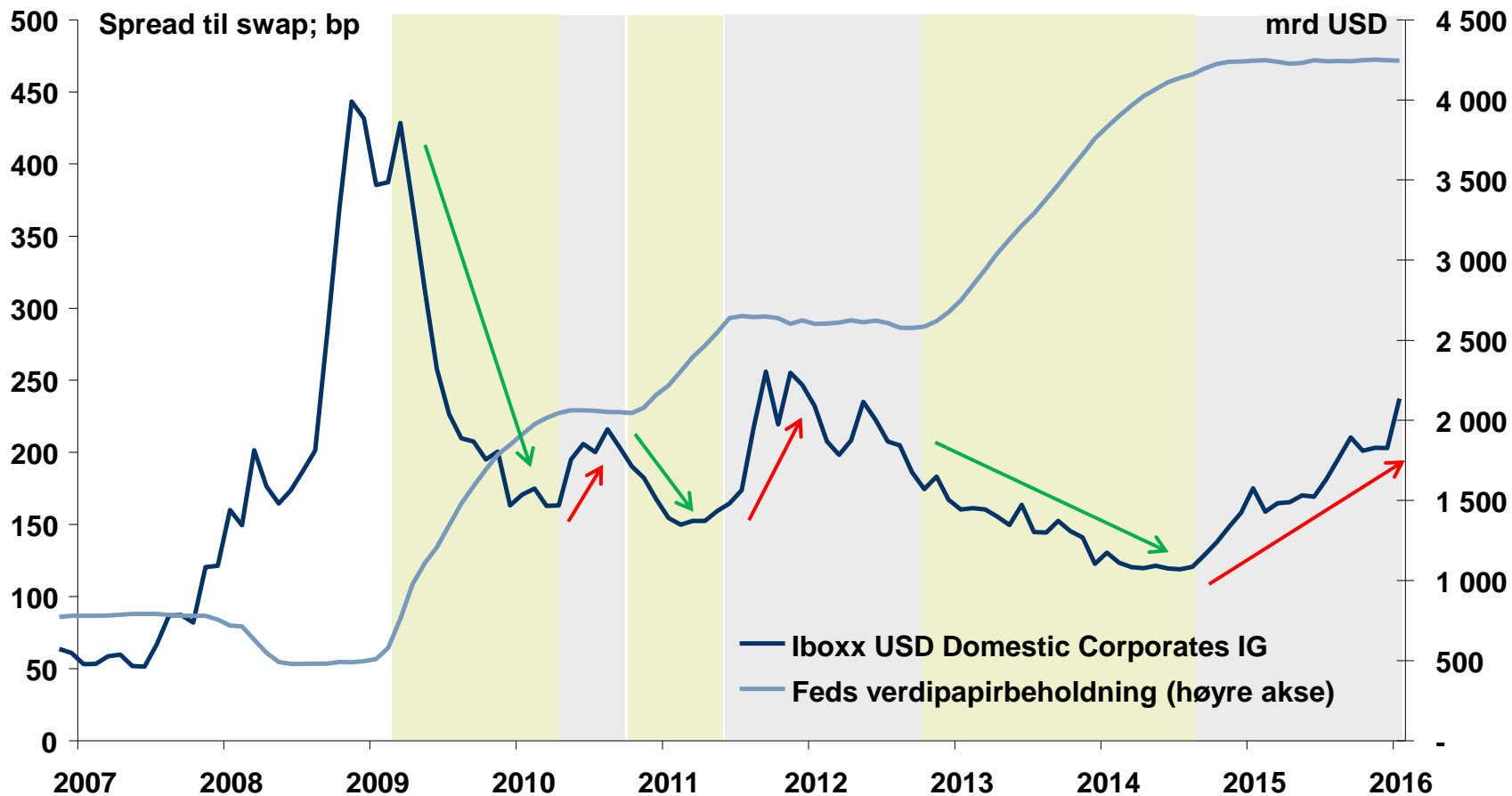
1. Portfolio effect
2. Search for yield

QE and stock market

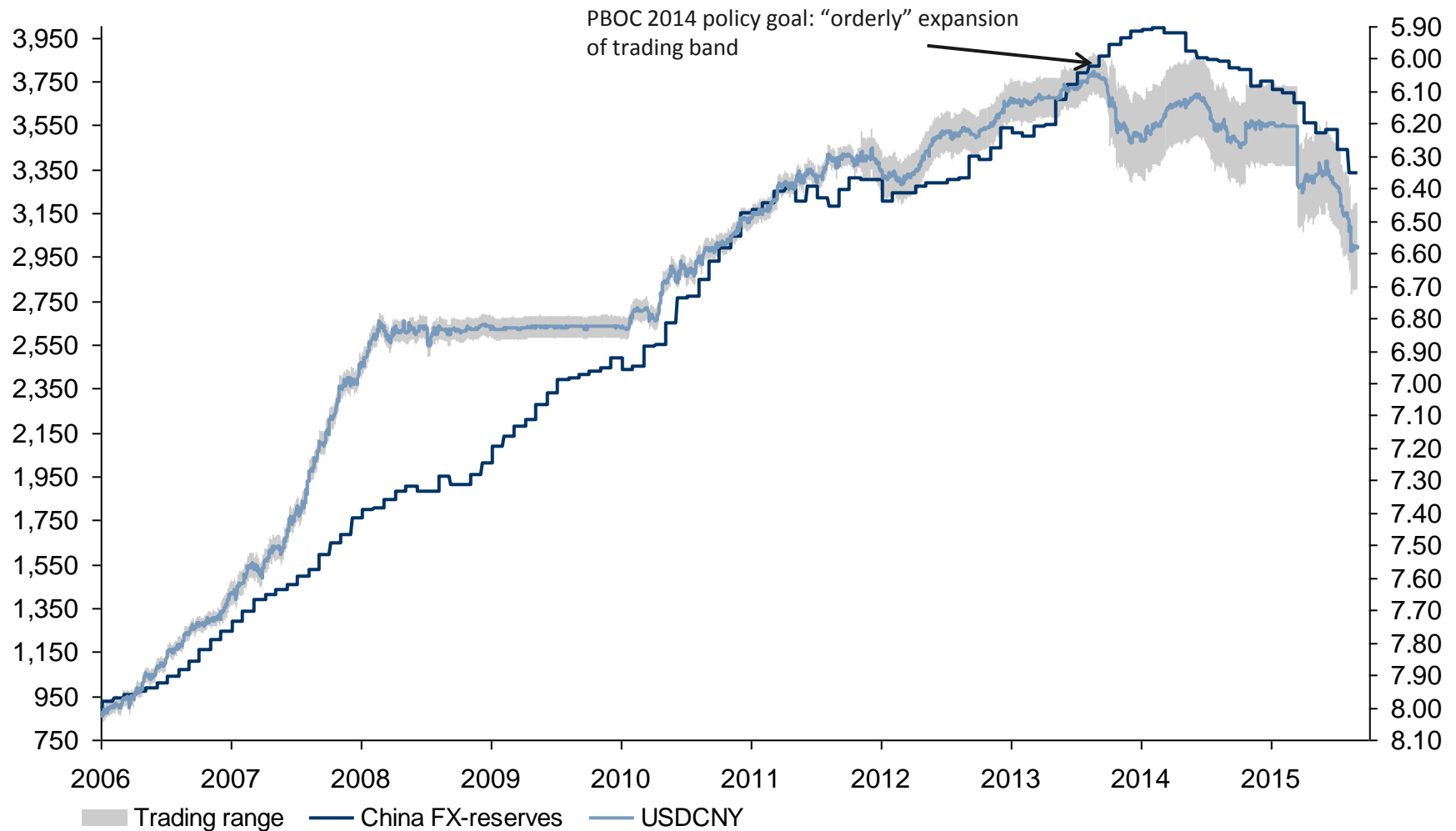


Kilde: Nordea Markets and Macrobond

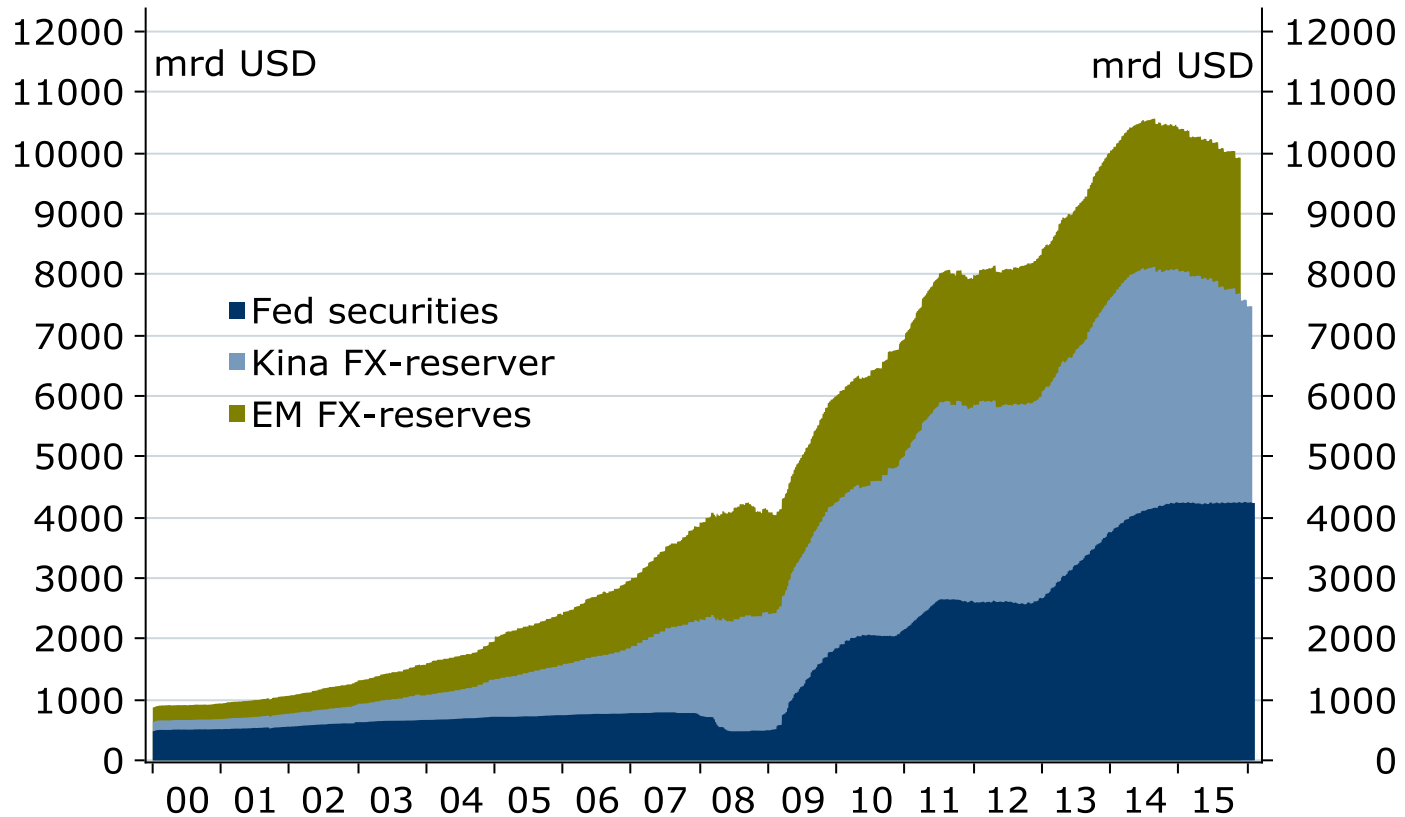
QE and credit spreads



But there is more: China foreign exchange reserves are falling



From QE to QT?



Kilde: Nordea Markets and Macrobond

Will Fed be able to increase interest rates?

