

NOK Update: Murder on the NOKient Express

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June 2023



You ever looked at something and wonder how it got there?

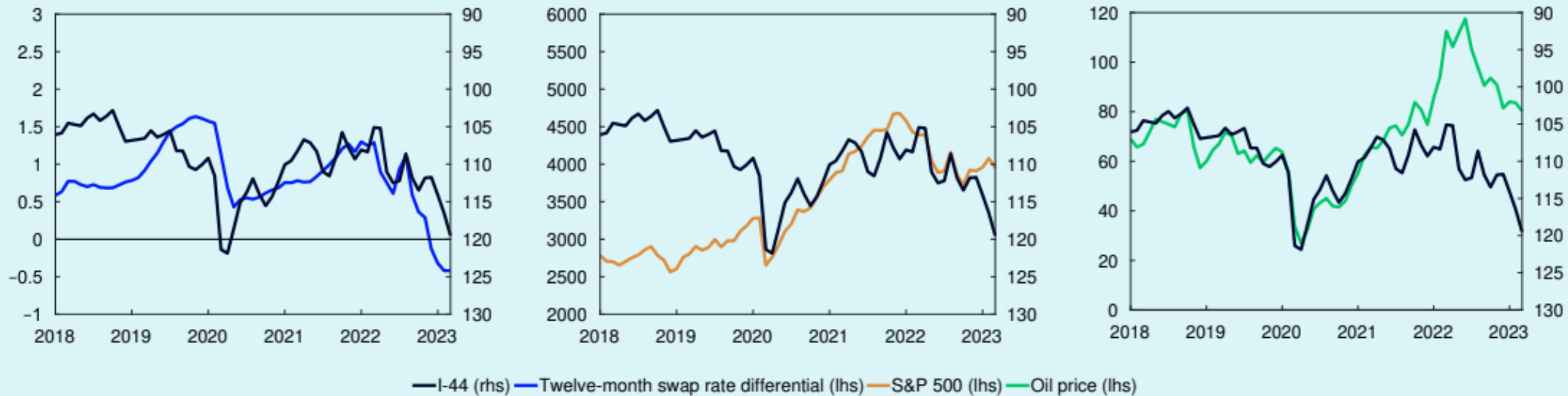
Agatha Christie's classic novel «Murder on the Orient Express» ends with Hercule Poirot deducing the victim was not killed by a single murderer but rather twelve individuals taking turns in stabbing him. This very much feels like the current set-up for the NOK: the ongoing NOK weakness cannot sufficiently be explained by a single factor, instead there are multiple perpetrators who collectively have put the NOK to the sword.

In this note we investigate the most likely smoking guns behind the NOK's dismal performance of late. Some are cyclical of nature (e.g. rate differentials) while others are more structural and unlikely to turn from headwinds to tailwinds anytime soon.



Chart 2.C Drivers of the krone exchange rate

I-44 against 12-month swap rate differential against major trading partners, the S&P 500 and oil prices (1st contract Brent Blend).



Sources: Bloomberg and Norges Bank

... leading us to think there are structural forces weighing on the NOK

Cyclical

1. The NOK is now a G10 low-yielder: An EM ccy without the EM carry
2. Terms of trade boon has deflated sharply as energy prices have slumped
3. Bits vs atoms // AI vs hydrocarbons
4. Petroleum-related transactions to turn increasingly more balanced as Norges Bank's NOK sales will gradually be lowered

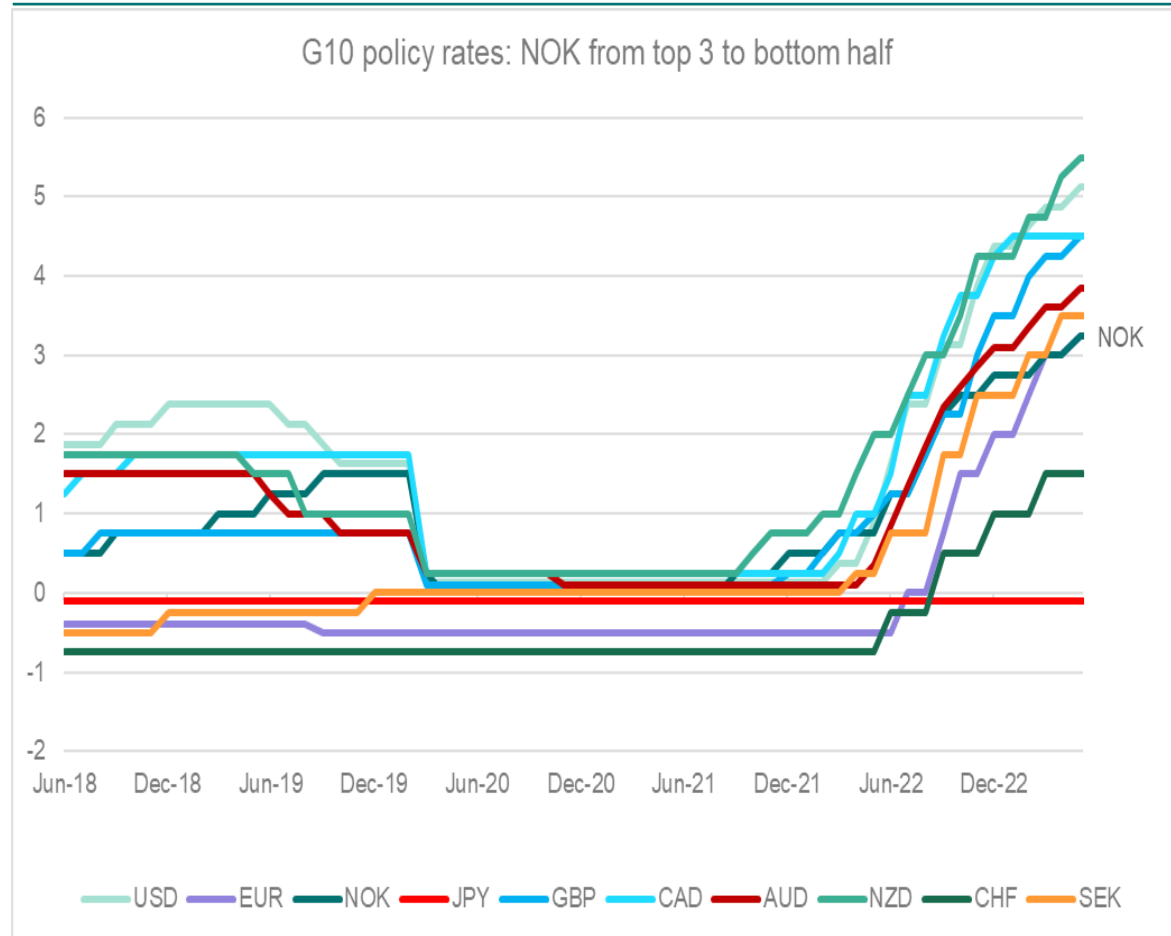
Structural

- A. Less dramatic weakening when looking at import-weighted NOK or real effective exchange rates
- B. A necessary devaluation to preserve competitiveness?
- C. Unlikely to see a petroleum capex boom like in previous decades, thus limiting the benefits of elevated energy prices
- D. Financialization of the NOK: Asymmetric risk/reward and domestic savings trend increasingly favouring unhedged global funds
- E. Are foreigners fleeing Norway? Losing out in the FDI race as taxation and subsidies more favourable elsewhere
- F. The system is 'leaking' NOK

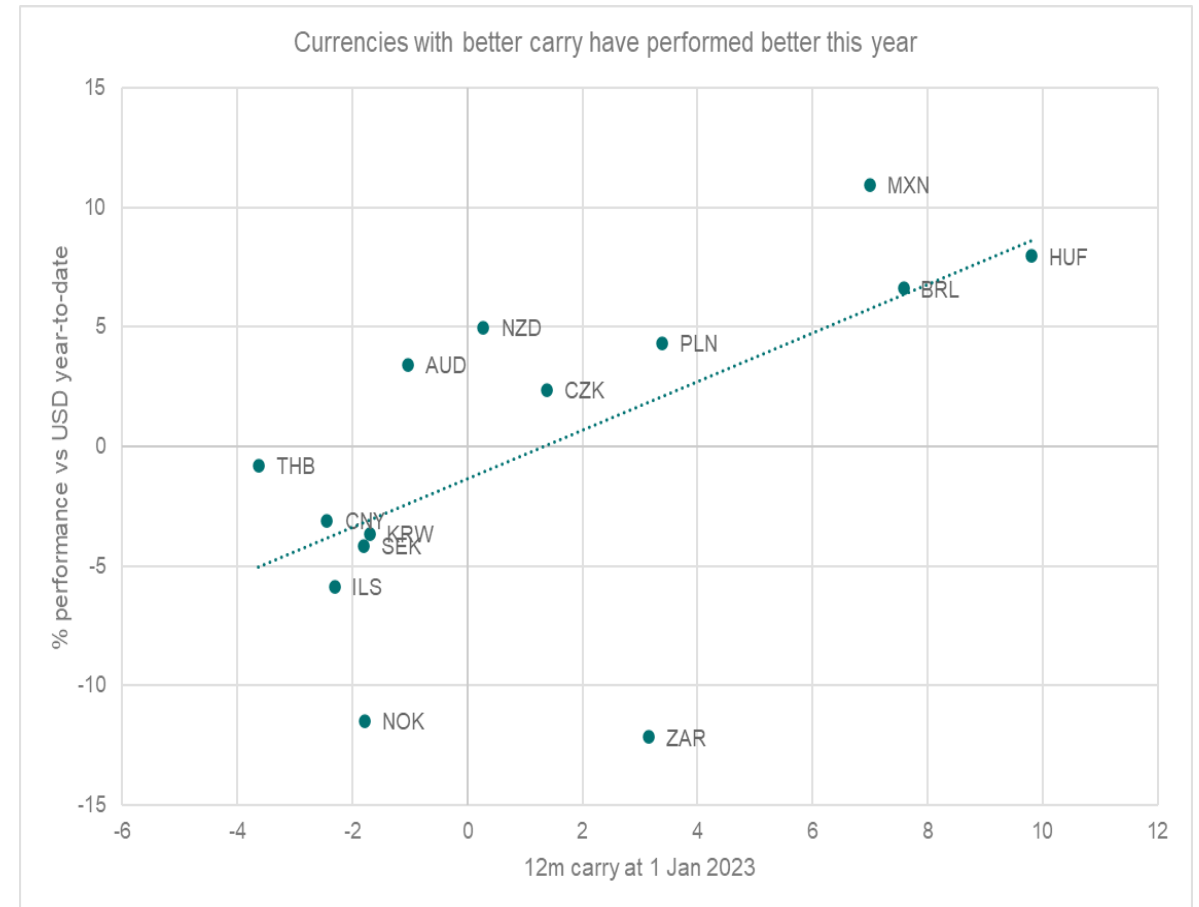
Cyclical factors: To eventually become more balanced

1) The NOK is now a G10 low yielder: From carry to funding currency?

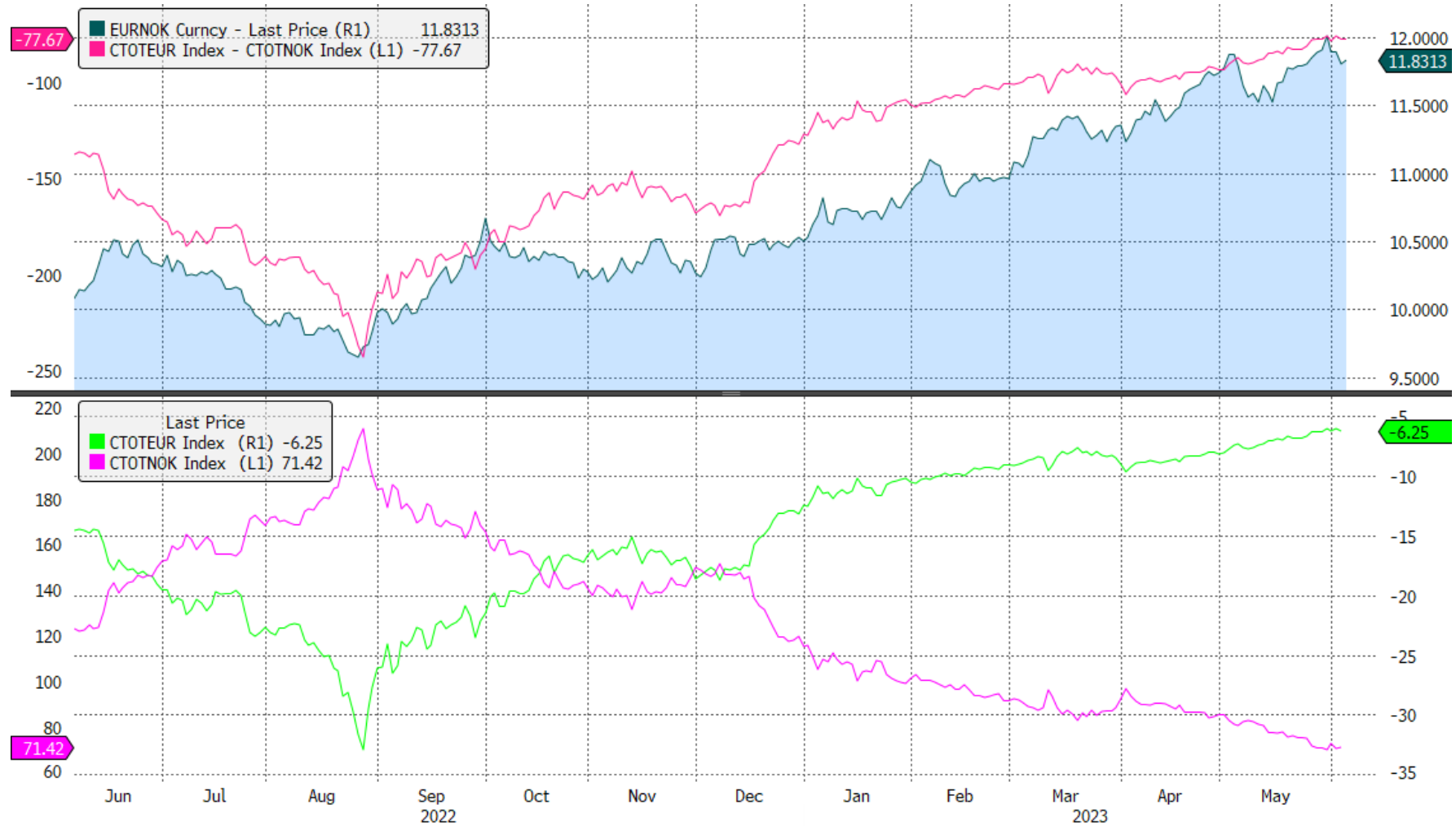
Moving down in the world



Carry is king



2) Terms of trade boon has deflated sharply as energy prices have normalized

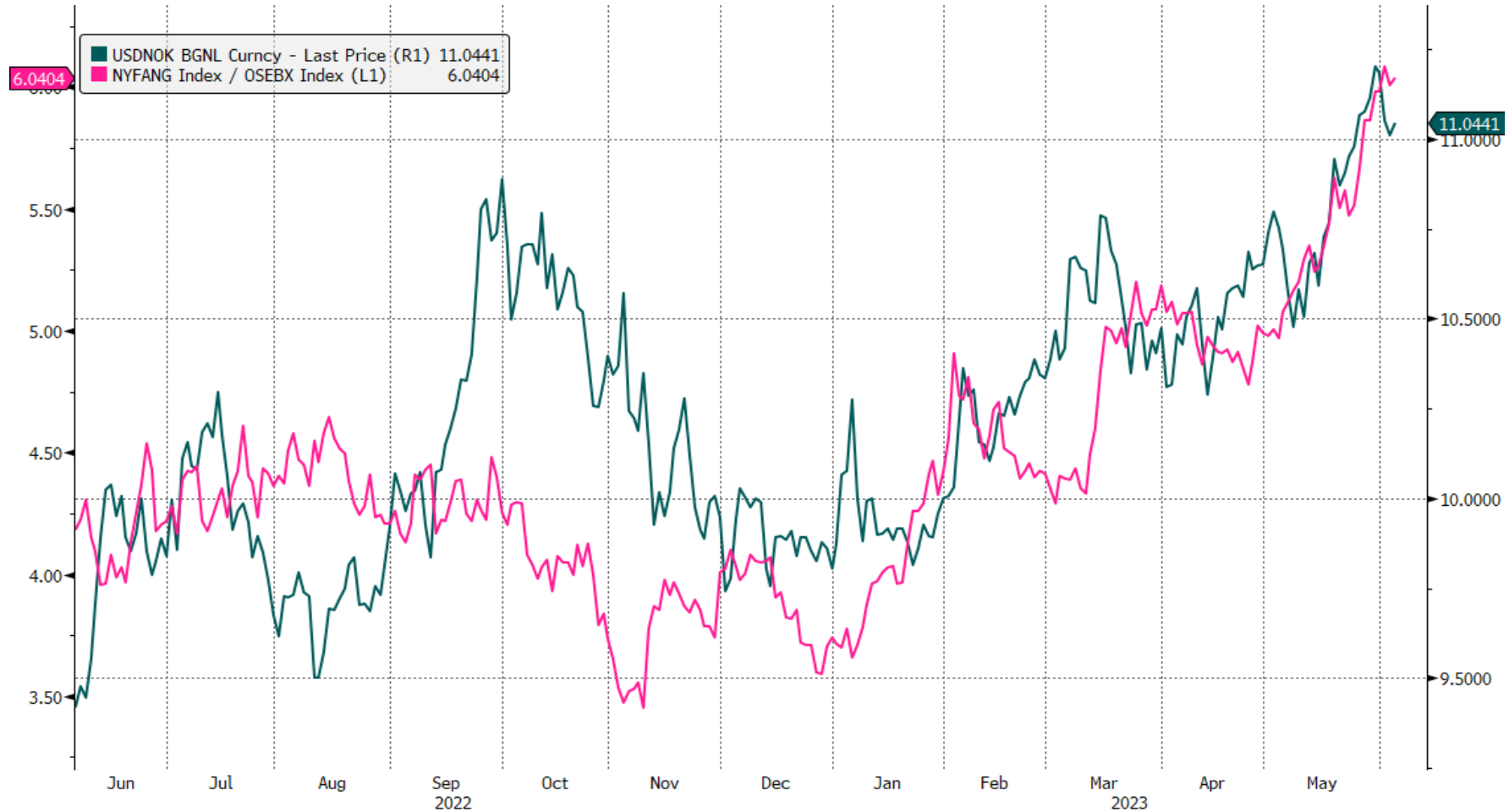


2) Terms of trade boon has deflated sharply as energy prices have normalized

Petroleum prices



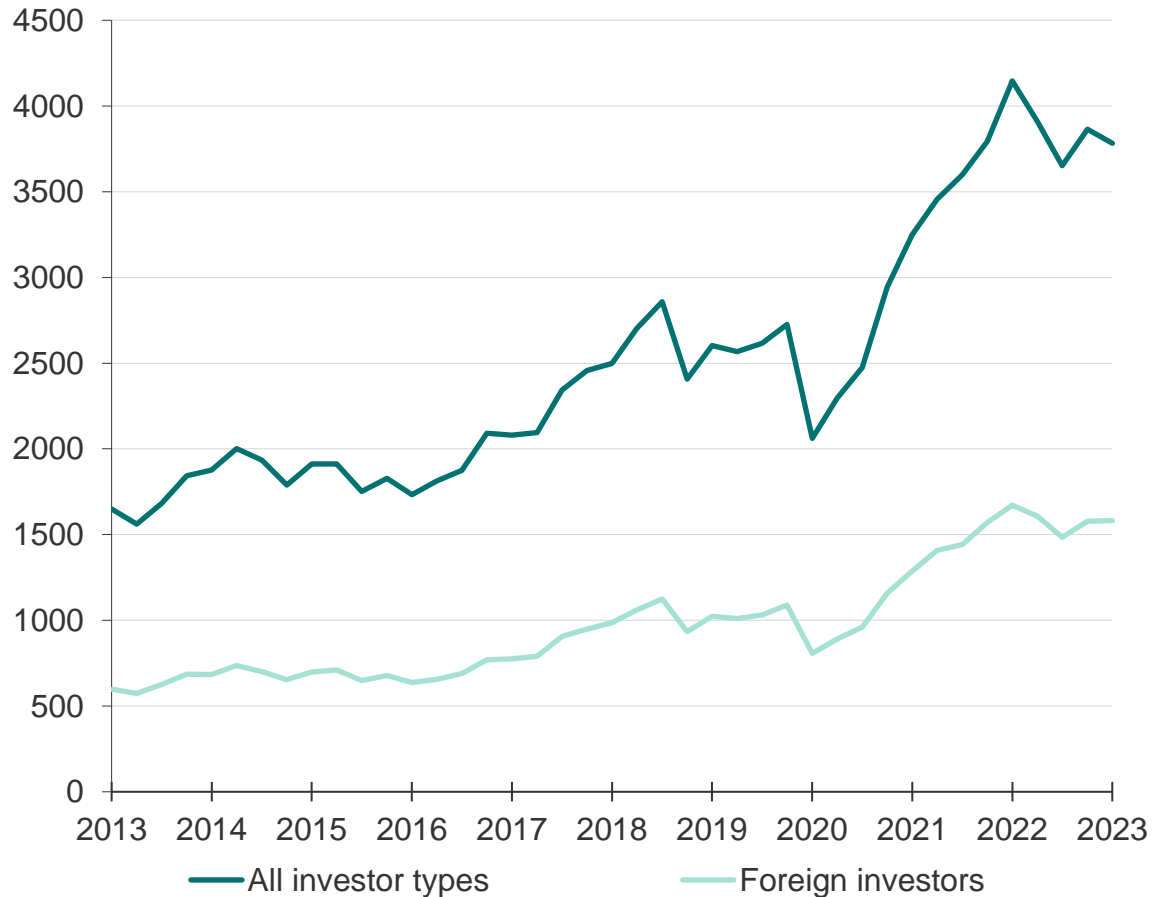
3) Bits vs atoms // AI vs hydrocarbons: Causation or simply correlation?



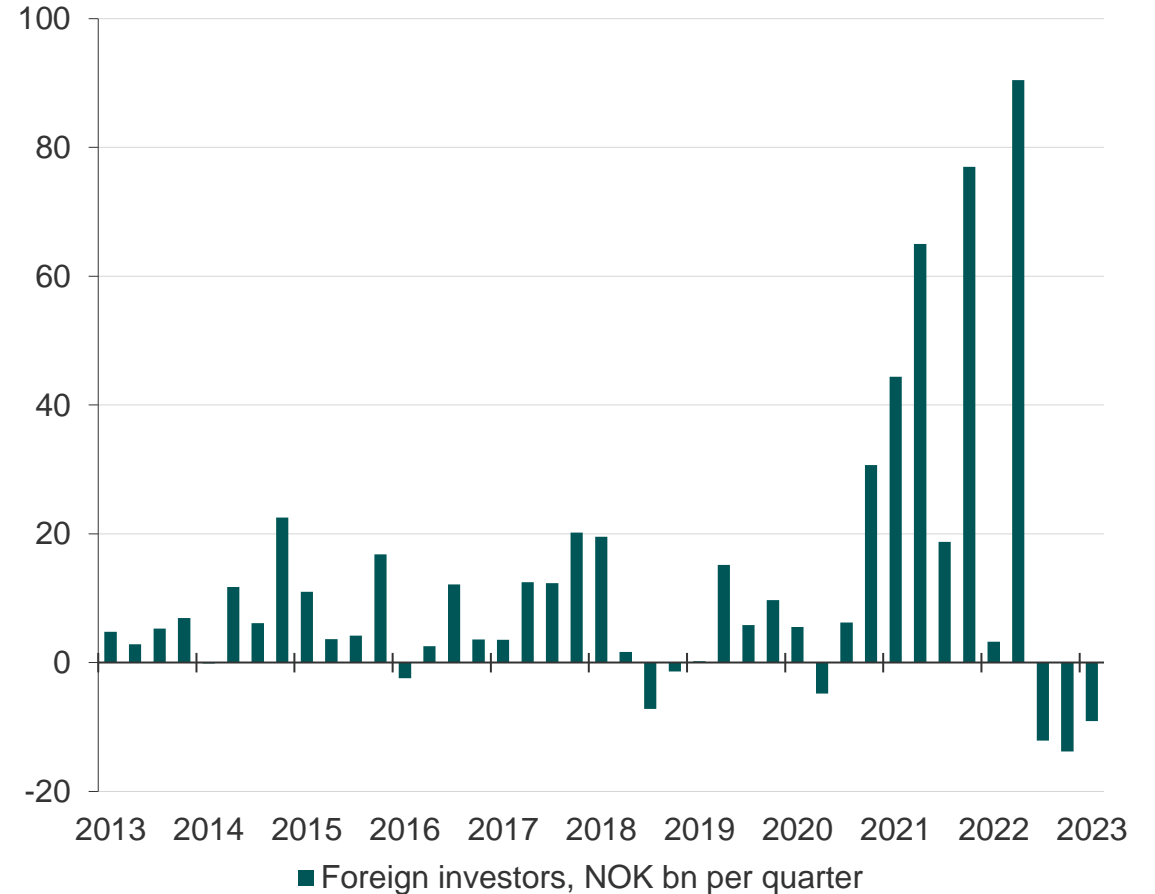
BofA's monthly Global Fund Manager Survey:
Tech funds attracting an all-time high of \$8.5bn in the week through 31 May according to EPFR Global Data

3) As oil/gas euphoria has faded, so have foreigners' purchases of NOK equities

Norwegian listed stocks. NOK bn

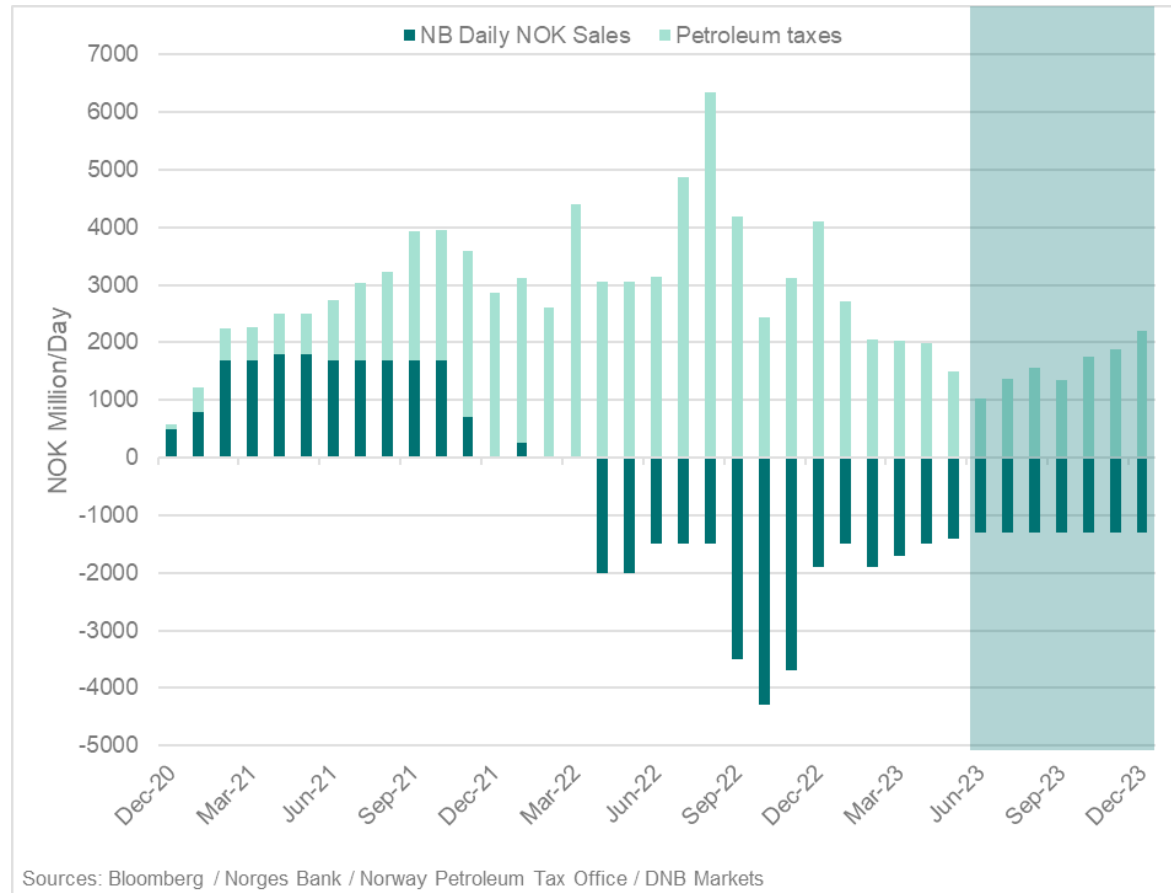


Net purchases of Norwegian listed stocks. NOK bn

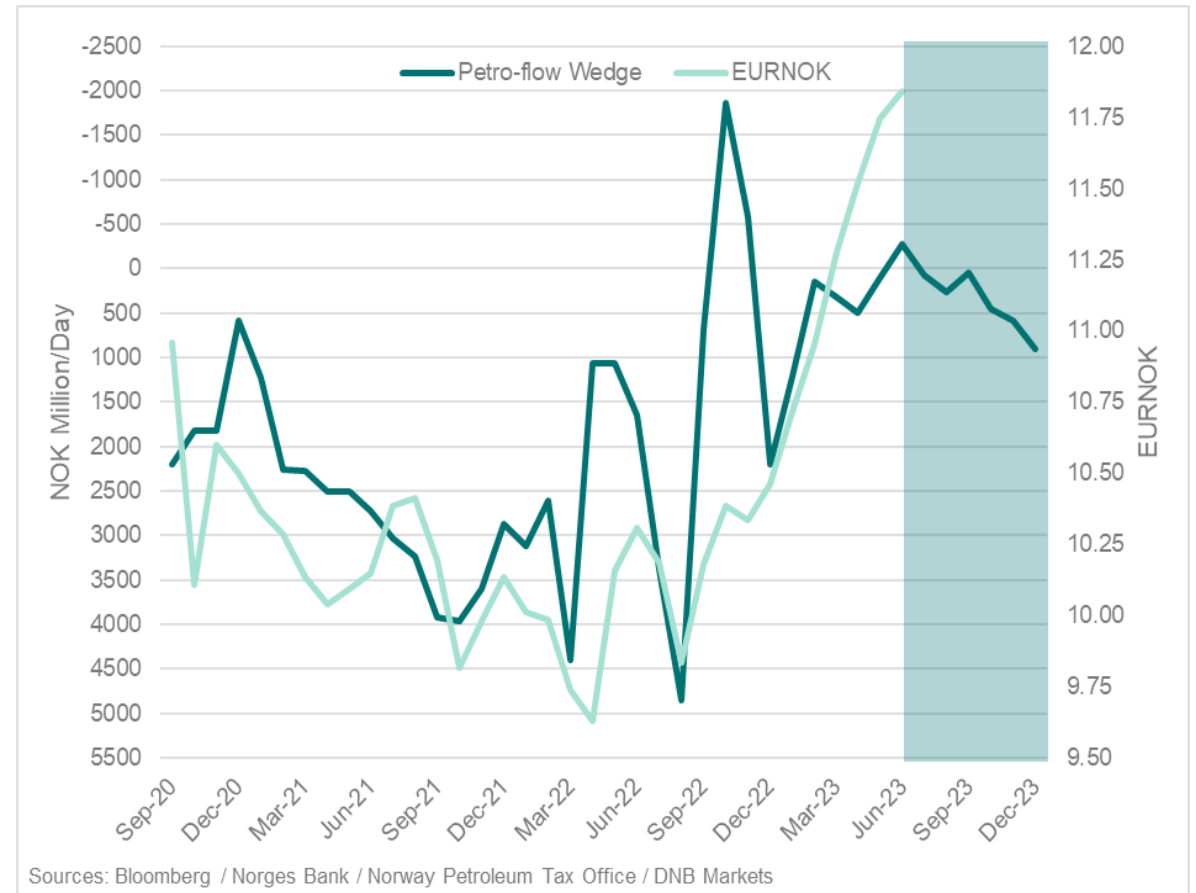


4) Petroleum-related transactions to be better balanced going forward

Petroflows much more balanced this year than '21/'22



Current energy px levels means petro-flow wedge to gradually tighten (wedge = NB Daily NOK sales – O&G petroleum tax purchases)

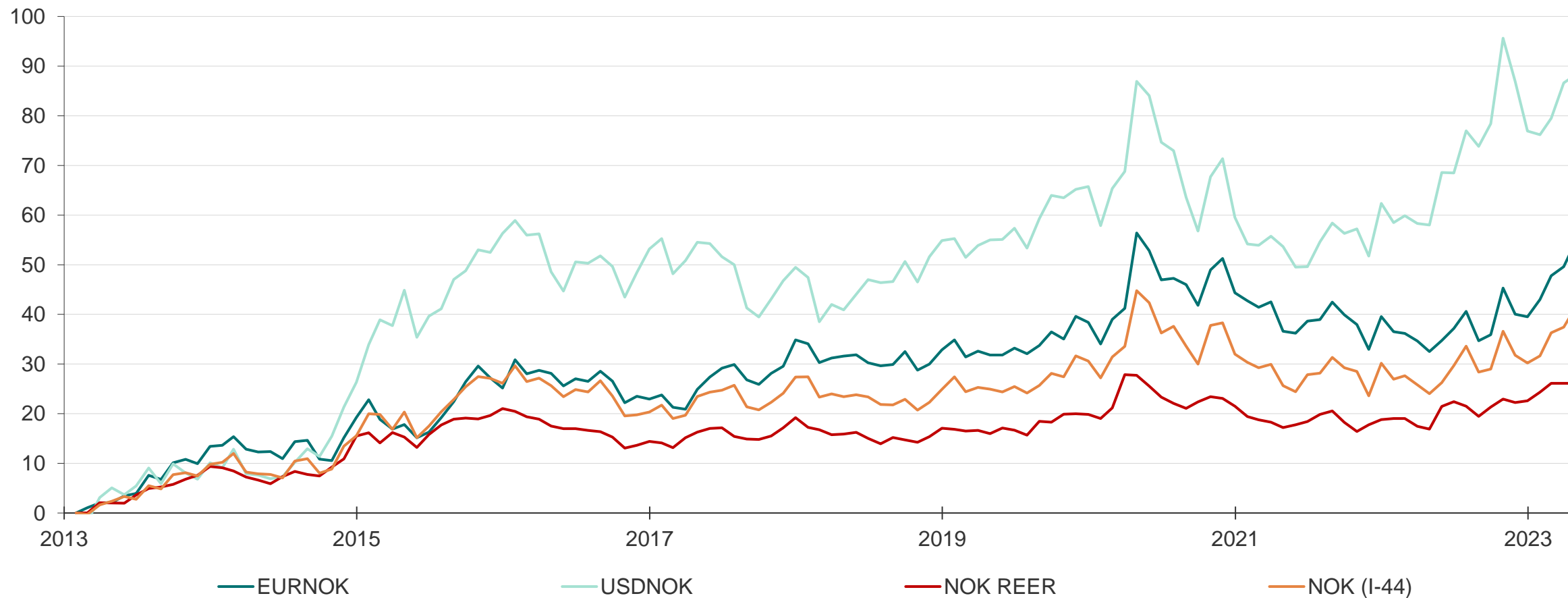


1) Excluding real estate activities
Source: OECD, DNB Markets

Structural factors: Persistent headwinds

A) Less dramatic weakening when looking at trade-weighted or real effective exchange rates

NOK: Indexed performance against other currencies. Percent*



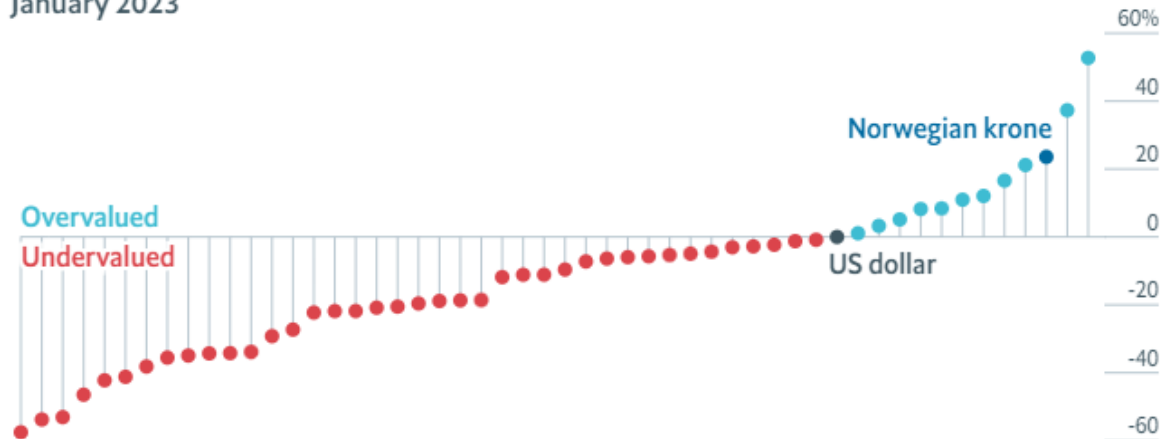
*Higher value consistent with weaker real exchange rates
Source: Bloomberg, DNB Markets

A) Are we really as undervalued as recent nominal depreciation suggests?

Big Mac Index suggesting fair value USDNOK = ~12

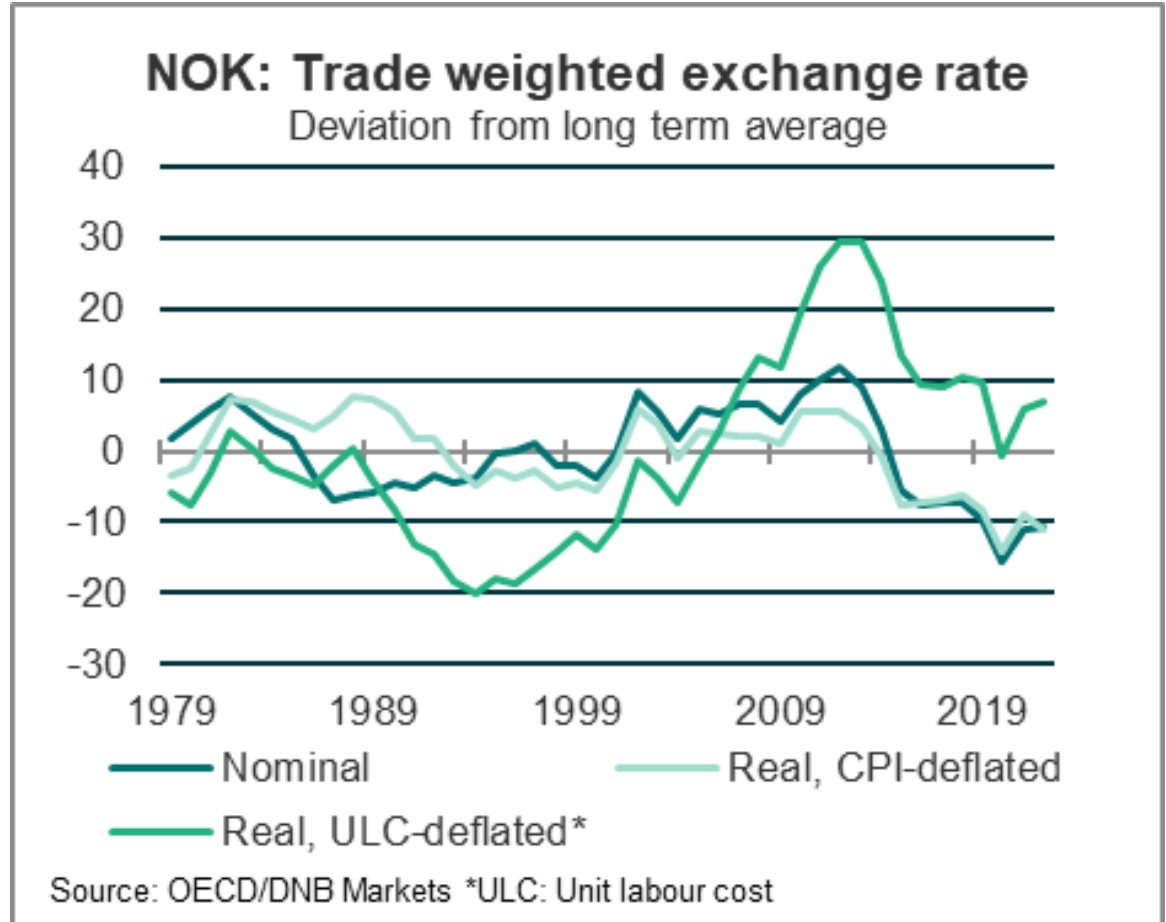
Choose a base currency: US dollar | Show index at: Jan 2023 | Adjust the index to account for GDP per person: Raw index | GDP-adjusted

The Norwegian krone is **23.6% overvalued** against the US dollar
January 2023



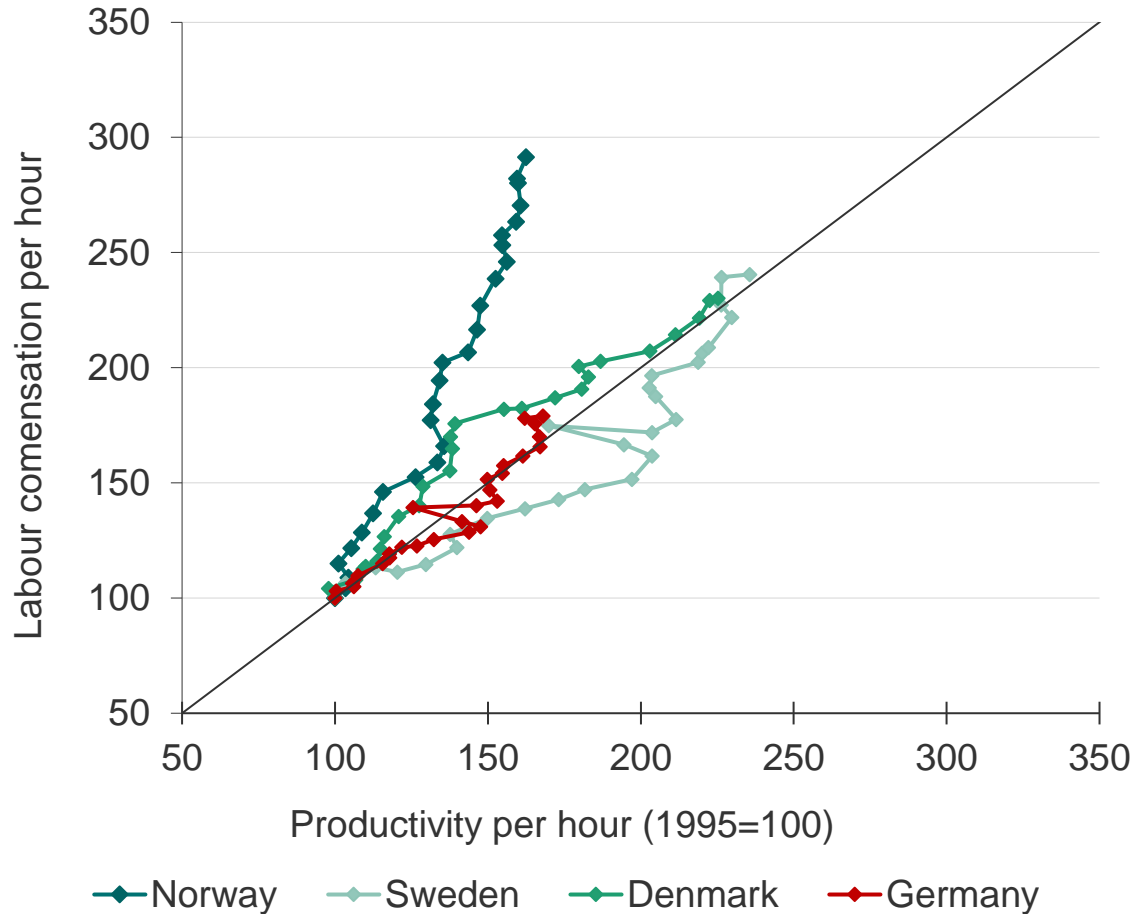
A Big Mac costs 22.9% more in Norway (US\$6.59) than in the United States (US\$5.36) at market exchange rates. Based on differences in GDP per person, a Big Mac should cost 1% less. This suggests the krone is **23.6% overvalued**

REER: Deflating with Unit Labour Costs less dramatic than with CPI

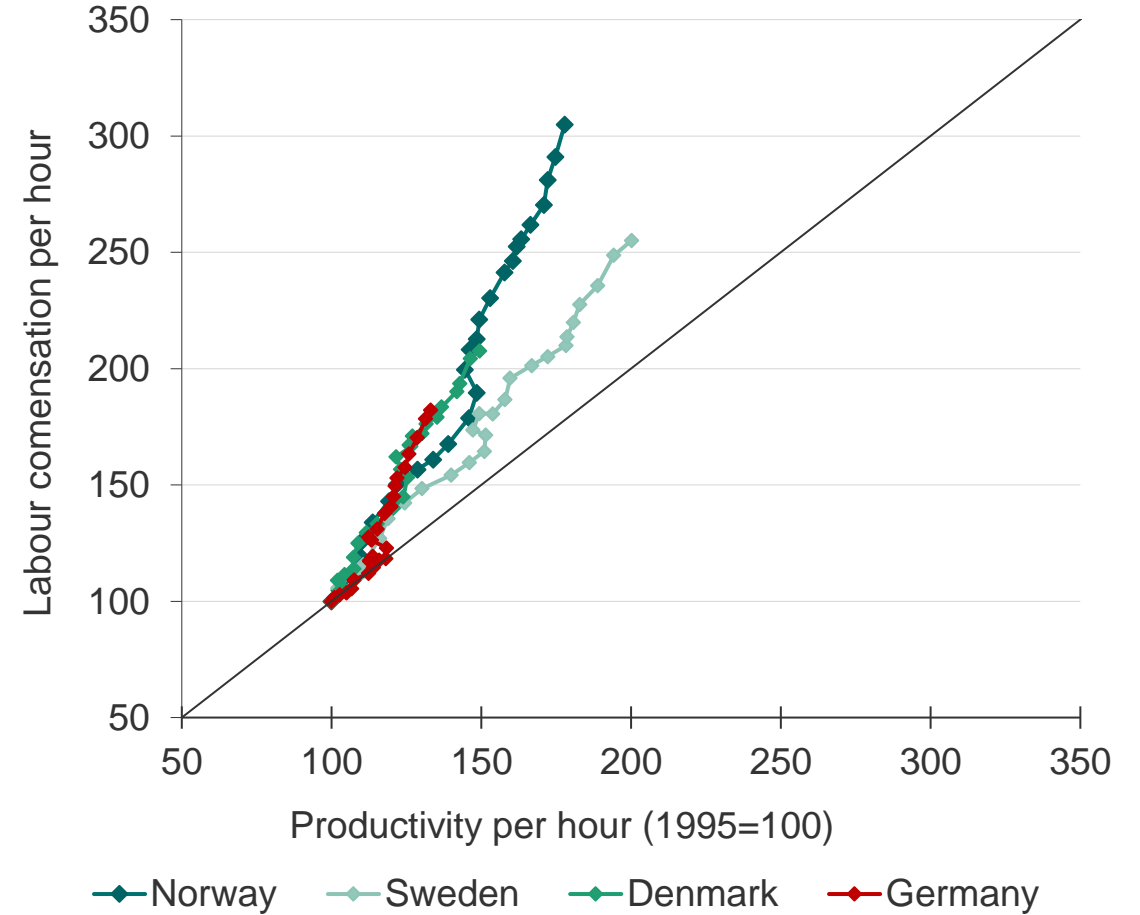


B) A necessary devaluation to preserve competitiveness? Norwegian wages have outpaced productivity relative to peers – a weaker NOK helps offsetting this

Manufacturing¹: Productivity and labour compensation



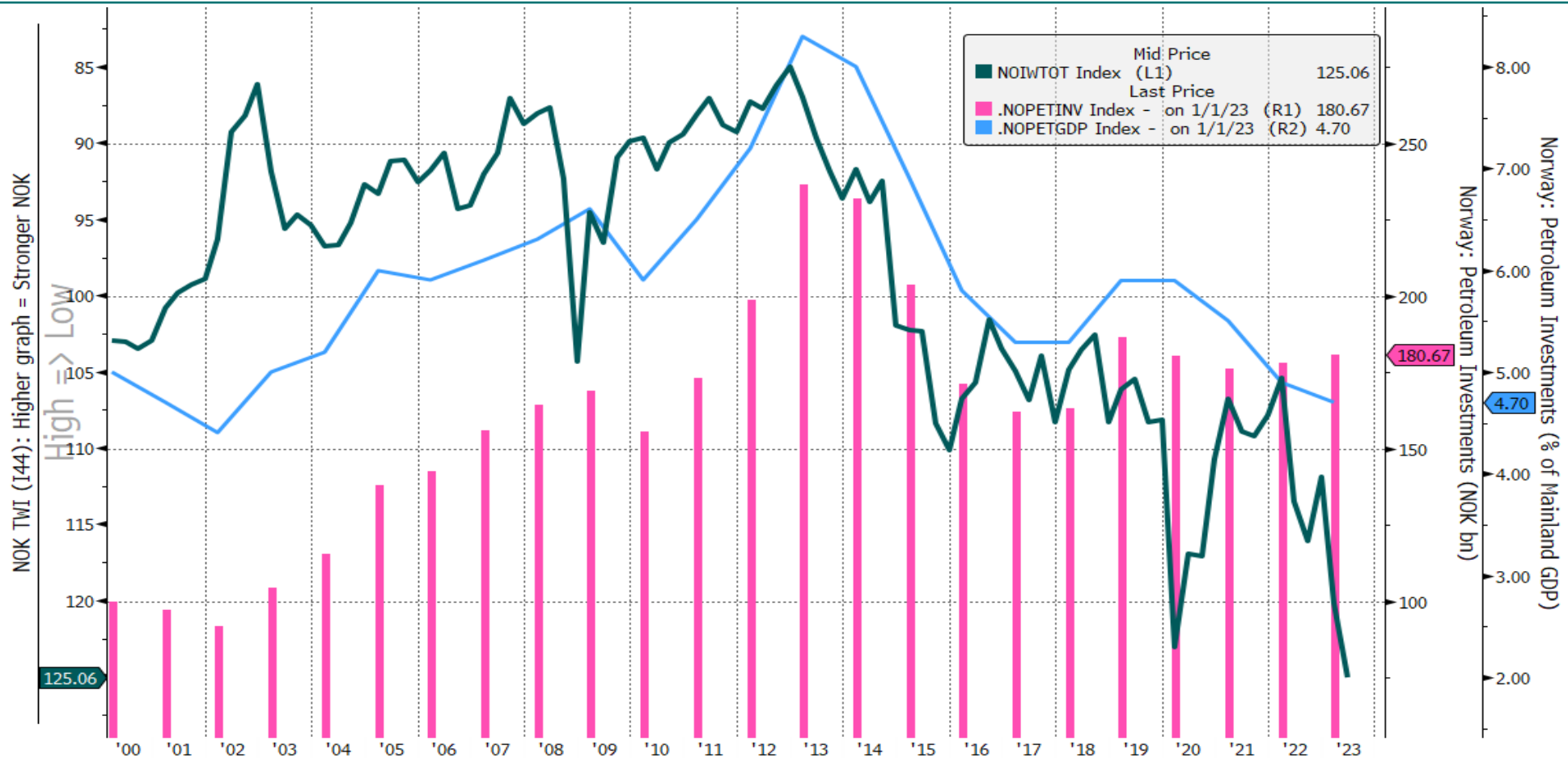
Services²: Productivity and labour compensation



1) Mainland economy
 2) Excluding real estate activities
 Source: OECD, DNB Markets

C) Unlikely to see a capex boom like in previous decades as Net Zero/ESG makes it more challenging to invest in new oil and gas fields on the Norwegian continental shelf

Without a corresponding capex boom, high energy prices simply mean current account surplus recycled into the petroleum fund



C) ESG capex trumped by US' Inflation Reduction Act and EU's Net Zero Industry Act?



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Tanzania completes talks with Shell, Equinor for \$30bn ...

8. mars 2023 — Tanzania has completed talks with Norway's **Equinor** and Britain's **Shell** for the construction of the proposed \$30bn **liquefied natural gas** ...

The US tax package could mean a crisis for the Norwegian battery industry: - Can't just demand and complain

President Joe Biden's "IRA" is a gift package for American green industry - and a potential disaster for the EU and Norway. However, Norske Morrow has faith that a viable solution will be found.

Nel chose Michigan – Norway and Europe were not close

The hydrogen company Nel receives billions in support from the US authorities for the construction of a giant factory near the car city of Detroit. Norway and Europe's offers were a long way off.

ABONNENT 3 MIN | PUBLISHED: 03.05.23 — 18.38 | UPDATED: A MONTH AGO



Reuters

Equinor puts Norwegian Trollvind offshore wind farm on hold

OSLO, May 22 (Reuters) - Equinor (EQNR.OL) will postpone indefinitely its planned Trollvind floating offshore wind farm project in Norway,...

2 weeks ago



The offshore wind industry wants higher subsidies

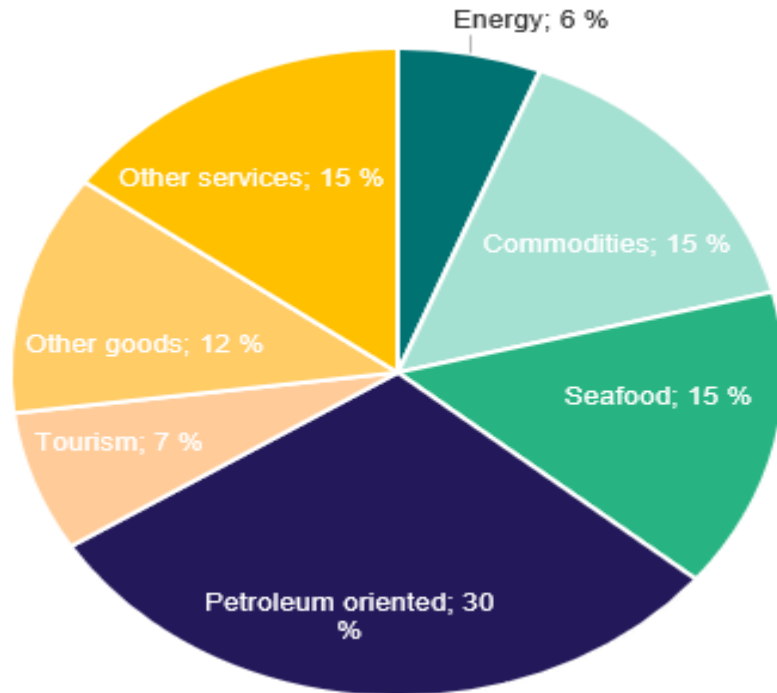
The proposed level of support could in the worst case lead to no one bidding in the auction for bottom-fixed offshore wind in the Southern North Sea, warns the interest group Offshore Norway.

More power – at all costs?

Offshore wind will be more expensive than expected, and electricity prices may be low when the wind blows in the North Sea. The need for power may also disappear with new, green industry lured by subsidies abroad. Time for a break?

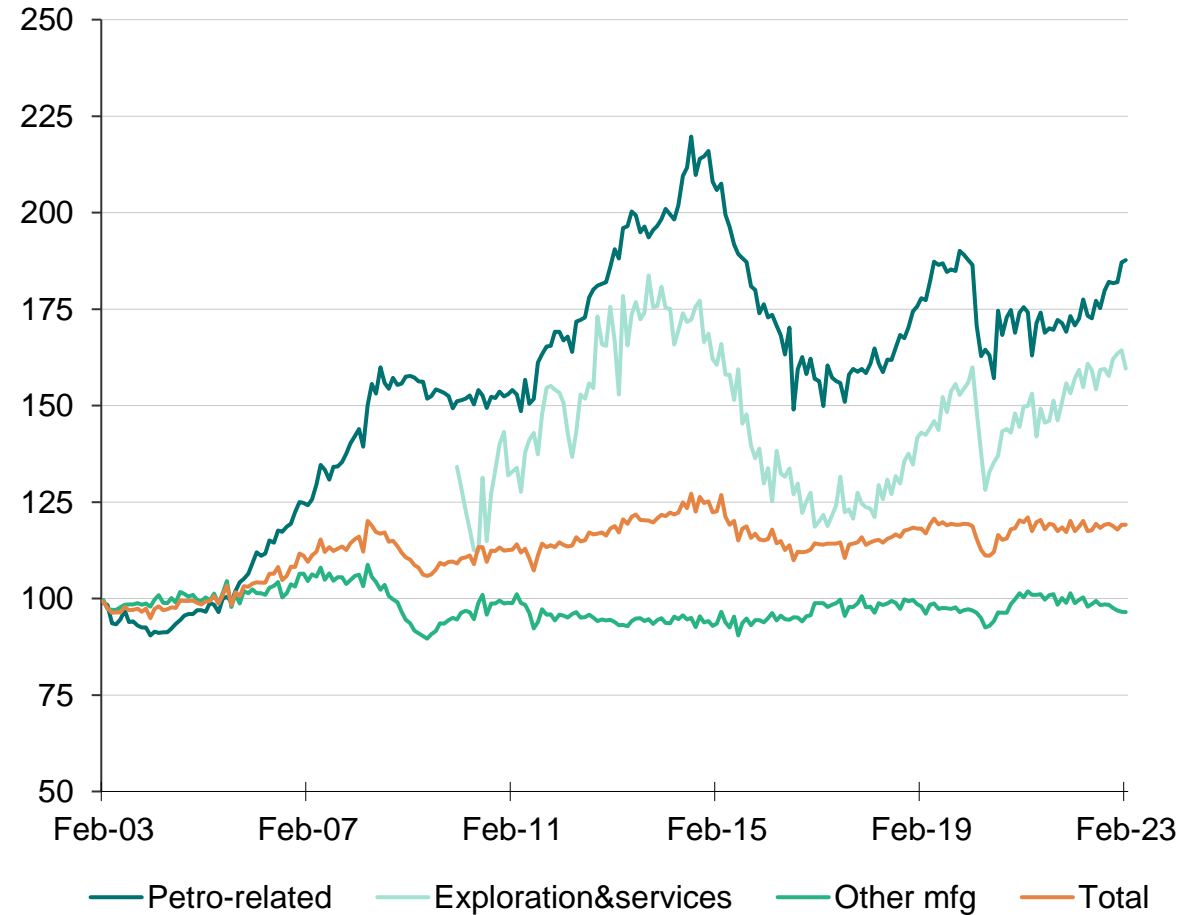
C) Exports composition and high capacity utilisation limits advantage of weak NOK

Norway: Mainland exports composition. 2017. Percent of total.



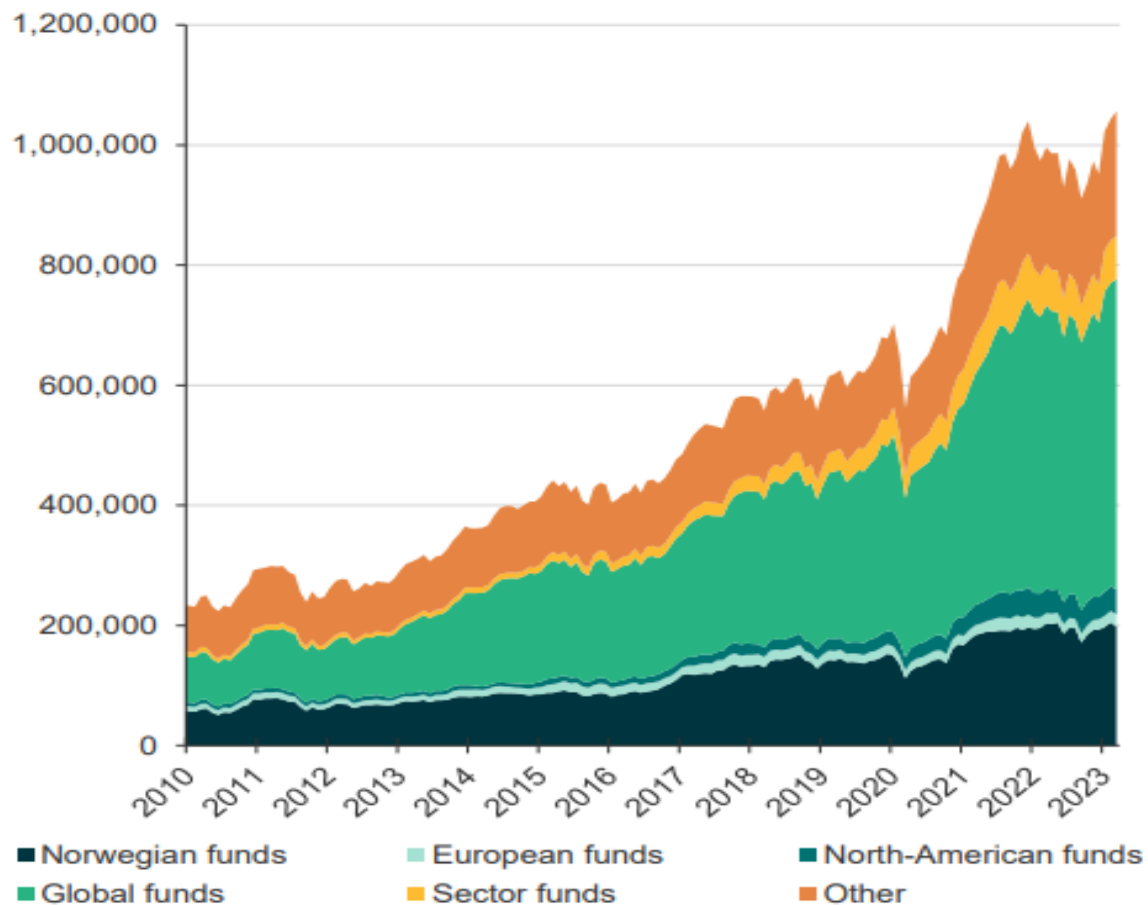
Norway mainland export industry structure = 1/3 petroleum oriented, 1/3 capital intensive already close to capacity constraints (seafood, energy, commodities), leaving only 1/3 of mainland exports to be fully able to take advantage of weak NOK

Norway: Manufacturing production. Index. SA

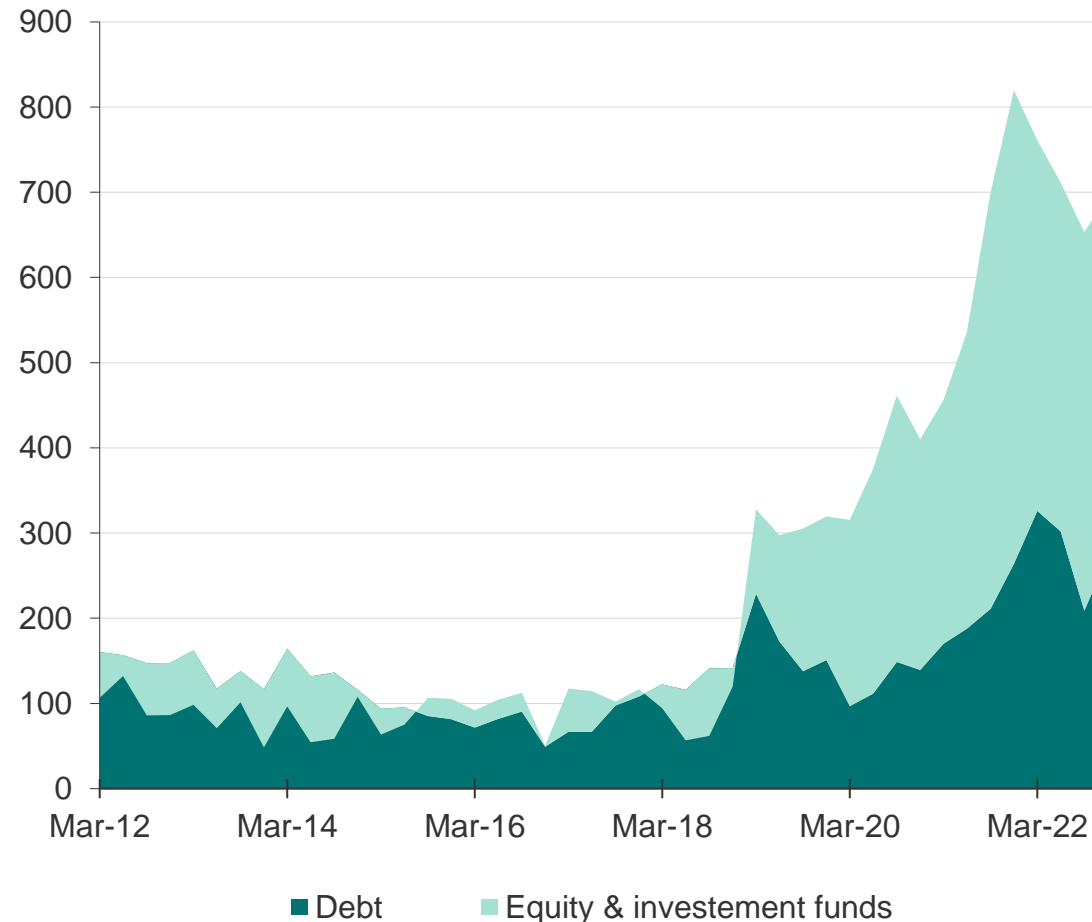


D) Higher offshore savings, which accelerated with the 2011 Pension reform (from defined-benefit to defined-contribution), adds to NOK depreciation

Norway: Assets under management. Equity funds. NOKm



Norway: Net portfolio investments. Non- and other financials. NOK bn.



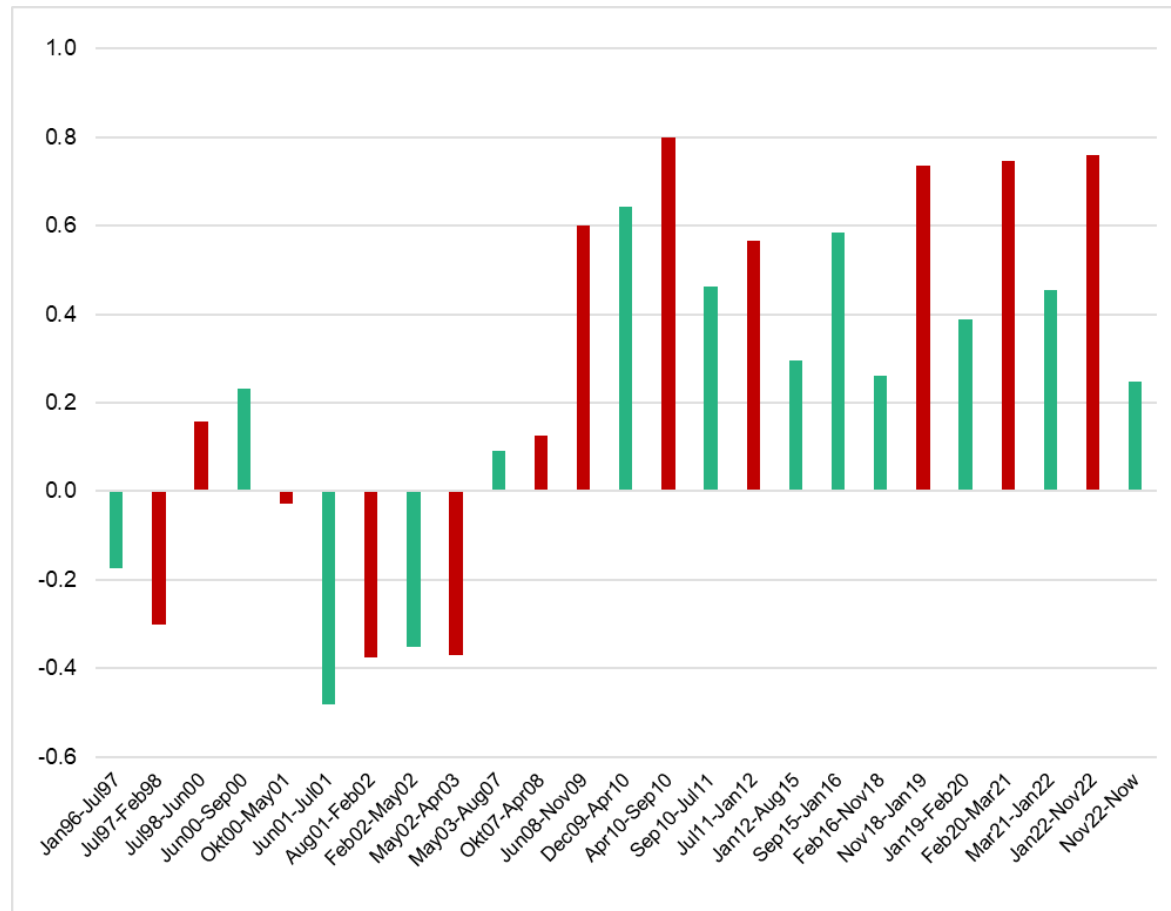
D) Rising demand for global funds, rotation into unhedged post-Covid

Cumulative net inflows, NOK billion. Selected global equity index funds – Norwegian asset managers.



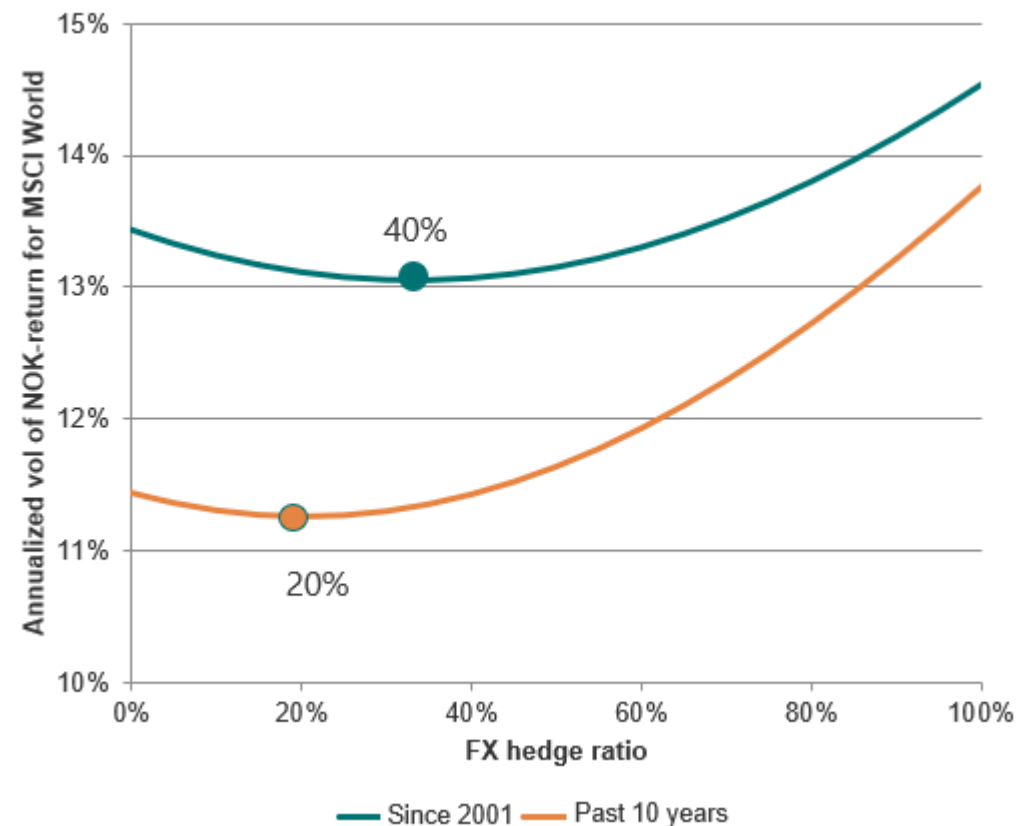
D) The NOK has become increasingly 'financialized' with risk/reward heavily skewed: The NOK weakens when equities sell off, fails to rally when equities rise

USDNOK vs S&P500: Correlation of weekly %-changes highly dependent on general risk sentiment¹ (risk-on = green bars / risk-off = red bars)



Optimal hedging ratio of international equity portfolios for Norwegian AMs have dropped sharply as natural hedge has increased

MSCI World: Optimal hedge ratio reduced significantly



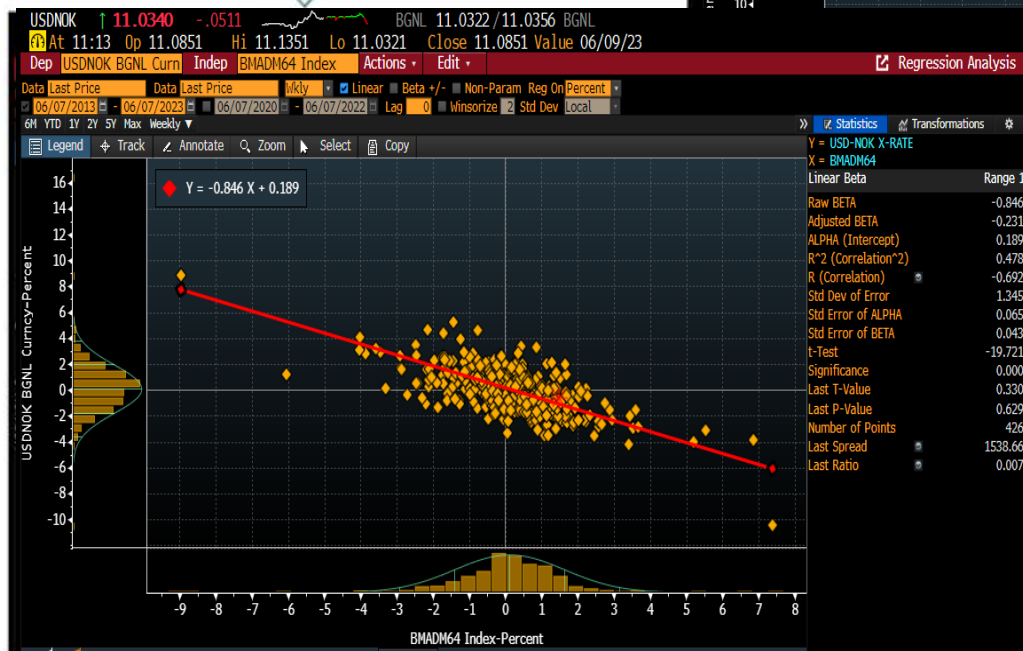
Sources: Bloomberg
1: Risk sentiment defined as VIX > 22 = risk off / VIX < 22 = risk on

D) The NOK has become increasingly 'financialized' but beware of 60:40 effect

USDNOK: Higher beta vs Global 60:40 portfolio than vs S&P500 due to domestic lifers/AM hedging

- Norwegian asset managers/lifers have large holdings of global bonds (c600bn NOK by year-end 2022)
- These bond portfolios are essentially fully fx-hedged, meaning if value of bond holdings drop (global FI sell off) this could trigger a need to unwind FX hedges (i.e. buy back currency)
- These mechanics help explain why USDNOK has exhibited higher beta/R2 to a global 60:40 portfolio than e.g. S&P

R-Squared past 3 years / past 10 years:
USDNOK vs Global 60:40 = 0.65 / 0.49

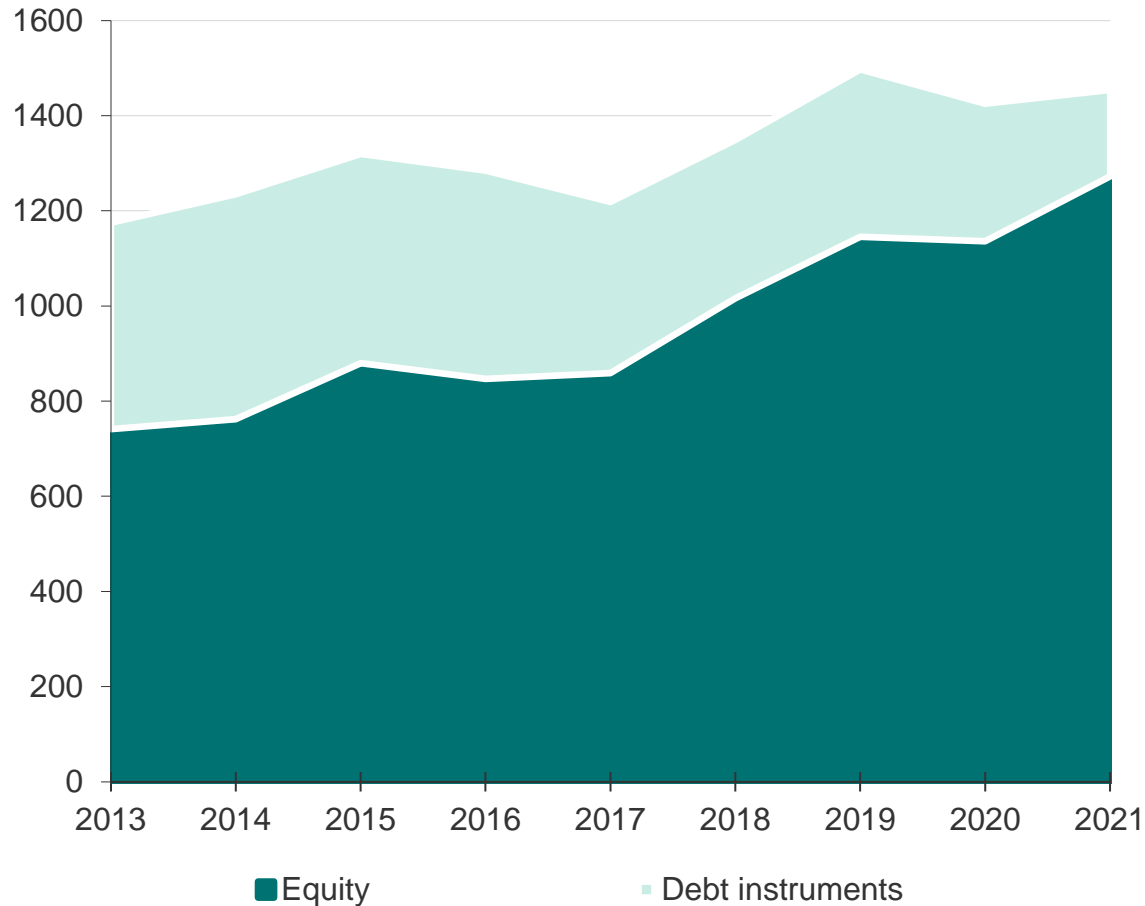


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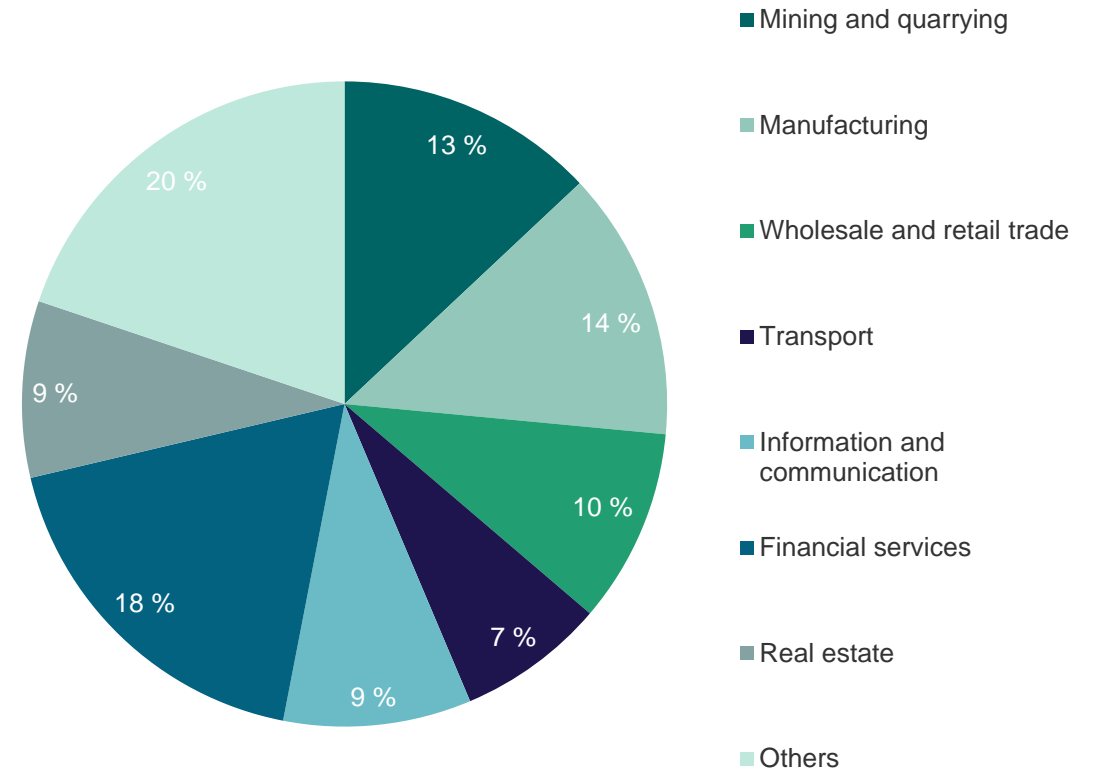


E) Foreign Direct Investments (FDIs): Steady climb and so little evidence of foreign divestment...

Norway: Foreign Direct Investments. Bn NOK

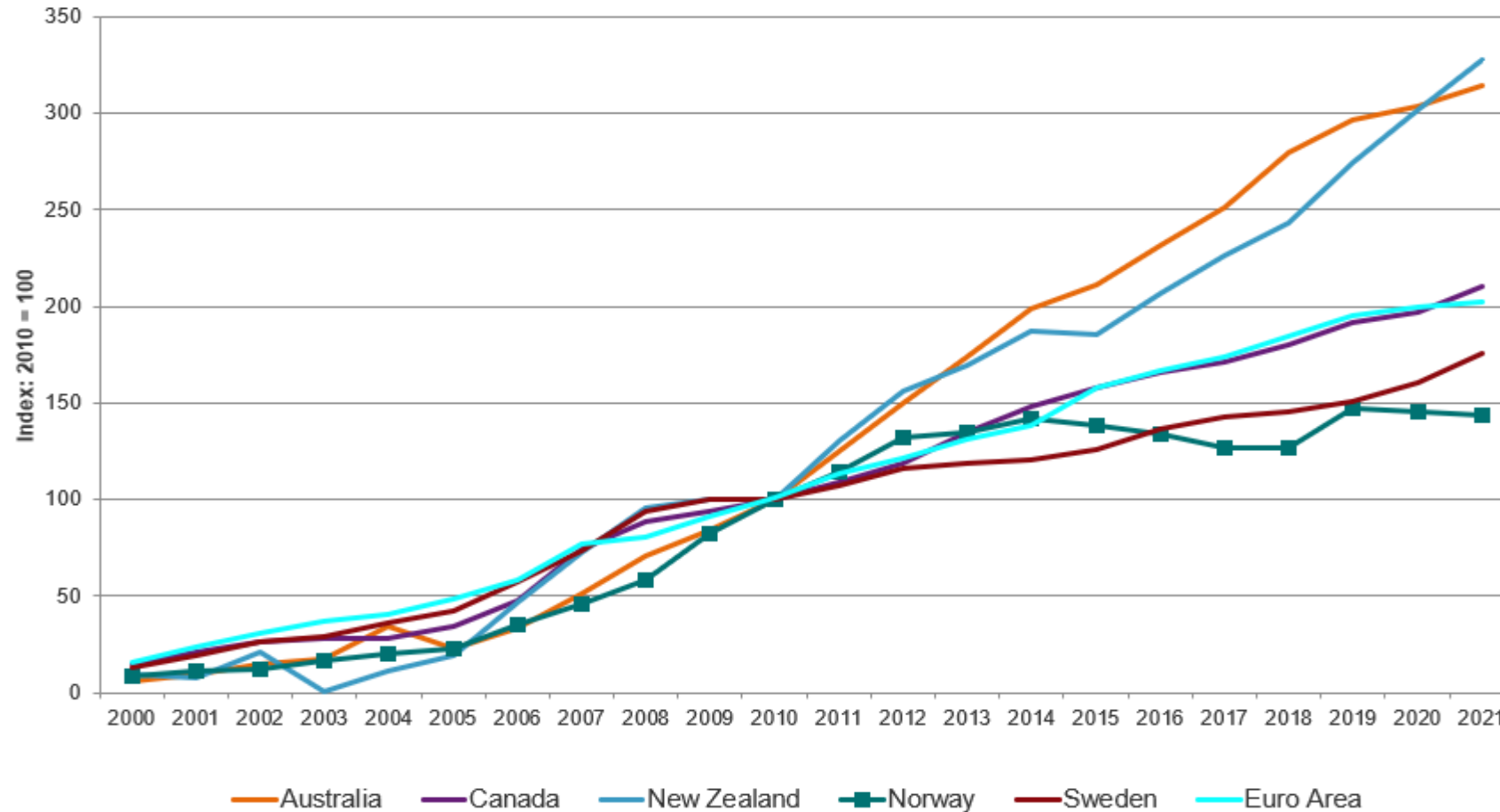


Norway: Foreign Direct Investments by sector. 2021. Bn. NOK



E) Foreign Direct Investments (FDIs): ... but at the same time failing to attract much new inflows

Norway's stagnation/reversal since the past decade an outlier compared to peers
FDI Cumulative Inflows (USD, indexed to 2010 = 100)



E) Recent tax reforms have pushed Norway up (down?) the tax league tables and introduced more uncertainty/higher political risk

Europe: Overall statutory tax rates (%). Norway now top 3



Tax changes poses a risk to foreign capex

- Our view is that the resource rent tax as it is proposed will be harmful to the viability of wind power plants in Norway, provides the potential for default on loan obligations, and may lead to a serious loss of invested capital. (...) For the above reasons and due to the uncertainty that comes with significant tax policy change, it is our view, however, that the proposals will have a negative effect on further investments in the Norwegian energy sector.”

Blackrock Inc in consultation response to government’s proposed resource rent tax on onshore wind farms

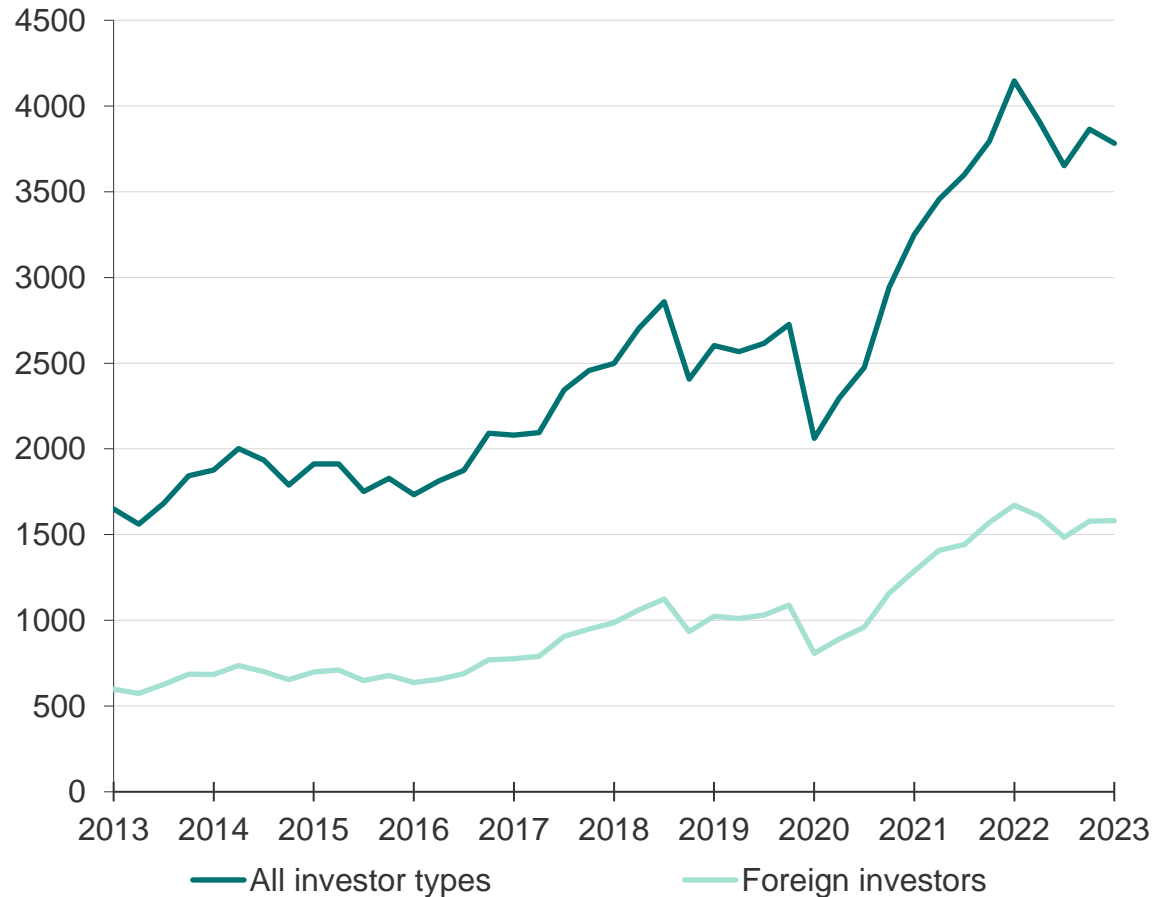
- «(...) First, the investment environment in Norway has become unpredictable and unstable. Second, foreign investors are being targeted and treated unfavourably in comparison to domestic investors. (...). From an investor’s point of view, the proposed taxes have already led to a severe degradation of Norway’s reputation as a potential jurisdiction for future investments. (...). Investors are extremely focused on political situation in Norway and proposed changes. «

Taaleri Energia (Finnish wind/sun/battery PE-asset manager) in consultation response to government’s proposed resource rent tax on onshore wind farms.

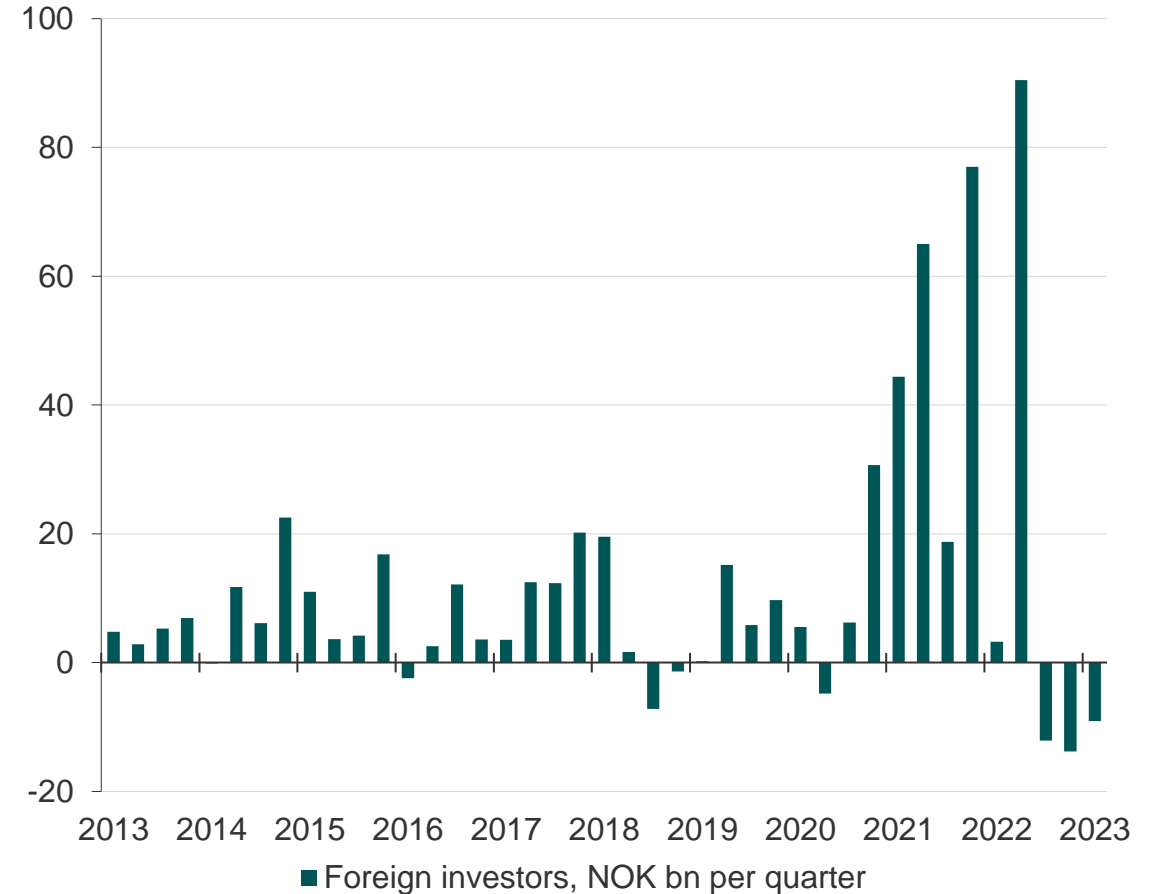
E) Are foreigners fleeing Norway?

Foreign holdings of listed stocks and bonds show little sign of foreign capital flight

Norwegian listed stocks. NOK bn



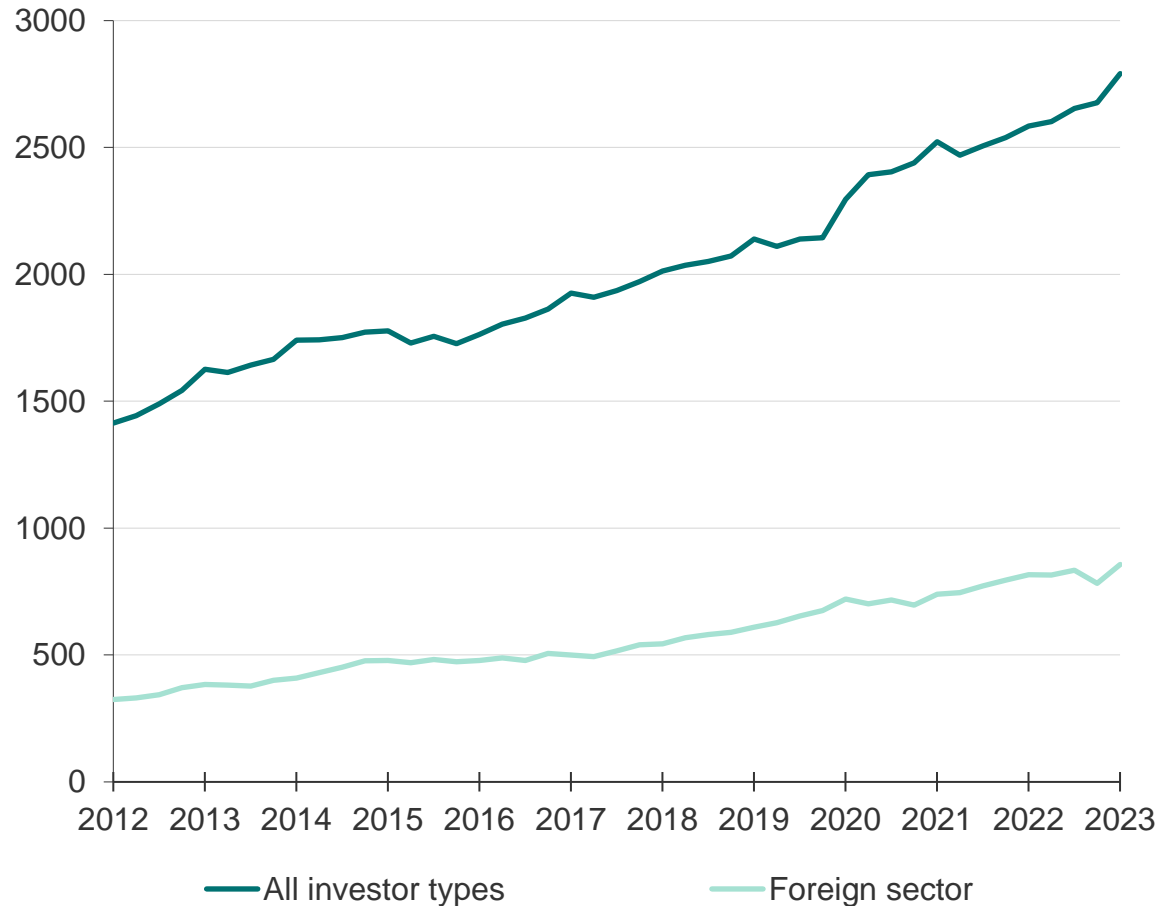
Net purchases of Norwegian listed stocks. NOK bn



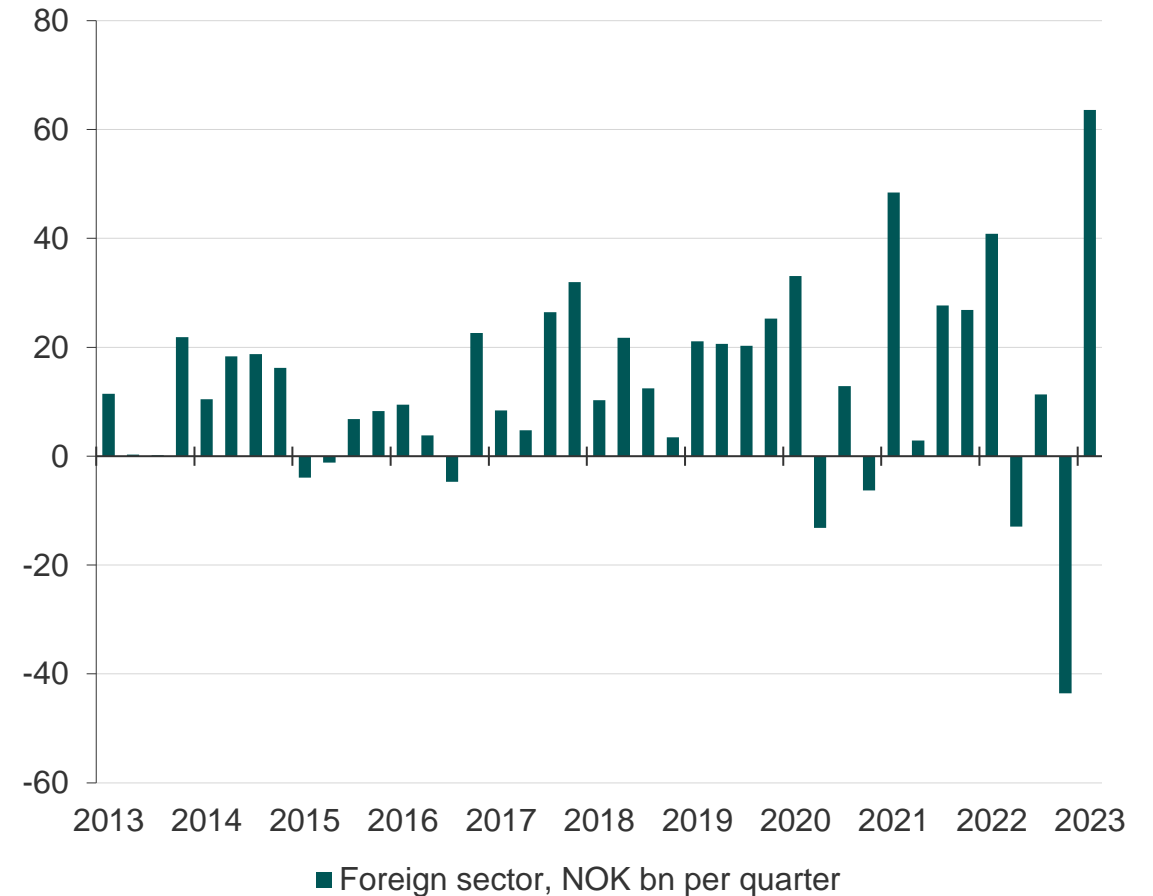
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Norwegian bonds. NOK bn.



Net purchases of Norwegian bonds. NOK bn

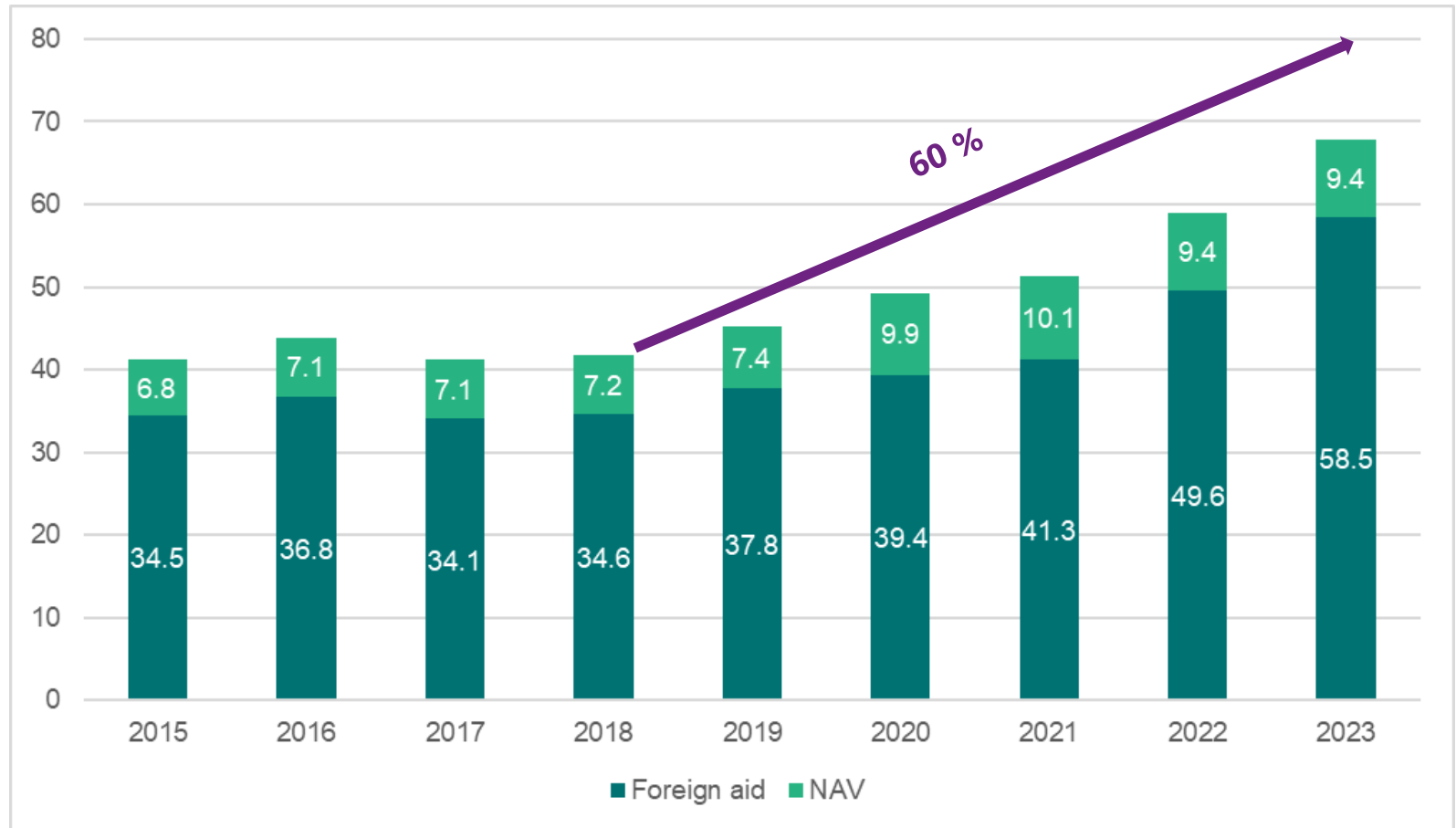


F) Is the system 'leaking' NOK?

Government non-NOK expenditures

- Norges Bank in [op-ed 23 May](#): "Over time, what matters to the FX market is petroleum revenue spending via the central government budget"
- Problem: The government budget may well be denominated in NOK but significant budget posts are de facto paid out in currency
- Foreign aid: Norway has a target of spending 1% of Gross Domestic Income on foreign aid
- NAV (The Norwegian Labour and Welfare Organization) pays out c10bn NOK in pensions and various benefits/claims to both Norwegian and international citizens living outside of Norway
- Also: Military spending (>50 new fighter jets)

Foreign aid and NAV payments have increased 60% the past 5 years. NOK billion



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