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Global uncertainty, Danish kroner and safe havens

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We investigate how the Danish krone has responded to financial market uncertainty shocks in recent decades. We show that Denmark only possesses some of the characteristics that usually define safe haven currencies, while other typical drivers of safe-haven flows are absent. Therefore, we also find a limited average and no systematic impact of *global* uncertainty shocks on the Danish krone, in contrast to other currencies that tend to either systematically appreciate or depreciate in periods of market stress. However, we do find some effects of *euro-specific* shocks that appear to strengthen the Danish krone more systematically. The results are consistent with recent uncertainty shocks and the stability of the Danish krone.

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Keywords

Danish krone | Fixed exchange-rate policy | Global uncertainty | Monetary policy

01 Introduction and main findings

Danmarks Nationalbank achieves its price stability mandate through a fixed exchange rate against the euro. Understanding the drivers of capital flows involving Danish kroner is crucial in safeguarding the fixed exchange rate policy. Historically, pressures on the Danish krone against the euro exchange rate (EUR-DKK) have occurred amid heightened uncertainty in global financial markets. While pressures on the Danish krone were consistently towards a weakening in the 1990s, the picture has been more mixed over the past 20 years. The period contains not only episodes of capital outflows amid global market uncertainty (e.g. during the Great Financial Crisis and the Covid-19 pandemic), but also episodes of appreciation pressure (during the European sovereign debt crisis and after the Swiss franc ceiling against the euro was abandoned in 2015).

In the post-pandemic era, indicators of geopolitical uncertainty have increased, and global shocks appear to be larger and more frequent. While this has occasionally increased financial market volatility, EUR-DKK has been remarkably stable. From January 2023 to end-May 2026, Danmarks Nationalbank recorded its longest spell without FX interventions under the exchange rate regime, and the monetary policy spread to the euro area has been unchanged since February 2023. Hence, investigating more systematically how the Danish krone responds to global uncertainty shocks – and whether dynamics have changed over time – is an important policy question for Danmarks Nationalbank. This question is conceptually related to the literature on safe haven currencies, which are generally understood to be in demand during periods of heightened uncertainty, triggering a broad-based appreciation.

The literature has identified several fundamental drivers of currencies' safe haven behaviour. These include a positive net foreign asset position, being a funding currency in carry trades and the size and depth of the domestic financial markets. Safe haven behaviour also tends to be self-reinforcing; if investors expect a currency to appreciate during financial market turmoil, they are likely to buy it. Denmark's net foreign asset position has increased heavily in recent decades. There is no perfect measure of a currency's use to fund carry trades. Instead, we consider two important characteristics of a funding currency in carry trades; low interest rates and deep FX markets. While Denmark has relatively low interest rates internationally, the Danish krone market remains relatively small by international standards. So do Danish financial markets more broadly. That implies mixed predictions on whether the Danish krone would behave like a safe haven currency.

While Denmark has some fundamentals of traditional safe havens, the broader safe haven properties of a pegged currency will solely reflect those of the anchor currency. Therefore, the traditional drivers of safe haven currencies could have less explanatory power in the Danish case. Consequently, we investigate more narrowly how global uncertainty affects EUR-DKK, which is also the policy variable of interest for Danmarks Nationalbank. A suite of global uncertainty measures is used.[1] As all these measures are derived from global financial markets, they are exogenous to the Danish krone market. Therefore, we can rely on simple methods like correlations, OLS regressions and local projections.

[1] The baseline is the safe-haven factor from Groethe et al. (2025), which summarises price developments across a range of assets that are often associated with safe haven properties. For robustness, the VIX index, the risk-on-risk-off index from Chari et al. (2024) and the funding stress factor from Adolfsen et al. (2026) are used as alternatives.

Naturally, variations in EUR-DKK are limited due to the peg. Therefore, the exchange rate itself does not provide a complete picture of changes in demand for Danish kroner against the euro. Consequently, we also use a daily version of the exchange market pressure (EMP) index for Danish kroner from Goldberg and Krogstrup (2023). The EMP takes into account central bank responses to capital flows that assert pressure on currencies by weighing currency movements, FX interventions and policy rate changes into one metric of exchange market pressure. As the EMP entails model uncertainty, we also investigate how each of its subcomponents react to global uncertainty shocks. This provides a comprehensive picture of how private sector demand for Danish kroner changes in response to global uncertainty. We abstract from looking at gross capital flows from e.g. individual sectors. The reason is that the private sectors' net flows will be reflected in FX interventions or changes in the interest rate spread of the Danish central bank to the extent that they imply pressure on the Danish krone. While looking at gross capital flows would shed light on different channels through which demand for Danish kroner might change, this analysis is outside the scope of this staff paper.

Our main finding is that the EUR-DKK exchange rate has shown very muted responses to global uncertainty shocks over the past two decades. This also applies to the EMP index and its subcomponents. Compared to traditional safe haven currencies (Swiss franc or Japanese yen) and risk-on currencies (Australian and Canadian dollar and Norwegian kroner), EUR-DKK does not behave systematically like any of the two currency groups. A plausible explanation is that the effect of having a high net foreign asset position is offset by the small size of Danish financial markets. The limited variation in EUR-DKK could also eliminate the self-fulfilling property of currency movements, which could explain why EUR-DKK does not seem to act as either safe haven or risk-on currency. Although Denmark's net foreign asset position has increased a great deal in recent decades, rolling regressions do not indicate that the relationship between global uncertainty and EUR-DKK has changed notably over time. The muted average response is confirmed by a case study of recent episodes of pressure on the Danish kroner or spikes in global uncertainty measures. For instance, the Russian invasion of Ukraine, the collapse of Silicon Valley Bank, the significant increase in US tariffs in April 2025 and the recent war in the Middle East led to heightened global market uncertainty, with limited impact on the Danish krone market.

Instead, we find evidence that euro-specific risk leads to an appreciation of the Danish krone against the euro. Specifically, increases in euro area government bond yields relative to swaps[2], partly reflecting sovereign risks in the euro area, are associated with a stronger Danish krone. While the European sovereign debt crisis is a case in point, the pattern is also visible outside this episode. It is somewhat intuitive that euro-specific uncertainty is particularly relevant for EUR-DKK, and the findings are in line with Jørgensen, Larsen and Risbjerg (2013).

From a policy perspective, our findings have the following implications: Firstly, it is very difficult to predict how possible future global uncertainty shocks will impact the Danish krone. While the average response is muted, pressures in either direction cannot be ruled out, depending on the specific channels at play. Previous research has already identified some of these channels. These include how the Danish pension sector's FX hedging can generate substantial DKK capital flows amid valuation changes in the US stock market.[3] By contrast, Danish corporates have been less involved in recent episodes of DKK pressure, as their demand for Danish kroner is mainly driven by their exports.[4] Identifying more of

[2] We use 10-year GDP-weighted euro area government bond yields relative to 10-year overnight index swaps. In the measure we use Germany, Italy, France, Spain and the Netherlands.
[3] See Grønlund, Jensen and Steffensen (2024).
[4] See Otte, Risbjerg and Tjørnum (2026).

such channels is an obvious avenue for future research. Secondly, higher risk premia in euro government bond markets are likely to trigger capital inflows to Danish kroner. The magnitude of this channel might, however, be smaller than during the sovereign debt crisis, due to the presence of ECB's Outright Monetary Transactions and the Transmission Protection Instrument, which contains unwarranted movements in euro area sovereign bond spreads.

02 Relation to the safe haven literature

Investigating how EUR-DKK responds to global uncertainty has a conceptual overlap with the safe haven literature, where several fundamentals of safe haven currencies have been identified. However, the safe haven literature has mainly focused on floating exchange rates, which are naturally different from the fixed exchange rate of the Danish krone against the euro. Below, we discuss safe haven properties in a fixed exchange rate regime and what it implies for our empirical strategy.

Safe haven currencies are not uniquely defined in the literature
While there is no universal definition of a safe haven currency, they are generally perceived as appreciating during periods of heightened risk aversion or economic uncertainty (see, for instance, Botman et al. (2013) or Ranaldo and Söderlind (2010)). A safe haven currency thus provides investors insurance during risk-off episodes, where most other asset prices tumble and marginal utility of consumption is high. Conceptually, this definition implies that a safe haven currency should appreciate against a broad basket of other currencies during market turmoil to provide the hedge. One way to operationalise this concept is by looking at the nominal effective exchange rate of a currency (see Hossfeld and MacDonald (2015) or Grothe et al. (2025)). Others have investigated safe haven behaviour using a range of currency pairs against the US dollar, being the world's dominant currency (see Ranaldo and Söderlind (2010) or Habib and Stracca (2012)). From a Danish perspective, it makes less sense to study general safe haven behaviour based on the nominal effective exchange rate, as that would simply be a mirror image of the potential safe haven properties of the euro. From a macroeconomic perspective, regardless of the monetary policy regime, it remains relevant whether the nominal effective exchange rate appreciates or depreciates during global uncertainty spikes. However, from a monetary policy perspective, the nominal effective exchange rate is less relevant for Danmarks Nationalbank than for inflation-targeting central banks. The nominal effective exchange rate matters for imported inflation and economic activity, thus affecting how inflation-targeting central banks set their policy rates. By contrast, Danmarks Nationalbank secures its price stability mandate through a fixed exchange rate policy and sets policy rates solely to keep EUR-DKK fixed. Therefore, we focus on EUR-DKK.

When a currency has shown safe haven dynamics in the past, it may be self-reinforcing: As global investors expect a certain currency to appreciate during financial stress, it can generate additional capital inflows to the specific country, fuelling appreciation of the currency (see Goldberg and Krogstrup (2023)). In the following, we will take a closer look at the fundamental economic drivers that create safe haven (or risk-on) status in the first place and relate those to Denmark.

Different fundamentals of safe havens have been identified in the literature
Safe haven currencies are often used to fund carry trades, which are basically a short position in a low-yielding currency and a long position in a high-yielding currency. A carry trade can be implemented in several ways. The perhaps most common one is to borrow in one currency and buy an asset in another (see Brunnermeier et al. (2008), Habib and Stracca (2012) or Hossfeld and MacDonald

(2015)[5]). Conceptually, a Danish pension fund (with liabilities in Danish kroner) buying euro bonds is engaging in a sort of carry trade. As carry trades are typically geared investments, global uncertainty spikes will typically lead investors to sell assets in the high-yielding currency (which depreciates) and buy the funding currency (which appreciates). Brunnermeier et al. (2008) find this channel to be important for the safe haven behaviour of the Swiss franc and Japanese yen. In general, there is no perfect quantitative measure of the use as funding currency in carry trades. Often, the net short position in a currency of hedge funds through futures is used as a proxy – but such products are only traded for the largest currencies. Instead, we consider two key characteristics of funding currencies in carry trades to judge whether a currency is usable as a funding currency. These are low interest rates (as there should be a yield pick-up) and deep FX markets (so investors can leverage sufficiently without moving prices).

Habib and Stracca (2012) also identify a country's external vulnerabilities – specifically the net foreign asset position - as an important predictor of its currency's safe haven status. A positive net foreign asset position is associated with an expected appreciation of the domestic currency (against the US dollar) during periods of global financial stress. This appreciation in the currency of creditor nations is attributed to repatriation flows, as investors generally reduce their foreign asset holdings and buy domestic assets in periods of global financial stress (see for instance Adler et al. (2016)). Naturally, there are some caveats to this channel, which also depends on *gross* foreign assets, the investors holding the external balances and whether they FX hedge their positions. For instance, Grønlund, Jensen and Steffensen (2024) have shown that Danish pension funds – holding a large share of Denmark's net foreign assets – sell Danish kroner amid US stock price declines to rebalance their FX hedge ratios. Such behaviour could somewhat mute the repatriation effect. Camanho, Hau and Rey (2022) have shown that equity flows matter more for currency dynamics than other portfolio flows, as equity investments are generally FX hedged to a lesser extent.

Habib and Stracca (2012) further find that absolute market size – as measured by the domestic stock market - supports a currency's safe haven status. This can work through several channels. Firstly, during periods of heightened global risk aversion, market liquidity may deteriorate, leading investors to favour large and highly liquid financial markets. Besides the domestic stock market, the size of domestic bond or FX markets could also matter for this effect. An event that demonstrates this pattern is the Global Financial Crisis, where small currencies tended to depreciate. Secondly, a large domestic equity market could also imply large holdings of foreign investors. If these FX hedge their positions, stock price declines amid global uncertainty could trigger appreciation of the domestic currency through the rebalancing of FX hedging. Lastly, strong public institutions and stable economic policy are also a prerequisite for being a safe haven currency (Habib and Stracca 2012).

Masujima (2019) argues that the importance of the drivers of safe haven status could be changing over time. Specifically, he argues that market-driven factors (carry trade and market size) have been increasingly important since the Great Financial Crisis, at the expense of external vulnerabilities (current account surplus and net foreign asset position). One explanation could be increased global financial integration and that the growth in financial cross-border flows has outpaced that of trade flows in recent decades. The rapid increase in FX market

[5] Hossfeld and MacDonald (2015) distinguish 'true' safe haven currencies from currencies that mainly appreciate due to carry trade unwind. They argue that the Swiss franc (and to some extent the US dollar) are true safe havens, while the Japanese yen mainly appreciates due to carry trade unwinding.

turnover – especially through FX swaps – is one example of this.[6] Increased global financial integration and the importance of financial flows is also reflected in the 'global financial cycle', identified by Rey (2015).

When the drivers of currency dynamics can change over time, so can the macroeconomic and financial fundamentals of safe haven status, and the relative importance of each factor.

The Danish krone has some fundamental safe haven characteristics but lacks others

In this paragraph, we examine how the Danish krone fits the characteristics of safe haven currencies discussed above. Denmark is compared to two traditional safe havens (Swiss franc and Japanese yen), two risk-on currencies (Australian and Canadian dollar) and two other Nordic countries (Norway and Sweden).

Like other previous negative interest rate policy countries (Sweden, Japan and Switzerland), short-term Danish krone rates have been relatively low since the start of the 2010s, see chart 1. This is particularly evident when compared to more traditional risk-on currencies such as the Canadian dollar and the Australian dollar. While low rates are a necessary condition for being a funding currency, the average daily turnover in the Danish krone market is quite low in an international context. This is especially so compared to traditional funding currencies in carry trades such as the Swiss franc and the Japanese yen, see chart 2.[7] This makes the Danish krone a less obvious choice for funding in carry trading at a large scale. The Australian and Canadian dollar are obvious choices for investment currencies in carry trades, as they have a large turnover and relatively high interest rates.

Denmark has had a large and increasing net foreign asset position relative to GDP since 2010, see chart 3. Over the past decade, Denmark has moved closer to Switzerland and surpassed Japan in terms of net foreign assets to GDP, but is still far behind Norway. Norway is arguably an outlier due to the Government Pension Fund Global (the Fund) holding the lion's share of Norway's net foreign assets and having an investment policy of investing abroad. This means that the classic retrenchment effect identified in the safe haven literature is likely to be smaller for Norway than the size of the net foreign asset position would suggest.[8] Denmark's large net foreign asset position could lead to repatriation during times of financial stress, adding a strengthening pressure on the Danish krone. It is worth noting that Denmark's large net foreign asset position masks huge gross foreign assets and external liabilities, which can have different effects on the Danish krone during heightened uncertainty. For instance, during the capital outflows from Danish kroner during the outbreak of the Covid-19 pandemic, Danish pension funds contributed heavily to the outflow although they have large net foreign assets. The channel was exactly rebalancing of FX hedging mentioned above.

Denmark's stock market is quite small in an international context, see chart 4a. Relative to GDP, the Danish stock market is comparable to the other countries considered, see chart 4b. Combined with the relatively small currency market, this would make Danish kroner less attractive during deteriorating liquidity conditions, where investors typically turn to large and highly liquid financial markets. The same applies to Norway and Sweden. As an example, all three countries faced capital outflows during the height of the Great Financial Crisis.

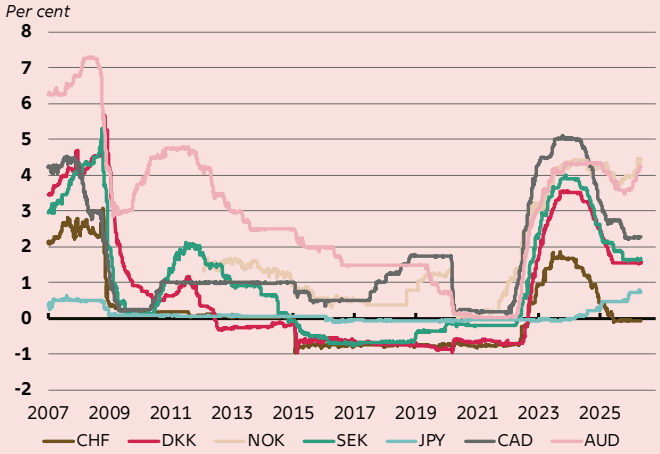
[6] See, for instance, the Triennial Central Bank Survey of foreign exchange and Over-the-counter (OTC) derivatives markets in 2025 conducted by the Bank for International Settlements.
[7] Note that the total turnover is mainly driven by FX swaps, which, in isolation, cannot be used to do carry trades, as currency exposures are unchanged.
[8] Norges Bank have also communicated that the Norwegian krone usually weakens during heightened geopolitical and economic uncertainty, mentioning liquidity and rebalancing of FX hedging by domestic asset managers as key factors, see Wolden Bache (2024).

While not identified as a driver of safe haven dynamics in the literature, Denmark's relatively large and liquid mortgage bond market played a special role during the Great Financial Crisis. While it was not possible to trade in some bond markets, the Danish bond market remained liquid and foreign investors sold large amounts, adding to the depreciation pressure.[9]

In short, Denmark appears to have a mixed set of fundamentals related to safe haven currencies. While the net foreign asset position points to safe haven features, the small size of the Danish financial markets is more of a risk-on characteristic. Lastly, the Danish krone is not an obvious choice as either a funding or investment currency in carry trades.

CHART 1

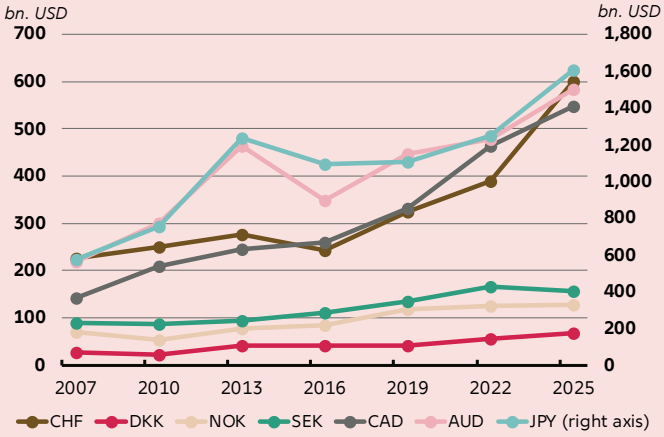
Domestic short-term interest rates



Note: The relevant short-term interest rate is the 1-month OIS. For DKK, observations after 9 March 2023 are based on the DESTR 1-month OIS. For earlier periods, the series is constructed from the CIBOR 1-month OIS, adjusted by subtracting the average spread between CIBOR and DESTR over the period 10 March 2023 to 31 July 2026. The same methodology is used for SEK. The series for CHF is constructed in a similar way, where the 1-month adjusted LIBOR is used prior to 1 January 2022 and the 1-month SARON is used thereafter. For NOK, the generic 1-year government bond rate is used due to data availability. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg.

CHART 2

Daily currency turnover

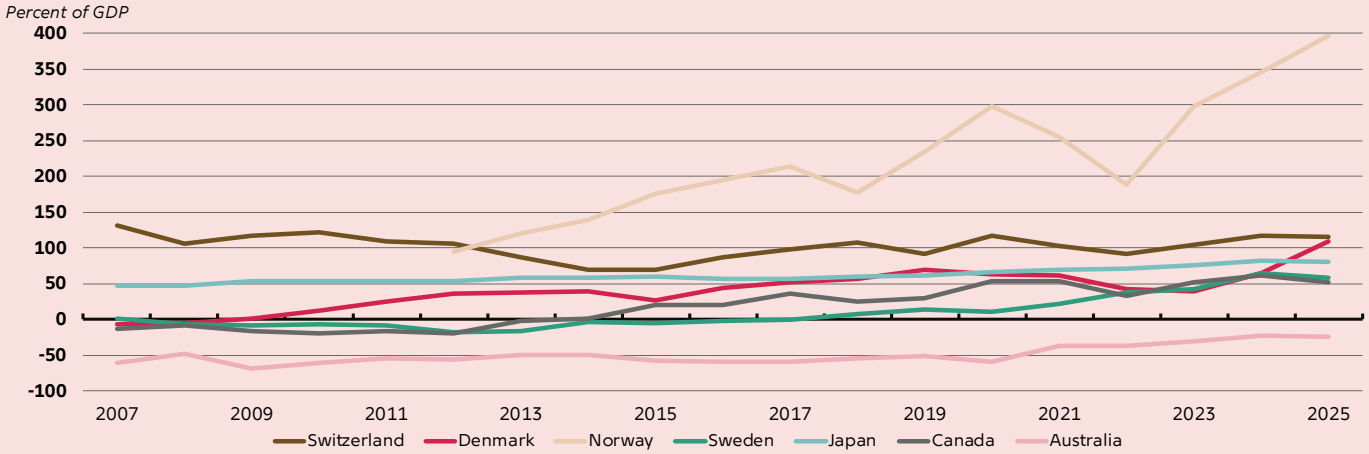


Note: OTC average daily foreign exchange turnover. Numbers include spot contracts, forward contracts, FX swaps, currency swaps and FX options. The sample covers triennial data from 2007 to 2025.
Source: BIS Triennial Survey.

[9] See Grønlund and Risbjerg (2020).

CHART 3

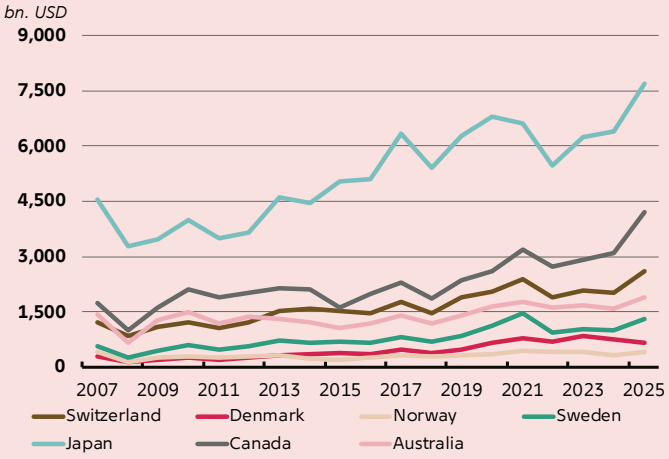
Net international investment position relative to domestic GDP



Note: The sample covers annual data from 2007 to 2025.
Source: IMF and Haver Analytics.

CHART 4A

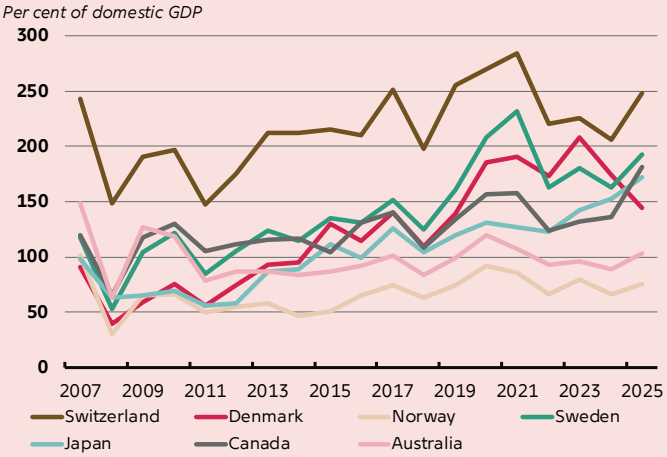
Market cap of domestic listed equities



Note: The market capitalisation of domestically listed equity is based on Bloomberg estimates.
Source: Bloomberg.

CHART 4B

Market cap of domestic listed equity relative to domestic GDP



Note: The market capitalisation of domestically listed equity is based on Bloomberg estimates.
Source: Bloomberg, IMF and Haver Analytics.

03 Measuring global uncertainty and its effect on the Danish krone

This part describes the uncertainty measures used and considers how to measure appreciation in a fixed exchange rate regime. Finally, we discuss how to estimate the relationship between global uncertainty and the Danish krone empirically.

A suite of four measures of global financial market uncertainty is used
There are several measures of global financial market uncertainty. To ensure that our results are robust, we use four different measures. Our baseline measure of global financial market uncertainty is the safe-haven factor constructed by Grothe et al. (2025). This factor is derived as the first principal component of daily changes in a range of variables often associated with safe haven characteristics. These are nominal effective exchange rates (US dollar, euro, Japanese yen, Swiss franc), 10-year government bond yields (US, Germany and Japan), the gold price and the VIX index.[10]

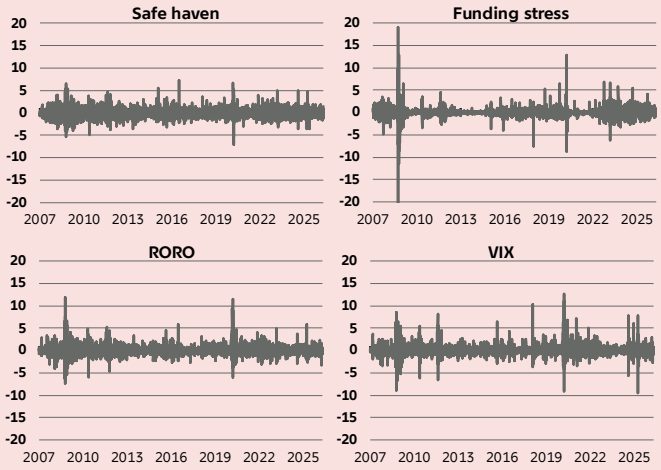
We also use three alternative measures of global uncertainty. Results from these alternative measures are reported in the Annex. The first is simply the VIX index, being one of the most widely used measures of global risk aversion in the safe haven literature. The second is the risk-on/risk-off (RORO) index from Chari et al. (2024). The RORO index is based on daily changes in several financial market variables in the US and the euro area. The overall index aggregates information across four broad categories - credit risk, equity market volatility, funding conditions and currencies as well as gold. The third alternative measure is the funding stress factor from Adolfsen et al. (2026), which narrowly focuses on stress in funding markets. The funding stress factor is the first principal component of daily changes in IBOR-OIS spreads (US, Japan, the euro area and the UK) and deviations from the covered interest parity between US dollar, the euro, the Japanese yen, the Swiss franc and the British pound.[11]

Our four uncertainty measures overlap – both conceptually, but also in some of the input variables. As a result, they show some co-movement, see chart 5 and table 1. Increases in all four uncertainty measures are associated with lower US stock prices. Hence, the measures should incorporate Danish pension funds' rebalancing of USD hedging amid US stock prices declines. The funding stress factor stands out, having a relatively low correlation with the other indicators. This reflects the fact that the funding stress factor picks up episodes where borrowing costs surge, while the other indicators mainly sum up changes in asset prices.[12] Therefore, when studying the effect of the other global uncertainty measures on the Danish krone, we control for the funding stress factor through regression analysis.

[10] Measuring implied 30-day volatility in the S&P500 index.
[11] From 2023, IBOR-OIS spreads are discontinued from the factor due to IBOR transitions.
[12] See Adolfsen, Grønlund and Harr (2026) for further details.

CHART 5

The measures of global uncertainty spike at well-known episodes of market turmoil



Note: All four series are normalised to have unit variance. The safe-haven factor is from Grothe et al. (2025), the funding stress factor from Adolfsen et al. (2026) and the RORO index is from Chari et al. (2024). The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

TABLE 1

Measures of global uncertainty show some co-movement, but pick up different types of uncertainty

Correlations	Safe haven	RORO	VIX	Funding stress	S&P 500
Safe haven	0	0.61	0.48	0.19	-0.45
RORO	0	0	0.68	0.29	-0.73
VIX	0	0	0	0.15	-0.81
Funding Stress	0	0	0	0	-0.15
S&P 500	0	0	0	0	0

Note: Correlation matrix of the four uncertainty measures described in chart 5 and daily returns on S&P500. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

Measuring currency developments is not trivial in a fixed exchange rate regime
As mentioned above, we intend to investigate how EUR-DKK responds to global uncertainty – rather than the nominal effective exchange rate, which almost solely reflects the dynamics of the euro. An obvious problem with using EUR-DKK is that Danmarks Nationalbank counters movements in the exchange rate through FX interventions and by changing policy rates relative to the ECB. In addition, the peg might imply self-stabilisation in EUR-DKK, if market participants expect Danmarks Nationalbank to intervene or change the policy rate spread to the euro area. Hence, EUR-DKK does not reveal the full underlying demand or supply of Danish kroner relative to euros. To somehow account for this, we also use the Exchange Market Pressure (EMP) Index for the Danish krone from Goldberg and Krogstrup (2023). The EMP index weighs currency movements (EUR-DKK), FX interventions and policy rate changes together in one metric, translated into exchange rate equivalents. Thus, it captures pressures on the Danish krone more broadly, and it is comparable to a floating exchange rate. While theoretically appealing, the EMP index adds model uncertainty to our empirical investigation. Therefore, we also investigate how the individual components of the EMP index – the exchange rate, FX interventions and the monetary policy spread to the euro area[13] – react to global uncertainty.

To determine the effect of global uncertainty on the Danish krone, all four uncertainty measures are assumed to be exogenous to the Danish krone
Our key identifying assumption is that causality between our global uncertainty measures and EUR-DKK is one-sided. Specifically, we assume that global uncertainty affects EUR-DKK, but that EUR-DKK does not impact global

[13] Only the domestic policy rate is included in the EMP index from Goldberg and Krogstrup (2023). This is because the index is constructed for a large sample of countries. In Denmark's case, the policy rate spread to the euro area is a more relevant variable. Therefore, we investigate how the policy rate spread reacts to global uncertainty, even though it does not feature in the EMP index.

uncertainty. Given the size of the Danish economy, the size of the Danish krone market and the exchange rate peg to the euro, this seems like a reasonable assumption. Additionally, none of the four global uncertainty measures include variables related to Denmark or the Danish krone, but rely solely on global financial market data.

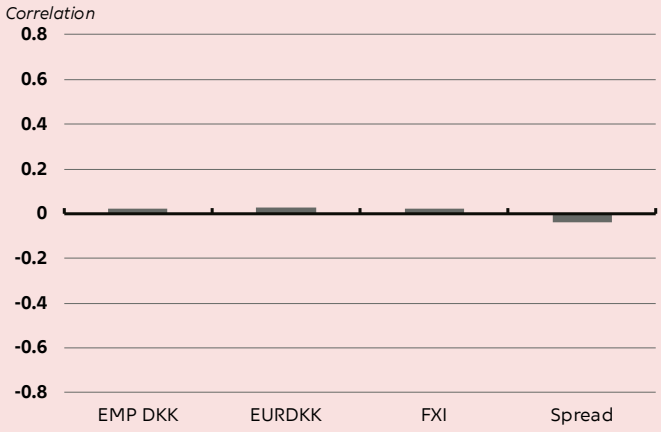
This assumption makes it possible to interpret changes in global uncertainty measures as a shock – from the perspective of the Danish krone market. Hence, simple time series regressions will be sufficient to study how global uncertainty affects the Danish krone exchange rate contemporaneously. To investigate whether global uncertainty affects the Danish krone with lags, we also use local projections as in Jordà (2005).

04 Empirical results: Global uncertainty has a modest impact on the Danish krone

This part presents our empirical results. Firstly, we investigate how EUR-DKK and the EMP index respond to increases in global uncertainty. We compare the reaction to several other currencies, including traditional safe havens, risk-on currencies and other Nordic currencies. Secondly, we explore how the Danish krone market reacts to euro-specific risk.

CHART 6

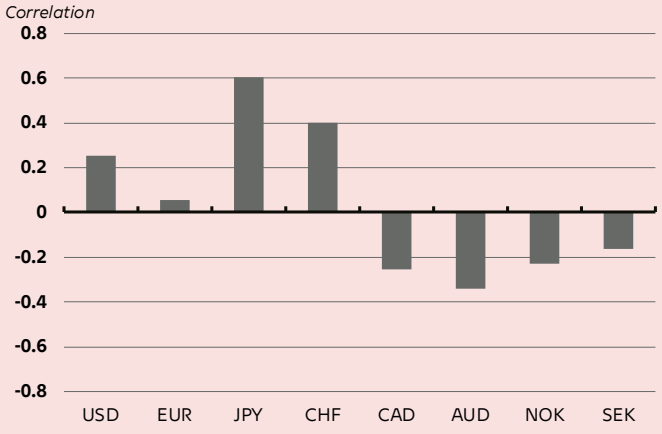
Correlations suggest near-zero correlation between the Danish krone and the safe-haven factor ..



Note: Contemporaneous correlation between selected variables and the safe-haven factor from Groethe et al. (2025). 'EMP DKK' is the Exchange Market Pressure Index for Denmark (defined relative to the euro). EUR-DKK is the exchange rate between Danish kroner and euro, FXI is Danmarks Nationalbank's purchase of foreign currency (FX interventions) and 'Spread' is the monetary policy spread between Denmark and the euro area. Positive (negative) values correspond to capital inflows (outflows) to Danish kroner, i.e. lower (higher) EUR-DKK, purchase of foreign currency and lower monetary policy spread between Denmark and the euro area. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg

CHART 7

.. especially compared to other currencies



Note: Contemporaneous correlation between selected nominal effective exchange rates and the safe-haven factor from Groethe et al. (2025). The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

Global uncertainty does not seem to move the Danish krone systematically in a particular direction

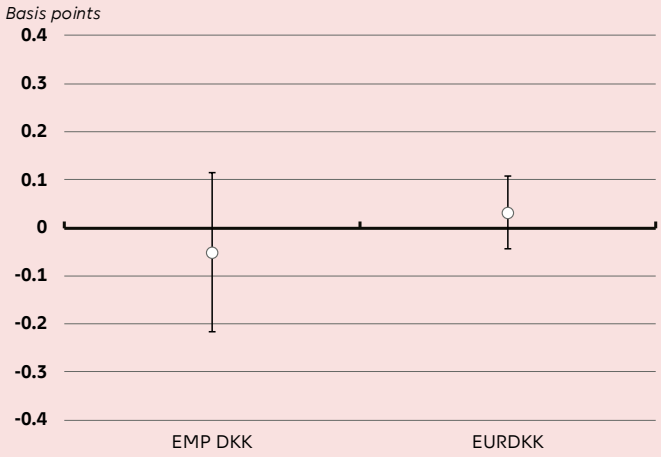
Both EUR-DKK and the EMP index for Danish kroner show near-zero correlation with the safe-haven factor in a sample covering the past two decades, see chart 6. The same applies to Danmarks Nationalbank's FX interventions and the monetary policy spread between Danish kroner and the euro. The overall response constitutes an average over the sample considered. Thus, the near-zero average relationship could reflect that the relation has changed over time or across different episodes. In contrast to the results for EUR-DKK, the nominal effective exchange rates of classic safe haven currencies like the Swiss franc and Japanese yen have a clear positive correlation with the safe-haven factor, see

chart 7. At the same time, risk-on currencies like the Australian and Canadian dollar as well as the Norwegian krone all exhibit clear negative correlations with the safe-haven factor. A similar pattern is found when using our three alternative measures of global uncertainty, see chart A.1 and A.2 in the Annex. Qualitatively similar results for the benchmark currencies in chart 7 are also found when using bilateral exchange rates against the euro rather than nominal effective exchange rates, see chart A.3 in the Annex.

Simple regressions – controlling for domestic short-term rates, stock market developments and the funding stress factor – also do not indicate that the Danish krone responds systematically to global safe-haven flows. This applies both to EUR-DKK and the EMP index, see chart 8. The estimated effects are very modest and statistically insignificant. Similar results are found for Danmarks Nationalbank's FX interventions and the policy rate spread to the euro area, see chart A.5 in the Annex. Estimates for other currencies confirm the picture shown by the correlations, see chart 9. The overall picture from these regressions is also found for alternative measures of global uncertainty and using bilateral exchange rates against the euro, see chart A.4, A.6 and A.7 in the Annex.

CHART 8

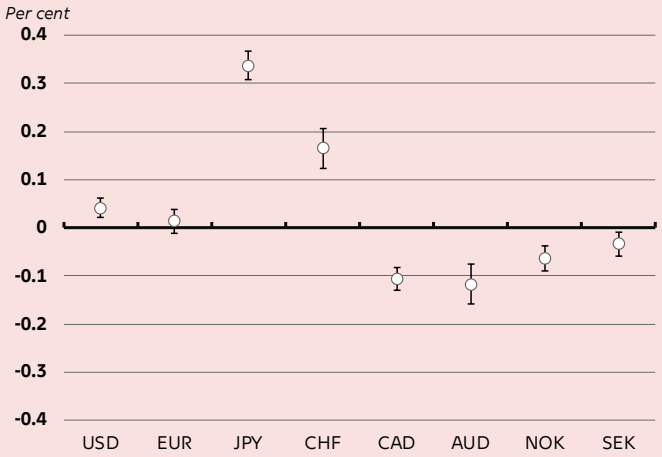
Simple regressions do not suggest a clear relationship between the Danish krone and global uncertainty



Note: Estimated contemporaneous basis point response to a 1 standard deviation change in the safe-haven factor using OLS. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART 9

Other currencies respond more systematically to global uncertainty



Note: Estimated contemporaneous response of nominal effect exchange rates to a 1 standard deviation change in the safe-haven factor using OLS. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

One interpretation of the modest and insignificant effect could be that the differences in characteristics that could drive safe haven behaviour in the Danish krone would pull in different directions when facing a shock to global uncertainty. While Denmark's net foreign asset position is a classic safe haven characteristic, the fact that the Danish krone market, and Danish financial markets more broadly, are small by international scale is not. By contrast, as discussed in the previous section, the Swiss franc and Japanese yen share safe haven characteristics more broadly. At the other end of the spectrum, the Canadian and Australian dollar are classical investment currencies in carry trades. Among the other Nordic countries, Sweden has a much smaller net foreign asset position than Denmark, and Norway is a special case due to the

Fund, essentially having no home bias due to its construction. As safe haven dynamics are self-reinforcing, the limited variation in EUR-DKK could also be an explanation why it lies somewhere between classic safe havens and risk-on currencies.

The modest relation between global financial uncertainty and the Danish krone is stable across time and timing

While the modest relationship between global uncertainty and the Danish krone represents an average, the relationship could potentially have changed in recent decades, where Denmark's net foreign asset position has increased substantially. However, rolling window regressions do not find this pattern. Specifically, coefficients from rolling window regressions of EUR-DKK and the EMP index on the safe-haven factor hover around zero without a clear trend, see chart 10. On the surface, the estimated relation around the outbreak of the Covid-19 pandemic suggests that global uncertainty shocks were temporarily associated with a stronger Danish kroner against the euro. However, this does not square well with the depreciation pressure on the Danish krone observed in March 2020. The estimates likely reflect high volatility in the safe-haven factor in March 2020, which eased significantly after its local peak. The easing of the safe-haven factor coincided with the capital outflows from the Danish krone. Using our three alternative measures of global uncertainty also suggests a zero relation between global uncertainty and the EUR-DKK and EMP, see chart A.8 and A.9 in the Annex. Over the rest of our sample, the three alternative uncertainty measures confirm the pattern of the safe-haven factor.

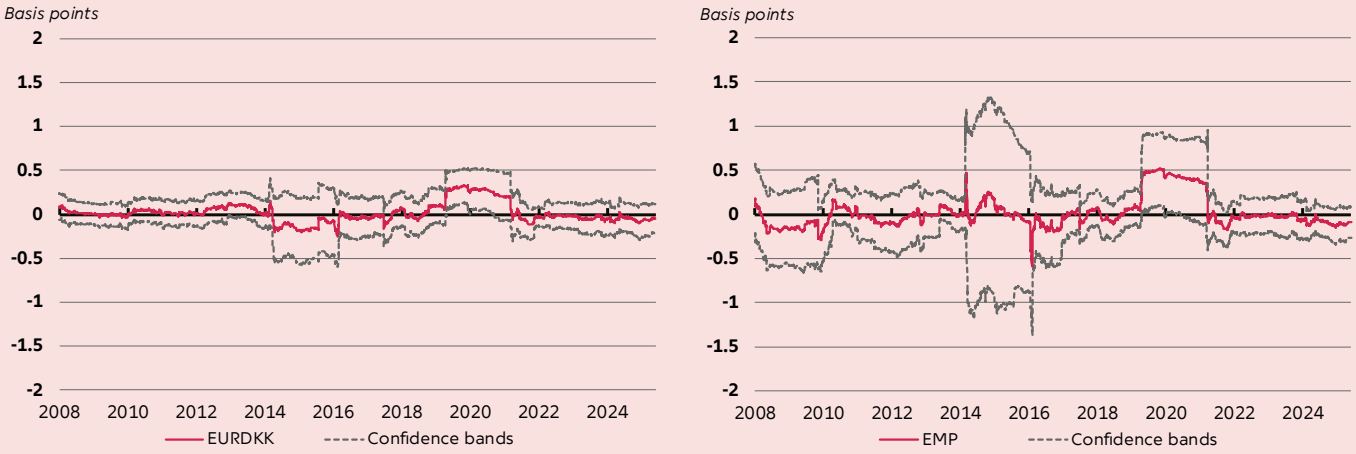
As suggested by the outbreak of the Covid-19 pandemic, the relation between global uncertainty and the Danish krone market could be lagged rather than contemporaneous, as our regressions have assumed so far. However, local projection exercises do not suggest that global uncertainty affects EUR-DKK or EMP systematically with a lag up to ten trading days upon impact, see chart A.10 and A.11 in the Annex. This suggests that the relation between the safe-haven factor and the Danish krone during the Covid-19 outbreak is more of an outlier than a general trend.

One way to reconcile the rising Danish net foreign asset position and the unchanged relation between EUR-DKK and global uncertainty could be that the net foreign asset position has become less important over time. This is related to the point raised by Masujima (2019), who studies how safe-haven determinants vary over time. Specifically, he finds that the current account surplus (which accumulates as increased net foreign assets) was most important before the Great Financial Crisis, while market driven factors (e.g. carry trades and liquidity) have become more important since then. This could be related to the very large increase in *gross* foreign asset positions in recent decades, which can trigger large cross-border capital flows amid financial market movements.

The above results and considerations highlight the importance of further investigation into how business models and investment preferences of different sectors as well as differences in the composition of external balances may affect drivers of exchange rate pressures. While Grønlund, Jensen and Steffensen (2024) have done so for the FX hedging of Danish pension funds, and Otte, Risbjerg and Tjørnum (2026) have investigated how corporates affect the Danish krone market, exploring such channels using microdata is a promising avenue for future research.

CHART 10

No clear change in the relationship between global safe-haven flows and EUR-DKK and the EMP



Note: 2-year rolling regressions. Estimated contemporaneous response to a 1 standard deviation change in the safe-haven factor. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

The results are consistent with recent episodes of pressures on EUR-DKK or spikes in global uncertainty measures, which do not show a clear pattern

The finding that global uncertainty on average has small effects on EUR-DKK and EMP squares well with recent episodes of pressure on EUR-DKK or spikes in global uncertainty measures. Over the past 20 years, there have been four episodes of greater exchange market pressure on the Danish krone.[14] In general, these four episodes have been associated with heightened global uncertainty, as indicated by all four measures of global uncertainty, see table 2. However, during these episodes, the Danish krone faced both depreciation pressures (Great Financial Crisis and Covid-19) and appreciation pressures (European Sovereign Debt Crisis and Reserve Krone Crisis in start 2015). A traditional safe haven currency would be expected to appreciate (or attract capital inflows) consistently through such episodes, while a traditional risk-on currency would typically depreciate (or be subject to capital outflows). The lack of a clear direction in Danish krone pressures amid heightening global uncertainty confirms the average results above and is likely to reflect the fact that exchange rate pressures have emerged through different channels, see Grønlund and Risbjerg (2020) for more details.

Besides the Covid-19 pandemic, the 2020s witnessed several events triggering spikes in global uncertainty measures. These include the Russian invasion of Ukraine in 2022, the Silicon Valley Bank collapse in 2023, the significant increase in US tariffs in April 2025, and the recent war in the Middle East. While the Danish krone depreciated slightly against the euro on these occasions, the pressure was very modest and not accompanied by FX interventions or changes in the interest rate spread to the euro area by Danmarks Nationalbank. Hence, the episodes confirm the limited response of the Danish krone to global uncertainty.

[14] These occurred during the Great Financial Crisis, the European Sovereign Debt Crisis, at the start of 2015 after the Swiss franc ceiling against the euro was abandoned ('Reverse Krone Crisis') and the outbreak of the Covid-19 pandemic.

TABLE 2

No clear pattern between spikes in global uncertainty and exchange market pressures on the Danish krone

	Safe-haven	Funding	RORO	VIX	Policy spread (bps)	FXI (bn. DKK)	EURDKK (bps)
Great Financial Crisis	33	61	84	60	190	33	-8
European Sovereign Debt Crisis	22	11	28	23	-65	-91	26
Reserve Krone crisis	14	9	3	3	-70	-275	19
Brexit	8	2	6	5	0	-4	-13
Covid pandemic	12	26	43	43	15	65	-10
Russian invasion of Ukraine	8	4	9	8	0	0	-7
Sillicon Valley Bank	12	10	8	4	0	0	-14
Liberation Day	9	2	14	30	0	0	-9
War in the Middle East	0	3	9	11	0	0	-2

Note: Standard deviation increases in uncertainty measures and subcomponents of the EMP index (DKK against EUR) from start of selected periods to the peak. For EMP, blue values are appreciation pressures, while red values are depreciation pressures. 'Great Financial Crisis' was September to November 2008, 'European Sovereign Debt Crisis' was August 2011 to June 2012, 'Reverse Krone Crisis' was January and February 2015 and 'Covid pandemic' was March 2020, following Grønlund and Risbjerg (2020). 'Brexit' was 23 June to 22 July 2016, 'Russian invasion of Ukraine' was 23 February to 23 March 2022, 'Silicon Valley Bank collapse' was 10 March to 11 April 2023, 'Liberation Day' was in April 2025 and 'the War in the Middle East' was in March 2026. All variables are measures relative to the trading day before the period apart from 'Covid pandemic', which is relative to the end of September 2019, as Danmarks Nationalbank carried out FX interventions in October 2019.
Source: Bloomberg, LSEG and own calculations.

From a policy perspective, this makes it inherently difficult to predict how EUR-DKK will respond to future global uncertainty shocks. It cannot be ruled out that global uncertainty shocks could spur pressures on the Danish krone in either direction going forward. The direction is likely to depend on the specific channel through which the pressure emerges.

There are some indications that the Danish krone strengthens against the euro upon heightened risk specifically related to the euro area

Previous research has shown that the Danish krone tended to strengthen against the euro during the European sovereign debt crisis.[15] While our findings above do not indicate a systematic EUR-DKK response to *global* uncertainty, we now consider how EUR-DKK responds to *euro-specific* uncertainty and risk. Euro-specific risk is measured in three ways: 1) Implicit volatility of the Eurostoxx stock index purged of movements in the VIX.[16] 2) The Composite Indicator of Systemic Stress (CISS) in the euro area purged of movements in the VIX.[17] 3) The spread between 10-year GDP-weighted euro area sovereign yields and 10-year OIS rates.[18] The first variable picks up euro area-specific stock market volatility, while the second picks up euro-specific financial stress more broadly. The third variable is intended to pick up redenomination risk of euro, but also reflects credit and liquidity risk premia. In general, no clean market-based measure of euro redenomination risk is available as a daily time series.

Local projections suggest that euro-specific increases in stock market volatility and CISS have not affected EUR-DKK on average in the past. This is both upon impact and up to 30 trading days after the shock, see chart 11. By contrast,

[15] Goldberg and Krogstrup (2019) and Jørgensen et al. (2013).
[16] Specifically, we regress the VSTOXX index (euro area equivalent of the VIX index) on the VIX, and the residuals are then used as euro area-specific movements.
[17] CISS is simply regressed on the VIX, and the residuals are then used as euro area-specific movements.
[18] We use Germany, Italy, France, Spain and the Netherlands as proxy for the entire euro area. These five countries constitute over 80% of the euro area sovereign bond market.

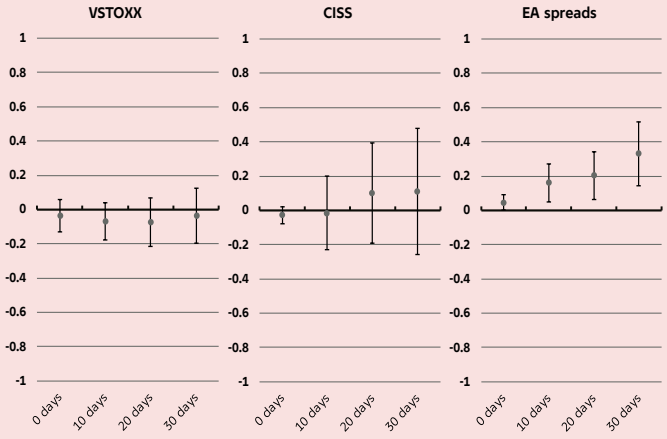
higher euro area sovereign bond spreads relative to swaps are found to strengthen the Danish krone against the euro. Specifically, a 1 standard deviation increase in the 10-year GDP-weighted sovereign bond spread is estimated to strengthen the Danish krone by 0.33 basis points against the euro at the peak after 30 days. Similar results are found for the EMP index for Danish kroner, see chart 12.[19] While the sovereign debt crisis is a case in point, our results are more general. Specifically, redoing the exercise with a sample starting in 2013 yields rather similar results. The estimated effect on the restricted sample, however, is slightly smaller and takes a bit longer time to impact the Danish krone market, see chart A.12 and A.13 in the Annex. To investigate whether these results are mainly driven by euro-specific risk, we redid the exercise using the nominal effective exchange rate of the euro. It seems that the euro experiences broad-based depreciation following a widening of euro area sovereign bond spreads, although the effect is not statistically significant, see chart A.14 in the Annex. Hence, it appears that investors generally price in some additional euro risk, when euro area sovereign bond spreads widen. In extreme cases this could reflect redenomination risk of the euro, but in less severe cases it could also simply reflect higher perceived credit risk. Hence, when euro area spreads widen, Danish krone assets are an obvious alternative because of the absence of currency risk. The strengthening of the Danish krone could also reflect an increased desire to hedge euro risk to Danish kroner. For instance, the Danish pension sector generally hedges a low share of the euro exposures because of the peg.

While the elasticities between euro area sovereign bond spread and EUR-DKK are similar before and after the sovereign debt crisis, variations in the euro area sovereign bond spreads are generally much smaller today. One reason is the presence of the ECB's Outright Monetary Transactions (OMT) and Transmission Protection Instrument (TPI), implemented in 2012 and 2022, respectively. Both tools are designed to counter unwarranted and disorderly increases in sovereign bond yields in the euro area, effectively limiting some of the movements on sovereign bond spreads. As a result, this channel might be less economically significant for the Danish krone in the future, compared to the heights of the sovereign debt crisis.

[19] To put the estimated effect into perspective, consider the European sovereign debt crisis, where the 10-year GDP-weighted sovereign bond yield increased by 150 basis points relative to swaps at the peak. For such magnitudes, our estimates suggest that the Danish krone would strengthen 14 basis points against the euro (roughly 1 DKK more when buying 100 euros). In comparison, EUR-DKK strengthened 25 basis points at the peak during the sovereign debt crisis.

CHART 11

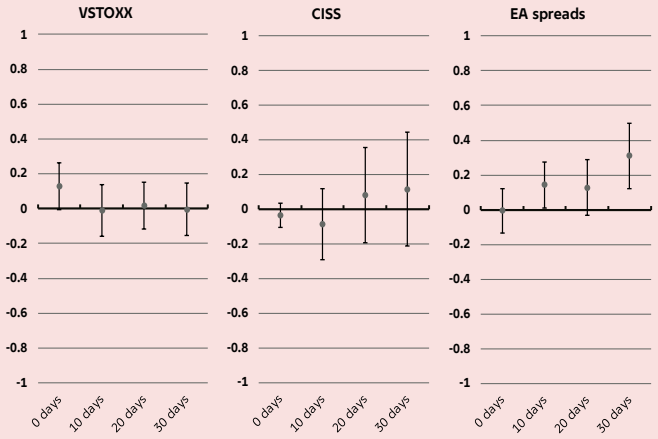
Increases in sovereign bond spreads in the euro area tend to strengthen the Danish krone against the euro ..



Note: Basis point strengthening of the Danish krone against the euro following a standard deviation increase in selected variables. 'VSTOXX' is the daily change in implicit volatility on the Eurostoxx index purged of movements in the VIX. 'EA spreads' is the daily change in 10-year GDP-weighted sovereign yields in Germany, Italy, France, Spain and the Netherlands less 10-year euro OIS rates. 'CISS' is the daily change in the composite indicator of systemic stress in the euro area purged of movements in the VIX. Impulse responses are estimated using local projections, including all three variables and the following controls: 1) Safe-haven factor 2) Funding stress factor 3) Daily return on the Danish stock market (C20 index) 4) 1-year Danish krone OIS swap rate 5) 1-year euro OIS swap rate. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART 12

.. which also pulls towards Danish krone appreciation in the exchange market pressure index



Note: Same as left-hand chart, using the exchange market pressure index between Danish kroner and euro as the dependent variable.
Source: Bloomberg, LSEG and own calculations.

05 Concluding remarks and policy implications

Due to the currency peg, the Danish krone generally mirrors the dynamics of the euro, which has been neither a safe haven nor a risk-on currency in the past. Therefore, it makes less sense to study the broader dynamics of the Danish krone, using e.g. nominal effective exchange rates, as in the safe haven literature. Instead, we have investigated how global uncertainty affects EUR-DKK, which is also the key policy variable for Danmarks Nationalbank. As EUR-DKK shows little variation due to the peg, we have also assessed the impact on the exchange market pressure (EMP) index for the Danish krone, taking into account FX interventions and policy rate movements.

Generally, global uncertainty is found to have a modest and non-systematic impact on both EUR-DKK and the EMP. This finding is robust across different uncertainty measures, over time (rolling regressions) and the timing of impact (local projections). The results for the Danish krone differ from other currencies, which are found to either systematically appreciate (e.g. Swiss franc and Japanese yen) or depreciate (e.g. Australian and Canadian dollar, Norwegian krone and Swedish krona) more systematically amid global uncertainty. One explanation could be that Denmark shares some characteristics of safe haven currencies (large net foreign asset position), but clearly lacks others (large and deep currency and financial markets). In absolute terms, Danish financial markets remain very small internationally. Among the Nordic countries, Norway is arguably a special case, as the Fund, by construction, does not have a home bias, while Sweden has a much lower net foreign asset position than Denmark. Traditional safe haven currencies like the Swiss franc and Japanese yen are both associated with large net foreign assets, relatively deep currency markets and extensive use as a funding currency in carry trades, which are all identified features of safe haven behaviour in the literature. These average results chime well with recent experiences of exchange market pressure on the Danish krone and spikes in global uncertainty measures, which do not show a clear pattern.

However, there are indications that the Danish krone strengthens amid euro-specific risk. Specifically, wider euro area sovereign bond spreads (to swaps) seem to strengthen the Danish krone against the euro. While the European sovereign debt crisis is a case in point, similar results are found in a sub-sample after that episode. While the elasticities suggest a non-negligible effect, the presence of the ECB's OMT and TPI programmes could limit movements in euro area sovereign bond spreads going forward, implying less impact from this channel.

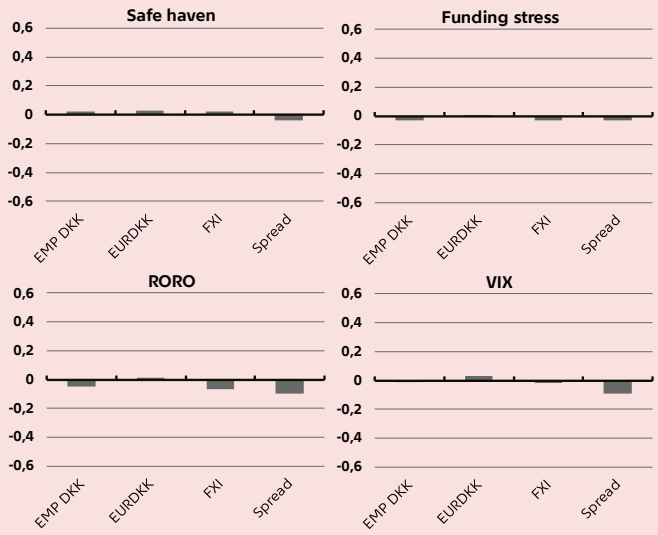
Our results highlight the difficulties in predicting how the Danish krone might react to future global uncertainty shocks. While recent evidence suggests a limited response, it cannot be ruled out that pressures on the Danish krone could emerge in either direction. It would likely depend very much on the specific shock and the channel through which the shock mainly affects the Danish krone market.

An obvious avenue for further research is analysis of the response of different sectors in their demand for Danish kroner to uncertainty shocks. That would help in understanding krone dynamics amid the evolution in Danish external balances.

06 Annex

CHART A.1

Correlations suggest a near-zero reaction of the Danish krone to global uncertainty measures

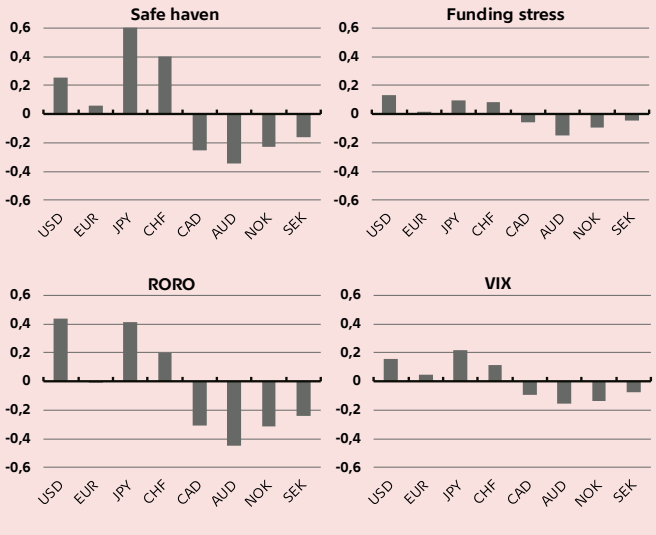


Note: Contemporaneous correlation between selected variables and different uncertainty measures. 'EMP DKK' is the Exchange Market Pressure Index for Denmark (defined relative to the euro). EUR-DKK is the exchange rate between Danish kroner and euro, FXI is Danmarks Nationalbank's purchase of foreign currency (FX interventions) and 'Spread' is the monetary policy spread between Denmark and the euro area. Positive (negative) values correspond to capital inflows (outflows) to Danish kroner, i.e. lower (higher) EUR-DKK, purchase of foreign currency and lower monetary policy spread between Denmark and the euro area. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg

CHART A.2

Most other currencies correlate more strongly with global uncertainty measures

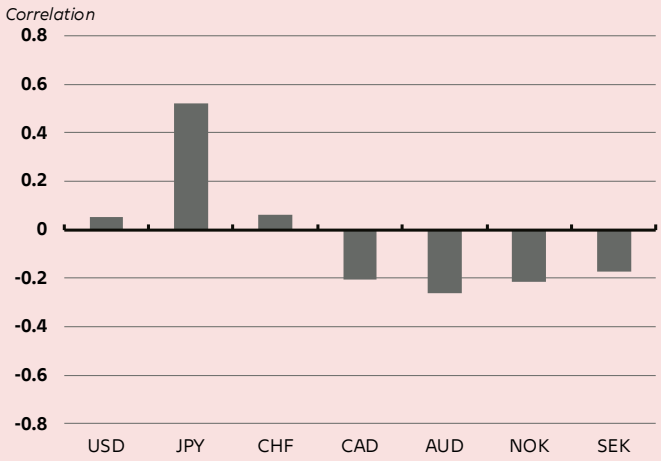


Note: Contemporaneous correlation between selected nominal effective exchange rates and different uncertainty measures. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg, LSEG and own calculations.

CHART A.3

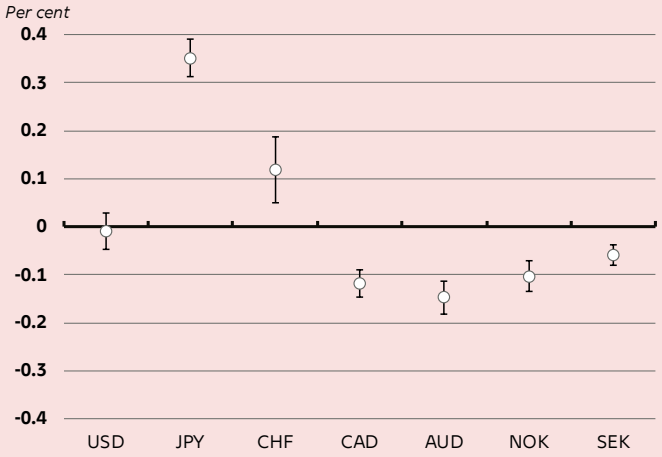
Correlations between the safe-haven factor and exchange rates against the euro are consistent with results obtained using NEERs..



Note: Contemporaneous correlation between selected effective exchange rates against the EUR and the safe-haven factor from Groethe et al. (2025). The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART A.4

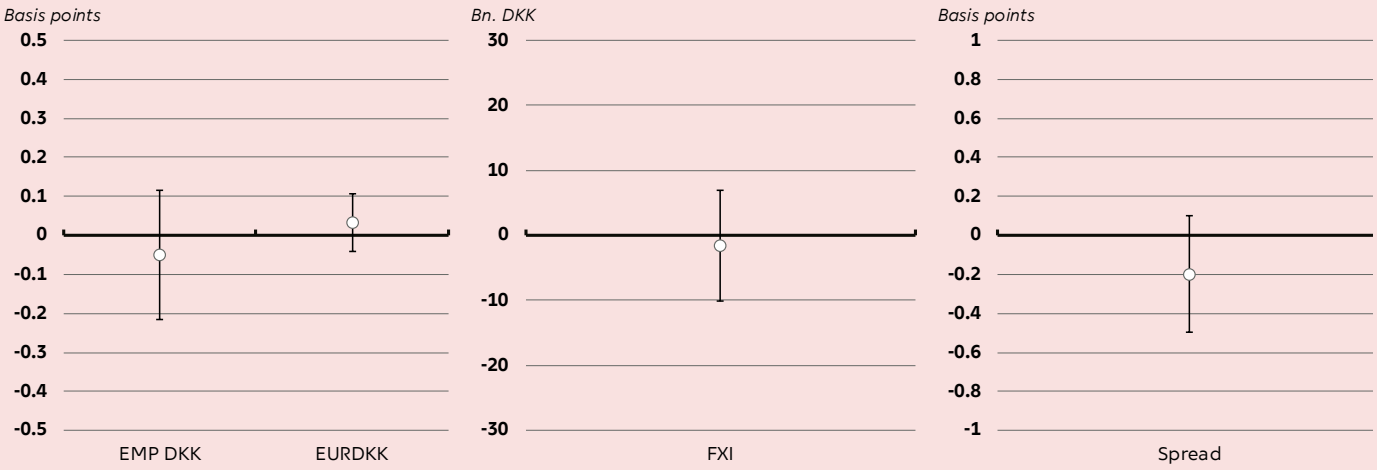
.. and the same holds true for the estimated exchange rate responses to safe-haven shocks



Note: Estimated contemporaneous response of exchange rates against the EUR to a 1 standard deviation change in the safe-haven factor using OLS. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART A.5

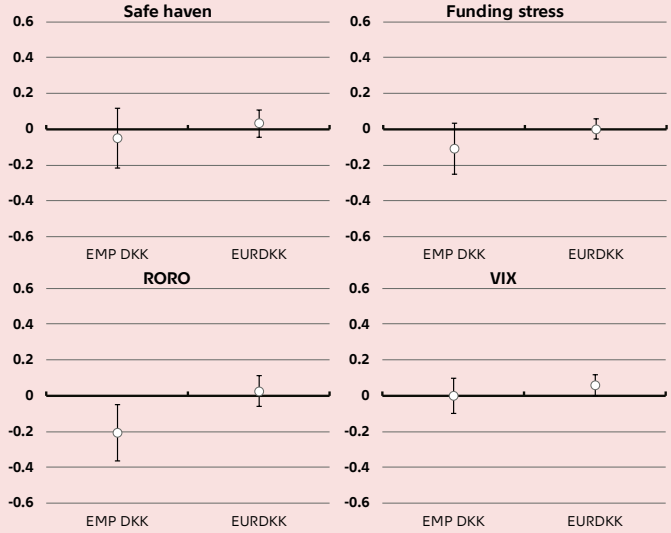
Neither EMP nor its subcomponents react systematically in either direction to global safe-haven flows



Note: Estimated contemporaneous response to a 1 standard deviation change in the safe-haven factor. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART A.6

Regressions also do not suggest a clear response of the Danish krone to higher global uncertainty



Note: Estimated contemporaneous response to a 1 standard deviation change in the global uncertainty measure. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART A.7

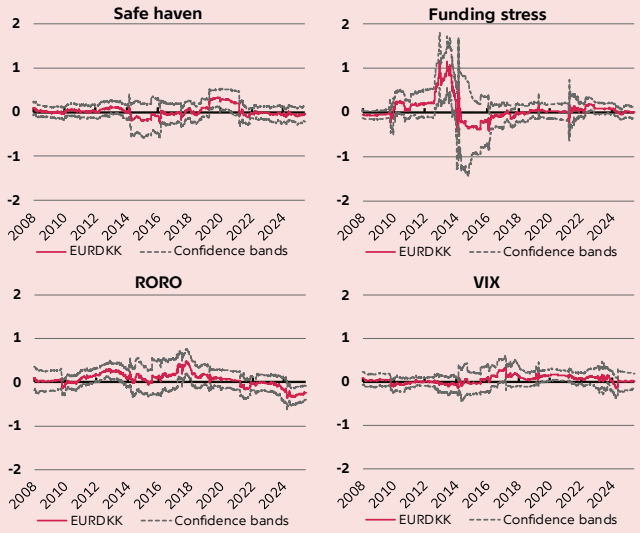
Other currencies show a more systematic response to higher global uncertainty



Note: Estimated contemporaneous effect of a 1 standard deviation change in a given uncertainty measure on nominal effective exchange rates using OLS. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers represent 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART A.8

Rolling regressions do not indicate a trend in the relation between global uncertainty and EUR-DKK

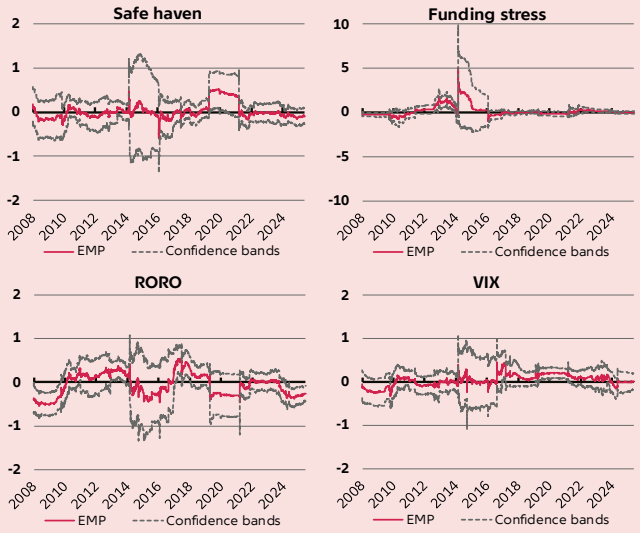


Note: 2-year rolling regressions. Estimated contemporaneous response to a 1 standard deviation change in the uncertainty measures. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg, LSEG and own calculations.

CHART A.9

.. and the same applies to the exchange market pressure index between Danish kroner and euro

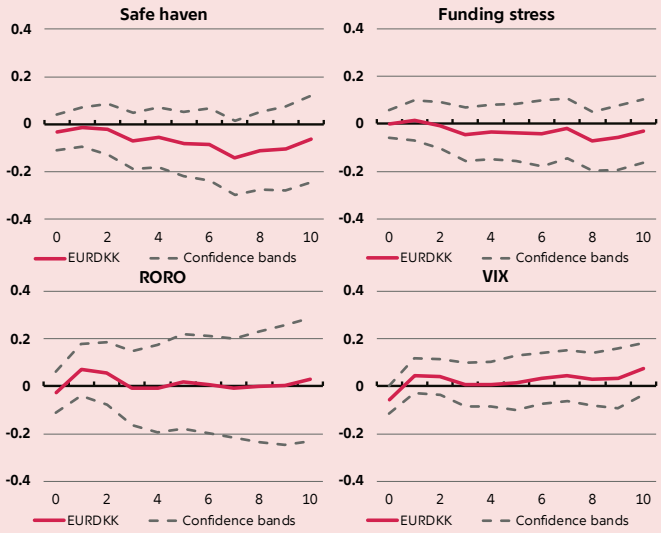


Note: 2-year rolling regressions. Estimated contemporaneous response to a 1 standard deviation change in the uncertainty measures. Daily changes in domestic 1-year OIS rates, daily stock market return and the funding stress factor are used as control variables. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg, LSEG and own calculations.

CHART A.10

Global uncertainty has on average no significant effect on EUR-DKK after 10 trading days ..

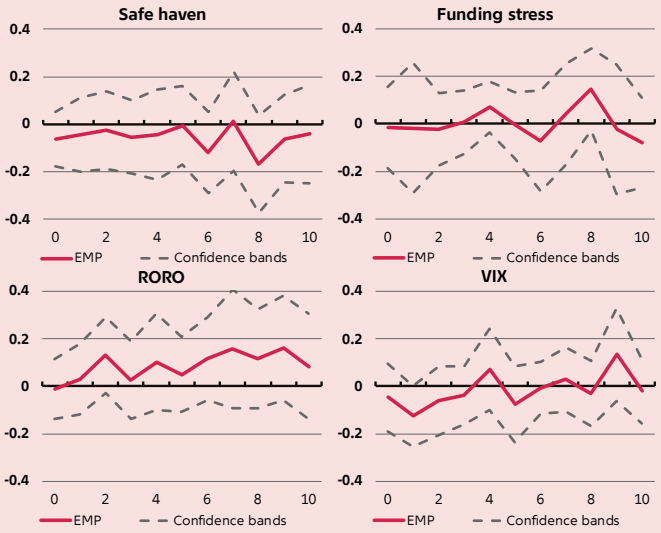


Note: Estimated effect of a 1 standard deviation shock to a given uncertainty measure on the exchange rate between Danish kroner and euro (estimated using local projections as in Jorda (2005)). Daily changes in domestic 1-year OIS rates and daily stock market return are used as control variables. Whiskers represent 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg, LSEG and own calculations.

CHART A.11

.. and the same applies to the exchange market pressure index between Danish kroner and euro

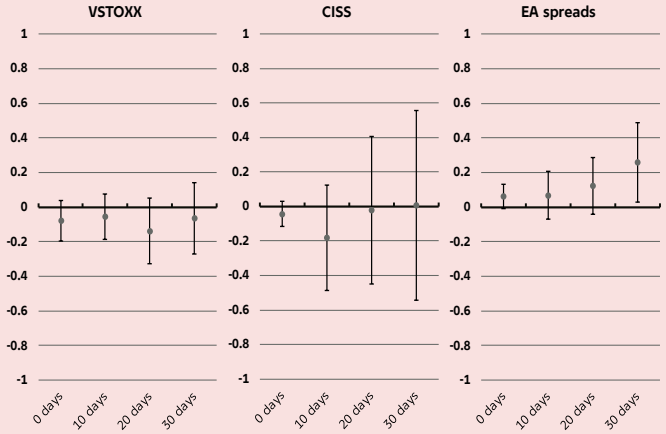


Note: Estimated effect of a 1 standard deviation shock to a given uncertainty measure on the Exchange Market Pressure Index between Danish kroner and euro (estimated using local projections as in Jorda (2005)). Daily changes in domestic 1-year OIS rates and daily stock market return are used as control variables. Whiskers represent 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg, LSEG and own calculations.

CHART A.12

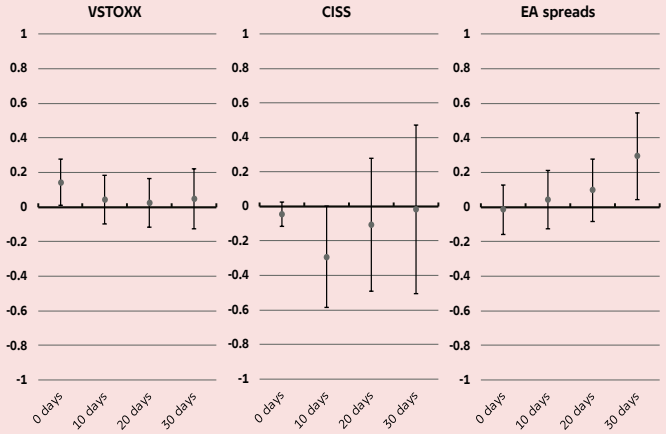
Higher euro area sovereign bond spreads have also tended to strengthen the Danish krone against the euro after 2013



Note: Basis point strengthening of the Danish krone against the euro following a standard deviation increase in selected variables. 'VSTOXX' is the daily change in implicit volatility on the Eurostoxx index purged of movements in the VIX. 'EA spreads' is the daily change in 10-year GDP-weighted sovereign yields in Germany, Italy, France, Spain and the Netherlands less 10-year euro OIS rates. 'CISS' is the daily change in the composite indicator of systemic stress in the euro area purged of movements in the VIX. Impulse responses are estimated using local projections, including all three variables and the following controls: 1) Safe-haven factor 2) Funding stress factor 3) Daily return on the Danish stock market (C20 index) 4) 1-year Danish krone OIS swap rate 5) 1-year euro OIS swap rate. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2013 to 1 May 2026.
Source: Bloomberg, LSEG and own calculations.

CHART A.13

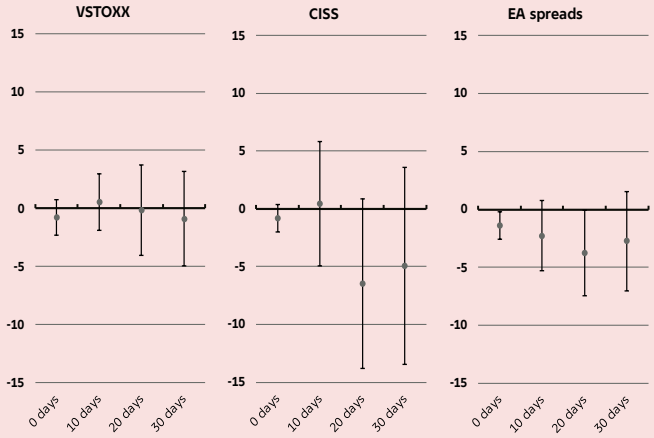
.. which also applies to the EMP index between Danish kroner and euro



Note: Same as left-hand chart, using the exchange market pressure index between Danish kroner and euro as the dependent variable.
Source: Bloomberg, LSEG and own calculations.

CHART A.14

Changes in euro-specific variables does not seem to affect the EUR NEER significantly



Note: Basis point strengthening of the EUR nominal effective exchange rate following a standard deviation increase in selected variables. 'VSTOXX' is the daily change in implicit volatility on the Eurostoxx index purged of movements in the VIX. 'EA spreads' is the daily change in 10-year GDP-weighted sovereign yields in Germany, Italy, France, Spain and the Netherlands less 10-year euro OIS rates. 'CISS' is the daily change in the composite indicator of systemic stress in the euro area purged of movements in the VIX. Impulse responses are estimated using local projections, including all three variables and the following controls: 1) Safe-haven factor 2) Funding stress factor 3) Daily return on the Danish stock market (C20 index) 4) 1-year Danish krone OIS swap rate 5) 1-year euro OIS swap rate. Whiskers are 95% confidence bands based on HAC standard errors. The sample covers daily data from 1 January 2007 to 1 May 2026.

Source: Bloomberg, LSEG and own calculations.

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Publikationer



ANALYSE

Analyser fokuserer på aktuelle emner, som er særligt relevante for Nationalbankens formål. Analyser kan også indeholde Nationalbankens anbefalinger. Her finder du bl.a. vores prognose for dansk økonomi og vores vurdering af den finansielle stabilitet. Analyser henvender sig til dig, der har en bred interesse for økonomiske og finansielle forhold.



STAFF PAPER

Staff Papers giver indblik i det analysearbejde, som Nationalbankens ansatte er i gang med. Staff Papers indeholder fx baggrundsanalyser og metodebeskrivelser. De henvender sig primært til dig, der i forvejen har kendskab til økonomiske og finansielle analyser. De konklusioner, der udtrykkes i Staff Papers, er forfatternes egne og skal ikke opfattes som Nationalbankens holdning.



WORKING PAPER

Working Papers præsenterer forskningsarbejde fra både ansatte i Nationalbanken og vores samarbejdspartnere. Working papers henvender sig primært til dig, som er fagperson, og til dig med interesse for forskning inden for centralbankvirksomhed samt økonomi og finans i bredere forstand. De konklusioner, der udtrykkes i Working Papers, er forfatternes egne og skal ikke opfattes som Nationalbankens holdning.



NYT

Nyt er en appetitvækker, der giver et hurtigt indblik i en af Nationalbankens længere publikationer. Nyt er for dig, der har brug for et let overblik og godt kan lide en tydelig vinkling.



STATISTIKNYHED

Statistiknyheder sætter fokus på de nyeste tal og tendenser i Nationalbankens statistikker. Statistiknyheder henvender sig til dig, der vil have hurtig indsigt i aktuelle finansielle data.



RAPPORT

Rapporter er en tilbagevendende beretning om Nationalbankens arbejdsområder og virksomhed. Her finder du bl.a. Nationalbankens årsrapport. Rapporter er for dig, der har brug for en status og opdatering på den forgangne periode.

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