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Neutral monetary policy in times of global uncertainty

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Uncertainty in financial markets increased significantly in April, but has since subsided. The krone exchange rate has been stable, and as of the end of August Danmarks Nationalbank had not intervened for over two and a half years. Danmarks Nationalbank has followed the European Central Bank's (ECB's) rate cuts of 25 basis points in April and June, respectively. Danmarks Nationalbank assesses that monetary policy and financial conditions in Denmark are neutral for economic activity.

Temporary turmoil has characterised global financial markets

In April, increasing macroeconomic uncertainty led to significant fluctuations in financial markets, which have subsided again since May. The development of US and European government bond yields has become more asynchronous, partly as risk premiums on US government debt have increased. The dollar has weakened significantly since March, but there are no signs that investors are opting out of dollar assets. The ECB considers its monetary policy to be neutral, while the Federal Reserve communicates, that US monetary policy is approaching neutral territory.

The krone has remained stable despite fluctuations in money market interest rates and global turmoil

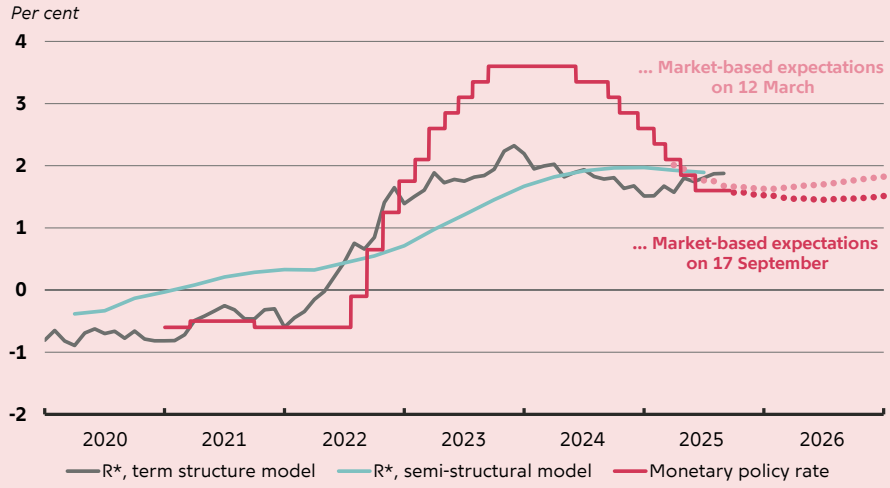
Volatility in parts of the Danish money market between March and June coincided with lower central bank liquidity and caused some Danish money market interest rates to periodically move outside the range between Danmarks Nationalbank's current-account and lending rates. However, the krone exchange rate has remained close to the central rate, and as of the end of August Danmarks Nationalbank had not intervened since December 2022, which is the longest such period in the history of the fixed exchange rate policy. The interest rate spread to the ECB has remained unchanged at -40 basis points.

Monetary policy is assessed to be neutral for the Danish economy

The market turmoil in April did not lead to a significant tightening of financial conditions in Denmark, which have eased since March as monetary policy rates have fallen. Based on a number of indicators, Danmarks Nationalbank assesses that monetary policy and overall financial conditions are neutral for the Danish economy. If global risks materialise, however, it could lead to a shift in financial conditions.

Main chart

Danmarks Nationalbank assesses that monetary policy is neutral for economic activity in Denmark



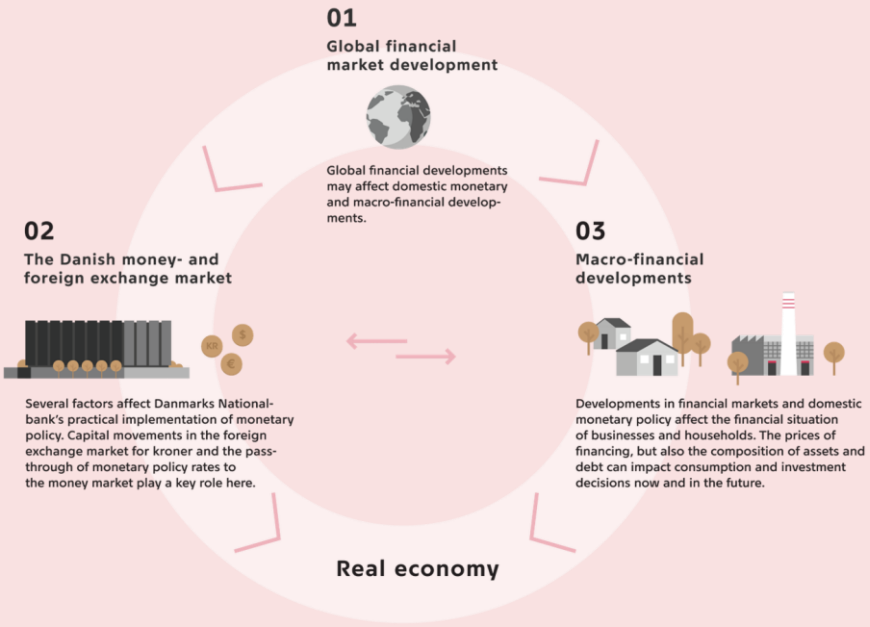
Note: The chart shows Danmarks Nationalbank's current-account rate (red) and market participants' expectations for €STR minus the current monetary policy interest rate spread between the euro area and Denmark (dashed). The estimates for the neutral policy rate are based on two different models, which are described in the appendix in S.T. Hetland, M.M. Ingholt, R.B. Larsen and M. Spange, Real interest rates in the context of inflation and higher government debt, *Danmarks Nationalbank Analysis*, no. 2, February 2023. Estimates are subject to considerable uncertainty. The latest data point is August 2025 for the term structure model, Q2 for the semi-structural model and 17 September for the policy rate.

Source: LSEG Workspace, Danmarks Nationalbank and own calculations.

Why is it important?

The Danish fixed exchange rate policy means that monetary policy is tailored to ensuring a stable krone exchange rate against the euro. The fixed exchange rate policy means that Danmarks Nationalbank generally follows the interest rate decisions of the ECB. Therefore, the monetary policy of the euro area has a bearing on financial and economic developments in Denmark. So does global financial developments, as Denmark is a small open economy closely integrated into the international financial system. Both are analysed in chapter 1. Global financial developments may also affect the demand for kroner and thus Danmarks Nationalbank's execution of the fixed exchange rate policy. This is one of the elements touched upon in the second chapter. An important element in the third chapter of the analysis is the assessment of how the fixed exchange rate policy, interacting with global financial developments, affects macro-financial conditions in Denmark. They are essential for Danmarks Nationalbank's assessment of current and expected developments in the Danish economy and its recommendations for economic policy in Denmark.

The analysis is published twice a year.



Keywords

Monetary and financial trends | Banking and mortgage credit | Central banks | Fixed exchange rate policy | Financial markets | Households and corporations | Monetary policy | Foreign exchange market

01

Global financial market developments

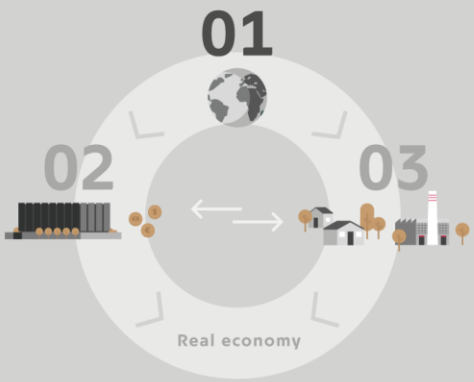
Trade policy uncertainty has been a significant theme in global financial markets since the release of the last *Monetary and financial trends* in March 2025. There were significant fluctuations in financial markets following the US administration's tariff announcements on 2 April, with market-based measures of uncertainty increasing significantly. Financial market uncertainty has decreased since May, while indicators of trade policy uncertainty have remained high.

The European Central Bank has lowered monetary policy rates by 50 basis points since March, while the US Federal Reserve lowered interest rates by 25 basis points in September 2025. Both central banks have communicated that they are awaiting the economic consequences of the gradual implementation of new tariffs. Market participants expect lower policy rates in both the US and the euro area compared to March, which is reflected in lower risk-free rates. In the euro area, lower nominal interest rates are mainly driven by lower market-based inflation compensation, while in the US they reflect lower real interest rates to support the economy. The risk premium on long-term US government bond yields has also increased, possibly due to market expectations of rising US government debt. In the euro area, sovereign bond spreads have generally fallen, which has contributed to a less synchronised development in interest rates across the Atlantic than previously.

The dollar has weakened significantly against the euro and several other currencies, particularly since the beginning of April. The weakening of the dollar in April was notable, as the dollar usually strengthens during global market turmoil. However, there are no signs of global investors withdrawing from dollar assets. Instead, there have been some indications that investors are lowering dollar exposure by increasing their dollar hedging. After significant declines in April, equity prices have risen substantially since May, especially in the US, and have gradually become less sensitive to new tariff announcements.

Chapter 01 and how it relates to the rest of the publication

This chapter (01) provides an update on global financial market developments and monetary policy in the euro area and the US. The Danish fixed exchange rate policy (02) means that Danmarks Nationalbank keeps the krone stable against the euro with the goal of achieving the same low and stable inflation pursued by the ECB. The fixed exchange rate policy and the fact that Denmark is a small open economy mean that euro area monetary policy and global financial developments (01) are important for the financial and economic conditions of Danish households and companies (03).

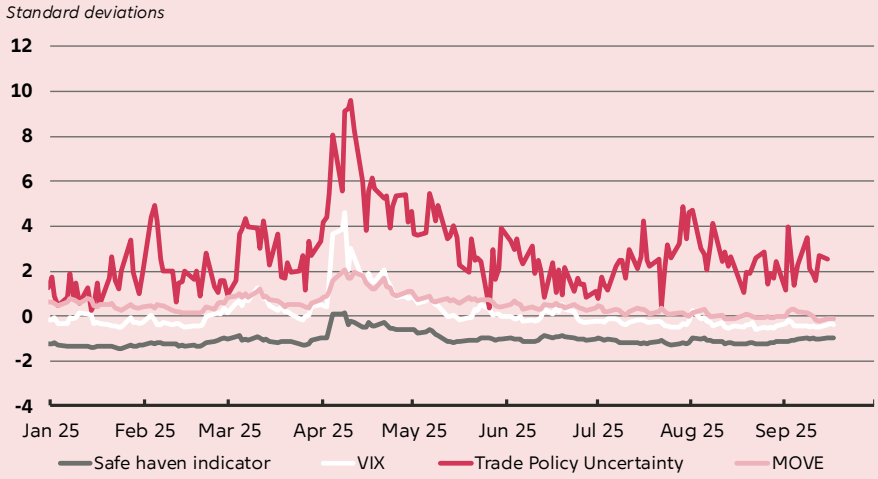


Temporary turmoil in the financial markets in April

Financial markets are less responsive to macroeconomic uncertainty
Several central banks and international organisations have downgraded growth expectations since the start of the year, emphasising a high level of uncertainty about the economic outlook.[1] The macroeconomic uncertainty should be seen through the lens of US trade policy and potential retaliation from trading partners. An indicator of trade policy uncertainty rose significantly in early April and has throughout the year been well above its historical average, with significant fluctuations, see chart 1.[2]

CHART 1

Market-based measures of uncertainty differ from trade policy uncertainty



Note: All four series are demeaned and divided by their respective standard deviations since 2016. Positive values therefore indicate a level above the historical average and vice versa. The units are standard deviations. VIX and MOVE are implied volatility in the US equity and government bond markets, respectively. Trade Policy Uncertainty is from Caldara et al., The economic effects of trade policy uncertainty, *Journal of Monetary Economics*, vol. 109, pp. 38-59, 2020. The safe-haven indicator follows Grothe et al., Recent patterns in global risk behaviour in financial markets, *VoxEU Column*, 12 August 2025, and is the first principal component from daily changes in the following variables: Nominal exchange rates for the Swiss franc, Japanese yen, euro and US dollar, the gold price, 10-year government bond yields in Japan, the US and Germany, and the VIX index. The dollar and euro are adjusted for the effects of 'domestic' macroeconomic and monetary policy shocks, while the gold price is adjusted for the development in the effective dollar rate.
Source: Bloomberg, Caldara et al., 2020, and own calculations.

Financial market uncertainty also temporarily increased following the US administration's tariff announcements on 2 April. For example, implied volatility in US equities (VIX index) and government bonds (MOVE) increased significantly,

[1]See, for example, IMF, Global Economy: Tenuous resilience amid persistent uncertainty, *World Economic Outlook*, July 2025, or the latest press releases from the Fed and ECB regarding their monetary policy meetings. See Danmarks Nationalbank, Weaker global trade slows growth in Denmark, *Danmarks Nationalbank Analysis (Outlook for the Danish economy)*, no. 23, September 2025, for Denmark.
[2] The index is based on articles in seven major US newspapers and therefore largely reflects uncertainty about US trade policy. Similar indices for Europe, for example, paint a similar picture.

see chart 1.[3] The increase was particularly strong for the VIX index, which rose to twice its 10-year average. At the same time, there were signs that investors were buying safe haven assets. This is shown by a 'safe-haven' indicator, summarising price increases for traditional safe haven assets, see chart 1.

Since May, financial market volatility has fallen back to pre-April levels, while trade policy uncertainty has remained high. This indicates a more subdued financial markets reaction to trade policy uncertainty than earlier this year. This is e.g. seen in equity markets, where prices have become significantly less sensitive to new tariff announcements, see below. This may reflect many changing tariff announcements and that market participants potentially perceive announced tariffs as part of broader political negotiations.

Central banks await the effects of trade policy on the economy

In both the US and the euro area, central banks expect inflation to approach target over the coming years.[4] The European Central Bank, ECB, has lowered monetary policy rates by 50 basis points since March and no longer refers to its monetary policy as restrictive. The ECB maintained monetary policy rates at the last monetary policy meeting in September. The Fed has kept monetary policy rates unchanged for most of the year, but lowered policy rates by 25 basis points in September. The Fed communicates that monetary policy will gradually reach a more neutral stance.

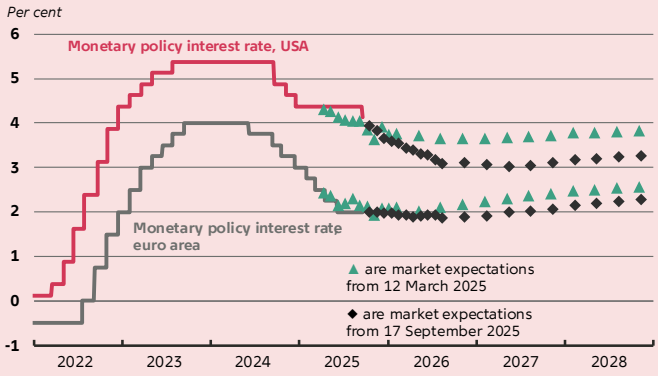
Both central banks have emphasised that macroeconomic uncertainty is significant and that future monetary policy decisions will depend, among other things, on how changes in tariffs affect economic activity and inflation. At the same time, the ECB has emphasised that increased fiscal spending on areas such as defence could have a significant impact on economic activity in the euro area. Market participants' expectations for monetary policy rates in the euro area have generally fallen since mid-March, see chart 2. This is mainly driven by lower market-based inflation compensation, indicating that the change in trade policy is expected to drag down euro area inflation, see chart 3. This could reflect that the EU has not matched the US tariffs.

Monetary policy rates in the US have fallen less than market prices indicated in March. During the same period, the market-based inflation outlook for especially the coming year has increased in the US, see chart 3. Expectations to future Fed monetary policy rates fell significantly after the US jobs report for July and August showed significantly weaker-than-expected job growth, while also revising down job growth for previous months. US swap rates for the next two years have now fallen significantly since March, mainly due to lower real interest rates, see chart 3. Among other things, this may reflect market expectations that, in the short term, the new tariffs could be stagflationary in the US, with employment falling and consumer prices rising. Market expectations of lower monetary policy rates could hint that the Fed is expected to increasingly focus on employment, as inflation is only expected to rise temporarily.

[3] See also Danmarks Nationalbank, Global uncertainty affects the financial sector, *Danmarks Nationalbank Analysis (Financial stability – biannual review and recommendations)*, no. 13, June 2025.
[4] In the ECB and Fed forecasts from September 2025, inflation in the US and euro area is expected to be 2.1 and 1.9 per cent, respectively, in 2027.

CHART 2

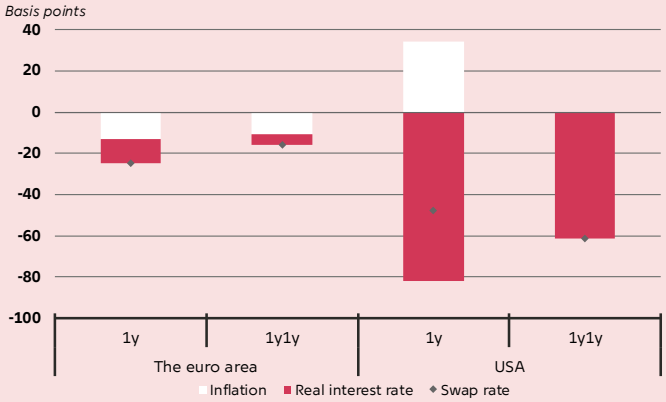
Expectations for monetary policy rates have fallen slightly in both the US and euro area



Note: The chart shows the ECB deposit facility rate (grey line), the midpoint of the Federal Reserve's federal funds target range (red line), the currently expected interest rate paths (black diamonds) and the expected interest rate paths as of 12 March 2025 (green triangles). The expected paths for monetary policy interest rates are based on €STR and SOFR swaps.
Source: LSEG and own calculations.

CHART 3

The inflation outlook for the coming year has affected interest rates differently in the US and the euro area



Note: The development of swap rates from 12 March to 17 September 2025, broken down into contributions from inflation swaps and real interest rates. EA indicates the euro area. 1y indicates the 1-year rate, while 1y1y indicates the 1-year rate in one year. Based on €STR and SOFR swaps.
Source: LSEG and own calculations.

Uncertainty about monetary policy rates is low in both the US and euro area compared to recent years

Uncertainty about monetary policy rates over the next year is greater in the US than in the euro area, see chart 4. However, uncertainty about US monetary policy rates is not high compared to recent years, while in the euro area it is at its lowest level in two years. This reflects that euro area inflation is around target, while US inflation has also fallen significantly since its peak, although it remains well above 2 per cent.

The Fed and ECB have made minor adjustments to their monetary policy strategy

Macroeconomic uncertainty was a significant theme in the ECB's latest monetary policy strategy review, published at the end of June. The ECB pointed out that several structural factors add to the uncertainty about inflation, which is expected to have larger deviations in both directions going forward. These include trade wars, geopolitical uncertainty, climate change and digitalisation. As a results, the ECB will make greater use of scenario and sensitivity analyses in its forecasts and focus more on uncertainty in its communications. The ECB maintained its inflation target of 2 per cent over the medium term and will continue to deploy all its monetary policy instruments.[5]

The Fed will also continue to aim for 2 per cent inflation but decided to move away from the *average* inflation target introduced in 2020. The average inflation target allowed for a period of inflation overshooting 2 per cent if it followed a period where inflation had been persistently below target. This was particularly relevant to ensure well-anchored inflation expectations when interest rates were

[5] Monetary policy instruments include negative interest rates, forward guidance, asset purchase programmes and long-term lending operations.

close to their lower bound. The Fed has emphasised that it will continue to use all available tools should interest rates approach their lower bound again.

CHART 4

Uncertainty about monetary policy rates is greater in the US than in the euro area

Note: The difference between the 75th and 25th percentiles of three-month Euribor and SOFR starting in 12 months. Latest observation is 16 September 2025.
Source: Atlanta Fed, Morningstar and ECB.

Long-term government bond yield trends have become less synchronised across the Atlantic

There have been some fluctuations in long-term government bond yields (maturity over 10 years) in the US and Germany since mid-March. Overall, 10-year US and German government bond yields have declined a bit more than 20 basis points since March. The drivers behind the lower long-term sovereign bonds yields differ, however. German government bond yields have fallen relative to swap rates, whereas US government bond yields have not followed the decline in corresponding swap rates, as shown in chart 5.[6] The difference between government bond and swap rates is typically interpreted as a risk premium on government bonds, reflecting e.g. credit and liquidity risk and changes in supply and demand for government bonds.[7]

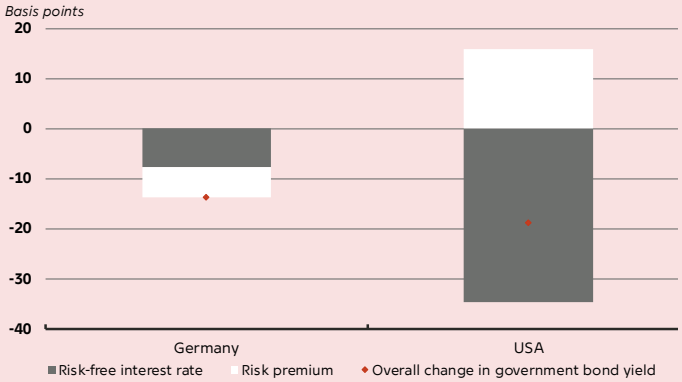
Risk premiums on 10-year US government bond yields increased primarily due to the US administration's announcement of tariffs in early April. Subsequently, the focus has been on rising government debt and fiscal policy sustainability in the US. For example, the US government's credit rating was downgraded to Aa1 by the rating agency Moody's on 16 May, but without significant increases in risk premiums. The risk premium on US government bonds is – despite the recent increase – around its historical level.

[6] A similar trend is seen for 30-year government bond yields, which is the benchmark with the longest maturity.
[7] Alternatively, one can look at the term premium from term structure models, which show the additional return that investors require to buy long government bonds over short ones. Term premia show a similar picture as the spread between government rates and swap rates.

In the euro area, 10-year sovereign bond yield spreads have been narrowing and are low in a historical context. For example, the spread between 10-year Italian and German government bond yields is at its lowest level since just before the European sovereign debt crisis in 2012, see chart 6.[8] However, the government bond yield spread between France and Germany has increased in recent months due to the political situation in France, though it remains modest compared to levels during the sovereign debt crisis. The relatively low sovereign yield spreads in the euro area do not suggest that the planned increases in defence and infrastructure investment have changed market participants' perception of fiscal sustainability.[9] The low government bond yield spreads, compared to the sovereign debt crisis, should also be seen through the lens of the ECB's Transmission Protection Instrument, TPI, which allows the ECB to buy government bonds in specific countries where government bond yields rise unwarranted and impairs monetary policy transmission.

CHART 5

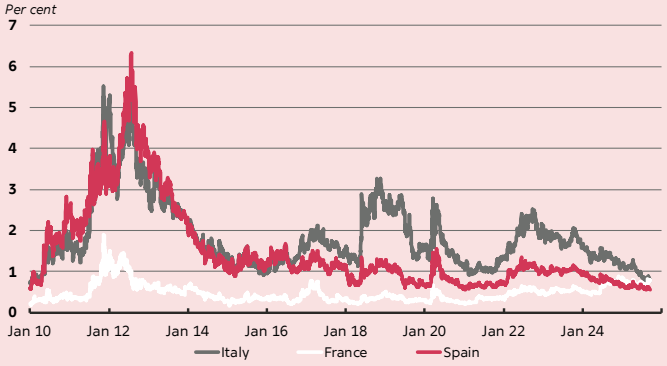
Risk premiums on 10-year government bond yields have increased in the US and decreased in Germany



Note: Development since 12 March 2025. ''Risk-free rate'' indicates the development of 10-year swap rates in the same currency (SOFR for the US and €STR for Germany). ''Risk premium'' indicates the difference in development between the 10-year government rates and 10-year swap rates.
Source: Bloomberg.

CHART 6

Euro area government bond yield spreads have fallen to their lowest level in many years



Note: 10-year government bond yield spread compared to Germany.
Source: Bloomberg.

Across the Atlantic, 10-year government bond yields have continued to become less synchronised compared to recent years, see chart 7. This trend gained particular momentum in the autumn of 2024, as polls indicated that the Republicans were becoming bigger favourites to win the presidential election.

Significant dollar weakening differs from previous episodes of market turmoil, but no signs of significant change in the dollar's international role

The US dollar has weakened significantly in 2025, especially after the US administration announced new tariffs in early April. The dollar has thus weakened by 7 per cent against a broad basket of currencies since the start of the year, see chart 8, while it has weakened around 15 per cent against the euro,

[8] The low yield spreadis partly due to an increase in 10-year German government bond yields. Compared to 10-year €STR swap rates, Italian and Spanish government bond yields, for example, are also historically low.
[9] See K. Abildgren, R. M. Jensen, R. R. Sørensen, D. Cucic and E.H. Partsch, Higher defence spending may increase capacity pressures moderately, *Danmarks Nationalbank Analysis,* no. 19, September 2025.

and thus also the Danish krone. A similar picture is shown by exchange market pressure indices, where the dollar has experienced significant weakening pressure since April, see chart 9. The index takes into account interventions in the foreign exchange market and interest rate changes, which have been limited during the period. Therefore, the index primarily reflects a normalised exchange rate development.

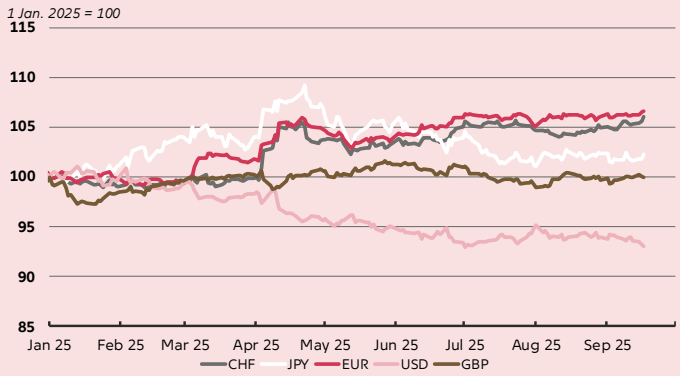
CHART 7

Less synchronised interest rate development across the Atlantic

Note: One-year rolling correlation between daily changes in 10-year government bond yields in the US and Germany.
Source: Bloomberg and own calculations.

CHART 8

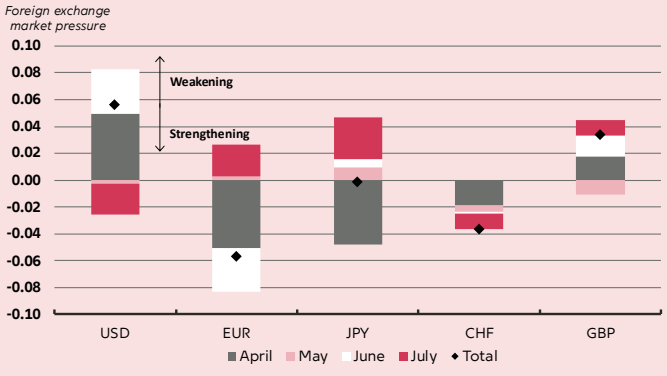
The dollar has weakened significantly since April 2025



Note: Nominal effective exchange rates (trade weighted). CHF is Swiss francs, JPY is Japanese yen, EUR is euros, USD is US dollars, and GBP is British pounds.
Source: Bloomberg.

CHART 9

...which is also reflected in the foreign exchange market pressure index



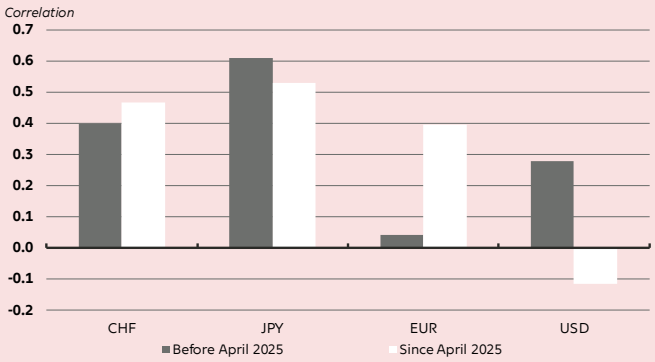
Note: The development in the Exchange Market Pressure Index from April to July 2025, cf. L. Goldberg and S. Krogstrup, International capital flow pressures and global factors, *Journal of International Economics*, January 2023.
Source: LSEG and own calculations.

Exchange rate movements are generally difficult to explain empirically, but are often related to the macroeconomic outlook, monetary policy and global uncertainty.[10] A more unfavourable macroeconomic outlook or more accommodative monetary policy typically weakens a currency. The dollar has historically appreciated amid spikes in global uncertainty, where investors seek safe havens. To examine the development in this relationship more closely, the development of a "safe haven" factor is considered.[11]

Since April 2025, the dollar has tended to weaken as investors seek safe havens, see chart 10. This is different from other traditional safe havens such as the Swiss franc and the Japanese yen, which strengthened in early April. However, the recent negative correlation between the dollar and the indicator of safe haven capital flows is not unique historically, but has previously occurred during periods of limited fluctuations in both the dollar and the safe haven indicator. There are also several historical examples of the dollar temporarily weakening on single days while investors sought other safe havens, typically associated with negative news specifically related to the US.[12] Furthermore, there are signs that the dollar's weakening in April was in line with the market reaction to previous changes in tariffs.[13]

CHART 10

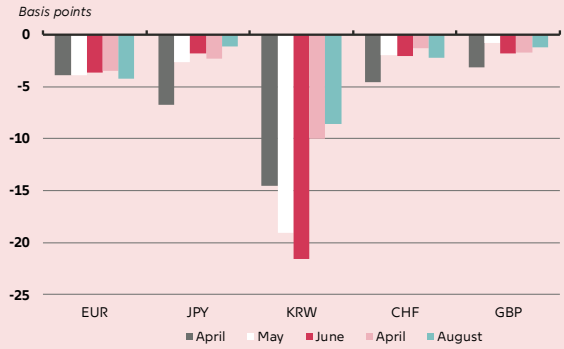
The correlation between the dollar and an indicator of investor preferences for safe havens has been negative since April



Note: Correlation between the asset in question and a safe-haven factor. The safe-haven indicator follows Grothe et al., Recent patterns in global risk behaviour in financial markets, *VoxEU Column*, 12 August 2025, and is the first principal component from daily changes in the following variables: Nominal exchange rates for the Swiss franc, Japanese yen, euro and US dollar, the gold price, 10-year government bond yields in Japan, the US and Germany, and the VIX index. The dollar and euro are adjusted for the effect of 'domestic' macroeconomic and monetary policy shocks, while the gold price is adjusted for the development of the effective dollar rate. CHF is Swiss francs, JPY is Japanese yen, EUR is euros and USD is US dollars. "Before April 2025" is the correlation since the beginning of 2007. Last observation is 17 September 2025.
Source: Bloomberg and own calculations.

CHART 11

The cost of hedging the dollar in the foreign exchange market has increased since March



Note: Change in deviations from the covered interest rate parity between the currency in question and the US dollar since March 2025. Based on three-month futures contracts and swap rates. The chart is based on monthly averages of daily observations.
Source: Bloomberg and own calculations.

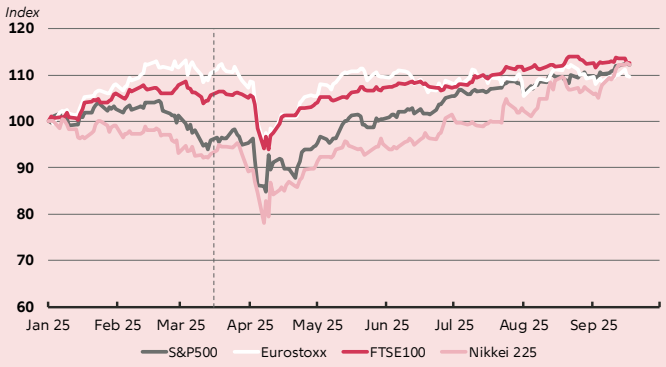
[10] See, for example, L. Brandt, A.S. Guilhem, M. Schröder and I.V. Robays, What drives euro area financial market developments? The role of the US spillovers and global risk, *ECB Working Paper Series*, no. 2560, May 2021.
[11] The factor follows Grothe et al., Recent patterns in global risk behaviour in financial markets, *VoxEU Column*, 12 August 2025, and is the same as depicted in chart 1.
[12] Other examples include the bankruptcy of Lehman Brothers during the financial crisis, the US government's credit rating downgrade in August 2011, and the bankruptcy of Silicon Valley Bank in March 2023.
[13] See D. Ostry, S. Lloyd and G. Corsetti, Trading blows: The exchange-rate response to tariffs and retaliations, *Bank of England Staff Working Paper*, no. 1.139, August 2025.

Signs of increased dollar hedging rather than retrenchment from dollar assets among investors

In addition to fundamentals such as macroeconomic outlook and monetary policy, other factors that influence investor preferences can also significantly effect on exchange rates. Although foreign investors sold dollar assets in April, the magnitude was within the historical variation over recent years, see box 1. In the following months, dollar assets have again been purchased from abroad, potentially because dollar assets fell significantly in value, especially when measured in other currencies. Hence, there are no signs that foreign investors have turned away from dollar assets. However, there are indications that the weakening of the dollar may be related to increased hedging of dollar risk by foreign investors.[14] The price of hedging the dollar against a number of other currencies increased after April and has since been higher compared to March, see chart 11. This may reflect that foreign investors have increased their dollar hedging and pushed up the price of dollar hedging.[15] Danish pension funds also increased their dollar hedging significantly from April to June, see the chapter *The Danish money and foreign exchange market.*

CHART 12

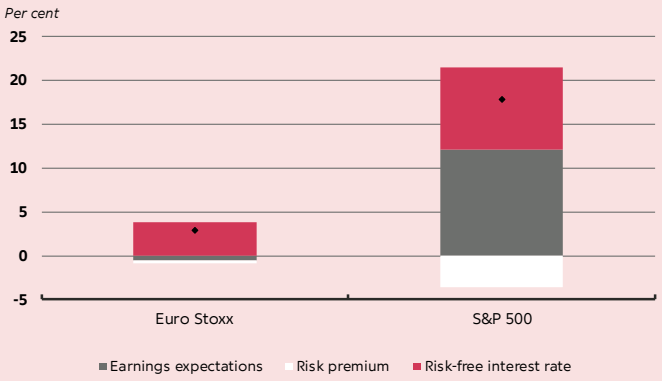
US equity prices in particular have risen since mid-March



Note: Equity prices indexed to 1 January 2025 = 100. The vertical line indicates the last *Monetary and financial trends* (12 March 2025).
Source: Bloomberg.

CHART 13

...which is linked to rising earnings expectations and lower interest rates



Note: Decomposition of total return on shares (including dividends) from 12 March to 17 September 2025. Based on a dividend discount model.
Source: LSEG and own calculations.

Equity prices reacted mainly to changing tariffs in April

There have been significant fluctuations in global equity prices since March. Equity prices fell significantly worldwide following the US administration's tariff announcements on 2 April, see chart 12. The decrease was mainly driven by higher equity risk premiums as the announced tariffs were significantly higher than expected.[16] Subsequently, equity prices in the US in particular have risen significantly, and the S&P500 is approximately 18 per cent higher than in mid-

[14] See H. Shin, P. Wooldridge and D. Xia, US dollar's slide in April 2025: the role of FX hedging, *Bis Bulletin*, no. 105, June 2025.
[15] The price of hedging currency (FX basis) can be an indicator of hedging demand, but canalso indicate other factors such as liquidity conditions in the underlying instrument or credit risks in the interbank market, see C. Borio, R. McCauley, P. McGuire and V. Sushko, Covered interest parity lost: understanding the cross-currency basis, *BIS Quarterly Review*, 2016.
[16] See Jakob Adolfsen and Thomas Harr, Disentangling trade policy uncertainty and equity market performance, *VoxEU Column*, May 2025.

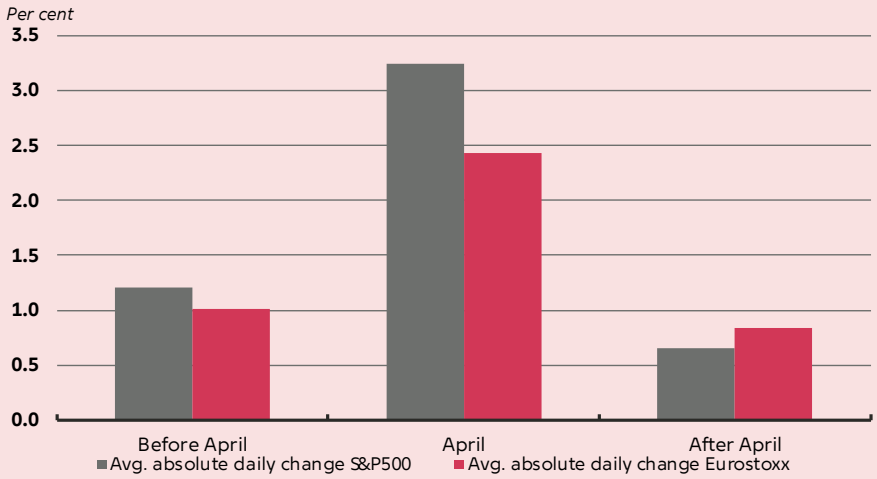
March. The increase in US equity prices is mainly due to lower risk-free interest rates and rising earnings expectations, see chart 13.

Earning expectations have therefore continued to remain unresponsive to macroeconomic uncertainty.[17] The large price increases on the S&P500 are primarily driven by the seven largest companies, all of which operate in technology and have contributed over half of the total increase in the S&P500 since March.[18] The remainder of the S&P500 is up about 13 per cent since March, with significant differences between sectors. For example, stock prices in healthcare, energy and consumer staples have increased modestly or declined since March. The rising equity prices may also reflect that equity prices are more sensitive to investors' required returns and long-term earnings expectations than profit over the coming years, which are more affected by the current macroeconomic uncertainty.[19]

Since April, equity prices in the US and euro area have reacted less to new tariff announcements than previously, see chart 14. During April, the S&P500 moved an average of over 3 per cent on days when the US or trading partners announced new tariffs, while the figure was 2.4 per cent for Eurostoxx. Since April, the S&P500 and Eurostoxx have moved an average of 0.7 and 0.9 per cent, respectively, on days with new tariff announcements.

CHART 14

Equity prices reacted mainly to changes in tariffs in April



Note: Average absolute changes in equity prices on days in 2025 when the US or trading partners have announced new tariffs. The dates include: 21/1, 27/1, 3/2, 4/2, 10/2, 13/2, 25/2, 1/3, 3/3, 4/3, 5/3, 6/3, 10/3, 12/3, 13/3, 24/3, 26/3, 2/4, 3/4, 4/4, 8/4, 9/4, 10/4, 11/4, 14/4, 29/4, 5/5, 8/5, 12/5, 23/5, 27/5, 30/5, 12/6, 27/6, 30/6, 2/7, 7/7, 9/7, 14/7, 28/7, 29/7, 30/7, 31/7, 6/8, 11/8, 18/8, 25/8 and 29/8.
Source: Bloomberg and own calculations.

[17] See also Danmarks Nationalbank, Towards a neutral monetary policy in 2025, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 7, March 2025.
[18] The seven companies are Apple, Alphabet (Google), Amazon, Meta (Facebook), Microsoft, Nvidia and Tesla.
[19] See box 3 in Danmarks Nationalbank, Stable financial markets support economy in recession, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 17, September 2020.

BOX 1

Equity and bond fund data show no signs of a broad sell-off of US securities

In the days following the US administration's tariff announcements on 2 April, several market commentators speculated whether the simultaneous weakening of the dollar could be due to a broader sell-off of US securities. To shed light on this, this box draws on capital flow data to assess whether international investors' trading in US securities reacted in the wake of the new US trade policy.

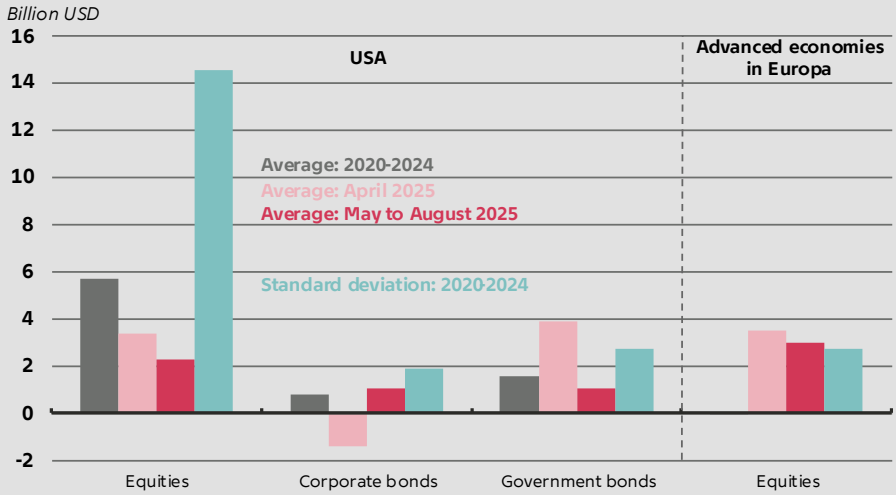
The data cover weekly trades from US-focused equity and bond funds.[1] Capital flows into and out of such funds typically account for a substantial portion of total portfolio investment flows. Data for US-focused funds can therefore act as a proxy for whether international investors chose to sell US securities after the tariff announcements, even though the data does not describe all portfolio investments in the US.[2]

Data shows that, since April, investors have been less inclined to buy US equities and corporate bonds than in 2020-2024, although there has been no outright sell-off of US securities, see chart A. A similar pattern is observed for US government bonds, where inflows since May have been below historical levels following a large inflow in April. The shift in bond funds in April towards safer government bonds could point to an investor preference for safe assets – a typical reaction during periods of global uncertainty. Data also shows that the decline in US-focused equity funds has been offset by inflows into European-focused equity funds. Investor domicile data, not shown in the chart, further shows that the decline in US-focused equity funds was primarily due to US-domiciled funds, indicating that the decline was driven by US investors. Overall, capital flows in 2025 are within the normal fluctuations, including in the week of tariff announcements, again indicated by data not shown in the chart.

Chart A

Temporary drop in inflows to US-focused equity funds and shift from corporate to government bond funds around the tariff announcements

Weekly inflows to US- and European-focused funds in 2025 by security type



Note: The chart shows the global net inflows to US- and European-focused funds mandated to buy equities, corporate bonds and government bonds, respectively.
Source: EPFR and own calculations.

[1] US-focused funds invest at least two thirds of assets in the US.
[2] Investments in global equity and bond funds form part of the total portfolio investments recorded in the balance of payments financial account. The EPFR data used in this box have been benchmarked with balance of payments statistics and other high-frequency data sources, see Y. Miao and M. Pant, Coincident indicators of capital flows, *IMF Working Paper*, no. 12/55, February 2012, and R. Koepke and S. Paetzold, Capital flow data – A guide for empirical analysis and real-time tracking, *International Journal of Finance & Economics*, August 2022. The studies find that EPFR data can be used to nowcast portfolio movements in the balance of payments financial accounts.

02

The Danish money and foreign exchange market

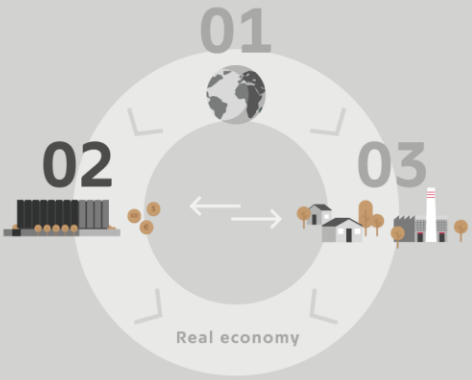
Since the last release of *Monetary and financial trends* in March, Danmarks Nationalbank has followed the ECB and lowered the monetary policy rates by a total of 0.5 percentage points. Danmarks Nationalbank's rate cuts have had a full pass-through to short-term money market interest rates with maturities up to one month. However, interest rates in some market segments, including the currency swap market, have at times been more volatile than normal and at times moved outside the monetary policy interest rate corridor, i.e. the interval between Danmarks Nationalbank's current-account and lending rates.

The volatility in money market interest rates coincided with increased krone demand in the money market and a lower net position. Regardless of the level of the net position, money market interest rates should not exceed Danmarks Nationalbank's lending rate for extended periods. The high volatility from March through June, when certain money market interest rates were periodically significantly above lending rates, signalled that the money market was not functioning efficiently.

The krone exchange rate against the euro has remained stable despite volatility in the money market and financial markets in general. Large dividend payments by Danish companies and declines in US equity prices in particular contributed to a slight weakening of the krone compared to the central rate in April. The depreciation was limited and short-lived, after which the exchange rate quickly moved back towards the central rate without Danmarks Nationalbank intervening in the Danish krone market. As of the end of August, Danmarks Nationalbank had not intervened in the Danish krone market since December 2022.

Chapter 02 and how it relates to the rest of the publication

This chapter (02) provides an update on the development of the Danish krone exchange rate and the Danish fixed exchange rate policy. The chapter analyses, in part, how monetary policy in the euro area (01) has affected the Danish money market. The pass-through to the money market is crucial for the transmission to the broader economy; this is analysed in chapter (03). Due to Denmark's fixed exchange rate policy, developments in the Danish krone market are key to how the ECB's monetary policy affects Danish financial conditions. Therefore, chapter (02) also analyses the movement of capital in the foreign exchange market.



Euro area interest rate cuts have led to a drop in Danish short-term market rates

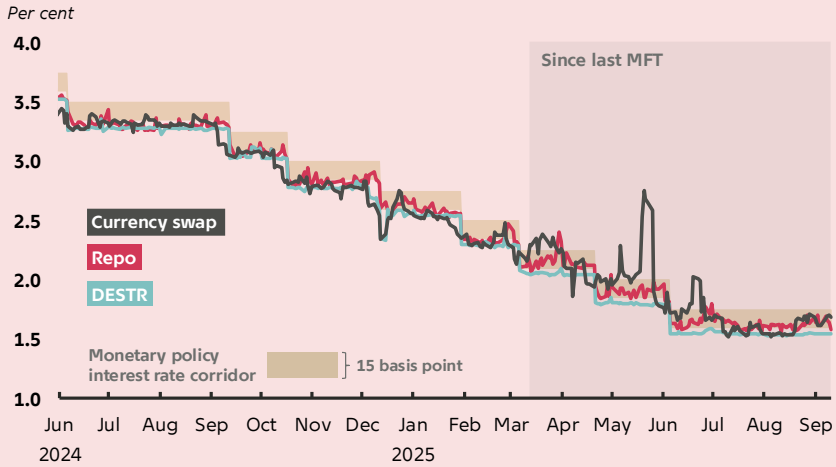
Since the release of *Monetary and financial trends* in March 2025, the ECB has cut monetary policy rates twice by a total of 0.5 percentage points, see chart 15. The krone exchange rate has remained stable around the central rate without intervention from Danmarks Nationalbank, while the interest rate spread to the ECB has been maintained at -40 basis points. The rate cuts have been fully reflected in the DESTR rate, which covers overnight rates on unsecured deposits, and in repo rates on secured loans.

The yield curve has flattened since March, reflecting that the market does not expect further rate cuts this year, similar to the euro area. Danish government bond yields have generally followed German government bond yields, which is why the spread on two-year government bonds is roughly unchanged, although the spread on 10-year government bonds has narrowed slightly.

From March to June, the volatility of short-term repo rates and implied rates on currency swaps was higher than usual, and rates periodically moved outside the monetary policy rate corridor defined by Danmarks Nationalbank's current account and lending rates. In particular, the implied rate on currency swaps, which is the rate on borrowing kroner against euros in a currency swap contract, was consistently above Danmarks Nationalbank's lending rate (see the dark grey line in chart 15). The volatility in short-term repo rates and implied rates on currency swaps did not have a noticeable impact on the krone exchange rate and has decreased since July.

CHART 15

Short-term money market interest rates have followed the monetary policy rate cuts, but experienced increasing volatility between March and June



Note: The currency swap rate is the implied krone rate calculated based on the difference between the spot and forward rates on a EUR/DKK currency swap with a one-week maturity. The repo rate is a weighted average of the interest rate on Danish banks' repo loans and lending with up to one week maturity, excluding loans between Danish banks. The Denmark Short-Term Rate, DESTR, is a reference rate based on unsecured overnight deposits in kroner. The monetary policy interest rate corridor is delimited by Danmarks Nationalbank's current-account and lending rates. The period since the last MFT starts on 13 March 2025. The latest data point is from 17 September 2025.

Source: Danmarks Nationalbank and own calculations.

Temporary volatility in the Danish money market

The fixed exchange rate policy means that Danmarks Nationalbank keeps the krone's exchange rate against the euro stable around the central rate. During periods of deviations from the central rate, Danmarks Nationalbank can stabilise the krone exchange rate through currency interventions and by changing monetary policy rates. When Danmarks Nationalbank changes monetary policy rates, it affects money market interest rates and thus the exchange rate of the krone against the euro. Which of Danmarks Nationalbank's monetary policy rates anchors money market interest rates depends on the total supply of central bank liquidity from Danmarks Nationalbank.[20] When the supply of central bank liquidity from Danmarks Nationalbank is high, the current-account rate will anchor money market rates, while when the supply of central bank liquidity from Danmarks Nationalbank is low, the lending rate acts as the anchor. Effective transmission of monetary policy depends on a well-functioning money market where monetary policy counterparties utilise Danmarks Nationalbank's facilities and are willing to distribute liquidity between each other. The high volatility in the money market from March through June, when money market interest rates were significantly above Danmarks Nationalbank's lending rate, signalled that the available krone liquidity was not being effectively redistributed.

Krone demand in the money market increased in March and April

During March and April, Danish banks experienced higher demand for kroner from their customers via repo and currency swap transactions than previously.[21] Foreign net loans of kroner in the Danish repo market increased by approximately kr. 60 billion, while the net loans of Danish insurance and pension companies increased by approximately kr. 30 billion, see chart 16.[22] At the same time, foreign countries increased their borrowing of kroner in the currency swap market, which increased by around kr. 90 billion in March, see chart 17. The demand for kroner via repos has been increasing since the beginning of 2024.[23]

When a bank meets customer demand for kroner, it may need to borrow from the money market or Danmarks Nationalbank

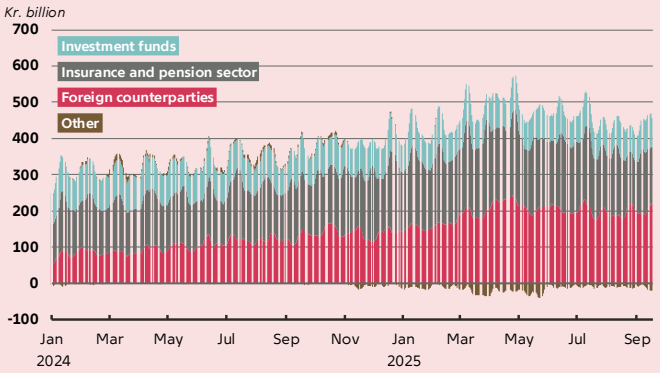
A bank can meet customers' demand for kroner by lending them kroner. This is done by increasing customer deposits in kroner corresponding to the loan amount, increasing the amount of commercially issued kroner.[24] If a customer needs to use the kroner, for example to buy securities on the financial markets, the buyer's bank must transfer central bank liquidity to the seller's bank. To complete the transaction, the buyer's bank must draw on its current-account at Danmarks Nationalbank. If needed, the bank can obtain central bank liquidity by borrowing from other monetary policy counterparties in the money market, which only leads to a redistribution of central bank liquidity between banks. The amount of central bank liquidity available to monetary policy counterparties is the net position vis-à-vis Danmarks Nationalbank as well as any monetary policy

[20] Central bank liquidity is the Danish banks' total gross deposits with Danmarks Nationalbank. The net position is the monetary policy counterparties' net deposits at Danmarks Nationalbank and indicates the amount of central bank liquidity offered to the banking system by Danmarks Nationalbank. See also G. Kidd, B.K. Søgaard and M.W. Toftdahl, Effective liquidity distribution is key for well-functioning money markets, *Danmarks Nationalbank Analysis*, no. 16, June 2025.
[21] Repo and currency swap transactions are both forms of secured lending where securities (e.g. government or mortgage bonds) and another currency (e.g. euro or dollar) are used as collateral. Repo and currency swap rates can also therefore have spillover effects on each other.
[22] Foreign counterparties include foreign investment and hedge funds with ties to Denmark.
[23] See also Danmarks Nationalbank, Global uncertainty affects the financial sector, *Danmarks Nationalbank Analysis (Financial stability – biannual review and recommendations),* no. 13, June 2025.
[24] The amount of central bank liquidity (which is a claim on Danmarks Nationalbank) remains unchanged in this case. In principle, a bank can increase both its deposits and lending as much as it wants based on its risk appetite. In practice, capacity is limited by financial regulation.

borrowing.[25] If the supply of central bank liquidity to the banking system via the net position is not sufficient, banks can increase the amount of central bank liquidity themselves by borrowing via Danmarks Nationalbank's weekly lending facility. This does not affect the banks' overall net position vis-à-vis Danmarks Nationalbank, but makes the lending rate more influential for money market interest rates.

CHART 16

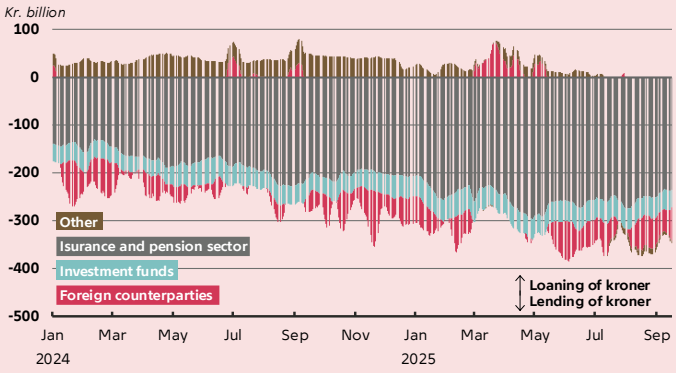
The demand for kroner in the repo market increased during March and April...



Note: Daily outstanding amount of Danish banks' net lending in the repo market, broken down by borrower sector. The series is shown as a one-week moving average. Loans between banks are not included in the calculation. 'Other' includes non-financial companies, among others. Calculations have been made based on Danmarks Nationalbank's money market statistics. The latest data point is from September 17 2025.
Source: Danmarks Nationalbank and own calculations.

CHART 17

...and was accompanied by increasing demand for kroner in the currency swap market



Note: Daily outstanding amount of open currency swaps, net, with Danish banks as a counterparty and the krone in one leg, broken down by sector. The series is shown as a one-week moving average. Currency swaps between banks are not included in the calculation. 'Other' includes, among others, non-financial companies. A positive value indicates that a sector has net borrowed kroner, i.e. bought kroner spot and sold kroner forward against another currency. A negative value indicates that a sector has net lent kroner, i.e. sold kroner spot and bought them back forward. Calculations have been made based on Danmarks Nationalbank's money market statistics. The latest data point is from September 17 2025.
Source: Danmarks Nationalbank and own calculations.

The supply of active central bank liquidity decreased significantly from March to June

Volatility in short-term money market interest rates increased from March to June, with repo rates and implied rates on currency swaps moving closer to, and at times exceeding, Danmarks Nationalbank's lending rates, see chart 18. In the wake of rising krone demand from banks' customers, the increase in volatility coincided with a decline in the net position, which reached its lowest level since spring 2022, see chart 19. In addition, only part of the outstanding central bank liquidity is active and available in the market. This is because some monetary policy counterparties prefer to place excess liquidity passively at Danmarks Nationalbank rather than lending it out in the money market. One way to measure active central bank liquidity is by looking at the portion of the net position held by banks with high money market activity. The measure of the net active position is the total net position held by the banks that report to Danmarks Nationalbank's money market statistics and are therefore considered

[25] The net position is the monetary policy counterparties' total deposits at Danmarks Nationalbank minus any lending. The net position is primarily affected by government payments and the interventions of Danmarks Nationalbank.

to be the most active players in the Danish money market.[26] Inactive central bank liquidity is typically held by smaller banks with simpler business models and less active liquidity management. However, the division is not clear-cut and should be considered a simple approximation. The level of activity within each category may vary, and individual banks may periodically reduce or increase their money market activity significantly.

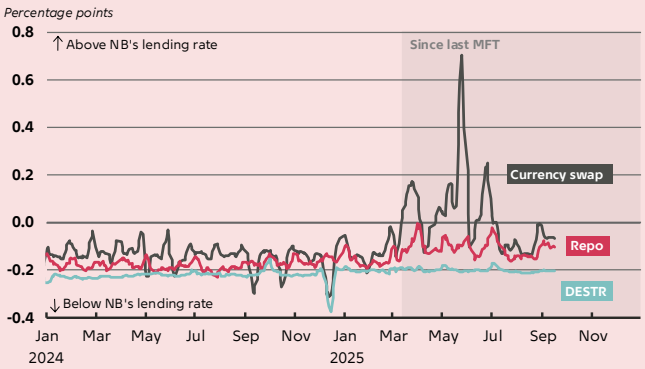
Inactive central bank liquidity, measured by the inactive part of the net position, has increased over the last 10 years, see chart 19. At the end of March, the active part of the net position fell to 14 per cent, which is the lowest share in several years.

Danmarks Nationalbank's lending facility was utilised when the active part of the net position was particularly low

Monetary policy counterparties borrowed kr. 42.8 billion through the weekly lending facility in March, which is the highest level since March 2020, see chart 19. The utilisation of Danmarks Nationalbank's lending facility peaked at the same time as the active part of the net position reached its low point in March and April, helping to ease pressure on the money market.[27] Since the beginning of July, the active net position, and thus central bank liquidity, have more than tripled, corresponding to an increase of around kr. 100 billion, while the uptake of monetary policy lending has completely subsided. The lending facility has not been utilised since July.

CHART 18

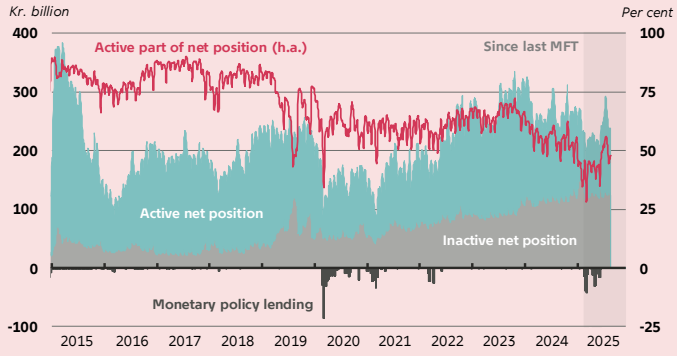
Money market interest rates have been closer to Danmarks Nationalbank's lending rate since March



Note: The graph shows the difference in relevant interest rates from Danmarks Nationalbank's lending rate. Positive values indicate that the interest rate is higher than Danmarks Nationalbank's lending rate. *Currency swap* is the difference between the implicit krone rate calculated based on EUR/DKK currency swaps with a one-week maturity and Danmarks Nationalbank's lending rate. *Repo* is the difference between Danmarks Nationalbank's lending rate and the interest rate on bank loans and lending in the repo market with a maturity of up to one week. *DESTR* is the difference between Danmarks Nationalbank's lending rate and the DESTR rate. Time series are shown as one-week moving averages. The period since the last MFT starts on 13 March 2025. The latest data point is from 17 September 2025.
Source: Danmarks Nationalbank, LSEG Workspace and own calculations.

CHART 19

The share of krone liquidity made available in the money market fell to very low levels



Note: The net active position indicates the part of the net position held by banks that report to Danmarks Nationalbank's money market statistics. The inactive net position is held by other monetary policy counterparties, which covers most Danish banks and mortgage credit institutions. The active and inactive net position and active part are one-week moving averages. Monetary policy loans are daily observations of the total outstanding amount of lending from Danmarks Nationalbank. The period since the last MFT starts on 13 March 2025. The latest data point is from 17 September 2025.
Source: Danmarks Nationalbank and own calculations.

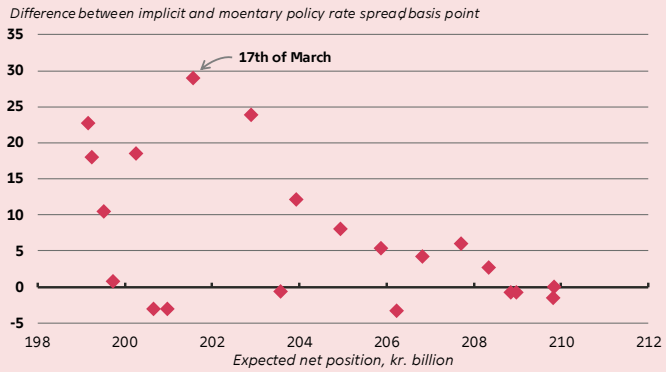
[26] The current and previous reporting banks are Arbejdernes Landsbank, Danske Bank, Jyske Bank, Handelsbanken, Nordea Danmark, Nykredit Bank, Skandinaviska Enskilda Banken, Spar Nord Bank, Sparekassen Kronjylland and Sydbank.
[27] Danmarks Nationalbank had an extraordinary opening for the lending facility on the 1st of April 2025.

Money market interest rates should not persistently exceed Danmarks Nationalbank's lending rate, regardless of the level of the net position

In March, the implied interest rate spread between kroner and euros from currency swaps increased, especially on days when there were expectations of further declines in the net position over the coming month, see chart 20.[28] This may indicate that the net position has had a significant effect on interest rate fluctuations in parts of the money market. Historically, deviations between the implied interest rate spread from currency swaps and the monetary policy rate spread have typically occurred when the active net position was low, see chart 21. It is natural that Danmarks Nationalbank's lending rate anchors certain money market interest rates in periods with a low supply of central bank liquidity via the net position. However, money market interest rates should not rise to a level significantly above Danmarks Nationalbank's lending rate for an extended period of time, regardless of the level of the net position.[29] Monetary policy counterparties can borrow unlimited amounts against collateral in Danmarks Nationalbank's weekly lending facility. Thus, if money market interest rates are temporarily above Danmarks Nationalbank's lending rate, monetary policy counterparties have an economic incentive to borrow via the facility and distribute the liquidity to other non-monetary policy counterparties. The efficiency of the money market should therefore not depend on the level or expectations of the net position.

CHART 20

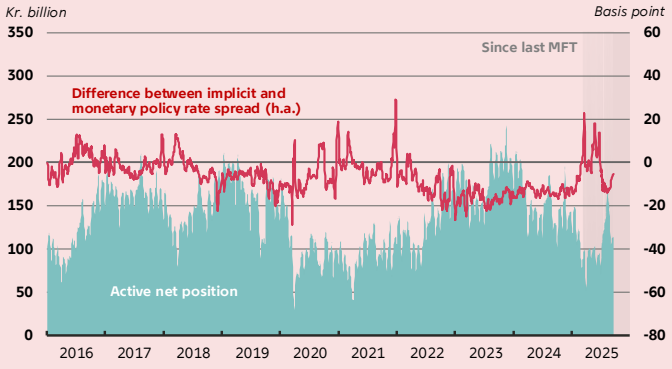
The implied interest rate spread increased especially on days in March with expectations of a future low net position



Note: The chart shows daily observations for the expected net position against the difference between the implied interest and policy rate spread in March 2025. The expected net position is calculated as the average of the daily net position, including Danmarks Nationalbank's forecast of liquidity impact from the government over the next month. The implied interest rate spread is calculated based on one-month currency forward contracts, while the monetary policy rate spread is the difference between one-month swap rates in euros and kroner.
Source: Danmarks Nationalbank and own calculations.

CHART 21

The active net position has historically followed the difference between the monetary policy and implied interest rate spread



Note: The net active position indicates the part of the net position held by banks that report to Danmarks Nationalbank's money market statistics. The implied interest rate spread is calculated based on one-month currency forward contracts, while the monetary policy rate spread is the difference between one-month swap rates in euros and kroner. The series is shown as a one-week moving average. The period since the last MFT starts on 13 March 2025. The latest data point is from 17 September 2025.
Source: Danmarks Nationalbank and own calculations.

[28] Danmarks Nationalbank publishes a monthly projection of the liquidity impact of government payments to support the liquidity management of monetary policy counterparties.
[29] However, the cost of relaying the krone liquidity can cause money market interest rates to be close to, but stably above, Danmarks Nationalbank's lending rate during periods of low central bank liquidity.

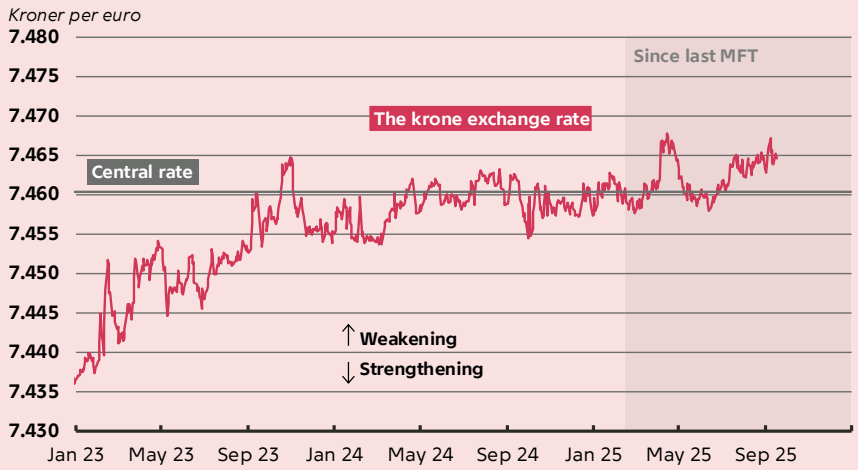
It is crucial that monetary policy counterparties are prepared to use the weekly lending facility to maintain their participation in the Danish krone money markets and contribute to the smooth functioning of the markets.[30] The use of the lending facility should thus be an integral part of the liquidity management of monetary policy counterparties.[31]

Stable krone exchange rate despite volatility in financial and money markets

Since the release of *Monetary and financial trends* in March 2025, the exchange rate of the krone against the euro has been close to the central rate, see chart 22. The observed volatility in the implied interest rates on currency swaps has thus not had a knock-on effect on the spot rate, even though the temporary increases in the implied interest rates on currency swaps made it cheaper to hedge from euros to kroner.

CHART 22

The krone exchange rate has remained stable, with a moderate and short-term weakening in April



Note: The daily krone exchange rate against the euro and the central rate as given by the European exchange rate mechanism (ERM II). The period since the last MFT starts on 13 March 2025. The latest data point is from 17 September 2025.
Source: Danmarks Nationalbank.

Large dividend payments from Danish companies and declines in US equity prices in particular contributed to a moderate weakening of the krone in April. The weakening was limited and short-lived, after which the exchange rate quickly moved back towards the central rate without intervention from Danmarks Nationalbank. As of the end of August, Danmarks Nationalbank had not

[30] See G. Kidd, B.K. Søgaard and M.W. Toftdahl, Effective liquidity distribution is key for well-functioning money markets, *Danmarks Nationalbank Analysis*, no. 16, June 2025.
[31] The same opinion has been expressed by the ECB and the Bank of England, among others, see C. Buch and I. Schnabel. Managing liquidity in a changing environment. *ECB Supervision Blog*. 18. March 2025, and V. Saporta, Learning by doing, *speech by Victoria Saporta, Executive Director for Markets in the Bank of England at the Bank of Finland and SUERF Conference in Helsinki*, 11 June 2025.

intervened in the Danish krone market since December 2022. Furthermore, the monetary policy rate spread to the ECB has remained unchanged at -40 basis points since February 2023. The long period without intervention and changes in the monetary policy rate spread, even during periods of volatility in certain money market interest rates and financial markets more broadly, speaks, among other things, to the balance in the krone market and the predictability of Danmarks Nationalbank's reaction pattern, which enables the market to stabilise itself.[32]

Current account surpluses continue to create ongoing demand for kroner, with balance in the krone market ensured by the interest rate spare to the ECB

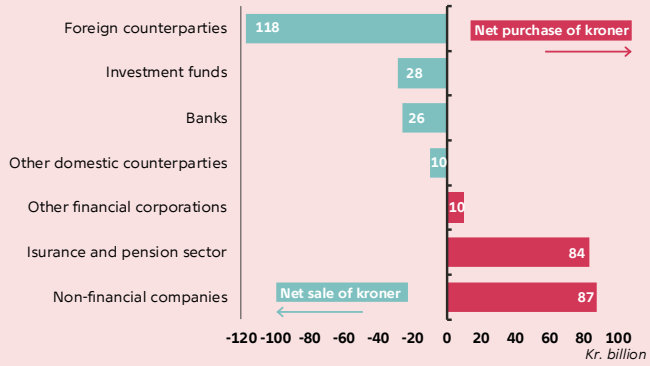
In recent years, Danish non-financial companies have accounted for the majority of net purchases through Danish banks. As elaborated in *Monetary and financial trends* from March 2025, companies' net purchases of kroner reflect, among other things, the large current account surplus, as they buy kroner when they repatriate foreign currency income from exports.[33] At the same time, the current account surplus has resulted in large Danish net foreign assets, which leads to further demand for kroner, partly due to *home bias* among investors.[34] Danmarks Nationalbank's negative interest rate spread to the ECB ensures that the Danish krone market is in equilibrium around the central rate by counteracting the capital inflow to Denmark that would otherwise result from the current account surplus and the significant net foreign assets.

Since March, Danish non-financial companies have had a significant net purchase of kr. 87 billion through Danish banks, see chart 23. This reflects, among other things, that companies continue to generate high profits in foreign currency from exports abroad, cf. *Outlook for the Danish economy* from September 2025.[35] However, over the past six months companies' purchases of Danish kroner have been lower compared to the past two years, see chart 24. Large corporate acquisitions have, among other things, meant that some companies have sold more kroner than usual, see *Monetary and financial trends* from March 2025. The uncertainty surrounding global trade policy, see the chapter *Global financial market developments*, may also have contributed to lower krone purchases. To the extent that companies are uncertain about their future profits, this may lead them to hedge expected earnings to a lesser extent and thus buy fewer kroner via forward contracts.

[32] See also Danmarks Nationalbank, Towards a neutral monetary policy in 2025, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 7, March 2025.
[33] See Danmarks Nationalbank, Towards a neutral monetary policy in 2025, *Danmarks Nationalbank Analysis (Monetary and financial trends),* no. 7, March 2025.
[34] See box 3 in *Monetary and financial trends* March 2025 for a more detailed explanation.
[35] Danmarks Nationalbank, Weaker global trade slows growth in Denmark, *Danmarks Nationalbank Analysis (Outlook for the Danish economy)*, no. 23, September 2025.

CHART 23

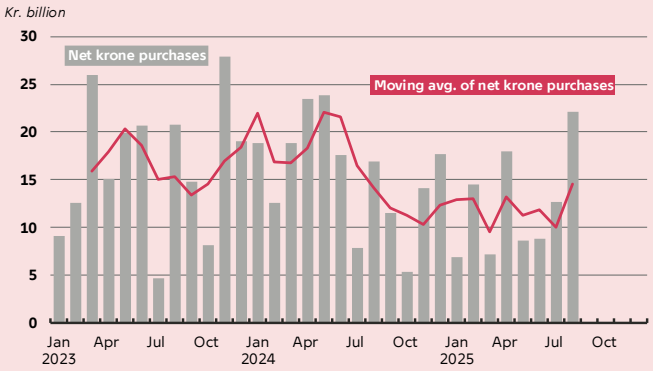
Danish companies and FogP have bought kroner, while foreign countries have sold kroner via Danish banks



Note: Net krone purchases in the Danish krone market by sector from the 1st of March 2025 to the 17th of September 2025. The category *Other domestic* includes households, non-profit organisations, the public sector and other unknown Danish counterparties.
Source: Danmarks Nationalbank.

CHART 24

Danish companies' net krone purchases have been lower in 2025 than in the previous two years



Note: Danish non-financial companies' monthly net krone purchases via Danish banks and three-month moving average of net krone purchases. The latest data point is August 2025.
Source: Danmarks Nationalbank.

Short-term krone weakening in April coincided with krone sales by foreign banks in light of dividend payments

Foreign players have accounted for the majority of Danish krone sales through Danish banks since March. In total, they have sold kr. 118 billion net, of which kr. 88 billion came from foreign banks. The majority of these trades are executed on behalf of the foreign banks' customers. The trades therefore reflect not only the banks' own trades, but also a wide range of different investors' sales of kroner.

Foreign net sales should be seen in light of dividend payments, among other things. In March and April, Danish companies paid out around kr. 40 billion in dividends to foreign investors, surpassed only by the record-high dividend payments in spring 2023.[36] When the dividends are transferred to foreign banks, the banks usually sell the kroner to Danish banks on behalf of the investors to the extent that the investors do not reinvest the dividends in Danish assets.

Declining prices on equities issued by large Danish companies in July and August did not give rise to significant krone sales from abroad or significant movements in the krone exchange rate.[37]

The insurance and pension sector's krone trades in April contributed to both the short-term weakening of the krone and to the subsequent stabilisation

Since the beginning of March, the insurance and pension sector, FogP, has purchased a net total of 84 billion worth of kroner via Danish banks, see chart 23. The net krone purchase covers, among other things, opposing movements around the short-term weakening of the krone in April. In the wake of the US administration's tariff announcements on the 2nd of April and the subsequent decline in equity prices, the sector sold kroner on certain days, which contributed to the short-term krone weakness. A similar dynamic has been seen

[36] Foreign investors owned approximately 63 per cent of Danish C25 equities at the end of May 2025.
[37] When foreign countries sell Danish equities, it tends to generate a krone sale to the extent that the proceeds are not reinvested in krone assets. When equity prices fall significantly, foreign investors who have hedged their krone exposure will generally buy kroner to rebalance their hedge ratio, which supports the krone exchange rate. Which of these effects dominates will depend on the investor mix, the hedge ratio and the outstanding asset portfolio.

in previous episodes of large foreign equity price declines, such as during the pandemic, as the sector will typically sell kroner to maintain its hedge ratio.[38] Overall, however, the extent of the sector's krone sell-off in early April was limited and differed from previous periods of large global equity price declines. Later in April, the sector had a significant net krone purchase, which contributed to the krone exchange rate moving back towards the central rate. This may reflect the fact that the short-term weakening made it cheaper for the sector to buy kroner.

Dollar hedging from the insurance and pension sector has contributed to higher krone demand, although most of the hedging was to euros

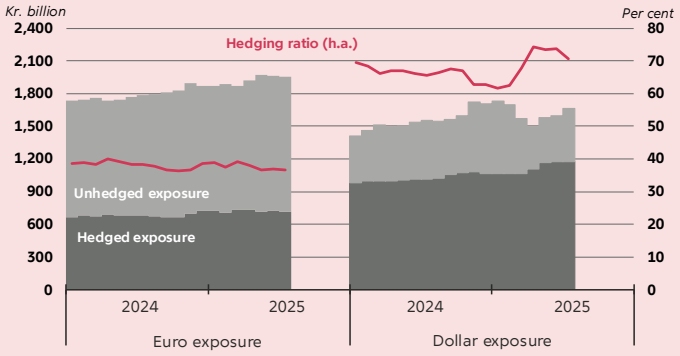
The krone sale from FogP in early April was limited compared to previous episodes where equity prices fell. This was partly due to FogP maintaining the level of their dollar hedging in March and April despite the decrease in dollar exposure. As a result, the hedge ratio on dollar assets increased by 11 percentage points – from 63 to 74 per cent, see chart 25. The hedge ratio of dollar exposure subsequently decreased slightly to around 71 per cent in July following the US equity price increases. However, the hedge ratio is still above the pre-April level. The increase in dollar hedge ratio breaks the trend from 2024, where the sector gradually allowed its hedge ratio to decrease as the value of its dollar investments increased. The increased hedging of dollar exposure indicates that the sector has sought to hedge against dollar risk, aligning with similar behaviour among investors globally, as discussed in the chapter *Global financial market developments*.[39]

However, the increased dollar hedging has only partially led to krone purchases, which has dampened the effect on overall krone demand since March. This is because the hedge is primarily traded against euros and not hedged further to kroner. From March to July, FogP sold dollars against euros via forward contracts for kr. 70 billion, see chart 26, while approximately kr. 20 billion was hedged directly to kroner. As only part of the increased exposure to the euro was subsequently hedged to kroner, the overall krone hedging ratio for the euro fell from 39 to 37 per cent from March to July, see chart 25.

[38] See S.A.M. Steffensen, B.M. Jensen and A.M. Grønlund, Currency hedging and the Danish pension sector, *Danmarks Nationalbank Economic Memo*, no. 2, May 2024.
[39] See H.S. Shin, P. Wooldridge and D. Xia, US dollar's slide in April 2025: the role of FX hedging, *BIS Bulletin*, no. 105, June 2025.

CHART 25

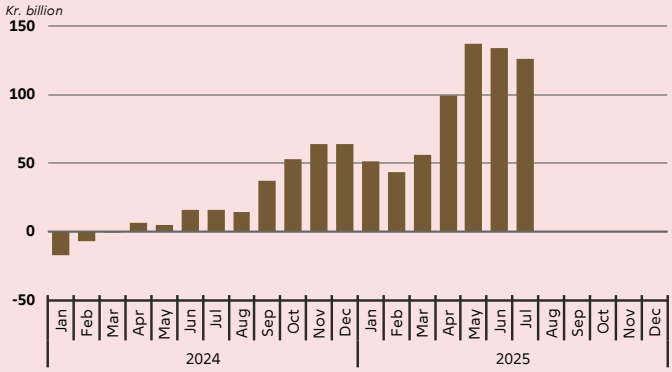
Dollar hedge ratio has increased – while the euro hedge ratio has decreased



Note.: FogP's total exposure in euros and dollars, respectively, broken down by hedged and unhedged exposure and hedge ratio, for the period January 2024 through July 2025.
Source: Danmarks Nationalbank.

CHART 26

Euro exposure has increased significantly since April as a result of increased dollar hedging to euro



Note: Cumulative change in FogP's total euro exposure as a result of hedging from dollars to euros in the period January 2024 through July 2025.
Source: Danmarks Nationalbank.

Purchases of foreign equities by the insurance and pension sector are unlikely to have had a significant impact on overall demand for kroner

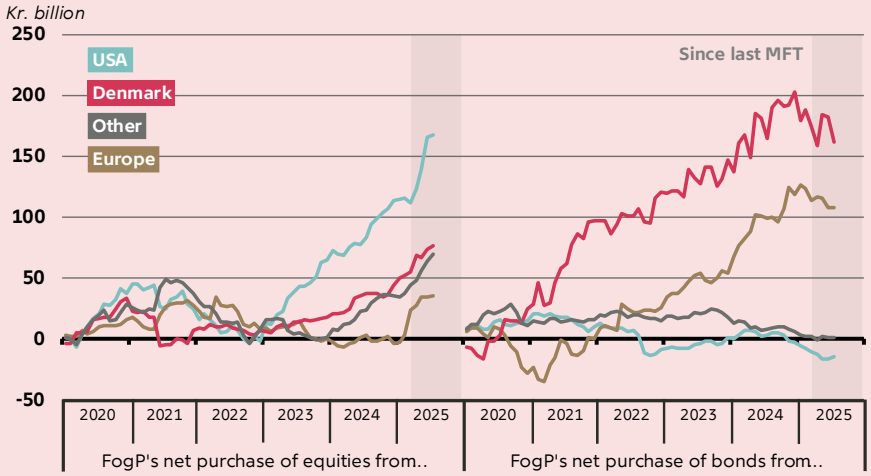
FogP has increased its purchases of European and US equities and sold bonds since March, see chart 27.[40] In the period March through July, FogP bought foreign equities for kr. 116 billion and sold foreign bonds for kr. 24 billion. Just under half of the equities purchased are American. The purchase of the US equities is the largest purchase the sector has made over a five-month period in the last five years. FogP bought mainly European equities in March, while purchases of US equities have increased since April after the significant falls in equity prices, see the chapter *Global financial market developments*.

There are no indications that FogP's purchase of foreign equities since March has had a significant impact on demand for kroner. FogP can finance the purchase of foreign equities in several ways, including through currency swaps, currency repo transactions, dividends and coupon interest received on holdings of foreign securities or from the settlement of currency derivatives. In all cases, it will be neutral for the demand for kroner, all else equal, unlike if the currency is obtained through spot transactions. However, data for FogP's spot transactions through Danish banks does not indicate an increase in krone spot sales during the period, nor is there any indication that FogP's spot trades with foreign banks have deviated significantly from last year, for example. [41,42]

[40] The purchase of securities only includes direct ownership of securities. In addition to securities, FoP's exposure to equities and bonds may also have changed through derivative contracts, such as equity futures.
[41] FogP's trades through Danish banks, by contrast, point to a decline in krone spot sales over the period.
[42] It should be noted that the current data coverage does not allow sufficient monitoring of FogP's krone trades with foreign banks to draw a firm conclusion. The conclusion is based on the assumption that increased spot sales of kroner will lead to an increase in foreign banks' spot sales of kroner to Danish banks, as foreign banks are not expected to be interested in holding krone liquidity. However, taking into account the higher dividend payments in March and April, as mentioned earlier, no significant increase can be observed compared to last year.

CHART 27

The insurance and pension sector has made large equity purchases and bond sales since March



Note: FogP's accumulated monthly net purchases of equities and bonds, respectively, since 2020, broken down by the market where they were issued. The figures do not include investments in securities through derivative products such as futures. The figures have been analysed to include FogP's investments made via Danish investment funds. The period since the last MFT starts in March 2025. The latest observation is July 2025.
Source: Danmarks Nationalbank.

03

Macro-financial developments

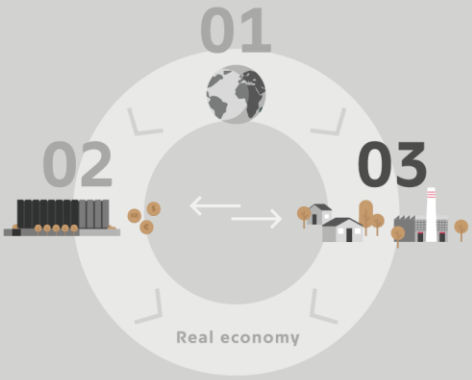
Danmarks Nationalbank's monetary policy rates have been further reduced over the past six months as the ECB has phased out tight monetary policy in the euro area. Interest rates on both new and existing debt have fallen further for households and companies. At the same time, credit growth increased in the first half of 2025 for households and companies.

Based on the development in financing conditions and market participants' expectations for monetary policy rates, Danmarks Nationalbank assesses that monetary policy and overall financial conditions in Denmark are currently neutral for economic activity. Financial market fluctuations in the wake of the US tariff announcements on 2 April have so far been temporary and have not changed the assessment of macro-financial conditions in Denmark.

Geopolitical developments can pose a risk of fluctuations in macro-financial conditions. Macro-financial imbalances have previously amplified adverse shocks to the Danish economy, but there are currently no signs that they are a significant risk factor for economic activity.

Chapter 03 and how it relates to the rest of the publication

This chapter (03) provides an update on the transmission of monetary policy to lending conditions for households and companies. Developments in the global financial markets (01) and domestic monetary policy conditions (02) affect the macro-financial conditions for Danish households and companies (03). Monetary policy affects the real economy through different channels, and the full effect of monetary policy changes occurs with a lag. This chapter analyses the transmission of monetary policy to households' and corporations' financing conditions. The nominal and real cost of obtaining new financing affects consumption and investment decisions. Market rates are also gradually transmitted to net interest payments, affecting consumption and investment opportunities.



Monetary policy and financial conditions are considered neutral for the Danish economy

Since March, Danmarks Nationalbank has followed the ECB and lowered interest rates by 0.5 percentage point. This means that monetary policy interest rates have been lowered by 2 percentage points since their peak in 2024. Market participants expect no further cuts to monetary policy rates through 2025. Since March, the lower monetary policy rates have been transmitted to lending rates for households and companies, contributing to a continued easing of overall financial conditions.

Danmarks Nationalbank assesses that monetary policy and overall financial conditions currently are approximately neutral for economic activity in Denmark, in line with the expectation from *Monetary and financial trends* from March 2025. The assessment is based on a wide range of indicators, including the development of estimates for the neutral level of the policy rate, lending rates and credit growth, as well as model-based estimates of the effect of monetary policy since 2022 on economic activity in Denmark.

The heightened market volatility in April was of a temporary nature and has not changed the assessment of macro-financial conditions in Denmark. Geopolitical uncertainty is a risk factor. For example, a sudden tightening of monetary policy in the US due to tariffs and increased inflation could lead to a sudden tightening in global financial conditions, see also *Outlook for the Danish economy* from September 2025.[43] Geopolitical unrest could also lead to rising risk premiums on financial assets. Currently, there are no signs that the macro-financial balances in Denmark pose a particular risk to the Danish economy.

Model estimates indicate that monetary policy is neutral for the Danish economy

Model estimates for the neutral interest rate indicate that Danish monetary policy rates are close to a level that is neutral for economic activity, see chart 28. This means that, subject to estimation uncertainty (see below), monetary policy neither promotes nor dampens economic activity relative to its potential level.[44] This development contrasts with 2023 and 2024, when monetary policy was restrictive according to the model estimates.[45] The development of the neutral interest rate in Denmark is in line with similar estimates from the ECB.[46]

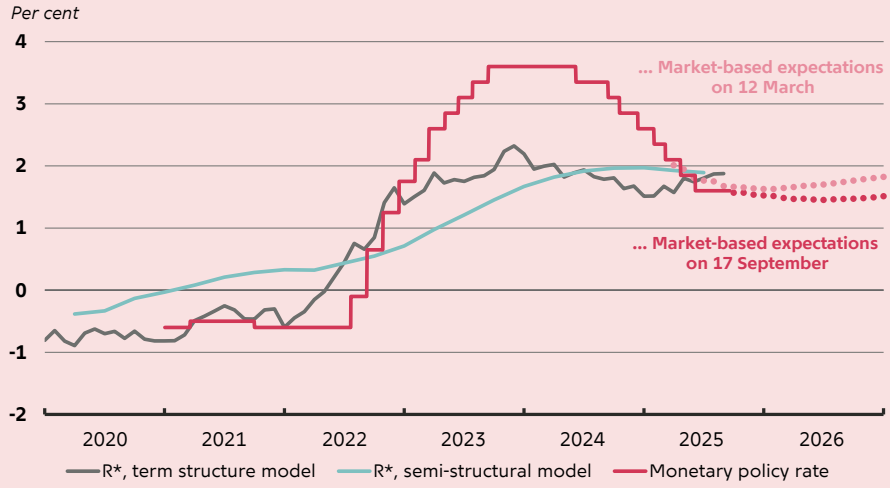
The neutral interest rate indicates the level of the policy rate that is neutral for economic activity compared to the potential level. Neutral interest rate estimates can serve as a starting point for assessing the effect of monetary policy on the economy, including inflationary pressures. However, the estimates cannot stand alone, partly because the neutral interest rate cannot be observed and must therefore be estimated, which involves considerable uncertainty. At the same time, the monetary policy stance is affected by other macro-financial conditions in the economy than just the policy rate which are not necessarily captured in the

[43] See Danmarks Nationalbank, Weaker global trade slows growth in Denmark, *Danmarks Nationalbank Analysis (Outlook for the Danish economy)*, no. 23, September 2025.
[44] For an in-depth discussion of potential output and the relationship with the neutral interest rate, see M. Bess, T.J. Bock, R.B. Larsen, J. Poeschl, F. Rozcypal and C.J. Weissert, The output gap in the Danish economy – calculation and assessment, *Danmarks Nationalbank Analysis*, no. 22, September 2025.
[45] The model estimates also indicate that the neutral interest rate may have increased since 2020. This may be due to, for example, expectations of higher public spending in the future, such as a result of military armament and the green transition, but also expectations of higher productivity growth, low savings and central banks' communication on monetary policy, see I. Schnabel, R(ising) star?, *speech by Isabel Schabel, executive board member of the ECB, at The ECB and its Watchers XXIV conference in Frankfurt*, March 2024.
[46] See Brand, C., N. Lisack and F. Mazelis, Natural rate estimates for the euro area: insights, uncertainties and shortcomings, *ECB Economic bulletin box*, February 2025, and I. Schnabel, No longer convenient? Safe asset abundance and r*, *speech by Isabel Schnabel, executive board member of the ECB, at the Bank of England's 2025 BEAR Conference in London*, February 2025.

estimation of the neutral interest rate. The following sections are therefore based on a wide range of other indicators that, together with the current interest rate level, are also important for the effect of monetary policy in Denmark.

CHART 28

The monetary policy rate is close to model estimates of the neutral interest rate



Note: The chart shows Danmarks Nationalbank's current-account rate (red) and market participants' expectations for €STR minus the current monetary policy interest rate spread between the euro area and Denmark (dashed). The estimates for the neutral monetary policy rate (r*) are based on two different models, which are described in the annex in S.T. Hetland, M.M. Ingholt, R.B. Larsen and M. Spange, Real interest rates in the context of inflation and higher government debt, *Danmarks Nationalbank Analysis*, no. 2, February 2023. Estimates are subject to considerable uncertainty. The latest data point is August 2025 for the term structure model, Q2 for the semi-structural model and 17 September for the monetary policy rate.
Source: LSEG Workspace, Danmarks Nationalbank and own calculations.

Lower price of new financing has contributed to easier financing conditions

The monetary policy rate cuts have been partially transmitted to interest rates on new financing, see chart 29. Since March, the average interest rate on new loans has fallen by around 0.6 percentage points for companies, while for households it has fallen somewhat less by almost 0.3 percentage points.

The more pronounced fall in interest rates for companies than for households reflects, among other things, that households take out more fixed-rate loans than companies, which take out more variable-rate bank and mortgage loans. This means that companies experience a larger drop in the average interest rate on new loans than households when monetary policy rates are lowered, and the interest rate reduction is not fully reflected in interest rates on new loans with longer fixed interest rates. This has been the case since March, as higher liquidity and risk premiums have pushed up the 30-year mortgage rate, largely offsetting the negative contribution from lower monetary policy rates, see chart 30.[47] Recently, however, the 30-year mortgage rate has fallen slightly, and, if this trend continues, it could potentially result in refinancing among Danish households. In

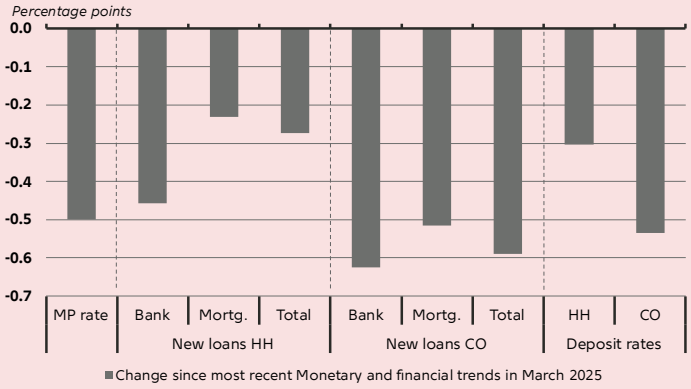
[47] Changes in the interest rate of a 30-year callable mortgage bond can be decomposed into changes in the risk-free interest rate following monetary policy expectations, changes in liquidity and risk premiums, and changes in the compensation for the issuer's right to refinance, see also *Monetary and financial trends* from March 2025. Like the risk-free interest rate, the right to refinance has contributed negatively to the 30-year mortgage rate since March.

previous refinancing waves, this has typically resulted in additional borrowing and consequently increased private consumption.[48]

Deposit rates for households and companies have also decreased since March, see chart 29. Company deposit rates have continued to fall more than for households, reflecting the fact that company deposit rates also increased more in 2022-2023 following the monetary tightening at the time. During 2025, the total deposits of Danish households in Danish banks increased by kr. 51 billion. The increase in deposits continues the trend of recent years, where household deposits have increased significantly compared to outstanding bank lending, which has remained relatively flat. The increase in deposits relative to bank lending means that deposit rates may have become relatively more important for households' consumption decisions than in the past, see box 4 in *Monetary and financial trends* from March 2025.[49]

CHART 29

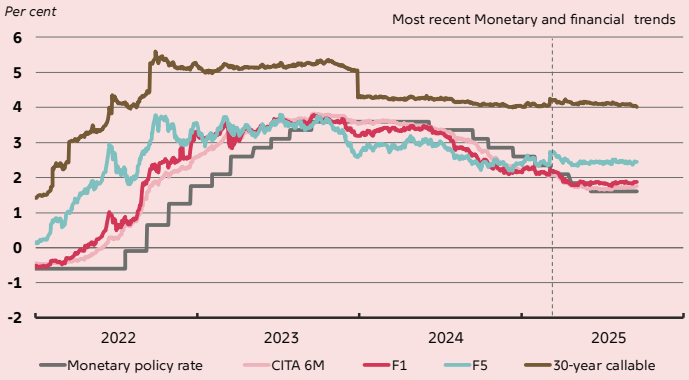
The average interest rate on new loans for households and companies has decreased



Note: Changes in the monetary policy rate, *MP rate*, are for the period from March to September 2025. Changes in interest rates on new bank and mortgage loans and deposits cover the period from March to July 2025. Households include non-profit institutions targeting households. *MP rate* indicates the current-account rate, which is the leading monetary policy interest rate. *HH* indicates households and *CO* indicates companies. *Mort.* is an abbreviation for mortgage.
Source: Danmarks Nationalbank, LSEG Workspace and Nordea Analytics.

CHART 30

Since March, short-term mortgage rates have fallen, while fixed-rate mortgage rates have remained unchanged



Note: The benchmark monetary policy rate is the current-account rate. Level changes in the 30-year convertible series reflect coupon changes. The latest data point is for 17 September 2025.
Source: Danmarks Nationalbank, LSEG Workspace and Nordea Analytics.

Lower interest costs on outstanding household and company debt allow increased consumption and investment

The average interest rate on outstanding loans has continued to fall for Danish households and companies since March, see chart 31. Since the peak in 2024, the decrease is approximately 0.4 and 0.7 percentage points for Danish households and companies, respectively. All else being equal, lower interest costs support consumption and investments, which are expected to increase moderately in 2026, see *Outlook for the Danish economy* from September 2025. The larger decrease in the average interest rate for companies is because they have a larger share of outstanding loans with short-term fixed interest rates compared to

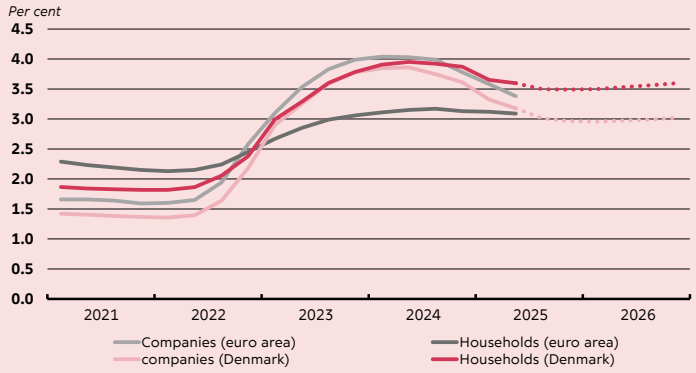
[48] See H.Y. Andersen, E.A. Grenestam and R.R. Nissen, Refinancing fixed-rate mortgages and homeowners' financial resilience, *Danmarks Nationalbank Economic Memo*, no. 2, May 2025.
[49] See Danmarks Nationalbank, Towards a neutral monetary policy in 2025, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 7, March 2025.

households. Similarly, a larger decrease in the interest rate on outstanding debt has also been observed for companies in the euro area compared to households, where the interest rate on outstanding household debt has remained roughly unchanged since the interest rate peak in 2024, see chart 31. The fact that interest rates have remained unchanged for households in the euro area since the ECB started phasing out its tight monetary policy differs from the development in Denmark and reflects a generally faster interest rate pass-through to households in Denmark compared to the euro area. This was also reflected in the period of monetary tightening in 2022 and 2023, when Danish households experienced a significantly larger rise in interest rates, see chart 31.[50]

A technical projection based on market participants' interest rate expectations indicates that the average interest rate on total outstanding debt will stabilise relatively close to current levels for both Danish households and companies in 2025, see chart 31.[51] The projection reflects that market participants do not currently expect more interest rate cuts from the ECB, see also the chapter on *Global financial market developments*. The market expects average household and company interest rates to be higher than they were at the beginning of 2022, when monetary policy was accommodative.[52]

CHART 31

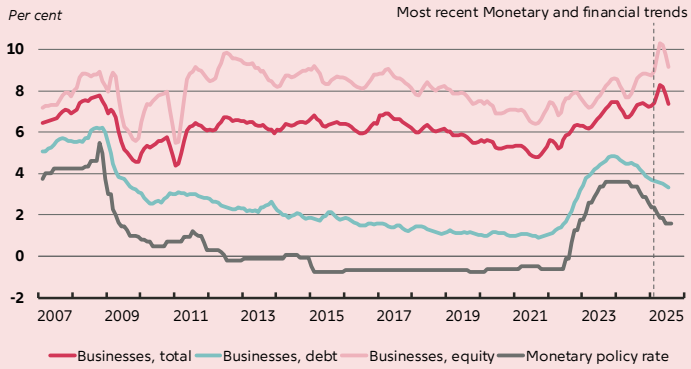
Market participants expect the average interest rate on outstanding debt to stabilise around the current level



Note: Quarterly interest expenses before tax on bank and mortgage debt for Danish households and non-profit institutions serving households and non-financial corporations. Dashed lines indicate projections, and the methodology is explained in footnote 34. The latest data point is Q2 2025.
Source: Danmarks Nationalbank, ECB and own calculations.

CHART 32

Companies' average external financing cost is at the same level as in March



Note: Balance sheet-weighted costs of raising external financing for companies. Companies relied heavily on equity financing, which goes a long way towards explaining their relatively high costs. For further details on the methodology, see box 1 in Danmarks Nationalbank, Decline in interest rates and refinancing boom, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 19, September 2019. The latest data point is for July 2025.
Source: Danmarks Nationalbank, Statistics Denmark, LSEG Workspace and own calculations.

[50] See A. Bovin, M. Jørgensen, A. Kuchler, J.W. Larsen, M.B. Læssøe and A.M. Otte, The household cash-flow effects of monetary policy in Denmark and the euro area, *Danmarks Nationalbank Economic Memo*, no. 1, January 2024.
[51] The projection is based on implicit market expectations for the loan segments F-short, F1, F3, F5 and fixed-rate loans. It takes into account the changes in the average interest rate for bank debt and F-loans when interest rates are continuously adjusted. It is assumed that interest rates on fixed-rate loans remain unchanged and that changes in interest rates on bank loans are 60 per cent of the change in the F-card rate, i.e. the observed pass-through in the current interest rate cycle. It is further assumed that there is a 5 per cent replacement of fixed-rate loans in each quarter, corresponding to an average replacement since 2003, excluding waves of refinancing. This corresponds to the implied market expectation for the 30-year interest rate in that quarter. Loan composition during the projection period is assumed to be as in March 2025. The projection is subject to considerable uncertainty, both in terms of market developments and refinancing behaviour among fixed-rate borrowers.
[52] See Danmarks Nationalbank, Accommodative financial conditions strengthen the upswing, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 23, September 2021.

It has continued to become more expensive for Danish companies to finance themselves through the equity market

The average cost of external financing for companies remains unchanged since the last *Monetary and financial trends* from March 2025, see chart 32. This reflects that the price of equity financing has increased, whereas, by contrast, the cost of debt financing has decreased.

The development in the cost of equity financing in Denmark should be seen in light of the fact that a few large companies dominate the Danish equity market. For example, Novo Nordisk's equity price has fallen since the summer of 2024, which, all else being equal, pushes up the price of equity financing. A calculation of the price of equity financing excluding Novo Nordisk thus shows a slight decrease, which means that the increase in the cost of equity financing in Denmark since the summer of 2024 is primarily due to Novo Nordisk. As a consequence, the development in companies' average external financing costs is not necessarily representative of Danish companies in general. Companies that primarily finance themselves through debt financing, such as smaller companies, will have seen a decrease in external financing costs since 2024, and this trend has continued since March.

Increased loan demand has fuelled rising credit growth for households and companies

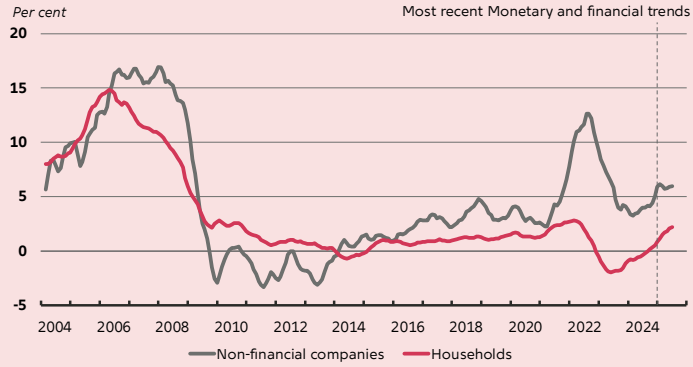
Growth in bank and mortgage lending has continued to increase for households and companies since the last *Monetary and financial trends* in March 2025, see chart 33. The development reflects, among other things, that loan demand increased in the first half of 2025, see Danmarks Nationalbank's lending survey. At the same time, during the first half of 2025 banks kept credit standards roughly unchanged for both households and companies.

Annual credit growth for non-financial corporations is currently at 6 per cent, see chart 33, primarily driven by large companies. Corporate credit growth remains higher than the average in the years after the financial crisis and before the covid pandemic.

The increase in credit growth for households since March 2025 has been relatively large. However, part of the increase is due to total credit to households coming off a low in 2022 and 2023 following the monetary tightening. Household credit growth is currently just above 2 per cent, which corresponds to the average level from the period between the financial crisis and the pandemic. The increasing credit growth for households is primarily driven by increased borrowing for home purchases, while the contribution from top-up loans has been negative, see chart 34. This reflects, among other things, house price developments, including in the Copenhagen area, while household consumption has been low in recent years, see *Outlook for the Danish economy* from September 2025.

CHART 33

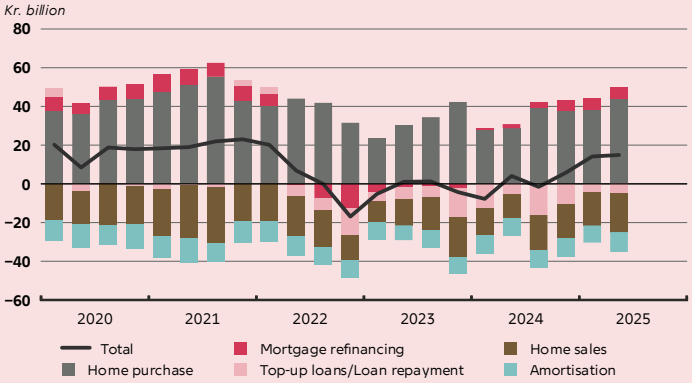
Credit growth has increased for both households and companies



Note: Growth in total lending by Danish banks (MFI sector) to households and non-financial companies, respectively. Three-month moving averages. The latest data point is July 2025.
Source: Danmarks Nationalbank.

CHART 34

Household credit growth is driven by home purchases



Note: Change in Danish households' loans secured on owner-occupied homes, including holiday homes. Includes mortgage and bank financing for properties where all financing is placed with credit institutions reporting fully to the Credit Register. The latest data point is Q2 2025.
Source: Danmarks Nationalbank.

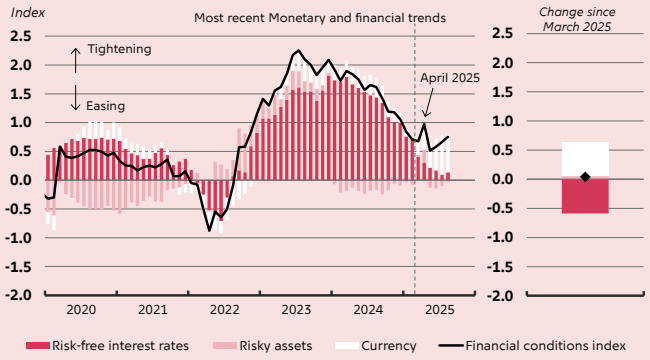
An index for overall financial conditions in Denmark has been flat since March despite a drop in risk-free interest rates

An overall index for Danish financial conditions indicates that the financial conditions are roughly unchanged since March, see chart 35. The index weighs together selected components from the previous sections, as well as other market data that are considered relevant for the transmission of monetary policy to macro-financial conditions in Denmark.[53] The index should therefore be seen as an overall indicator of financial conditions in Denmark and a supplement to the other indicators discussed above.[54] The flat development of the index since March reflects the decline in risk-free interest rates, which has been offset by a strengthening of the effective krone rate in light of the weakening dollar, see the section on *Global financial market developments*.[55] The decrease in short-term interest rates in particular has contributed to the easing in the risk-free component, while the development in long-term interest rates has been approximately neutral during the period, see earlier. Market volatility in April resulted in a short-term tightening of the financial conditions index in Denmark, see chart 35. The tightening was particularly driven by significant falls in Danish equity prices and the weakening of the US dollar. However, the increase in the index was temporary and has not changed the overall picture of continued easing of financial conditions in Denmark. Comparing a daily version of the index around April with the financial crisis and the covid pandemic shows that the tightening in April was both relatively small and short-lived compared to historical episodes of high market volatility, see chart 36.

[53] The decisive factor for monetary policy transmission in Denmark is the pass-through to the krone exchange rate, cf. Danmarks Nationalbank's mandate to conduct a fixed exchange rate policy. However, the transmission of monetary policy to macro-financial conditions has an impact on capacity pressures in Denmark and thus also Danmarks Nationalbank's recommendations for fiscal policy, see Danmarks Nationalbank, Weaker global trade slows growth in Denmark, *Danmarks Nationalbank Analysis (Outlook for the Danish economy)*, no. 23, September 2025.
[54] The index weights how the risk-free interest rate curve, risky assets and the exchange rate affect financial conditions for households and businesses in Denmark based on their historical effect on inflation. The index gives indications of the change in overall financial conditions, while it is difficult to interpret at the level.
[55] In the model, a strengthening of the krone favours tighter financial conditions. This is because a stronger krone reduces exports, and thus economic activity, which, together with lower import prices, pushes down inflation. Read more in the chart legend for chart 35.

CHART 35

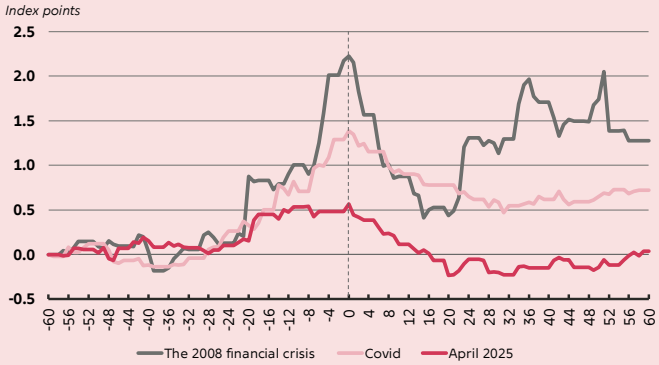
Flat development in overall financial conditions in Denmark covers a decline in risk-free interest rates, offset by currency



Note: The development in the financial conditions index and sub-components shown on a monthly basis. "Risk-free interest rates" is the first principal component of swap rates with maturities from three months to 10 years minus the one-year swap rate in nine years (proxy for a market-based nominal equilibrium interest rate). 'Risky assets' is the first principal component of the following variables: 1) monthly return on the C20, 2) a proxy for the equity risk premium (expected earnings yield on the C20 less a 10-year swap rate), 3) option-adjusted yield spread on mortgage bonds and 4) implied interest rate volatility from 1Y10Y swaptions and 3-month Cibor-OIS yield spread. "Currency" is nominal effective krone rate. The three factors are weighted in the overall index based on their effect on Danish inflation in a VAR model via impulse response functions. The latest data point is August 2025.
Source: LSEG Workspace, Macrobond, Nykredit and Danmarks Nationalbank.

CHART 36

Fluctuations in financial conditions were relatively limited in April 2025 compared to other episodes of high volatility



Note: Cumulative change in daily financial conditions index from 60 days before the peak to 60 days after the peak during episodes of high market volatility. The peak was 28 October 2008 during the financial crisis, 23 March 2020 during covid and 22 April 2025.
Source: LSEG Workspace, Macrobond, Nykredit and Danmarks Nationalbank.

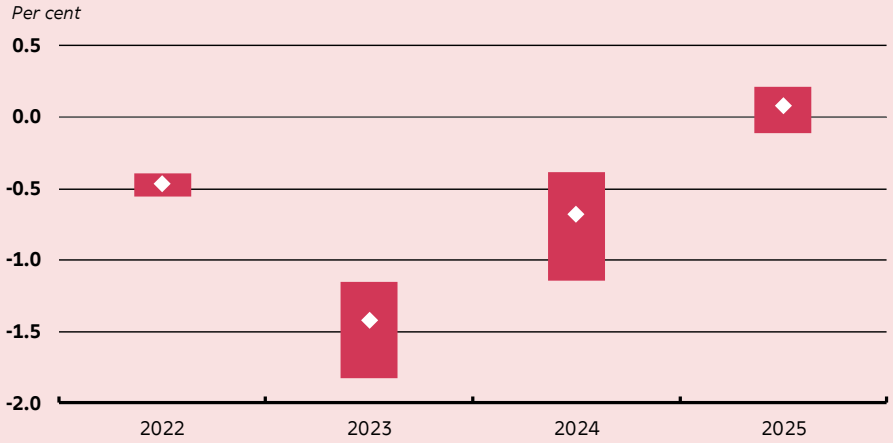
Monetary policy and overall financial conditions are assessed to be neutral for the Danish economy

Based on the indicators reviewed above, Danmarks Nationalbank assesses that monetary policy and overall financial conditions are neutral for the Danish economy. The assessment is based on the above comparison of the policy rate and estimates for the neutral interest rate level, as well as the review of the development in macro-financial conditions. The assessment is further supported by a model-based analysis of the transmission of past monetary tightening.[56] The model indicates that the effects of monetary tightening since 2022 have passed through the Danish economy, and that the total effect of monetary policy since 2022 has a neutral effect on Danish GDP in 2025, see chart 37. The conclusion for the multi-year monetary policy effect since 2022 is thus unchanged from the last *Monetary and financial trends* in March, reflecting that monetary policy in the euro area has followed market expectations and that changes in market expectations for the ECB's monetary policy for 2025 have been broadly unchanged, see section on *Global financial market developments*.

[56] Read more about the model in box 5 in Danmarks Nationalbank, Towards a neutral monetary policy in 2025, *Danmarks Nationalbank Analysis (Monetary and financial trends)*, no. 7, March 2025.

CHART 37

Multi-year effect of monetary policy since 2022 has approximately neutral effect on Danish GDP in 2025



Note: The chart shows the accumulated effects of ECB interest rate changes since 2022 on Danish GDP levels according to Danmarks Nationalbank's DSGE model. The white markings are mean estimates, while the red areas indicate 90 per cent confidence ranges. Read more in box 5 in *Monetary and financial trends*, March 2025.
Source: Own calculations.

Macro-financial conditions can change quickly in the face of geopolitical uncertainty, but financial vulnerabilities are smaller than before

The geopolitical uncertainty could lead to shocks to the global and Danish economy, see *Outlook for the Danish economy* from September 2025. It could also lead to changes in macro-financial conditions, for example, if inflation rises in the US due to tariffs and the Federal Reserve tightens monetary policy, with knock-on effects on asset prices globally. Geopolitical uncertainty could also lead to higher risk premiums across asset classes, thereby tightening macro-financial conditions. During the financial crisis, financial markets acted as an *accelerator* for adverse shocks to the economy. This meant that adverse effects on the Danish and global economy were amplified due to vulnerabilities and imbalances in the financial system. The macro-financial balances are markedly different today compared to before the financial crisis, and there are no current signs that the macro-financial channel poses a particular risk to economic activity in Denmark in terms of amplifying the effect of potential shocks to the Danish and global economy, see box 2 for further discussion.

BOX 2

Macro-financial imbalances do not currently contribute to tail risks for economic activity in Denmark

Macro-financial imbalances can help amplify shocks to the economy
Increased global uncertainty has meant that larger and new types of shocks could potentially hit the Danish and global economy compared to previously. During the financial crisis, financial vulnerabilities and imbalances amplified the effects of economic shocks.[1] For instance, self-reinforcing effects can occur through leveraged purchases of financial assets: When a negative economic shock causes a loss in the value of financial assets, it encourages leveraged investors to sell in order to repay their debts. This puts further downward pressure on prices, which in turn encourages further liquidation and an *accelerator mechanism* occurs.[2] By contrast, a positive shock can increase asset prices and encourage further indebtedness and purchases that push prices up and so on.

This box examines whether the development in macro-financial imbalances is currently assessed to contribute to tail risks to GDP growth in Denmark through self-reinforcing effects. This is achieved through so-called quantile regression, which describes the probability distribution of one variable, in this case Danish GDP growth, conditional on other variables, specifically a measure of cyclical systemic risks.[3]

Cyclical systemic risks, i.e. the build-up of macro-financial imbalances, are in this box given by the Systemic Risk Indicator, SRI hereafter. The SRI is a weighted average of measures of credit growth, equity price development, debt servicing ratio and house price developments.[4] The SRI indicates whether debt and asset prices are growing above their usual levels, potentially giving rise to self-reinforcing effects, see above. The Danish SRI is shown in chart A.

The model indicates that tail risks to Danish GDP growth are currently not significantly affected by cyclical systemic risks – unlike the period before the financial crisis
The projection of the probability distribution for Danish GDP growth over a two-year horizon indicates no substantial tail risks, as shown in chart B. This is shown by the fact that the distribution is not skewed, with adverse shocks being significantly more likely than positive shocks. Thus, the likelihood of a decline in economic activity is limited. This contrasts with the model projection at the end of 2006, i.e. the projection of GDP growth in 2008, where the development of financial imbalances indicated significant risks to Danish economic activity over a two-year horizon that were later realised in the financial crisis. However, the period leading up to the financial crisis was an extreme case and does not necessarily mean that estimated tail risks below this level should not be addressed.

The projection can be used to assess the risk of self-reinforcing effects through cyclical systemic risks in the financial system. However, the model's relatively simple specification and limited focus on macro-financial imbalances mean that the projection cannot be compared with the projection of Danish GDP in *Outlook for the Danish Economy* from September 2025 or related scenario analyses.[5] The conditional probability distributions in chart B can therefore not be considered informative for the expected range of outcomes for GDP growth, as this will depend on a wide range of other factors not taken into account in the model.

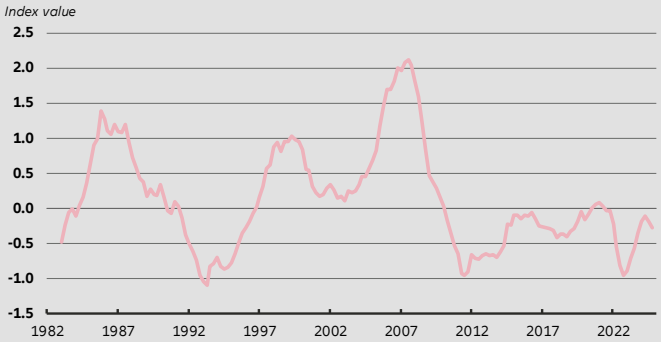
An additional caveat is that the analysis is based on historical correlations that are not necessarily indicative of how self-reinforcing effects through financial channels may play out in the future.

Finally, it should be noted that the model uses GDP growth in Denmark as an outcome variable, partly due to the literature on growth-at-risk, but GDP growth does not necessarily reflect the recession cycle and capacity pressure in the economy, which will also depend on labour market conditions, etc., see also *Outlook for the Danish economy* from September 2025.

Continues ...

CHART A

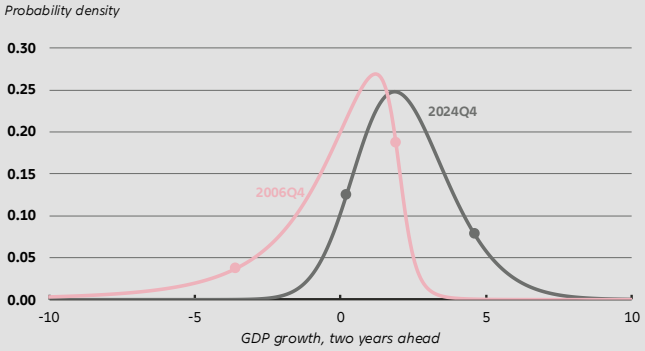
Indicator for the development of cyclical systemic risks points to limited build-up of macro-financial imbalances



Note: The chart shows the Systemic Risk Indicator, SRI, for Denmark quarterly based on D. Cucic, N.F. Møller, I.G. Yordanova and S.G. Søndergaard, Evaluating the macroprudential stance in a growth-at-risk framework, *Danmarks Nationalbank Economic Memo*, no. 14, November 2022, see also J. H. Lang, C. Izzo, S. Fahr and J. Ruzicka, Anticipating the bust: a new cyclical systemic risk indicator to assess the likelihood and severity of financial crises, *ECB Occasional Paper Series*, no 219, 2019. The series runs until 2024 Q4. SRI is a weighted average of the three-year change in house prices relative to income, the two-year change in debt relative to GDP, the two-year growth in deflated credit, the two-year change in the debt servicing ratio and the three-year growth in deflated Danish equity prices. All inputs in the SRI have had their median value subtracted and are divided by their respective standard deviations.
Source: Danmarks Nationalbank, the Systemic Risk Council and own calculations.

CHART B

Model estimates for the conditional probability distribution indicate that cyclical financial imbalances do not currently contribute to tail risks to Danish GDP growth



Note: The chart shows the estimated probability distribution of annual GDP growth two years ahead in Q4 2006 and Q4 2024 conditional on SRI. The dots mark the lower and upper deciles of the distributions. The model is estimated on quarterly data for the period 1983Q1:2024Q4 and includes a constant, dummy variables for 2020Q1, 2020Q2, 2020Q3 and 2020Q4 during the corona pandemic and SRI. The distributions depicted cannot be considered informative of the expected range of outcomes for GDP growth, which will depend on a number of other factors beyond the SRI. The model is estimated for the quantiles [0.05; 0.10; ... ;0.90;0.95], the point estimates of which are subsequently fitted with a skewed t-distribution corresponding to T. Adrian, N. Boyarchenko and D. Giannone, Vulnerable Growth, *American Economic Review*, no. 109, vol. 4, pp. 1263-1289, 2019. The distributions depicted consequentely do not express estimation uncertainty.
Source: Danmarks Nationalbank and own calculations.

... continued

[1] See B.B Poulsen and I.G. Yordanova, Systemic risks in credit institutions and the economy, *Danmarks Nationalbank Analysis*, no. 10, April 2025.
[2] See e.g. B. Bernanke, M. Gertler and S. Gilchrist, The financial accelerator in a quantitative business cycle framework, *Handbook of Macroeconomics*, vol. 1, part C, pp. 1341-1393, 1999, Elsevier Science and A. Krishnamurthy, Amplification Mechanisms in Liquidity Crises, *American Economic Journal: Macroeconomics*, vol. 2, no. 3, pp. 1-30, July 2010.
[3] We follow the methodology in T. Adrian, N. Boyarchenko and D. Giannone, Vulnerable Growth, *American Economic Review*, no. 109, vol. 4, pp. 1263-1289, 2019.
[4] The target is an updated version of the one in D. Cucic, N.F. Møller, I.G. Yordanova and S.G. Søndergaard, Evaluating the macroprudential stance in a growth-at-risk framework, *Danmarks Nationalbank Economic Memo*, no. 14, November 2022, and is a weighted average of the three-year change in house prices relative to income, the two-year change in debt relative to GDP, the two-year growth in deflated credit, the two-year change in the debt servicing ratio and the three-year growth in deflated Danish equity prices. These targets have been identified as having the best early warning properties for financial crises, see J.H. Lang, C. Izzo, S. Fahr and J. Ruzicka, Anticipating the bust: a new cyclical systemic risk indicator to assess the likelihood and severity of financial crises, *ECB Occasional Paper Series*, no 219, 2019.
[5] See Danmarks Nationalbank, Weaker global trade slows growth in Denmark, *Danmarks Nationalbank Analysis (Outlook for the Danish economy)*, no. 5, September 23.

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