

January 30, 2019

Global Macro Forecast

Global economy on shaky ground

A downturn is imminent

Time for politicians to step up

Interest rates remain low

Page intentionally left blank

Executive summary

Global economy on shaky ground

- A downturn is imminent
- Time for politicians to step up
- Interest rates to remain low

Toward a synchronised economic downturn

The global economy is on shaky ground and is about to slow down. Growth is dampened in the wake of the trade war, Brexit and weakening of the industrial business cycle. After several years of booming growth and falling unemployment, it is not only China and the eurozone, but also the US that is slowing. Against this background we believe that the European Central Bank will not hike the refi rate in the next few years and that the US Federal Reserve will even lower interest rates next year when the downturn of the business cycle becomes more apparent.

United Kingdom: Will the Brexit question go back to the people?

The uncertainty surrounding Brexit continues to weigh on the UK economy, and GDP growth in 2018 looks set to be the weakest since the financial crisis. There is still no majority in the House of Commons for any kind of Brexit solution. We believe that Brexit will be postponed, and that the question will have to be taken back to the people, either through a general election or a second referendum. However, the deadlock in parliament could also lead to a no-deal Brexit. The uncertainty will continue to burden the UK economy for a long time to come, and we believe the Bank of England will stay on hold as regards changes in the base rate.

Sweden: The sun sets on the Swedish economic boom

Growth is faltering, but the good times are not over yet. Employment is still rising and many indicators show that GDP rose again in the fourth quarter. However, lower housing construction will increasingly subdue GDP. That, coupled with the global slowdown, will put the brakes on Sweden. A resolute response in the form of stabilisation policy will be difficult. The fiscal space is limited, while monetary policy is uncomfortably close to its limit. In the wake of a further rise in underlying inflation, the Riksbank will raise the repo rate again in the second half of 2019, before the lean times arrive in earnest.

Norway: 2019 looking good, but uncertainties build toward 2020

Mainland GDP growth is set to hold up well this year, largely due to a double-digit increase in petroleum investments. However, petroleum investments are expected to decline again from 2020, without strong offsetting growth impulses. We thus maintain our view that GDP growth will slow materially from next year. Risks are skewed to the downside, in our view. We reiterate our call that the policy rate will be increased twice this year, but that this will also mark the peak of the hiking cycle this time.

Denmark: OK for now, but headwinds are emerging

Temporary factors dampened GDP growth last year and the labour market paints a stronger picture of underlying economic activity. Consumers will, in our view, keep the economy going for a while, but lack of skilled labour and weaker global growth are creating headwinds and we believe that the Danish economy will cool down as we move into 2020. Cracks are appearing in the more expensive parts of the housing market and residential investments are believed to have peaked. Nationalbanken will likely hike rates over the coming year.

Finland: Adjusting to a colder place

We expect Finnish exports to face headwinds as global growth weakens and domestic resources become scarce in 2019e-20e. With the construction cycle also maturing, the economic growth will depend on the consumer. However, consumers are already cautious, so we expect a gradual weakening of GDP growth.

Netherlands: From leader to laggard

As feared, the Dutch economy was not immune to the weakening global business cycle, and GDP growth slowed markedly in the third quarter last year. While we believe the economy still has some room to run, growth is set to cool in the coming years due to capacity constraints and especially weaker global growth, which will hit the small, open Dutch economy relatively hard later in our forecast horizon, we believe.

Contents

GLOBAL OVERVIEW	
Global economy on shaky ground	5
THEME ARTICLE: CENTRAL BANKS' ASSET PURCHASING	
Phasing out asset purchases will be a challenge	10
THEME ARTICLE: LONG-TERM FX VALUATION	
USD overvalued and EUR in line with fundamentals	13
FORECASTS	
Our home markets	15
UK	
Will the Brexit question go back to the people?	16
SWEDEN	
The sun sets on the Swedish economic boom	17
NORWAY	
2019 looking good, but uncertainties build toward 2020	18
FINLAND	
Adjusting to a colder place	19
DENMARK	
OK for now, but headwinds are emerging	20
NETHERLANDS	
From leader to laggard	21
Key ratios	22
Disclaimer	25

Contact information

Ann Öberg: +46 8 701 2837, anob04@handelsbanken.se
Lena Fahlén: +46 8 701 8329, leli15@handelsbanken.se
Christina Nyman: +46 8 701 5158, chny09@handelsbanken.se
Anders Bergvall: +46 8 701 8378, anbe83@handelsbanken.se
Johan Löf: +46 8 701 5093, jolo22@handelsbanken.se
Helena Bornevall: +46 8 701 1859, hebo12@handelsbanken.se
Kiran Sakaria: +46 8 463 3654, kisa02@handelsbanken.se
Claes Måhlén: +46 8 463 4535, clma02@handelsbanken.se
Lars Henriksson: +46 8 463 4518, lahe06@handelsbanken.se
Martin Jansson: +46 8 701 2343, nija03@handelsbanken.se
Terese Loon: +46 8 701 2872, telo03@handelsbanken.se
Tiina Helenius: +358 10 444 2404, tihe01@handelsbanken.se
Janne Ronkanen: +358 10 444 2403, jaro06@handelsbanken.se
Halfdan Grangård: +47 223 97181, hagr11@handelsbanken.no
Kari Due-Andresen: +47 223 97007, kodu01@handelsbanken.no
Marius Gonsholt Hov: +47 223 97340, maho60@handelsbanken.no
Nils-Kristian Knudsen: +47 228 23010, nikh02@handelsbanken.no
Jes Asmussen: +45 4679 1203, jeas01@handelsbanken.dk
Bjarke Roed-Frederiksen: +45 4679 1229, bjro03@handelsbanken.dk
Rasmus Gudum-Sessingø: +45 4679 1619, ragu02@handelsbanken.dk

Global Overview

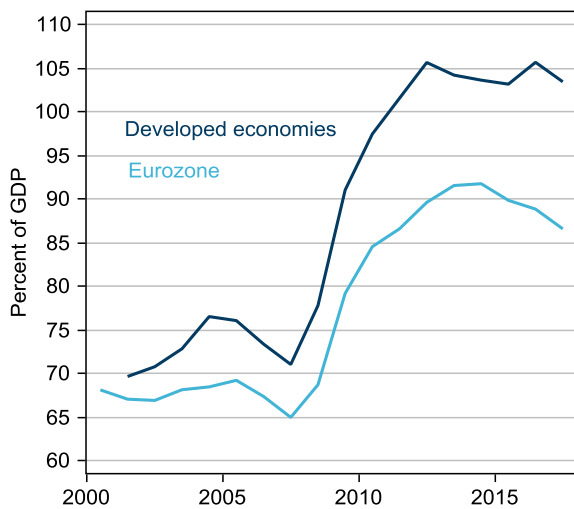
Global economy on shaky ground

The global economy is on shaky ground and is about to slow down. Growth is dampened in the wake of the trade war, Brexit and a weakening of the industrial business cycle. After several years of booming growth and falling unemployment, it is not only China and the eurozone, but also the US that is slowing down. Against this background, we believe the European Central Bank will not hike the deposit rate in the next few years and that the Federal Reserve will even lower interest rates next year when the business cycle downturn becomes more apparent.

Challenges in 2019

We envisage a number of challenges for the global economy during the coming year, and it is now time for politicians to step up to the plate and make progress. With an impending slowdown in the global economy, the importance of finding solutions to the various geopolitical risks affecting the world takes on another dimension. There is otherwise a risk that faith in the political establishment could quickly be eroded, leading to increases in social instability, populism and protectionism.

High public debt



Sources: Macrobond and IMF

Economic booms provide an opportunity to implement structural reforms without having to leave weaker groups behind. It can be about, for example, facilitating a transition to increasingly automated production and at the same time preparing society for an ageing population and climate change. There is a risk that such reforms will be more difficult to implement when the economy weakens, and with public debt in many places now higher than prior to the global financial crisis in 2008/09, fiscal policymakers are ill equipped to tackle any forthcoming recession. The challenges are only exacerbated by the lack of

effective tools available to central banks and the high levels of private debt.

Increased concern in the financial markets

Since our macroeconomic forecast in November, the financial markets have had a turbulent time. A weaker outlook for the global economy and higher interest rates have put pressure on companies' valuations and profit forecasts. This development has contributed to somewhat strained financial relationships, with lower share prices and widening differences in the yields on corporate and government bonds. We have long predicted that the climate for risk assets would become less attractive as the market shifted toward our more pessimistic view of the business cycle, even though the uncertainty in the markets has been unexpectedly high in recent months. The Federal Reserve has done what it can to calm the markets, but we nonetheless expect periods of turbulence in the financial markets to become more common.

Volatility on stock markets



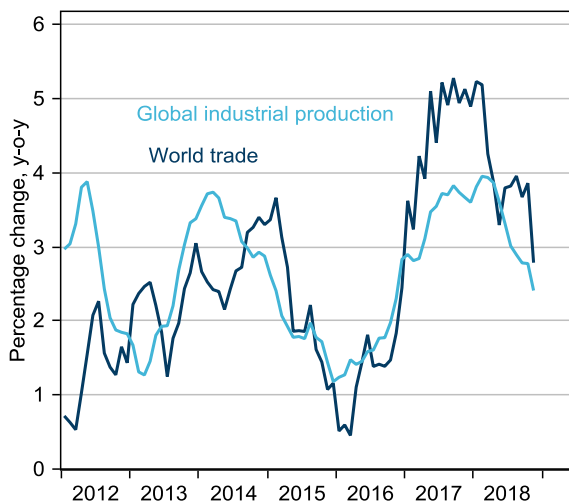
Source: Macrobond

Growth has peaked

The global economy has grown quickly in recent years, but both outcomes and forward-looking indicators point to a widespread drop in growth. Global industrial production growth, which is often a step ahead of the rest of the economy in the business cycle, dampened during 2018, and growth in global trade has also slowed. At the same time, forward-looking indicators such as the Purchasing Managers' Index (PMI) for industry have retreated, an indication that the global industrial cycle will continue to weaken over the coming year.

This turnaround in the global economy is largely built on the current late phase of the business cycle, in which previous driving forces have instead become a handbrake on growth. Financial relationships are more strained, economic policies are less expansive and capacity limits are putting a dampener on growth. This is all happening concurrently with a downturn in China, which is combining with geopolitical uncertainty and trade conflicts to further impede growth, probably to a greater extent than we had previously realised. We expect global growth to sink from 3.7 percent last year to 3.2 percent in 2020, which is slightly lower than our previous forecast and the 3.5 percent average growth figure over the past 20 years.

Slowdown in industrial production



Source: Macrobond

Toward a synchronised economic downturn

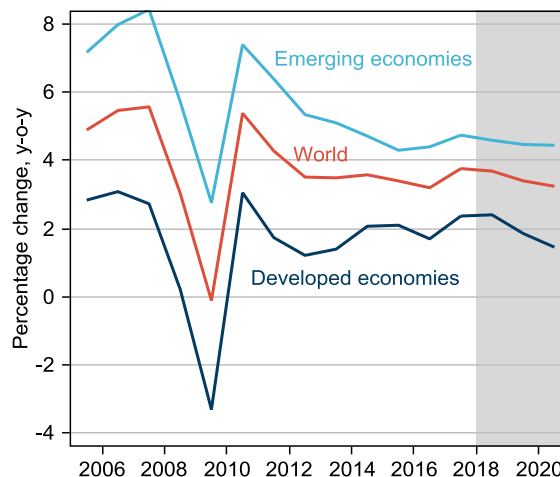
During the second half of 2018, the global economy was fairly splintered, with major regional differences. In the US, the expansive fiscal policy, featuring extensive tax cuts, resulted in a substantial increase in growth, while in China the dominant impression was

that banks were not lending to the same extent as before, coupled with a general waning of economic activity. In the eurozone growth has been subdued due to political unrest, the slowdown in China and a weak growth trend. Emerging markets were also negatively affected by higher global interest rates and the stronger US dollar.

It is becoming increasingly clear that we are heading toward a global economic downturn. Capacity limits, higher interest rates and less expansive fiscal policy are all factors in our assessment that growth will gradually decline in the US as well. At the same time, the trade war and the authorities' actions will contribute to the continuation of the slowdown in China, despite new stimulus measures. While in the eurozone, development will be burdened by continued political uncertainty and the prevailing weak investment climate.

Despite the slowdown, resource utilisation in most places remains high. Unemployment is set to reach record lows in the US and the eurozone over the next few years. Inflationary pressure, however, remains low. The window of opportunity for central banks to implement rate hikes is therefore now closing quickly, as economic activity will decrease more sharply later in the year.

Weaker global growth



Note.: Grey field Handelsbanken's forecast.
Sources: Macrobond and Handelsbanken

Risk of weaker development

While we predict a much more distinct deterioration of the global economy than many others, developments could actually end up being much worse.¹ We believe it cannot be ruled out that the **stock market slump and increased volatility** in recent times represent merely the start of a more substantial correction,

¹ See Bloomberg and Consensus Economics.

which could lead to a situation whereby the US and European economies go a step further than the downturn and instead slide into a full recession. Major stock market slumps usually have a definitive impact on corporate investments, while household consumption is also undermined by deteriorating future prospects and the fact that household assets fall in value. The ability of economic policymakers to counter a more significant downturn in the global economy is also limited in many countries, which could lead to more potent changes in the economic climate than usual.

Risk of weaker investments?



Source: Macrobond

Negotiations between the US and China on their future trading relationship have started, and we expect there to be some modest progress. For example, we now assume that the US will refrain from raising its tariffs on China when the 90-day period expires on March 1. However, we do not expect to see a resolution to the underlying conflict between the US and China regarding such matters as intellectual property rights, which will generate further conflicts and global uncertainty in 2019. The risk remains that the **trade war could expand** and pull in more countries, potentially leading to a global recession. Another obvious risk is **Brexit**, and the chance that the UK may leave the EU without a trade agreement in place (see article on the UK).

The record-long government shutdown in the US is not expected to impact the US economy in any significant way. However, **partisanship in US politics** risks hindering growth more notably if the two sides cannot agree on an increase to the debt ceiling in the summer.

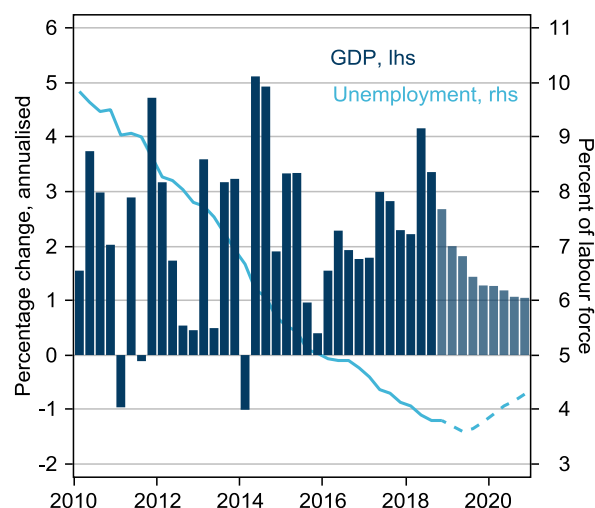
On the other hand, we may have underestimated the potential and resilience of the US economy. Another key element of our view on the economy is that the

Chinese economy is slowing down more than many others have estimated. As the authorities in China have a far-reaching ability to stimulate the economy, a stronger trend cannot be ruled out.

US set to slow down

The US economy remains in fine fettle. Growth increased by almost 3 percent last year and unemployment is at a record low. Tax cuts and increased public expenditure are important explanations for this strong performance and are estimated to have boosted GDP growth by 0.7 percentage points last year. The high demand for labour has contributed to a slight rise in wage pressure in 2018, but the underlying inflationary pressure remains modest, given that cost pressure is held back by higher productivity growth.

US: GDP and unemployment



Sources: Macrobond and Handelsbanken

Growth in the US has, for the last two years, been fuelled mainly by investment. However, investment has slowed slightly in recent times, while consumption has risen more quickly. Optimistic households, thanks to factors such as a strong labour market and higher wages, signal continued increases in household consumption in the near future. Nonetheless, there are signs that rising interest rates have started to dampen household purchases of cars and housing. In addition, the effects of the fiscal stimulus measures will be less keenly felt in 2019, while the labour shortage will intensify. This means that ever more factors are converging to gradually hold back US growth next year, and by 2020 we continue to expect a distinctly weaker economic climate, with rising unemployment as a result.

New stimulus measures in China

Economic growth in China has slowed over the past year, with the decline becoming even more pronounced in recent months. This is reflected in much

lower confidence indicators for business and, to a lesser extent, in hard figures such as GDP and investment. The downturn in domestic demand can primarily be attributed to the previous efforts to reduce credit growth and shadow banking activities. Total debt as a percentage of GDP is no longer climbing, meaning that the risks in the economy have been reined in, but at the price of lower credit growth, which is also resulting in decreased economic activity. Furthermore, confidence has been shaken by the ongoing trade war with the US, particularly among export companies, resulting in a decline in exports in recent times.

The downturn has caused the authorities to shift their focus toward stimulating growth. The measures they have implemented to do so include tax cuts, relief through monetary policy (thus far mainly in the form of increased liquidity in the money market via lower interbank rates and reduced reserve requirements for banks) and by promoting the issuance of regional bonds to facilitate infrastructure investments. However, it is not as easy to stimulate the economy now as it was during previous periods of sluggish growth. A new credit bubble is hardly desirable, making it difficult to stimulate the economy by traditional means, with investments in infrastructure and housing. We expect the effects of the new stimuli to be felt this year, mitigating the downturn in the economy but not preventing it outright. We expect growth to gradually sink from 6.6 percent in 2018 to 5.7 percent in 2020, which is unchanged compared to our earlier forecast.

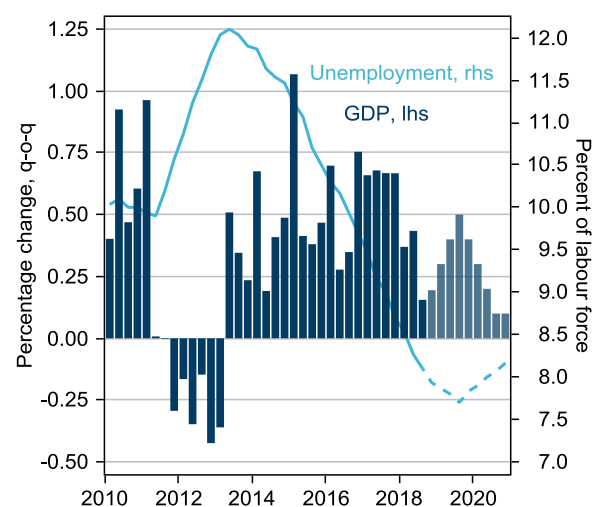
Subdued growth in the eurozone

The eurozone is characterised by what essentially amounts to permanent political uncertainty. So while the severe budget problems in Italy seem to be solved for the time being, worries have shifted to France, where there are major protests against the incumbent president. Elections for the European Parliament are happening in spring, when populist parties are expected to make strides, further heightening the uncertainty. Although we do not believe that any of these political risks will topple the economy, they all contribute to increased uncertainty and the postponement of investment and consumption decisions.

We also believe that Brexit will hinder growth in the UK and, to a lesser extent, the eurozone in the coming years. The positions in the British Parliament are locked, which means that the outcome is still highly uncertain. We expect that Brexit will be postponed until the end of 2019 and expect the question of Brexit to again be put to the people, either via a new referendum or a general election. However, we do not discount that the UK could leave the EU without a deal.

Growth in the eurozone slowed considerably during the second half of 2018, after the recovery of recent years. We think that the downturn is partially due to temporary factors, and we expect stable employment and earnings to support consumption next year, and that exports will recover somewhat when the effects of the euro strengthening wane. However, significant political uncertainty, a weaker global economic climate, strained financial relationships and capacity limits will combine to slow down growth. We lower our growth forecast for the eurozone to 1.3 percent for this year and 1.2 percent next year. With lower growth in the next few years, we expect unemployment to start creeping up in 2020.

Eurozone: GDP and unemployment



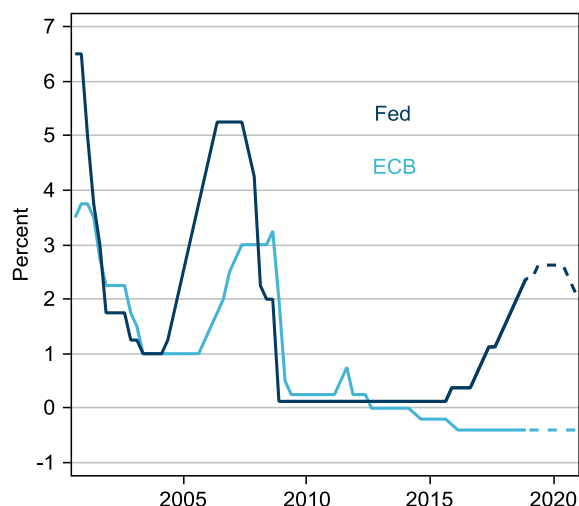
Sources: Macrobond and Handelsbanken

Window for rate hikes closing rapidly

Since our last macroeconomic forecast in November, the market's expectations regarding further rate hikes by the central banks have been largely tempered, while yields on government bonds have also declined. The trend seems to be that the market actors are concerned about a more notable downturn in the global economy.

The Federal Reserve has signalled that it is switching off the "autopilot" and will focus more on the available economic statistics now that the rate is approaching neutral levels. A more statistically-minded Fed, faced by weaker global growth, more volatile financial markets and modest inflation prospects, will likely tread more cautiously compared to its track record in 2018. We expect the Fed to implement a final hike in June. Weaker economic data should then indicate that a pause in hikes is needed, followed by a rate cut in the second half of 2020.

Expansionary monetary policy



Sources: Macrobond and Handelsbanken

The ECB has indicated that it intends to implement a deposit rate hike during the second half of the year. However, the downturn in the economy and the ongoing decline in inflationary pressure mean that the window for rate hikes in the eurozone is now closing rapidly. We believe that there will be no rate hikes by the ECB this year or next. Most signs thus point to the eurozone entering the next recession with the current record-low key rate of -0.4 percent.

In the US, we deem that the long yields are so high that they cannot increase much further in the short term. As the economic downturn manifests itself more clearly during the second half of the year, the long yields can be expected to decrease again. Simultaneously, we expect European long yields to climb somewhat, although they will remain historically low over the coming years.

The central banks' overall balance sheets will now begin to decline. We believe that this will contribute to continued high volatility in the financial markets and put upward pressure on interest rates. As we at the same time expect a weaker economy, we do not believe the central banks have any urgency to phase

out asset purchases, but rather that the Fed may turn off the pace of the reduction in the balance sheet. Finally, we believe that additional QE programmes, perhaps especially in countries that have not been able to raise the policy rate to what is seen as more normal levels, can very well be launched in the next recession (see theme article: Challenge to phase out asset purchases).

Weakening of the dollar

We expect the slowdown of the US economy to weaken the dollar, with EUR/USD approaching 1.25 in 2020, which is in line with our assessment of the equilibrium path for EUR/USD (see theme article: USD overvalued and EUR in line with fundamentals). The Chinese authorities have employed a strategy of deliberately weakening their currency as a means of stimulating the economy. We expect the yuan to continue depreciating somewhat, before regaining strength. However, we believe the yuan will remain undervalued for the next few years.

Theme article: Central banks' asset purchasing

Phasing out asset purchases will be a challenge

Since the financial crisis, many of the world's central banks have resorted to unconventional methods and increased their balance sheets sharply, in order to stimulate the economy when key rates have approached their minimum. Now that the balance sheets are being reduced, this may have a tightening effect on the economy that is comparable with rate hikes. However, there are important differences, and there is limited knowledge as to what the consequences may be. Our assessment is that the effects may be relatively large, and that volatility in the financial markets will remain high. In such an environment, we believe the central banks will be in no hurry to phase out asset purchases. They may even change their plans.

Central banks: record balance sheets

At year-end 2018, the combined value of the balance sheets of the three main central banks (the Federal Reserve, ECB and the Bank of Japan) totalled the equivalent of USD 13,000bn. This corresponds to around 15 percent of global GDP. Most of the balance sheet consists of quantitative easing (QE), which entails purchases of financial assets. The various QE programmes differ, and include different types of assets, but the emphasis is on government bonds. QE was introduced in conjunction with the financial crisis, when key rates dropped close to zero and were considered to be approaching a minimum level, while there was a substantial need for additional stimulus measures. A further purpose of these programmes was to improve the way that markets worked after the financial crisis. For example, the ECB initially focused on supporting liquidity in the interbank system and supporting the economies of Greece, Ireland and Portugal; it was not until some years later that it began making asset purchases similar to those in the US.

The effects of the central banks' massive purchasing of long-term government instruments and other financial assets are uncertain, disputed, and also vary between different QE programmes. However, the general opinion is that the programmes have led to lower long yields and higher asset prices, and have stimulated economic activity, thereby contributing to higher inflationary pressure. At the same time, many analysts have highlighted the risks of this unconventional policy, saying that it has led to increased risk-

taking and higher debt. In addition, the central banks' asset purchases have sharply increased their balance sheets, resulting in higher risk. In the worst case, the consequences of possible major capital losses could lead to national governments needing to contribute money, thus calling the central banks' independence into question.

Asset purchases have contributed to lower rates

Several studies suggest that the expansive stimulus of QE in the US is equivalent to a 3-5 percentage points lower Fed funds rate.² Among other things, Reynard (2015) points out that asset purchasing in the US is equivalent to a 4 percentage points lower funds rate, and has contributed to 1.75 percent higher GDP; Kuttner (2018) points out that long yields have fallen by 1.5 percentage points, corresponding roughly to a 4.5 percent lower funds rate.³ Studies in the eurozone suggest effects of roughly the same magnitude, as well as rising share prices⁴, although the spread of results across the euro countries differ greatly (Dell'Ariccia et al, 2018).

The asset purchases affect the economy through several different channels, some of which are the same as those used by central banks in normal times. One such channel, which has probably been important in how asset purchases have affected yields, is signalling that monetary policy will be expansive for a long period.⁵ The main difference is that QE impacts long yields more directly. This in turn can lead

² It is difficult to separate the effects of QE from underlying economic events. Therefore, many studies focus on the direct impact on bond yields at the announcement of a QE programme. Assessing the impact on GDP and inflation is even more difficult.

³ Wu and Xia (2016) suggest that QE has reduced US unemployment by around 1 percentage point. Rezende and Ristinemi (2018) suggest that Swedish inflation and unemployment rates would have been 0.47 percentage points lower and 0.73 percentage points higher, respectively, if it had not been for the Riksbank's asset purchases.

⁴ Share prices rose by an average of around 13 percent on the back of OMT, and 4 percent on the back of SMP within the EU (Krishnamurthy et al 2017).

⁵ Some studies suggest that this could explain roughly one-third of the decrease in US long yields that is linked to QE (Kuttner 2018). For the eurozone, it would seem that the signal value has had less impact (Dell'Ariccia et al, 2018). Rezende and Ristinemi (2018) demonstrate that exchange rates respond more to communications of changes linked to the policy rate than to those linked to quantitative easing.

to spillover effects in other, higher-risk asset classes, such as corporate bonds and equities.

Fed showing the way for tapering

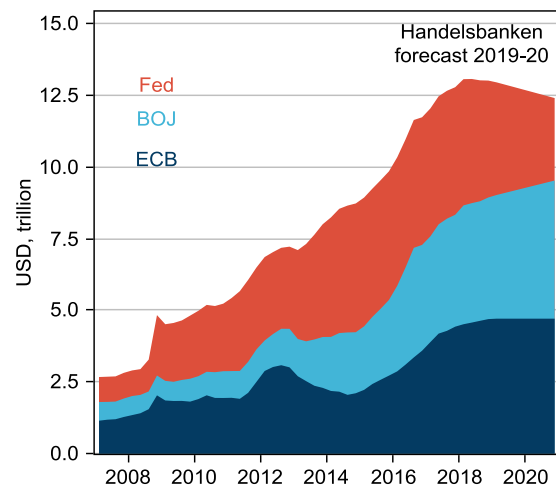
In conjunction with the 2008/09 financial crisis, the Federal Reserve (Fed) was the first to use QE to dampen the effects of the crisis. The Fed is also the central bank that has had most success in keeping to its inflation target over the past ten years, and unlike the other central banks, it has begun a tapering of the balance sheet. It is therefore natural to regard the Fed's path toward normalisation as a guideline for other central banks. The procedure has been as follows: first, the net purchases are discontinued, and the balance sheet is left unchanged for a while. Then, the first rate hike is implemented. After a few more rate hikes, at a slower pace than normal, a reduction of the balance sheet is begun, by parts of the maturing bonds not being reinvested. The tapering will occur more slowly than the expansion, and the idea has been that it should be able to take place fairly independently of the economic cycle. Both the Riksbank and the ECB have indicated that this procedure will be followed. According to the Fed, the long-term level of their balance sheet will be higher than before the financial crisis.

Transition from QE to QT

The Fed's plans mean that QE will decrease by a rate equivalent to around 3 percent of US GDP per year. The ECB discontinued its net purchasing of bonds at year-end 2018. However, we do not believe that the next step for the ECB, a refi rate hike, will be possible in the next two years. Therefore, our assessment is that a reduction of the balance sheet will not occur either. The Bank of Japan's plans mean that it will continue to increase its balance sheet.

All told, the central banks' balance sheet will now begin to decrease; we will move from QE to QT (quantitative tightening).

Balance sheets FED, ECB, BoJ

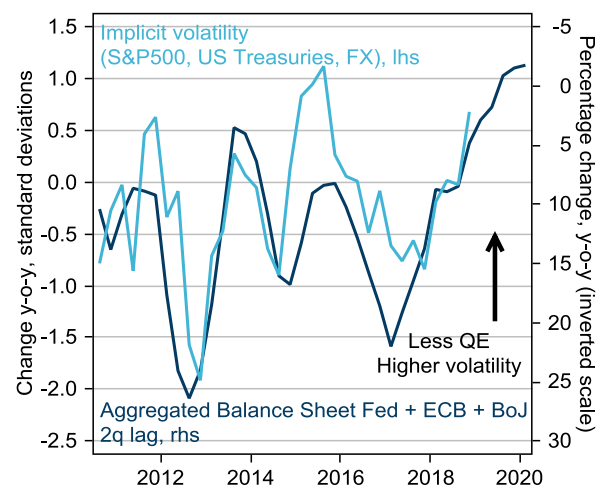


Sources: Macrobond, Bloomberg and Handelsbanken

Tapering will impede future developments

As we have established, estimates of the effects of QE, and thus QT, vary greatly. Nor can the Federal Reserve forecast with certainty what a shrinking balance sheet will mean for financial markets and the economy. While global QE has generally increased since the financial crisis, the pace has varied. Our assessment is that not only the level of QE but also the rate of change has been an important part of understanding the economic development since the financial crisis. To illustrate this, we compare how QE co-varies with volatility on the financial markets. The chart below shows how changes in QE have led to increases and decreases in volatility on the equity, fixed income and currency markets.

QE and volatility



Note: Handelsbanken's forecast for the balance sheet
Sources: Macrobond and Bloomberg

Given the current plans of the three major central banks, we expect QT to be a drag on both the financial markets and the economy over the next few

years, despite the fact that the central banks' balance sheets will remain high in historical terms.

The economic cycle will affect plans

Although the Fed has previously indicated that the scaling-down of the balance sheet would take place on autopilot, and be like “watching paint dry”, we find it reasonable to expect that the Fed and other central banks' plans for QE will be affected by economic developments. The Fed's planned tapering in 2019-20 can be assumed to correspond to a funds rate hike of some 0.5 percentage points, and an increase in government bond yields of around 0.15 percentage points in 2019-20 (PIIE Policy Brief and Capital Economics). This will entail a fairly substantial tightening in a situation where the economic cycle is slowing down.

Asset prices will also be affected, and a major downturn could, in addition to hitting households and companies, create problems for the financial sector (including central banks). As early as 2017, when the Fed announced its QT programme, we warned that its assumption of effects being small was optimistic, and we see a risk that it may need to alter its plans, if monetary policy is not to become too tight when the economic cycle weakens. In addition, the Fed has recently indicated that it will indeed be possible to switch off the autopilot if necessary.

Rapid tapering unlikely

In 2019, the overall balance sheet for the world's major central banks should start to decrease. The trend over the past ten years will thus be broken. Our conclusion is that this will mean higher interest rates than would otherwise be the case, and increased volatility on the financial markets. In addition, we believe that uncertainty about the effects of QT, in an environment of increasing concern about lower growth, will cause the Fed to ease off the rate of reduction of the balance sheet. Finally, we believe that further QE programmes, perhaps particularly in countries that have not yet hiked their key rate to slightly more normal levels, may very well be launched in the next economic downturn.

References

Reynard Jan 2015 – QE Equivalence to Interest Rate Policy: Implications for Exit.

Rafael B. De Rezende and Annukka Ristiniemi – A shadow rate without a lower bound constraint, Juni 2018, Sveriges Riksbank Working paper series 355.

Capital economics, Global economics focus, “How big a threat is the unwinding of QE?” 7 December 2017.

PIIE Policy brief, 18-19 QE: A User's Guide, Gagnon and Sack, October 2018.

Kuttner, 2018 – Outside the Box: Unconventional Monetary Policy in the Great recession and Beyond, Journal of Economic Perspectives, Vol. 32, p. 121-146.

Dell'Ariccia et al, 2018 – Unconventional Monetary Policies in the Euro Area, Japan and United Kingdom, Journal of Economic Perspectives, Vol. 32, p. 147-172.

ECB has gone its own way

The ECB's monetary policy since the financial crisis has partly differed from that of the Fed, in terms of both measures and aims. Since the initial phase of the financial crisis, the ECB has had to manage financial instability to a greater extent. For the ECB, this escalated in conjunction with the debt crisis in 2011-12. The balance sheet was utilised on this occasion, too, in the form of repos to banks, as well as bond purchases, in order to limit the rise in government bond yields for certain euro countries. However, the most effective policy tool may have been ECB President Mario Draghi's promise in 2012 to do “whatever was necessary” to keep the euro collaboration together. This was the trigger for a massive interest rate decrease in the crisis-hit countries, which has probably contributed more to the eurozone's recovery in the past few years than the actual asset purchases.

The success of Mr Draghi's “guidance” makes it more difficult to estimate the effects of the ECB's balance sheet policy on European real yields. The ECB did not announce its QE until the second half of 2014, and it was not until early 2016 that the ECB included corporate bonds in the programme. The ECB's QE programme contributed to a substantial decrease in real yields, particularly for German government bonds. The impact of corporate bonds was also tangible, with a sharp decrease in yields versus the equivalent swap yields.

Before year end, as the end of the net purchasing approached, the yield spread increased again. In our assessment, this has largely been driven by increasing concerns over the economy rather than the ending of the QE programme. This is backed up by the fact that the increases in yields have been greater for bonds issued by financial players that were not included in the ECB's QE programme than for other corporate bonds. Nevertheless, the ending of the programme means that corporates will receive less support from the ECB in their market funding, and that there is a risk of market turbulence driving up yields to a greater extent than in the past few years.

Bond rates vs swap



Source: Merrill Lynch

Theme article: Long-term FX valuation

USD overvalued and EUR in line with fundamentals

Although it is widely accepted that exchange rates vary substantially and are difficult to forecast, models based on economic fundamentals can track the evolution of the exchange rate rather well in the long run. The deviations between the actual and estimated equilibrium exchange rates may be sustained for fairly long periods, but the exchange rate eventually tends to experience a correction toward its equilibrium level. Our new fair value model indicates that the USD is currently overvalued, while the EUR, GBP and CNY are broadly in line with fundamentals and the JPY, NOK and SEK are undervalued. The model indicates that the fair value for EUR/USD is 1.25 and 6.0 for USD/CNY.

Framework: Exchange rate forecasts⁶

Currencies tend to deviate to varying extents from their fair value or the estimated equilibrium exchange rate. These deviations may be sustained for long periods (up to five years) due to factors such as relative cyclical development and interest rate differentials. However, in most cases the exchange rate eventually tends to experience a correction toward its fair value in countries with floating exchange rates.

Exchange rate determinants

Short term: 0-6 months

- Interest rate differentials
- Relative business cycle

Medium term: 6 months-5 years

- Short-term factors affect how fast the exchange rate converges toward the equilibrium level

Long-term (equilibrium): 5 years

- Average inflation relative to trading partners
- Structural factors such as relative productivity, current account and terms of trade

Exchange rate determination in the long run

There is empirical support for the premise that the exchange rate in the long run is anchored by more

sluggish trends determined by economic fundamentals. According to the purchasing power parity theory (PPP), the real exchange rate should be constant over time. Thus, goods and services can be expected to cost the same in different countries after conversion to the same currency.⁷ Which means that when inflation is higher than in other countries, the nominal exchange rate depreciates, and vice versa.

However, there are strong theoretical arguments that the real equilibrium exchange rate can change over time and in many countries there is a clear trend in the real exchange rate. A common theme for theories that try to explain the trend in the real exchange rate is that the real exchange rate is stronger in "rich" countries. An example of such a theory is the Balassa–Samuelson effect, according to which the real exchange rate strengthens in economies that show a faster growth in productivity.

Other factors that are relevant to how rich a country is compared with other countries include terms of trade, i.e. the relationship between export prices and import prices expressed in domestic currency, and the current account balance. The more advantageous the terms of trade are in relation to other countries, the stronger the real exchange rate is expected to be.

Long-term FX valuation

We estimate the fair value for seven currencies. The model estimates are based on an approach through which the real equilibrium exchange rate is determined by relative productivity, terms of trade and the

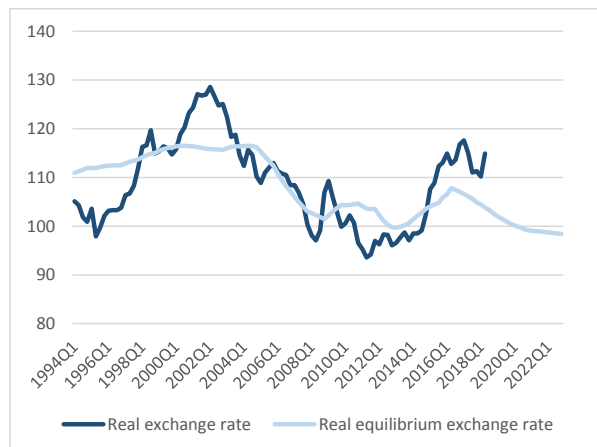
⁶ See, Macro comment "SEK undervalued and USD overvalued" for an in-depth analysis of the factors that determine developments for the long-term exchange rate and the model estimates for the equilibrium exchange rate, with focus on the SEK.

⁷ At relative purchasing power parity, the price levels in different countries are not necessarily the same, measured in the same currency, but the relationship between them is constant.

current account.⁸ Higher productivity growth in relation to trading partners, improved terms of trade and a decrease in the current account balance lead to an appreciation of the real exchange rate.

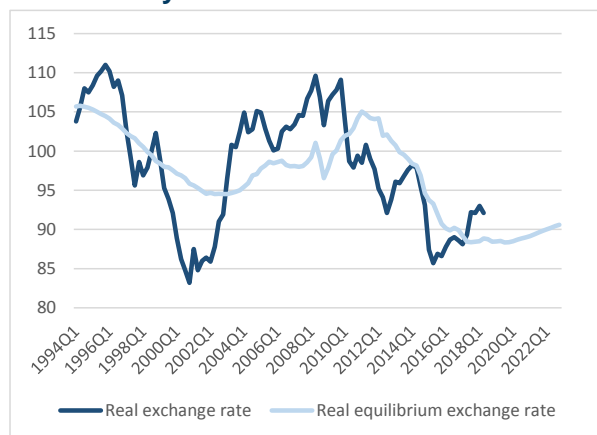
As shown in the figure below, the real effective exchange rate and its equilibrium level follow each other relatively well in the long run, but there are also longer periods of time when the real effective exchange rate has deviated from its equilibrium level.

USD overvalued



Note: Higher value = stronger exchange rate
Sources: Macrobond and Handelsbanken

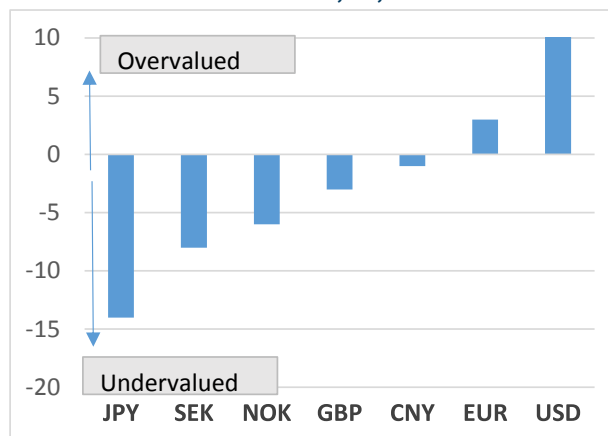
EUR broadly in line with fundamentals



Note: Higher value = stronger exchange rate
Sources: Macrobond and Handelsbanken

The results indicate that the USD is currently overvalued (by 11 percent) and the EUR, GBP and CNY are broadly in line with fundamentals. The JPY, SEK and NOK are undervalued by 14, 7 and 6 percent respectively. Fair value for EUR/USD is 1.25 and 6.0 for USD/CNY.

Deviation from fair value, %, Q3 2018



Note: Trade-weighted terms
Source: Handelsbanken

The bilateral fair value shown in the table below is the exchange rate that is consistent with today's level of the fundamental variables (productivity, terms of trade, current account). As the fundamental variables change, the equilibrium exchange rate will also change. In the coming years, the equilibrium exchange rate is expected to be relatively stable for most countries, as there are not expected to be major differences in the inflation rate or other fundamental variables.

The exception is the CNY, which is expected to appreciate because China has a higher productivity growth rate than its trading partners. In 2022, the fair value for USD/CNY is estimated to be 5.6. However, China has a "semi-fixed" exchange rate, so it is doubtful whether the exchange rate will strengthen at the rate indicated by fundamentals.

Bilateral fair value

	Spot (2019-01-25)	Fair value, Handelsbanken
EUR/USD	1.14	1.25
USD/JPY	109	89
GBP/USD	1.32	1.4
USD/CNY	6.75	6.0
USD/SEK	9.05	7.5
USD/NOK	8.52	7.4

Note: Fair value consistent with the level of the fundamental variables 2018q3.
Source: Handelsbanken

⁸ As a first step, the trade-weighted equilibrium exchange rate for each country is calculated. After estimating how much the trade-weighted exchange rate is undervalued or overvalued for the seven countries, it is

possible to calculate the bilateral exchange rates that are consistent with each country's equilibrium exchange rate.

Forecasts

Our home markets

Handelsbanken regularly produces analysis and macroeconomic forecasts for our home markets; the UK, Sweden, Norway, Finland, Denmark and the Netherlands. Annual averages, expressed as percentage change, year-over-year, except where noted otherwise.

United Kingdom

	2017	2018	2019p	2020p
GDP	1.7	1.3	1.4	1.3
Unemployment*	4.4	4.1	4.2	4.3
Inflation	2.7	2.5	2.0	1.9
Policy rate, percent**	0.5	0.75	0.75	0.75
Exchange rate, EUR/GBP**	0.887	0.888	0.920	0.920

Sources: ONS, Macrobond and Handelsbanken

* Percent of the labour force **At year-end

Sweden

	2017	2018	2019p	2020p
GDP*	2.4	2.3	1.5	1.6
GDP, actual	2.1	2.2	1.5	1.8
Household consumption*	2.3	1.3	1.8	2.1
Fixed investment*	6.4	4.6	0.1	1.2
Net exports, GDP contribution*	-0.4	0.1	0.6	0.0
Unemployment**	6.7	6.3	6.2	6.4
Inflation, CPIF	2.0	2.1	2.0	1.8
Policy rate, percent***	-0.5	-0.25	0.00	0.00
Exchange rate, EUR/SEK***	9.85	10.28	9.90	9.70

Sources: Macrobond and Handelsbanken

*Calendar adjusted **Percent of the labour force ***At year-end

Norway

	2017	2018	2019p	2020p
GDP	2.0	1.6	2.1	1.6
GDP, mainland	2.0	2.4	2.3	1.4
Household consumption	2.2	1.9	2.0	1.7
Petroleum investments	-3.8	2.1	12.0	2.0
Unemployment*	4.2	3.9	3.5	3.5
Inflation, CPI-ATE	1.4	1.5	1.9	1.8
Policy rate, percent**	0.50	0.75	1.25	1.25
Exchange rate, EUR/NOK**	9.84	9.95	9.30	9.30

Sources: Macrobond and Handelsbanken

*Percent of the labour force **At year-end

Finland

	2017	2018	2019p	2020p
GDP	2.8	2.5	1.7	1.0
Household consumption	1.3	1.5	1.7	1.4
Fixed investments	4.0	2.7	0.6	-1.3
Net exports, GDP contribution	1.6	0.3	0.3	0.2
Unemployment*	8.6	7.4	6.9	6.9
Inflation	0.7	1.1	1.3	1.2
General govt balance**	-0.7	0.1	0.2	0.1
EMU debt**	61.3	59.3	57.4	56.5

Sources: Macrobond and Handelsbanken

*Percent of the labour force **Percent of GDP

Denmark

	2017	2018	2019p	2020p
GDP	2.3	0.9	1.5	0.8
Household consumption	2.1	2.3	1.4	0.8
Government consumption	0.7	0.4	0.4	0.6
Fixed investments	4.6	5.2	-3.3	0.3
Exports	3.6	0.4	2.7	0.5
Imports	3.6	3.4	-0.5	0.2
Unemployment, LFS*	5.9	5.0	4.5	4.9
Inflation	1.1	0.8	1.2	1.6
Policy rate (dep. rate), percent**	-0.65	-0.65	-0.45	-0.45

Sources: Macrobond and Handelsbanken

*Percent of the labour force **At year-end

Netherlands

	2017	2018	2019p	2020p
GDP	3.0	2.5	1.6	1.0
Unemployment*	4.9	3.9	3.5	4.0
Inflation, HICP	1.3	1.6	2.6	1.6

Sources: Macrobond and Handelsbanken

* Percent of the labour force

Source: Handelsbanken Capital Markets

United Kingdom

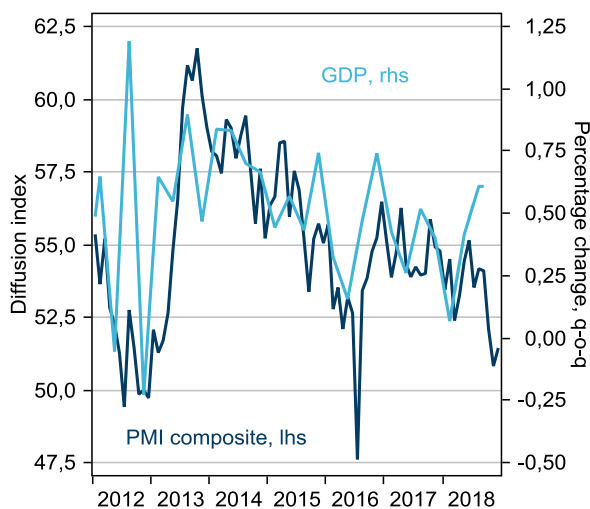
Will the Brexit question go back to the people?

The uncertainty surrounding Brexit continues to weigh on the UK economy, and GDP growth in 2018 looks set to be the weakest since the financial crisis. There is still no majority in the House of Commons for any kind of Brexit solution. We believe that Brexit will be postponed, and that the question will have to be taken back to the people, either through a general election or a second referendum. However, the deadlock in parliament could also lead to a no-deal Brexit. The uncertainty will continue to burden the UK economy for a long while to come, and we believe the Bank of England will be forced to stay on hold as regards changes in the base rate.

Weak growth

Economic growth disappointed last year, and GDP for 2018 looks set to be the weakest since the financial crisis. We reiterate our expectation for GDP growth of 1.3 percent in 2018. Business sentiment has increasingly been weighed down by uncertainty over Brexit, and the PMI composite suggests that growth was close to stagnating in the fourth quarter. Output in the manufacturing sector has picked up recently, but this is largely attributable to companies stockpiling as they prepare for a possible hard Brexit. Expectations for future output growth remain lacklustre across sectors, according to corporate barometers.

GDP and PMI composite



Source: Macrobond

Inflation peaked in early 2018, and has since decelerated. The currency effect should continue to pull inflation lower, but the underlying cost pressure remains high. Unemployment remains at its lowest level since the mid-1970s, at 4.0 percent. However, we believe it will inch higher over the coming years, as Brexit continues to weigh on the economy. We anticipate a 1.4 percent increase in GDP this year, and 1.3 percent next year.

Parliament battling over Brexit

The House of Commons is scrambling to find a way forward in terms of Brexit. Positions remain deadlocked, and there is no majority in the House for any solution. At the one extreme, some MPs (mostly Tories) want to go for a no-deal Brexit, while at the other, there are MPs who want to remain in the EU. In recent months, a growing number of MPs across parties have also voiced support for abandoning Brexit altogether. Theresa May's deal was rejected by the House in mid-January, by a record majority. Her recently presented Plan B includes only marginal changes, and is therefore not likely to be any more successful. Mrs May has not been open to other alternatives, and Brexit Day, March 29, is approaching apace. Although preparations are in progress for a no-deal Brexit, it is becoming increasingly clear that a decisive majority of MPs are against such a solution. We therefore believe it is most likely that Brexit will now be postponed. We believe the EU would agree to an extension, if this were to allow for a democratic process, such as a snap general election or a referendum. However, if it appeared that the UK just wanted to buy time, we are not convinced Brussels would accept a delay.

Given the deadlocked parliament, and the fact that the EU considers the negotiations to be over, our baseline assumption is that the Brexit question will have to be taken back to the people. This could be in the form of either a general election or a second referendum. If so, Brexit will be postponed until the end of 2019 or beyond. But that said, there is a slight risk that the deadlock will instead result in a no-deal Brexit.

BoE in the shadow of Brexit

Brexit is currently overshadowing everything in the UK, including monetary policy. Our baseline assumption implies that Brexit uncertainty will linger for a long time, meaning that the BoE will keep monetary policy changes on hold.

Sweden

The sun sets on the Swedish economic boom

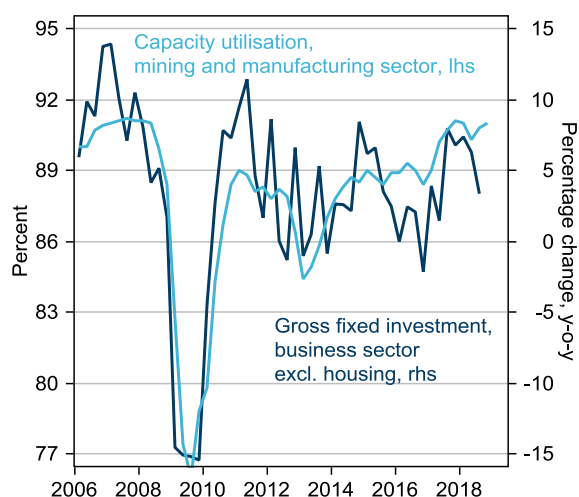
Growth is faltering, but the good times are not over yet. Employment is still rising and many indicators show that GDP rose again in the fourth quarter, after its previous fall. However, lower housing construction will increasingly subdue GDP. That, coupled with the global slowdown, will put the brakes on Sweden. A resolute response in the form of stabilisation policy will be difficult. The fiscal space is limited, while monetary policy is uncomfortably close to its limit. In the wake of a further rise in underlying inflation, there will be time for the Riksbank to raise the repo rate again in the second half of 2019, before the lean times arrive in earnest.

Autumn fall in GDP a warning sign

GDP fell in the third quarter last year, but that does not mean Sweden has entered into a recession. First, the labour market continues to improve, with more hours worked and higher employment. Second, hard data indicate that GDP rose again in the fourth quarter. Although negative growth in the third quarter was partly attributable to temporary factors, leaner times lie ahead. Global growth is set to decrease and the outlook has become gloomier for the eurozone. For the moment, exports are increasing at a decent rate, but we expect a gradual slowdown.

With regards to domestic demand, construction investment is now decreasing and that will continue, as the number of construction starts appear to decline further. Lower investment will hamper GDP primarily in 2019, but growth in 2020 will also be held back. However, we do not anticipate negative effects to spill over to the wider economy. In addition, we see a stable housing prices trend ahead.⁹

Investment fall despite capacity strain?



Sources: Statistics Sweden and Macrobond

In light of the partially gloomier growth outlook, businesses have scaled back their investment plans. Yet, exports growth is sustained, capacity utilisation remains high, and new staff are still being recruited, suggesting that companies will still continue to increase investments in the near term. Coupled with decent growth in household consumption, it will provide a certain counterweight to the economic slowdown.

Fiscal space limited

When the slowdown eventually sets in, automatic fiscal stabilisers will come into play to provide support. In addition, there may be a need for further support from discretionary fiscal policy measures, particularly as the Riksbank has more limited scope than usual to stimulate the economy. Unfortunately, fiscal policy also has more limited room to manoeuvre, as the surpluses from prosperity years were moderate.

Repo rate rises uncertain

The current period of goal achievement for the Riksbank has entered its third year. CPI inflation has been underpinned by volatile energy prices, spreading concerns about the durability of inflation. The recent fall in the oil price and the negative prospects for electricity prices in the forward market mean that 2019 should bring a lower inflation rate. The question is: what will happen to inflation after that?

We see good support for inflation, at least this year, as recently high inflation has raised expectations, feeding into even higher prices, notably for rents. Further ahead, the collective wage agreements in 2020 will be essential to inflation. When the parties begin their negotiations this autumn, the sun will already have started to set on the economic boom. The Riksbank will be in a similar situation when the time comes for the next rate rise. But since outcomes for inflation and other macro data are expected to still be reasonable this autumn, our main scenario is for the repo rate to be lifted once more, in September.

⁹ For a more detailed analysis of the housing market and construction, see our "As safe as houses?" report.

Norway

2019 looking good, but uncertainties build toward 2020

Mainland GDP growth is set to hold up well this year, largely due to a double-digit increase in petroleum investments. However, petroleum investments are expected to decline again from 2020, without strong offsetting growth impulses. We thus maintain our view that GDP growth will slow materially from next year. Risks are skewed to the downside, in our view. We reiterate our call that the policy rate will be increased twice this year, but that this will also mark the peak of the hiking cycle this time.

Petroleum investments rising sharply in 2019

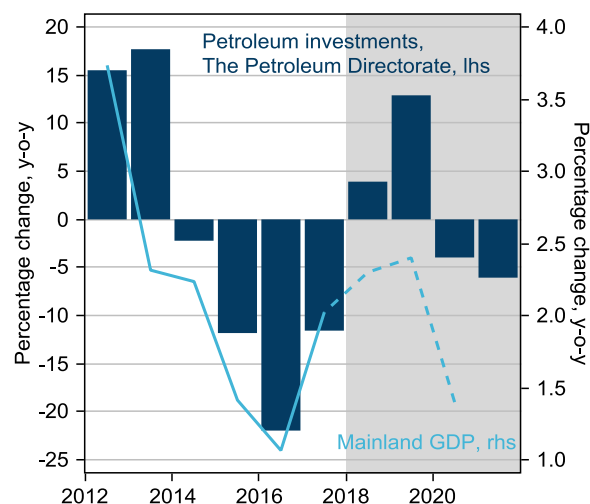
We note from monthly data that GDP growth has rebounded solidly in the fourth quarter, following a temporary slowdown. We thus reiterate our expectation for Mainland GDP growth to hover around 2.3-2.4 percent in 2018-19. We also maintain our view that economic growth will be stable in 2019. Rising petroleum investments are the key driver of the still-optimistic growth outlook for 2019. Some notable large projects, such as the second phase of Johan Sverdrup field, will be completed this year, regardless of low oil prices. Information received so far indicates petroleum investments may rise even faster than previously expected, offsetting the effects of downwardly revised forecasts for global growth.

Slowdown expected to set in from 2020

However, as stressed by The Petroleum Directorate, resource growth from new discoveries has been low in recent years, and expectations are for lower petroleum investments from next year. Having said that, the implied downturn for oil supplying industries from 2020 onward will not be nearly as severe as experienced through 2015-16. At the same time, offsetting growth impulses are weaker this time around. For starters, the fiscal room is more limited, global growth is weakening more than previously expected, and the outlook for residential investments (a key factor in limiting the overall slowdown during the time of collapsing oil prices) remains soft. We maintain our view that nominal housing prices will rise modestly over the forecasting horizon, but note that construction costs are picking up as well. This implies real housing prices are little changed, offering few incentives to expand building activity.

The risks to the outlook are tilted to the downside. Global growth may slow faster than anticipated. Among domestic factors, the housing market, which has performed in line with our expectations over recent months, is posing greater downside than upside risks. This is because debt levels are high and mortgage rates are expected to rise somewhat further. We know from experience that demand, and thus housing prices, can change abruptly.

Short-term rise in oil investments



Sources: Macrobond, Handelsbanken and The Petroleum Directorate

Low oil prices, weak NOK and higher inflation

The changes to our forecasts are more pronounced in the area of the NOK and thus core inflation. Oil prices have declined materially since October, and thus the present level of the NOK is weaker than previously anticipated. We still see scope for some appreciation over the forecasting horizon, however, and target the EUR/NOK toward 9.50 over the next three to six months. However, the expected appreciation will occur from a weaker starting point. Consequently, our inflation forecasts are revised somewhat upward. We now expect the CPI-ATE will average closer to, but still below, the 2.0 percent target.

Policy rate peaking at 1.25 percent

We continue to expect two rate hikes in 2019, which is in line with the near-term guiding from Norges Bank. However, due to lower oil prices and increasing global risks, Norges Bank has lowered the longer end of the curve. We believe Norges Bank will continue to lower its trajectory, and reiterate our call that the policy rate will peak at 1.25 percent in this cycle. Our global growth and interest rate expectations are weaker than those anticipated by Norges Bank. Finally, we take our lead from employer and union groups, which continue to signal domestic wage expectations well below Norges Bank's forecasts.

Finland

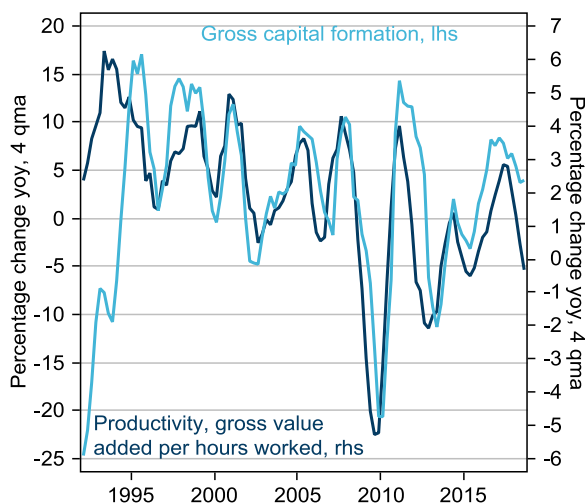
Adjusting to a colder place

We expect Finnish exports to face headwinds as global growth weakens and domestic resources become scarce in 2019e-20e. With the construction cycle also maturing, the economic growth will depend on the consumer. However, consumers are already cautious, so we expect a gradual weakening in GDP growth.

Exports and investment to face headwinds

Finnish GDP growth slowed slightly in 2018 and the structure of growth changed as well. Net exports made only a small positive contribution to overall GDP growth after adding almost 2 percentage points in 2017. Domestic final demand picked up somewhat, but not enough to compensate for net exports. Behind the drop in exports was the weakening in global demand, particularly the slowdown in European growth. Furthermore, problems in the supply chains of global engineering companies also troubled Finnish firms, causing delays to deliveries and providing much of the explanation behind the marked increase in inventories and very weak exports in the third quarter of 2018. Exports will most likely see a temporary improvement when these inventories are reduced; nevertheless, our view is that global growth in 2019-20, and its composition, will no longer be as favourable for Finnish exports. Hence export growth will slow a touch this year and decline further in 2020.

Finnish productivity and investments



Source: Macrobond

A key headwind facing the Finnish GDP growth, is an emerging scarcity of resources, particularly labour input. It could be seen as a trigger for broad-based investments in an economy; however, the weakening in productivity growth since the end of 2017 does not support accelerating corporate investments. In 2019-20, the global consumer is likely to

be in the driver's seat, and this kind of growth will be difficult for Finland, as the supply of consumer goods in the Finnish export mix is limited. With weaker export growth, import growth will slow as well leaving the contribution of net trade still positive, but small.

The Finnish construction cycle peaked at the turn of 2016-17, but construction investments have stayed relatively robust, growing by 4 percent in the first three quarters of 2018, compared to the same period 2017. Construction permits and starts point to further weakening in 2019-20. Finland has experienced a small construction boom over the past few years, and now, industry's decreasing pool of skilled labour, weakening profitability and peaking confidence point toward a respite.

Consumer to take the baton

Finnish consumers became surprisingly cautious in the third quarter of 2018, as household consumption increased only 0.5 percent from the previous year. The consumer confidence is still relatively upbeat, markedly above its long-term average, but the survey does indicate consumers are concerned about the general economic outlook and labour market. We actually find support for healthy consumption growth in 2019, as employment growth is still relatively robust. The recovery in employment since the end of 2017 and the fact that inflation has remained moderate have lifted consumers' real disposable incomes considerably from 2016-17. The income and interest rate outlook should support consumption in 2019-20, but increased uncertainty over the economic outlook seem to be weighing more, especially as the consumer savings rate has been negative for the past couple of years.

2019 is an election year in Finland, but we do not expect a deterioration in public finances as a result. An economic upswing has led to strengthening public revenues and these and measures to curb expenditure growth have generated a better-than-expected balance. As GDP growth slows more in 2020, and employment growth fades, the next government may well be faced again with a dilemma over how to tackle the still marked long-term sustainability gap in public finances in a weaker growth environment.

Denmark

OK for now, but headwinds are emerging

Temporary factors dampened GDP growth last year and the labour market paints a stronger picture of underlying economic activity. Consumers will, in our view, keep the economy going for a while, but lack of skilled labour and weaker global growth are creating headwinds and we believe that the Danish economy will cool down as we move into 2020. Cracks are appearing in the more expensive parts of the housing market and residential investments are believed to have peaked. Nationalbanken will likely hike rates over the coming year.

Temporary factors lowered growth in 2018

The latest revised National Accounts figures showed stronger-than-expected quarterly growth in the third quarter and growth in the first half of the year was revised up. We have nonetheless only lifted our GDP growth forecast for 2018 slightly to 0.9 percent – the slowest growth since the European debt crisis in 2012. The weak outcome is however primarily due to temporary factors, not least the carryover effect from the lift in GDP growth in 2017 from a one-off patent sale. The dry summer also appears to have dampened growth via weakness in utility and agriculture production. Adjusting for those effects points to an underlying GDP growth closer to 1.6 percent.

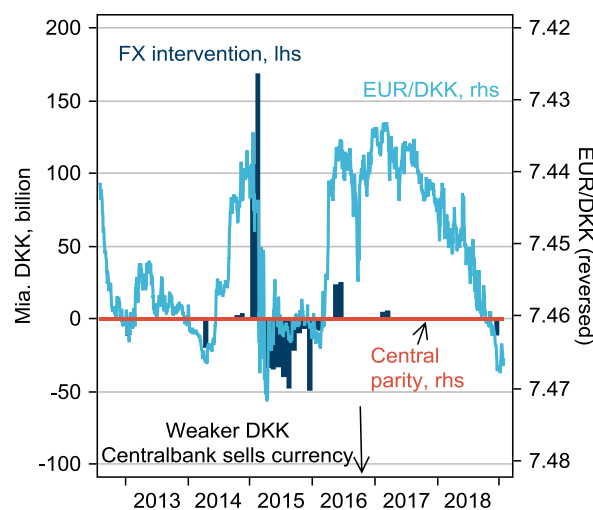
But peak in growth is behind us

As these temporary effects abate, growth will be higher in 2019 than last year, we believe. In the short run we expect export growth to recover somewhat from a surprisingly weak development last year and conditions for private consumption continue to look favourable. High household debt and cautious consumers, as mirrored in a decline in consumer confidence, will however keep a lid on consumption growth, we believe. Lack of skilled labour also weigh on the growth potential. Furthermore, even though we expect exports to contribute more to growth this year than last, the ongoing slowdown in the eurozone will reduce foreign demand as we move through the year. Elevated capacity utilisation rates and low interest rates constitute a positive backbone for investments, but high global geopolitical uncertainty and fading global growth prospects will, in our view, make businesses less inclined to invest.

The upshot is that we have lowered our growth forecast for 2019 to 1.5 percent, largely due to our more pessimistic outlook for especially the eurozone economy. Given the close trade relations with the UK and the relative importance of the shipping sector, a no-deal Brexit remains a key risk for the economic outlook. 2019 is also an election year in Denmark, but we do not foresee any marked changes in the current broadly neutral fiscal stance and stability-orientated economic policy regardless of the outcome.

The importance of shipping also means that our expectations of a more pronounced slowdown in the global economy in 2020 will enhance the deceleration in the Danish economy. Thus we expect GDP growth to slow to about 1 percent next year, also underpinned by our view that the construction cycle has peaked. A surge in construction alongside reduced affordability and tightening credit standards has led to a significant increase in the supply of homes for sale in especially the big cities. We do not rule out a negative development in apartment prices over the coming years and we expect residential investments to begin to act as a drag on overall growth later in our forecast horizon.

Rate hikes cannot be ruled out



Sources: Macrobond

The DKK has moved to the weak side of the central parity vs. the EUR in latest months and the Danish central bank sold foreign currency in the market in December for the first time since 2016 in order to keep the krone steady. If the weakening pressure on the krone persists, we expect the central bank to at first intervene further. We however do not rule out that it eventually will follow up with independent rate hikes of 0.1 percentage points in both the second and third quarter, thus closing the current negative spread vs. the ECB policy rate.

Netherlands

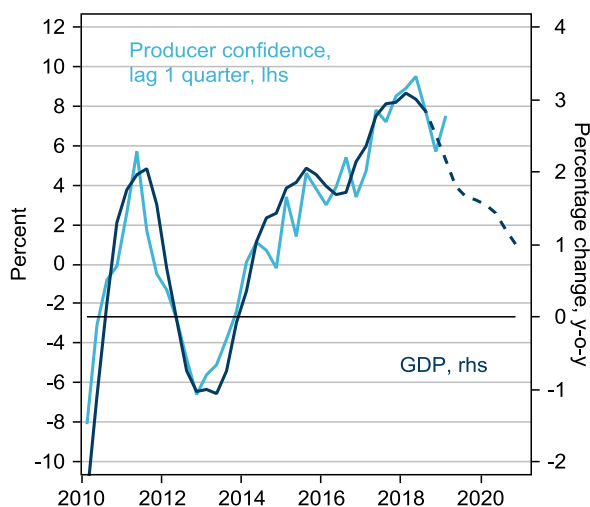
From leader to laggard

As feared, the Dutch economy was not immune to the weakening global business cycle, and GDP growth slowed markedly in the third quarter last year. While we believe the economy still has some room to run, growth is set to cool in the coming years due to capacity constraints and especially weaker global growth, which will hit the small, open Dutch economy relatively hard later in our forecast horizon, we believe.

No escape from reality

As feared, the apparent immunity of the Dutch economy to the slowdown in the global manufacturing cycle, the loss of traction in the eurozone, and the rise in geopolitical uncertainty, which it showed in the first half of 2018, did not last. Thus, GDP growth weakened more than expected in the third quarter last year, resulting in the weakest quarterly expansion since 2015. We do expect the economy to have performed somewhat better at the end of 2018, but the weaker-than-expected outcome over the summer means that growth last year probably ended up at 2.5 percent which is lower than the 2.8 percent we forecast in November.

Growth set to slow in coming years



Sources: Macrobond and Handelsbanken

Economic growth to slow further

We believe the Dutch economy still has some room to run, but growth is set to slow over the coming year due to a combination of increasing tightness on the labour market and lower global growth. Given our more pessimistic outlook for especially the eurozone economy, we assume that growth will decelerate to 1.6 percent in 2019 versus our previous forecast of 1.8 percent. Thus, slower growth in the eurozone has a tendency to affect the Dutch economy relatively hard due the Netherlands position as a major European trading hub. Due to this dependency on foreign trade the more marked slowdown in global economic activity that we expect in 2020, will also

weigh heavily on the small open Dutch economy. In combination with a strengthening of the EUR, which we expect, we forecast that GDP growth will fall to about 1 percent in 2020, turning the Netherlands from leader to laggard in the eurozone.

Risks associated with our forecast are currently seen as tilted to the downside stemming primarily from external factors. Stronger global growth than anticipated could, on the other hand, brighten the outlook for the Netherlands; however, this would increase the risk of overheating, in our view, if capacity constraints were not met with measures to increase potential growth.

Fiscal spending the bright spot

While we continue to see household spending as an important driver of the economy, consumer confidence seems to have peaked, pointing to more moderate household consumption growth ahead. Due to the tightness of the labour market, it is also becoming increasingly difficult to lift employment further, in our view, and we expect unemployment to fall at a slower pace before beginning to rise toward the end of the year as the economy weakens further. Despite the tightness of the labour market, real wages have not picked up, as inflation has risen, and in 2019e, inflation will rise more rapidly, primarily due to increases in VAT and higher energy taxes. This will, of course, only be a temporary effect, and we expect inflation to fall back below 2 percent in 2020 as the economy and the labour market cool.

We also expect a lack of labour to hamper residential investments in particular, and the orientation of Dutch businesses toward international trade also indicates that growth in capital expenditure in general will slow in tandem with exports as the global economy cools and geopolitical uncertainties prevail. As it stands, government expenditure looks set to be the only spending component that will rise more this year than last, as public spending lagged behind the coalition government's plans last year. On a positive note, public finances are sound, which leaves the Netherlands in a healthier position than many other countries when it comes to tackling the economic downturn, in our view.

Key ratios

Real GDP forecasts

	2017	(Previous forecast 2017)	2018f	(Previous forecast 2018)	2019f	(Previous forecast 2019)	2020f	(Previous forecast 2020)
Sweden*	2.4	2.4	2.3	2.6	1.5	2.0	1.6	1.6
Norway	2.0	2.0	1.6	1.6	2.1	2.1	1.6	1.9
Norway Mainland	2.0	2.0	2.4	2.3	2.3	2.4	1.4	1.5
Finland*	2.8	2.8	2.5	2.5	1.7	1.9	1.0	1.2
Denmark	2.3	2.3	0.9	0.7	1.5	1.6	0.8	0.7
EMU	2.5	2.4	1.8	1.9	1.3	1.6	1.2	1.4
USA*	2.2	2.3	2.9	2.9	2.3	2.3	1.3	1.3
UK	1.7	1.8	1.3	1.3	1.4	1.4	1.3	1.3
The Netherlands	3.0	2.9	2.5	2.8	1.6	1.8	1.0	0.8
Japan	1.9	1.6	1.1	1.1	0.8	0.8	0.4	0.4
China	6.8	6.9	6.6	6.5	6.0	6.0	5.7	5.7

*Calendar adjusted

Source: Handelsbanken Capital Markets

Inflation forecasts

	2017	(Previous forecast 2017)	2018f	(Previous forecast 2018)	2019f	(Previous forecast 2019)	2020f	(Previous forecast 2020)
Sweden	1.8	1.8	2.0	2.0	2.2	2.3	2.3	2.7
Sweden (CPIF)	2.0	2.0	2.1	2.2	2.0	2.0	1.8	1.9
Norway	1.8	1.8	2.8	2.8	1.7	1.3	1.5	1.5
Norway (core)	1.4	1.4	1.5	1.5	1.9	1.7	1.8	1.7
Finland	0.7	0.7	1.1	1.1	1.3	1.5	1.2	1.6
Denmark	1.1	1.1	0.8	0.8	1.2	1.5	1.6	1.5
EMU	1.5	1.5	1.7	1.8	1.7	2.0	1.6	1.7
USA (core)	1.6	1.6	1.9	2.0	2.0	2.2	2.0	2.0
UK	2.7	2.7	2.5	2.5	2.0	2.0	1.9	1.9
The Netherlands	1.3	1.3	1.6	1.6	2.6	2.5	1.6	1.6

Source: Handelsbanken Capital Markets

Unemployment forecasts

	2017	(Previous forecast 2017)	2018f	(Previous forecast 2018)	2019f	(Previous forecast 2019)	2020f	(Previous forecast 2020)
Sweden	6.7	6.7	6.3	6.4	6.2	6.3	6.4	6.5
Norway	4.2	4.2	3.9	3.9	3.5	3.5	3.5	3.4
Finland	8.6	8.6	7.4	7.5	6.9	7.2	6.9	7.1
Denmark	5.9	5.9	5.0	4.9	4.5	4.5	4.9	5.0
EMU	9.1	9.1	8.2	8.2	7.8	7.9	8.0	8.0
USA	4.4	4.4	3.9	3.9	3.7	3.7	4.1	4.1
UK	4.4	4.4	4.1	4.1	4.2	4.2	4.3	4.3
The Netherlands	4.9	4.9	3.9	3.9	3.5	3.5	4.0	4.0

Source: Handelsbanken Capital Markets

Interest rate forecasts

Policy rates	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	-0.25	-0.25	0.00	0.00	0.00
US (range midpoint)	2.375	2.625	2.625	2.625	2.125
Eurozone	-0.40	-0.40	-0.40	-0.40	-0.40
Norway	1.00	1.00	1.25	1.25	1.25
Denmark	-0.65	-0.55	-0.45	-0.45	-0.45
UK	0.75	0.75	0.75	0.75	0.75
3m interbank rates	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	-0.15	-0.15	0.05	0.10	0.15
US	2.70	2.95	2.92	2.90	2.40
Eurozone	-0.30	-0.25	-0.20	-0.20	-0.30
Norway	1.40	1.40	1.65	1.65	1.65
Denmark	-0.30	-0.20	-0.10	-0.10	-0.20
2y govt. yields	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	-0.40	-0.30	-0.15	-0.10	-0.10
US	2.60	2.80	2.85	2.75	1.75
Eurozone (Germany)	-0.55	-0.45	-0.35	-0.40	-0.60
Norway	1.30	1.40	1.40	1.50	1.50
Denmark	-0.50	-0.30	-0.10	-0.15	-0.35
Finland	-0.40	-0.35	-0.25	-0.30	-0.50
UK	0.80	0.80	0.80	0.80	0.80
5y govt. yields	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	-0.05	0.00	0.10	0.10	0.00
US	2.80	3.00	2.75	2.55	1.95
Eurozone (Germany)	-0.20	-0.10	0.10	0.05	-0.20
Norway	1.60	1.70	1.70	1.70	1.60
Denmark	-0.10	0.10	0.30	0.25	0.00
Finland	0.00	0.10	0.30	0.30	0.00
UK	1.20	1.20	1.20	1.20	1.15
10y govt. yields	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	0.55	0.60	0.70	0.70	0.50
US	2.80	3.00	2.85	2.70	2.25
Eurozone (Germany)	0.30	0.45	0.60	0.55	0.20
Norway	2.00	2.10	2.20	2.20	2.10
Denmark	0.25	0.50	0.70	0.60	0.20
Finland	0.60	0.70	0.85	0.85	0.45
UK	1.60	1.60	1.60	1.60	1.50
2y swaps	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	0.05	0.15	0.25	0.35	0.40
US	2.80	3.00	3.05	2.95	1.95
Eurozone	-0.10	-0.05	0.05	0.05	-0.10
Norway	1.70	1.70	1.80	1.80	1.80
Denmark	0.05	0.25	0.40	0.40	0.20
UK	1.20	1.20	1.20	1.20	1.20
5y swaps	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	0.50	0.55	0.65	0.65	0.70
US	2.95	3.15	2.90	2.70	2.10
Eurozone	0.30	0.40	0.50	0.45	0.30
Norway	2.00	2.10	2.10	2.10	2.00
Denmark	0.35	0.55	0.75	0.75	0.45
UK	1.50	1.60	1.60	1.60	1.50
10y swaps	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
Sweden	1.10	1.15	1.25	1.25	1.10
US	2.85	3.05	2.90	2.75	2.30
Eurozone	0.85	0.90	1.10	1.10	0.90
Norway	2.30	2.40	2.50	2.50	2.40
Denmark	0.95	1.20	1.40	1.40	1.10
UK	1.70	1.80	1.90	1.90	1.80

Source: Handelsbanken Capital Markets

Exchange rate forecasts

	Q1 2019	Q2 2019	Q3 2019	End 2019	End 2020
EUR/SEK	10.20	10.10	10.00	9.90	9.70
USD/SEK	9.03	8.78	8.40	8.25	7.76
GBP/SEK	11.40	11.22	10.99	10.76	10.54
NOK/SEK	1.06	1.06	1.06	1.06	1.04
DKK/SEK	1.37	1.35	1.34	1.33	1.30
CHF/SEK	9.03	8.78	8.62	8.46	8.22
JPY/SEK	8.52	8.44	8.32	8.25	7.76
CNY/SEK	1.31	1.29	1.25	1.25	1.23
EUR/USD	1.13	1.15	1.19	1.20	1.25
USD/JPY	106.00	104.00	101.00	100.00	100.00
EUR/GBP	0.895	0.900	0.910	0.920	0.920
GBP/USD	1.26	1.28	1.31	1.30	1.36
EUR/CHF	1.13	1.15	1.16	1.17	1.18
USD/CNY	6.90	6.80	6.70	6.60	6.30
EUR/DKK	7.47	7.47	7.47	7.46	7.46
SEK/DKK	0.73	0.74	0.75	0.75	0.77
USD/DKK	6.61	6.50	6.28	6.22	5.97
GBP/DKK	8.35	8.30	8.21	8.11	8.11
CHF/DKK	6.61	6.50	6.44	6.38	6.32
JPY/DKK	6.24	6.25	6.22	6.22	5.97
EUR/NOK	9.60	9.50	9.40	9.30	9.30
SEK/NOK	0.94	0.94	0.94	0.94	0.96
USD/NOK	8.50	8.26	7.90	7.75	7.44
GBP/NOK	10.73	10.56	10.33	10.11	10.11
CHF/NOK	8.50	8.26	8.10	7.95	7.88
JPY/NOK	8.01	7.94	7.82	7.75	7.44

Source: Handelsbanken Capital Markets

Research disclaimer

Risk warning

All investments involve risks and investors are encouraged to make their own decision as to the appropriateness of an investment in any securities referred to in this report, based on their specific investment objectives, financial status and risk tolerance. The historical return of a financial instrument is not a guarantee of future return. The value of financial instruments can rise or fall, and it is not certain that you will get back all the capital you have invested.

Research disclaimers

Handelsbanken Capital Markets, a division of Svenska Handelsbanken AB (publ) (collectively referred to herein as 'SHB'), is responsible for the preparation of research reports. SHB is regulated in Sweden by the Swedish Financial Supervisory Authority, in Norway by the Financial Supervisory Authority of Norway, in Finland by the Financial Supervisory Authority of Finland and in Denmark by the Danish Financial Supervisory Authority. All research reports are prepared from trade and statistical services and other information that SHB considers to be reliable. SHB has not independently verified such information and does not represent that such information is true, accurate or complete.

In no event will SHB or any of its affiliates, their officers, directors or employees be liable to any person for any direct, indirect, special or consequential damages arising out of any use of the information contained in the research reports, including without limitation any lost profits even if SHB is expressly advised of the possibility or likelihood of such damages.

The views contained in SHB research reports are the opinions of employees of SHB and its affiliates and accurately reflect the personal views of the respective analysts at this date and are subject to change. There can be no assurance that future events will be consistent with any such opinions. Each analyst identified in this research report also certifies that the opinions expressed herein and attributed to such analyst accurately reflect his or her individual views about the companies or securities discussed in the research report.

Research reports are prepared by SHB for information purposes only. The information in the research reports does not constitute a personal recommendation or personalised investment advice and such reports or opinions should not be the basis for making investment or strategic decisions. This document does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for any securities nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever. Past performance may not be repeated and should not be seen as an indication of future performance. The value of investments and the income from them may go down as well as up and investors may forfeit all principal originally invested. Investors are not guaranteed to make profits on investments and may lose money. Exchange rates may cause the value of overseas investments and the income arising from them to rise or fall. This research product will be updated on a regular basis.

No part of SHB research reports may be reproduced or distributed to any other person without the prior written consent of SHB. The distribution of this document in certain jurisdictions may be restricted by law and persons into whose possession this document comes should inform themselves about, and observe, any such restrictions.

The report does not cover any legal or tax-related aspects pertaining to any of the issuer's planned or existing debt issuances.

Please be advised of the following important research disclosure statements:

SHB employees, including analysts, receive compensation that is generated by overall firm profitability. Analyst compensation is not based on specific corporate finance or debt capital markets services. No part of analysts' compensation has been, is or will be directly or indirectly related to specific recommendations or views expressed within research reports.

From time to time, SHB and/or its affiliates may provide investment banking and other services, including corporate banking services and securities advice, to any of the companies mentioned in our research.

We may act as adviser and/or broker to any of the companies mentioned in our research. SHB may also seek corporate finance assignments with such companies.

We buy and sell securities mentioned in our research from customers on a principal basis. Accordingly, we may at any time have a long or short position in any such securities. We may also make a market in the securities of all the companies mentioned in this report. [Further information and relevant disclosures are contained within our research reports.]

SHB, its affiliates, their clients, officers, directors or employees may own or have positions in securities mentioned in research reports.

In conjunction with services relating to financial instruments, the Bank may, under certain circumstances, pay or receive inducements, i.e. fees and commission from parties other than the customer. Inducements may be both monetary and non-monetary benefits. If inducements are paid to or received from a third party, it is required that the payment must aim to improve the quality of the service, and the payment must not prevent the Bank from safeguarding the customer's interests. The customer must be informed about such remuneration that the Bank receives. When the Bank provides investment research, the Bank receives minor non-monetary benefits. Minor non-monetary benefits consist of the following:

- Information or documentation about a financial instrument or an investment service that is general in character.
- Written material produced by a third party that is an issuer to market a new issue.
- Participation at conferences and seminars regarding a specific instrument or investment service
- Corporate hospitality up to a reasonable amount.

The Bank has adopted Guidelines concerning Research which are intended to ensure the integrity and independence of research analysts and the research department, as well as to identify actual or potential conflicts of interests relating to analysts or the Bank and to resolve any such conflicts by eliminating or mitigating them and/or making such disclosures as may be appropriate. As part of its control of conflicts of interests, the Bank has introduced restrictions ("Information barriers") on communications between the Research department and other departments of the Bank. In addition, in the Bank's organisational structure, the Research department is kept separate from the Corporate Finance department and other departments with similar remits. The Guidelines concerning Research also include regulations for how payments, bonuses and salaries may be paid out to analysts, what marketing activities an analyst may participate in, how analysts are to handle their own securities transactions and those of closely related persons, etc. In addition, there are restrictions in communications between analysts and the subject company. According to the Bank's Ethical Guidelines for the Handelsbanken Group, the board and all employees of the Bank must observe high standards of ethics in carrying out their responsibilities at the Bank, as well as other assignments. For full information on the Bank's ethical guidelines please see the Bank's website www.handelsbanken.com and click through to About the bank – Sustainability at Handelsbanken – Sustainability – Policy documents and guidelines – Policy documents – Policy for ethical standards in the Handelsbanken Group. Handelsbanken has a ZERO tolerance of bribery and corruption. This is established in the Bank's Group Policy on Bribery and Corruption. The prohibition against bribery also includes the soliciting, arranging or accepting bribes intended for the employee's family, friends, associates or acquaintances. For full information on the Bank's Policy against corruption please see the Bank's website www.handelsbanken.com and click through to About the bank – Sustainability at Handelsbanken – Sustainability – Policy documents and guidelines – Policy documents – Policy against corruption in the Handelsbanken Group.

When distributed in the UK

Research reports are distributed in the UK by SHB.

SHB is authorised by the Swedish Financial Supervisory Authority (Finansinspektionen) and the Prudential Regulation Authority and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority. Details about the extent of our authorisation and regulation by the Prudential Regulation Authority, and regulation by the Financial Conduct Authority are available from us on request.

UK customers should note that neither the UK Financial Services Compensation Scheme for investment business nor the rules of the Financial Conduct Authority made under the UK Financial

Services and Markets Act 2000 (as amended) for the protection of private customers apply to this research report and accordingly UK customers will not be protected by that scheme.

This document may be distributed in the United Kingdom only to persons who are authorised or exempted persons within the meaning of the Financial Services and Markets Act 2000 (as amended) (or any order made thereunder) or (i) to persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"), (ii) to high net worth entities falling within Article 49(2)(a) to (d) of the Order or (iii) to persons who are professional clients under Chapter 3 of the Financial Conduct Authority Conduct of Business Sourcebook (all such persons together being referred to as "Relevant Persons").

When distributed in the United States

Important Third-Party Research Disclosures:

SHB research is not "globally branded" research and each recipient of SHB research is advised that in the United States, SHB research is distributed by Handelsbanken Markets Securities, Inc., ("HMSI") an affiliate of SHB. HMSI does not produce research and does not employ research analysts. SHB research and SHB research analysts and its employees are not subject to FINRA's research analyst rules which are intended to prevent conflicts of interest by, among other things, prohibiting certain compensation practices, restricting trading by analysts and restricting communications with the companies that are the subject of the research report. SHB has no affiliation or business or contractual relationship with HMSI that is reasonably likely to inform the content of SHB research reports; SHB makes all research content determinations without any input from HMSI.

SHB research reports are intended for distribution in the United States solely to "major U.S. institutional investors," as defined in Rule 15a-6 under the Securities Exchange Act of 1934. Each major U.S. institutional investor that receives a copy of research report by its acceptance hereof represents and agrees that it shall not distribute or provide research reports to any other person. Any U.S. person receiving SHB research reports that desires to effect transactions in any equity securities discussed within the research reports should call or write HMSI. HMSI is a FINRA Member, telephone number (+1-212-326-5153).

Macro Research and Trading Strategy

Macro Research

Lena Fahlen	Head of Macro Research	+46 8 701 83 29	Denmark		
Christina Nyman	Chief Economist	+46 8 701 51 58	Jes Asmussen	Head, Macro Research, Denmark and Netherlands	+45 46 79 12 03
Web Editor			Rasmus Gudum-Sessingø	Senior Economist, Denmark and Eurozone	+45 46 79 16 19
Terese Loon		+46 8 701 28 72	Bjarke Roed-Frederiksen	Senior Economist, China and Latin America	+45 46 79 12 29
Sweden			Norway		
Helena Bornevall	Scenario Analysis and Senior Economist	+46 8 701 18 59	Kari Due-Andresen	Head, Macro Research, Norway, UK	+47 22 39 70 07
Johan Löf	Senior Economist, Sweden	+46 8 701 5093	Nils Kristian Knudsen	Senior Strategist FX/FI	+47 22 82 30 10
Anders Bergvall	Senior Economist, Thematic Analysis and US	+46 8 701 8378	Marius Gonsholt Hov	Senior Economist, Norway	+47 22 39 73 40
			Halfdan Grangård	Senior Economist, Norway	+47 22 39 71 81
Finland			Trading Strategy		
Tiina Helenius	Head, Macro Research	+358 10 444 2404	Claes Mählén	Chief Strategist	+46 8 463 45 35
Janne Ronkanen	Senior Economist, Finland	+358 10 444 2403	Martin Jansson	Senior Commodity Strategist	+46 8 461 23 43
			Nils Kristian Knudsen	Senior Strategist FX/FI	+47 22 82 30 10
			Lars Henriksson	Strategist FX	+46 8 463 45 18
			Kiran Sakira	Strategist FX	+46 8 701 46 14

Debt Capital Markets

Tony Lindlöf	Head of Debt Capital Markets	+46 8 701 25 10
Per Eldestrand	Head of Debt Capital Markets Sweden	+46 8 701 22 03
Måns Niklasson	Head of Corporate Loans and Acquisition Finance	+46 8 701 52 84
Thomas Grandin	Head of Corporate Bonds	+46 8 463 45 83

Sales

Fixed Income Sales

Henrik Franzén +46 8 701 11 41

Corporate Sales

Bo Fredriksson +46 8 701 345 31

FX Sales

Håkan Larsson +46 8 701 345 19

Syndication

Thomas Grandin +46 8 701 345 83

Regional sales

Copenhagen

Kristian Nielsen +45 46 79 12 69

Gothenburg

Björn Torsteinsrud +46 31 774 83 39

Gävle

Petter Holm +46 26 172 103

Helsinki

Mika Rämänen +358 10 444 62 20

Linköping

Fredrik Lundgren +46 13 28 91 10

London

Tolga Kulahcigil +44 207 578 86 12

Luleå/Umeå

Ove Larsson +46 90 154 719

Malmö

Fredrik Lundgren +46 40 243 900

Oslo

Petter Fjellheim +47 22 82 30 29

Stockholm

Malin Nilén +46 8 701 27 70

Toll-free numbers

**From Sweden to
N.Y. & Singapore**
020-58 64 46

**From Norway to
N.Y. & Singapore**
800 40 333

**From Denmark to
N.Y. & Singapore**
8001 72 02

**From Finland to
N.Y. & Singapore**
0800 91 11 00

Within the US
1-800 396-2758

Svenska Handelsbanken AB (publ)

Stockholm
Blasieholmstorg 11
SE-106 70 Stockholm
Tel. +46 8 701 10 00
Fax. +46 8 611 11 80

Copenhagen
Havneholmen 29
DK-1561 Copenhagen V
Tel. +45 46 79 12 00
Fax. +45 46 79 15 52

Helsinki
Itämerenkatu 11-13
FI-00180 Helsinki
Tel. +358 10 444 11
Fax. +358 10 444 2578

Oslo
Tjuvholmen allé 11
Postboks 1249 Vika
NO-0110 Oslo
Tel. +47 22 39 70 00
Fax. +47 22 39 71 60

London
3 Thomas More Square
London GB-E1W 1WY
Tel. +44 207 578 8668
Fax. +44 207 578 8090

New York
**Handelsbanken Markets
Securities, Inc.**
875 Third Avenue, 4th Floor
New York, NY 10022-7218
Tel. +1 212 326 5153
Fax. +1 212 326 2730
FINRA, SIPC