

Contents

Mature business cycle changes the risk profile	3
THEME ARTICLE: INFLATION Upside risks to the inflation outlook	8
THEME ARTICLE: HOUSING MARKETS IN THE NORDICS, UK AND NETHERLAN A cautious start to 2018	NDS 10
UNITED KINGDOM A challenging road ahead	12
NETHERLANDS Fuel to the fire	13
SWEDEN Slowdown in construction will not break business cycle	14 14
NORWAY Modest decline in house prices; no negative spillover	15
DENMARK Still a solid outlook, but the peak is in the rear-view mirror	16
FINLAND Strong momentum will carry into the new year	17
Key ratios	18
Disclaimer	21

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 51 58, chny09@handelsbanken.se Johan Löf: +46 8 701 5093, jolo22@handelsbanken.se Helena Bornevall: +46 8 701 1859, hebo12@handelsbanken.se Eva Dorenius: +46 8 701 5054, evdo01@ handelsbanken.se Claes Måhlén: +46 8 463 4535, clma02@handelsbanken.se Lars Henriksson: +46 8 463 4518, lahe06@handelsbanken.se Kiran Sakaria, +46 8 701 4614, kisa02@handelsbanken.se Martin Jansson, +46 8 701 2343, nija03@handelsbanken.se Tiina Helenius: +358 10 444 2404, tihe01@handelsbanken.se Janne Ronkanen, +358 10 444 2403, jaro06@handelsbanken.se Kari Due-Andresen: +47 223 97007, kodu01@handelsbanken.no Marius Gonsholt Hov: +47 223 97340, kodu01@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 introduction

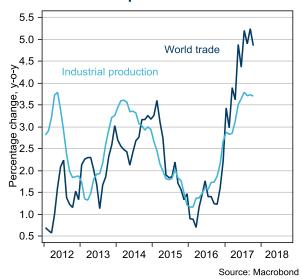
Mature business cycle changes the risk profile

Global growth accelerated a lot in 2017, exceeding our expectations. Despite this, inflation has been subdued. This combination has favoured risk assets in general and the stock market in particular. We expect that the business cycle will continue to strengthen in 2018, though growth will be at a somewhat slower pace by the end of the year. The central banks will therefore continue their shift toward a less expansionary monetary policy. We anticipate that bond yields will rise as a result of this and asset prices will come under pressure. In 2019, global growth will slow, as capacity constraints are increasingly felt and the US heads for a recession. An important theme for 2018 will be the risk of higher inflation, which would have a major impact on monetary policy and asset markets.

Strong start to 2018

The picture of a strong global business cycle was reinforced in the autumn and this winter. Industrial activity and global trade continued to grow rapidly both in developed countries and emerging economies and global trade strengthened.

World trade and production



Although we have observed a synchronised upswing among countries, regions and sectors for an extended period of time, we and other forecasters have been surprised by the strength and sustainability of the upturn during the autumn. We have therefore revised our forecasts upward, especially for the eurozone and the US both this year and next. Inflation in most of the world has remained subdued, despite increasing resource utilisation, and despite some budding signs of an upturn in global price pressures.

Since our last macroeconomic forecast, the UK and the EU, following challenging negotiations, have agreed to continue discussions about their "divorce" and can now move on to negotiating their future relationship. This increases the likelihood of an agreement between the parties. However, in light of the disagreement in the UK parliament, we still expect a hard Brexit. By this we mean that there will be an agreement, but it will be significantly less favourable to the UK than has been the case so far. Our forecast for the US in 2018 has been influenced by the decision to implement Trump's tax reform. We expect some short-term positive effects on growth, but do not believe the reform will permanently increase the potential for growth. Furthermore, rising commodity prices and increased global trade have favoured developments in China and many other emerging economies in 2017.

From concern to confidence in 2017

Looking back at 2017, we can conclude that the year ended on a much more positive note than it began. The general discussion at the beginning of 2017 focused on the populist and protectionist tendencies sweeping the US and Europe. Global trade had been weak in 2016 and there were concerns that the prospects for global trade would significantly deteriorate with new trade barriers. Europe looked forward to a "super-election year" with uncertain outcomes, which contributed to the cautious growth estimates in the eurozone. But the data came in stronger, especially in the eurozone, and the political uncertainty substantially declined after the French elections in May. A lesson after both Brexit and the European "super-election year" is that political uncertainty had far less impact on the financial markets and macroeconomic trends than feared.

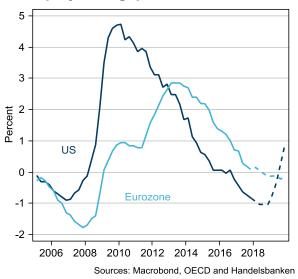
Key drivers of global growth in 2017 include a less restrictive fiscal policy, continued low interest rates and credit channels that have begun to function once again, including in the eurozone. Employment has risen, as has confidence in economic conditions, buoyed by higher asset prices. In addition, investments had been neglected, which contributed to an

increase in capacity utilisation. Taken together, these factors have created conditions for a strong and broad industrial business cycle. In addition, some of the factors that dampened global growth in 2016 disappeared, as did uncertainty about the Chinese economy, falling oil prices and thus lower oil-related investments.

An exciting 2018 lies ahead

We believe that the factors that were important for growth in 2017 will continue to be so for some time into 2018. We therefore expect a continued strengthening of the business cycle and falling unemployment.

Unemployment gap



Note: Dotted line is Handelsbanken's forecast

A growing number of economies will therefore be booming in 2018, which means that the output gap and the unemployment gap will be positive, and economic relationships will now be tested. Looking ahead, we believe the focus will be on the following two questions in the coming year:

- How large is the potential for growth in light of a long period of low investment, poor productivity growth and an ageing population? Although unemployment has just dropped to more normal levels, across the board, companies are reporting problems finding labour, including in many European countries where unemployment is still relatively high.
- Will 2018 be the year when we see wages and prices begin to pick up more clearly as a result of more mature economies? And consequently the year when interest rates rise more substantially? There are some signs of accelerating inflationary pressures, such as in the commodity

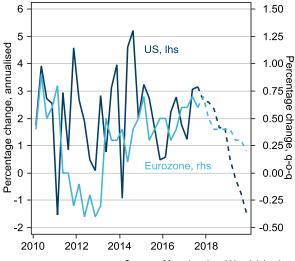
markets, but so far, consumer prices remain relatively subdued. However, this picture can rapidly change, as we have seen several times in history.

For now, we do not expect soaring inflation, but we do see a risk of higher than expected inflation. This would be a challenge for central banks given that many economies around the world are heavily in debt and therefore sensitive to interest rates. It would also put pressure on asset markets. We see higher inflation and thus higher interest rates as one of the greatest risks for 2018 and we discuss this in greater detail later in this report.

Global slowdown in 2019

In our main scenario, we nevertheless expect inflation to rise only moderately in 2018 as capacity utilisation rises. The central banks will therefore continue the difficult journey toward a normalisation of monetary policy. As the industrial cycle continues to strengthen, growth in the global economy will rise to the highest level since 2011. However, already in late 2018, we see that capacity limitations will slow growth and that the US economy in particular is clearly heading for a downturn. Overheating in the labour market will lead to rising labour costs in the US, which will squeeze profits. At the same time, financial conditions will tighten, not only because higher interest rates will increase interest payments, but also because of lower asset prices and tighter credit conditions. These factors will have a clear impact on investments, which will slow, and uncertainty about the economic trend will spread to the entire US economy.

GDP growth dampens



Sources: Macrobond and Handelsbanken

Note: Dotted line is Handelsbanken's forecast

Such a development will have repercussions on growth in other countries, especially in foreign trade, thereby driving down global growth in 2019. We also expect that growth in China will continue to decline gradually. This is mainly due to political measures to reduce risks in the housing market and the rapid credit expansion. Weaker growth in China and the US is expected to have a negative impact on other emerging economies in 2019.

Home markets boosted by a strong environment but domestic factors also play a role

Although the conditions differ to some extent for Handelsbanken's home markets (Sweden, Norway, Finland, Denmark, the UK, the Netherlands), global growth are very important for all the countries. Above all, Finland, the Netherlands and Sweden have benefited from strong global trends. In addition to external factors, there are domestic factors that are expected to be important in 2018. One is the housing market in Norway and Sweden, where prices fell in 2017. This has generated concerns of a major correction. For the complete details, see our theme article entitled "A cautious start to 2018". In summary though, our view is that these effects will be limited and we do not anticipate that this will spread to the whole economy in either Norway or Sweden. In Denmark, the growth was weak in the third quarter of 2017, but our assessment is that this was due to temporary factors, including changed registration fees for cars, and we expect stable growth in 2018. In Finland, the trend is still strong and broad, although growth will shift down in 2018. The Netherlands is experiencing rapid growth, which is being further fuelled by an increase in public spending. In the UK, Brexit is naturally dominating the agenda.

Overall, there are signs of a sustained upswing in all of our home markets. Consequently, we foresee inflation levels in our home markets, with Norway lagging behind, gradually nearing their targets. However, as international growth slows in 2019, we expect the global conditions to have an adverse impact on growth in our home markets.

High oil prices to dampen ahead

Oil prices have risen sharply over the past six months, to just under USD 70 per barrel. The upswing can be partly explained by strong global demand and OPEC so far managing to restrict supply, thereby lowering global oil inventories. Unrest in Iran and developments in Saudi Arabia have also buoyed prices. With inventories usually rising at the start of each year and with increased US oil production, our expectation, prices will dampen in the future.

Asset price tailwinds subsiding

The combination of higher growth and lower inflation than was expected in 2017 has provided a favourable environment for asset markets. The stronger economic activity has resulted in higher profit growth. Meanwhile, continued low inflation has kept interest rates down which, combined with low volatility, has contributed to a further rise in values.

For fixed income markets, 2017 was an undramatic year. The Fed raised interest rates three times, which was in line with their guidance, although it was one more rate increase than was expected at the market at the beginning of the year. As the market changed pricing, short-term interest rates have risen. However, yields on longer-term bonds remained virtually unchanged during the year, which significantly reduced the difference between long and short interest rates. The eurozone also failed to display any drama during the year. The ECB's QE programme proceeded as expected. Both short and long interest rates have been trading in a narrow range.

However, it appears that the tailwinds boosting asset markets will subside over the course of 2018. First and foremost, our forecast for the economic cycle means a weaker outlook for corporate profit growth. The basis for our assumptions for the coming year is also different. The relatively low expectations on the global economy ahead of 2017 were also significantly easier to surpass than today's optimistic forecasts. In 2018, GDP growth is expected to further accelerate to become the strongest year for developed economies since 2010. Over the course of 2018, the monetary policy environment will also be less favourable for asset prices.

Central banks continue normalisation in 2018

The Fed will continue to raise interest rates in 2018, and we now expect that the stronger growth will result in three rate increases during the year, which is in line with its forecast, but one more than we had included in our most recent forecast. However, the economic slowdown toward the end of 2018 will result in a shift toward interest rate cuts in 2019.

The ECB's monetary policy will be less expansionary in 2018. We expect that inflation will be somewhat higher than the ECB assumes and therefore we expect that it will end its securities purchases in the latter part of 2018 and raise key interest rates in Q1 2019. We have therefore postponed the first rate hike by the ECB, compared to our forecast in October, in light of ECB communication. As we see it, there is pressure within the ECB to get away from negative interest

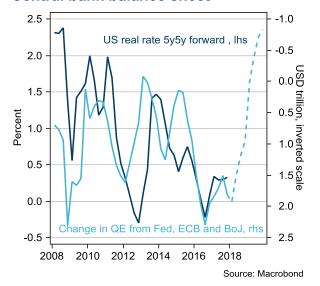
rates and we believe that this pressure is increasing as the economy strengthens. We expect that interest rates will have reached zero by the end of 2019.

The central banks' total balance sheets will stop growing in 2018. At the same time that the ECB is tapering its purchases, which will end later this year, the Fed is scaling down its balance sheet at an accelerating pace. In our main scenario, the Bank of Japan will continue to expand its balance sheet at the same rate as in 2017. The increase in the aggregate balance sheet will level off during the year after which, as our main scenario, it will decline in 2019.

Rising bond yields in 2018

It is not possible to determine with certainty what effect central banks' bond purchases will have had on fixed income markets. It would seem, however, that the change in global QE, rather than the level, has had the greatest impact on long-term real interest rates. The figure below shows the change in the aggregate balance sheet of the Fed, the ECB and the Bank of Japan.

Central bank balance sheet



Note: Dotted line is Handelsbanken's forecast

We believe that the effect of central banks ending bond purchasing programmes is underestimated and will put greater upward pressure on long-term rates than central banks and the market are expecting. Long-term yields have risen lately, partly due to expectations of less expansionary monetary policy. Altogether, we expect that the spread in long-term rates between the US and the eurozone will decrease as economy-related differences decline. The chart below shows the relative labour market gap between the US and the eurozone and the spread in 10-year yields. As unemployment be-

gins to rise in the US, but continues to fall in the eurozone, today's historically substantial spread in bond yields should decrease significantly.

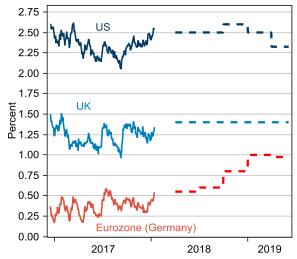
Business cycle and spread



Note: Dotted line is Handelsbanken's forecast

As a result of rising bond yields, the valuation of asset markets in general may come under some pressure, especially during the second half of our forecast horizon. Overall, we do not foresee conditions for yields in the global asset market that were as good as in 2017. However, a weaker economic climate and less favourable monetary policy will probably not be noticeable for the asset markets until the second half of the year.

Differences decreasing in long bonds



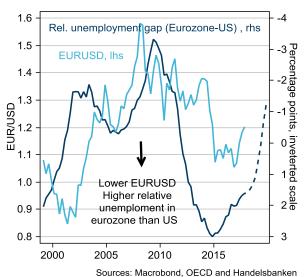
Sources: Macrobond and Handelsbanken

Note: 10 year gov. bond; dotted line is Handelsbanken's forecast

Temporarily stronger dollar ahead

Volatility was also low in the currency market, although not as depressed as in stock markets and the fixed income market. In early 2018, we expect that the US tax reform will strengthen the USD against the EUR slightly as US companies bring home cash that is at least partially invested in foreign currency. However, just as with bond yields, the relative economic trend will be most important for the foreign exchange trend. The labour market is already improving more quickly in the eurozone than in the US, which has historically been consistent with a rise in the EURUSD. In conclusion, we believe that the dollar will be stronger in early 2018, whereas a bit further down the line we foresee a weakening of the dollar based on our economic scenarios with a weak trend in the US in 2019. In late 2019, we anticipate that the EURUSD will trade at 1.25.

Weaker dollar ahead



Note: Dotted line is Handelsbanken's forecast

Mature business cycle leads to new risks

Although we have revised our forecasts upward for, among others, the US and the eurozone in 2018, we may have underestimated the strength of the upturn. This is particularly the case for the investment climate in the eurozone, as well as for the global industrial cycle. We may also have underestimated the potential and resilience of the US economy, where we expect a recession in 2019.

On the other hand, there are also major risks associated with high global levels of debt, which would result in a much worse performance. The trigger could be that financial conditions would be tightened more than the central banks had intended once monetary policy is normalised— and also more than we are expecting in our main scenario. In Italy, the political situation is very uncertain with the upcoming election this spring, and the Italian banking system is still less capitalised than other European banks, while Italian government debt is high.

China's property market and the banking system still pose a high potential risk to the global economy, although concerns have been alleviated since the authorities implemented various measures. There are also a number of geopolitical tensions, such as between North Korea and the US, which could give rise to weaker economic growth.

Upside risks to inflation and interest rates

We especially want to emphasise the risks associated with inflation and thus the central banks' monetary policy. There are arguments in favour of inflation rising faster in the future and also that it will remain subdued. The arguments for continued low inflation are well known – globalisation, technological developments, potentially large untapped labour reserves, both in developed countries and in emerging economies. When inflation has been low for a long time, it is easy to believe that it always will be. However, we believe there are factors indicating that inflation will rise faster than expected and thus consider that there is a clear risk that rapidly increasing inflation will take us by surprise (see separate article "Upside risks to the inflation outlook").

Central banks would initially welcome an uptick in inflation; however, they would be forced to reverse monetary policy more quickly if inflation became persistent. In such a case, the pace and magnitude of interest rate increases would be greater than current expectations, resulting in a general revaluation of assets. Decreasing asset values would increase the risk of a weaker economic performance. A sustainable increase in inflation would also reduce central banks' ability to fight downturns or shocks with monetary policy.

Theme article: Inflation

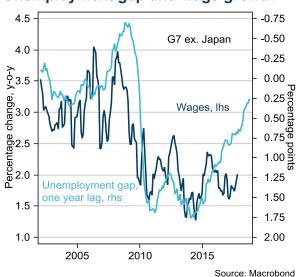
Upside risks to the inflation outlook

Despite improving labour market conditions, core inflation has remained tame in the years following the financial crisis. This has called the link between resource utilisation and inflation fluctuations into question. In our view, evidence points to the relationship still being valid. Looking ahead, we expect core inflation to accelerate gradually, but we offer a warning that underlying price pressures may be stronger than most anticipate.

Stubbornly weak inflation since the GFC

Stubbornly weak inflation readings stand out as one of the key puzzles that emerged during the recovery from the global financial crisis (GFC). Prior to the GFC, core inflation among the G7 nations (excluding Japan) hovered close to, but somewhat below, the inflation targets in the different countries. However, in the years following the crisis, inflation has remained well below target, even though growth has been healthy and unemployment has fallen. First of all, as the labour market heats up, one would expect the bidding for labour to buoy the average wage. As a consequence, increasing general prices would eventually follow, as firms try to shield their margins from rising costs. However, wage pressures do not appear to have materialised. For the G7 nations as a whole (excluding Japan as a special case), nominal wage growth appears to be lagging behind the normalisation of the labour market.

Unemployment gap and wage growth



Wage growth remains well below past standards that proved compatible with price inflation at around 2 percent. However, and as recently pointed out by the IMF, around two thirds of the slowing of average nominal wage growth since 2008, relative to 2000-07, can be explained by a weakening of the productivity trend in many economies, including the US.

Nominal wage growth and productivity



This time is not different

We should note one floating theory, namely that technological changes, globalisation and increased competition across various markets may have suppressed wage bargaining and also limited the pricing power of firms. According to this theory, these factors would dampen the price responsiveness of changes to overall resource utilisation of the real economy. However, none of these supposedly dampening factors were suddenly introduced after the GFC.1 There are a lot of studies on the relationship between the real economy and inflation, and these have produced somewhat differing results. Nonetheless, our view is that a majority of these studies conclude that the relationship between the real economy and inflation is relatively stable after the GFC.

Mankiw was sceptical about whether globalisation had made marginal costs and inflation less cyclically sensitive.

¹ Greg Mankiw pointed to these questions already back in 2006, highlighting that the debate is not new. Note that

This will inevitably have important consequences, as we expect any remaining slack in the global economy to erode quickly, with overall employment rising further. Moreover, as we move deeper into the boom phase of the cycle during 2018, the still-weak productivity trend will mean that even a small rise in nominal wage growth - relative to past standards will significantly increase cost pressures, i.e. unit labour costs (a proxy for firms' marginal costs). Furthermore, we should note that there is a time lag of around a year before changes to overall capacity utilisation will work their way through to wages and inflation. Given the backdrop of solid global GDP growth in 2017, being extended into 2018, we see lagging effects that will drive wages and inflation higher during 2018-19. All in all, we expect inflation eventually to accelerate.

On the periphery of this main story, there could be other factors affecting inflation as well.

"Lowflation" could prove temporary

The IMF has analysed how inflation expectations, labour market slack and imported inflation have contributed to the low inflation up until 2016.2 First, the IMF found that inflation expectations had become more backward looking, which implies more persistent effects of labour market slack and import prices on inflation. Additionally, it found that the relationship between labour market slack and inflation had been stable, but that the importance of import prices had increased. The biggest contribution to lower inflation had been weak demand and persistent economic slack together with subdued import prices. The latter partly reflects the decline in oil and other commodity prices, but subdued import prices are also associated with industrial slack in key large economies, such as China, generally implying cheaper imports for the rest of the world. However, last year, producer prices in China, as well as commodity prices, increased substantially, meaning that the disinflationary effects from import prices seen after the GFC should decrease. Inflation expectations are also showing tentative signs of acceleration, following the trough of 2016.

China PPI and G7 core inflation



Inflation expectations turning upwards



Source: Macrobond

Risk assessment: Upside in inflation outlook

In summary, we do not believe there is clear evidence of a significant break in the relationship between resource utilisation and cost pressures and inflation. Furthermore, the effect from low import prices in recent years will decrease. Thus, our base case continues to point to a gradual increase in global core inflation this year. If anything, we should be aware of potential upside risks to our inflation outlook. Higher inflation may also cause inflation expectations to drift upward. If the latter should materialise, it may further amplify the upward drift in inflation.

² IMF October 2016, WEO, Chapter 3.

Theme article: Housing markets in the Nordics, UK and Netherlands

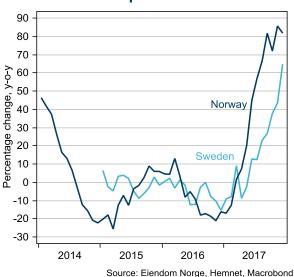
A cautious start to 2018

Last year saw a significant focus on house prices in several of our home markets³. In Norway and Sweden, prices fell for some of 2017, raising questions about whether a repeat of developments previously seen in Denmark, the Netherlands and the UK should be expected. We do not believe so, although 2018 is beginning on a cautious note. Stable prices in Finland suggest the country is sitting this one out.

Falling house prices in Sweden and Norway

In the second half of last year, house prices fell in Norway and Sweden. Regulatory changes were a contributory factor, particularly the introduction of debt-to-income caps and increased requirements for amortisation. The decline in Norway was mainly confined to Oslo. In addition to a debt-to-income cap, requirements were also introduced there that stipulated a minimum level of equity of at least 40 percent for second home purchases. In Sweden, the decline in prices was more broad-based, although Stockholm saw the greatest fall. In addition, housing construction rose sharply in these countries, and some cases of speculation were observed in Oslo and Stockholm. The stock of unsold housing units rose rapidly, particularly apartments. In part, this was a result of an increase in newly-produced housing units, but it was also triggered by greater uncertainty on the market, we believe. While apartments have taken longer to sell, there has not been a clear drop in sales activity. Concerns on the housing market have not spread to other sectors of the economy either.

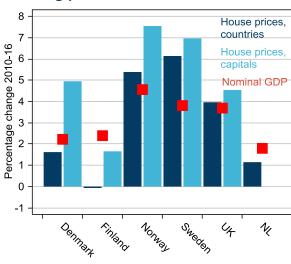
Stock of unsold apartments



Some countries have already experienced a sharp decline in prices

In Sweden and Norway, there was a long period of rapidly rising house prices, and prices rose faster than GDP on average from 2010.

Housing prices and GDP 2010-2016



Source: Macrobond

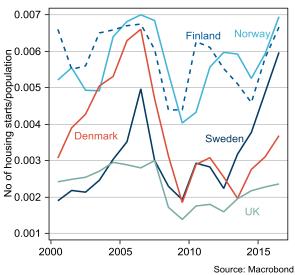
In Denmark, the Netherlands and the UK, the underlying conditions on the housing market were different. Overall, house prices in these countries did not exceed the pace of GDP growth on average in 2010-16 after a sharper fall in prices during the global financial crisis and subsequent slower recoveries. It is, however, the case that the price fall in Denmark began as early as 2006 in Copenhagen, following a period of substantial residential investment and in conjunction with rising interest costs. These effects were amplified by the global financial crisis. In addition, the housing markets in these countries were hit somewhat harder during the euro crisis of 2012. However, worth noting is the relatively rapid price increase in Copenhagen, which was partly correlated with a substantial urbanisation trend. It is also worth noting that house prices in the Netherlands experienced a sharp increase last year.

Handelsbanken Capital Markets

³ Our home markets are Denmark, Finland, the Netherlands, Norway, the UK and Sweden.

A pronounced decrease in global demand and rapidly rising interest costs were two key factors in the sharp price falls in 2009 in Denmark and the Netherlands. Something often mentioned is also the increase in housing investments that preceded the price drops. However, the level of housing construction did not differ significantly from that of other countries. The lowest number of housing starts in relation to population was in the UK. In addition to the risks related to the property market in the wake of Brexit, the current discourse on the housing market in the UK focuses, among other factors, on the fact that the housing being built is too expensive, although this has also been discussed in Sweden lately.

Construction of housing per capita



Note: No data available for the Netherlands. Elimination of investment subsidies in Sweden as from 2007, caused a swell of building starts in 2006.

Finland is in a class of its own

In Finland, house prices have remained nearly unchanged since 2010. Besides a slow increase in incomes, a contributory factor has also been a difference in amortisation cultures, which is demonstrated by the fact that non-amortising loans generally have not existed in Finland. On average, mortgage holders in Finland repay their loans in 20 years. Household savings are, however, relatively low. At the same time, housing has been built at a faster rate than in other countries in relation to the size of the population.

Reduced concerns in Sweden and Norway

In 2018, we do not expect any substantial macroeconomic effects to emanate from the housing market, rather we forecast a stabilisation of prices in Norway and Sweden. We highlight factors including low interest rates, a strong economy, a high employment ratio and resulting steady growth in income. The coming months will show whether that is enough to keep house price levels stable. We will pay close attention to sales activity and we expect the stock of unsold housing units to decrease gradually from today's high levels in Sweden and Norway. Another thing to keep an eye on is housing starts. These will show whether problems and concerns related to some individual housing developers have spread more widely within the construction sector. We expect demand for housing to remain strong. The challenge for construction firms will be to build cost-effectively and in locations that are most in demand.

High debt levels complicate the way forward

This year and next, the ECB and the Riksbank will start raising their key interest rates from today's record-low levels, we believe. However, Norges Bank and the Bank of England will stay on hold, in our view. Even if interest costs remain low for some time to come, interest rate increases will slow the rise in house prices ahead, we believe.

In Sweden and Norway, household debt has continued to increase over recent years as house prices have risen and more people have bought their own homes, and also because of an expansion of other types of credit. This means that households in Sweden and Norway are more susceptible to interest rate changes than they were before. A reassuring factor regarding these countries, however, is that household savings there have increased alongside the increase in debt. Furthermore, surveys from the Swedish National Institute of Economic Research indicate that Swedish households are expecting – and should thus not be surprised by – higher interest rates to come.

On the other hand, in Denmark, the Netherlands and the UK, households reduced their debt after the financial crisis. However, it is worth noting that (total) household debt remains the highest in Denmark and the Netherlands. Meanwhile, a substantial share of mortgage loans in these two countries were secured at fixed rates, meaning that the transmission mechanism is weaker than in Sweden and Norway, where the vast majority of people have floating rates.

As we anticipate that central banks will proceed with interest rate increases at a slow pace, we do not foresee any major drama in house prices. However, if inflation were to rise faster than expected, which we discuss in this report's other themed article, the central banks may have trouble balancing their inflation targets with the risk of a severe price decline on the housing market.

United Kingdom

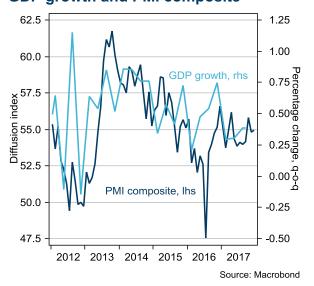
A challenging road ahead

Brexit is already dampening UK GDP growth, and we believe there will be plenty of turbulence ahead. In our view, a hard Brexit is the most likely scenario, and something like Canada's deal is probably a realistic prospect. We believe GDP growth and wage growth will stay subdued, prompting the central bank to leave the policy rate unchanged and triggering a further weakening of the pound.

Brexit already affecting economic activity

GDP growth in the UK decelerated markedly going into 2017 and, compared to its largest trading partners, the UK is obviously lagging behind in terms of economic expansion. Output in the construction sector fell in Q2 and Q3 last year, and manufacturing performance has been disappointing given the strong momentum in mainland Europe and the US. However, economic sentiment in the UK picked up in the second half of 2017, suggesting improved momentum, particularly in the manufacturing sector. Based on past form, the PMI index suggests that GDP growth, which increased from 0.3 percent in Q2 to 0.4 percent in Q3 could even have picked up a little further in Q4. However, Brexit-related uncertainty has taken its toll on private investment and consumption, and according to the PMI surveys, companies are questioning the durability of the upturn.

GDP growth and PMI composite



Tough challenges in Brexit negotiations

In December, the UK and EU agreed to proceed to talks about their future relationship. The agreed timetable says that the terms of a possible transition phase will be negotiated until the end of March; then, from the end of March, the focus will be on the future relationship. A deal on the future relationship must be struck by October to allow time for ratification before Brexit on March 29, 2019. We believe the coming negotiations will be far more demanding than those up until now. The agreement to move forward in December was built on shaky ground, in our view. The UK government guaranteed that no hard border would be drawn between Northern Ireland and the Republic of Ireland, but how the government will deliver this guarantee remains a mystery. Prime Minister May has weak support, and is totally dependent on the will of the Northern Irish DUP. We believe it will be very challenging, if not impossible, for May to reconcile the opposing demands of the parties negotiating Brexit in 2018. Ireland and the EU have said that their number one priority is keeping the EU united. Therefore, leaving the internal market and customs union means hard borders. The DUP has said a hard border with Ireland is out of the question, and that it will not accept differences between the rules for Northern Ireland and the rest of the UK. At the same time, the hard-line Brexiteers in May's own party keep insisting that controlling immigration, striking trade deals with other countries, and avoiding European Court of Justice jurisdiction are absolute red lines. The EU has said it is willing to offer the UK something like the deal it made with Canada, but this is not good enough for the UK, as it, for instance, would not include services and most likely would require some form of border control. Someone has to back down, and so far, it has not been the EU.

Bank of England forced to stay on hold

The way we see it, a hard Brexit is the most likely scenario. By that, we mean the UK securing some sort of limited deal with the EU, potentially similar to the Canada deal. Whatever the case, we expect plenty of turbulence ahead and UK GDP growth and wage growth to stay subdued. This will again force the Bank of England to keep its policy rate unchanged, we believe in contrast to market expectations, and lead to a further weakening of the pound.

Netherlands

Fuel to the fire

The Dutch economy ended 2017 on very solid footing, with GDP growth hitting a ten-year high. Supported by low interest rates, a solid global backdrop and expansionary fiscal policy, we expect the economy to continue its strong run in 2018 before decelerating in 2019. As the economy will continue to grow above its potential, we believe unemployment will decline further and inflationary pressure will begin to build.

Strong year for the Dutch economy

2017 was a stellar year for the Dutch economy, as it experienced strong and broad-based growth, an extraordinary pace of recovery in the labour market and a rapid improvement in the housing market. Low borrowing costs, the solid and synchronised global economic expansion, diminishing spare capacity and increased profits all added fuel to the fire. As such, GDP looks set to have grown by 3.3 percent last year – the highest in ten years.

Growth to remain high in 2018

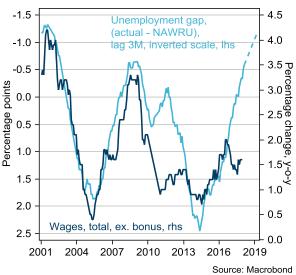
We argue that the current high confidence among businesses and consumers indicates that the selfsustained improvement in business investments and private consumption will continue as we move into the new year, underpinned by still very favourable financing conditions and rising disposable income. We expect that export growth will continue to benefit from the strong footing of the global business cycle, albeit with the risk of small headwinds from the appreciation of the EUR in 2017. Further fuel will come from increased government spending of more than 0.5 percent of GDP as laid out in the new coalition government agreement. Given our more positive outlook for the global economy and the prospect of a more expansionary fiscal policy, we raise our growth forecast for 2018 from 2.3 to 2.8 percent. We still expect growth to decelerate in 2019 driven by less accommodative financial conditions, higher inflation, slower global growth and as a rapidly maturing cycle increases capacity constraints and eliminates catchup demand. The potential hard Brexit would also deal a blow to the Dutch economy, with growth expected to slow to around 1.5 percent in 2019.

Rapidly approaching the top of the cycle

Given the strong performance in recent years, the economy has now entered a new phase in the business cycle as the output gap has closed. Without structural reforms that bolster the potential growth rate of the economy, the risk of overheating has become more inherent. This risk has become even more pronounced due to the aforementioned higher

government spending announced by the new government. Thus, the labour market is already tight, and the higher growth will push unemployment even further below its structural level, currently estimated at around 5 percent. We lower our unemployment forecast to 3.9 percent in 2018.

Labour market tightening rapidly



Inflation to rise

So far, the tightening of the labour market has had little impact on wages, as seen in the chart above. This has most likely been due to discouraged workers reentering the labour market. However, labour scarcity is beginning to increase and the tight labour market is expected to exert upward pressure on private sector wage growth, reaching 3 percent in 2019. In combination with rental increases due to the strengthening of the housing market, we expect underlying price pressures to intensify. We expect inflation to increase to 1.9 percent this year before accelerating to 2.6 percent in 2019. That said, this acceleration is not only due to the tighter labour market and high economic growth but also due to an increase in the VAT rate from 6 to 9 percent as well as an increase in several energy taxes from January 1, 2019 as part of the new government's announced income tax reform.

Sweden

Slowdown in construction will not break business cycle

On the back of the ongoing drop in housing prices, we expect that housing investment is about to turn around and fall from last year's highs. However, we expect the drop in construction activity to be moderate, and therefore it should be more than offset by an improved export outlook. All in all, we find that the cyclical boom continues, paving the way for inflation and some cautious rate increases from the Riksbank.

Gloomier outlook for housing investment...

Over the past half year, debates about the Swedish economy have shifted even more focus toward the housing market. This is hardly a surprise, as housing prices have now started to drop, after years of increases that were outpacing the rise in household disposable income. However, we argue that the housing price fall will prove to be moderate in the end because households are supported by – among other factors – high employment and low interest rates. As such, we expect this benign price correction to have limited knock-on effects on the wider economy, with sentiment proving resilient so far.

Still, housing price fluctuations tend to affect construction, so the current price correction should have a direct and significantly negative effect on GDP. Our previous forecast assumed that capacity constraints in the construction sector would cause housing starts to stabilise this year, stripping away a positive contribution to GDP. However, as it turned out, housing starts stopped increasing already in 2017 and now we expect 2018 to show a material step down from the investment level of 2017, thereby dragging down GDP.

Fewer housing starts, lower investment



Note. Starts include Statistics Swedens estimate of final outcome. Source: Macrobond

...but pick-up in exports boosts GDP growth

Despite the gloomy outlook for housing investment, there is cause for optimism, and we revise our overall GDP growth forecast upward for 2018. This follows from better-than-expected global trends, further lifting demand for Swedish exports. Leading indicators, such as new manufacturing orders, have improved lately, bearing witness to the pick-up in exports. With capacity utilisation already high, the faster production growth will accentuate the need for business investment ahead; this also stands to counter the drag on GDP from the slowdown in construction. Next year though, we expect the boost from Sweden's trading partners to fade, resulting in GDP growth below trend, at which point the cyclical boom will begin to cool.

Unemployment elevated despite job growth

The reacceleration in GDP growth has brought about a resumption in the positive employment trend after a brief pause last fall. Another bright spot in the Swedish labour market is the rising participation rate. However, we maintain the view that there is a problem stemming from labour-market mismatching. Thus, even though we revise down our forecast for unemployment, we still see a turning point this year, with unemployment starting to increase for structural reasons (i.e. even before the upcoming dampening of the business cycle would merit such an increase).

Inflation to stay close to the Riksbank's target

The tighter labour market, with a glaring shortage of labour, is now affecting wage outcomes. Even though the average rate of increase indicated in the central agreements shifted down on the back of last year's negotiations, actual outcomes have instead increased. We expect the higher wage increases, paired with persistently muted productivity growth, to help inflation to remain close to the target in 2018 and 2019, despite a gradual strengthening of the krona. With inflation on target and the Riksbank having taken the first steps toward policy normalisation by not formally extending its asset purchase programme into the new year, we argue that a first interest rate increase is on the cards. We expect the Riksbank to follow through on its current messaging and deliver a 25 basis point increase in September, after which the repo rate will be increased another two times in 2019. Once the first rate rise draws closer and anxiety about housing prices subsides, we expect the krona to start strengthening.

Norway

Modest decline in house prices; no negative spillover

House prices have continued to slide, in line with our estimates, and we continue to forecast a soft landing. There are currently no signs of a negative spillover into other sectors of the economy. Instead, mainland activity is holding up well. Core inflation remains tame, and is expected to hover well below the 2.5 percent target over the coming years. We maintain our view that Norges Bank will stay on hold.

Soft landing for the housing market

Norwegian house prices have continued to slide, in line with our expectations. We maintain our outlook for the housing market and continue to forecast a soft landing. Recent data have shown that the monthly decline in prices has slowed, at least a bit. The ongoing downward correction in the housing market has not led to any negative spillover into other sectors of the economy. Employment growth remains robust, real incomes are rising with higher nominal wages and low inflation, and consumer sentiment has recovered to levels seen prior to the oil price collapse of 2014. That said, we continue to emphasise that it is too soon to call the bottom for house prices. Overall supply is still elevated relative to demand, and demand must rise before house prices can stabilise.

Housing prices



Robust near-term outlook for the economy

According to signals from Norges Bank's Regional Network (December 5), the quarterly pace of growth

Still weak inflationary pressures

Core inflation, as measured by CPI-ATE, has on average been slightly weaker than we expected during the final guarter of 2017. But the weakening of the NOK exchange rate, in November and December in particular, should in isolation give a temporary boost to imported price inflation during the first half of this year. The inflationary impulse will gradually fade, however, as some of the depreciation of the NOK mentioned above has already been reversed. Also, we expect the NOK to continue to appreciate somewhat throughout the forecast horizon. All told, the inflation outlook is little changed. Overall price pressures remain weak, and we continue to expect CPI-ATE to hover well below the 2.5 percent target over the coming years. We maintain our view that Norges Bank will remain on hold in 2018 and 2019.

_

for the mainland economy will continue to be around 0.6 percent. The Financial News Index⁴, which is an even more timely activity indicator, has fallen a bit over the past month, but from elevated levels. Its signals are now very similar to the output signals from the Regional Network. All told, while the housing market continues to represent a drag on the economy, the overall growth outlook remains stable, supported by a further increase in oil prices. In our opinion, the current pace of growth is slightly above the potential for the economy, and as such, remaining slack will continue to erode. Note that we have lowered our GDP estimate for 2017 slightly, to 1.9 percent from 2.0 percent; however, this follows negative revisions to the official data. But we have raised our growth estimate for 2018 to 2.3 percent from 2.1 percent, as current momentum is somewhat stronger than we previously anticipated. Overall revisions are therefore slightly positive for 2017-18. Further ahead, we continue to expect some deceleration in GDP growth, to 2.0 percent, because of a weakening global outlook.

⁴ FNI-Retriever/CAMP (BI), which is designed to track Norwegian GDP growth and the business cycle at high frequency.

Denmark

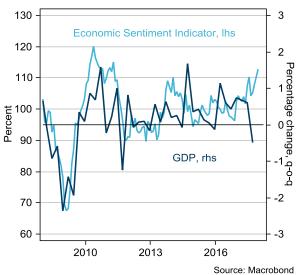
Still a solid outlook, but the peak is in the rear-view mirror

We argue that the negative GDP growth in Q3 is not a harbinger of a new economic downturn. Sentiment indicators are satisfactory, Denmark's main export markets are growing solidly and fundamentals for consumers and financial conditions are supportive. We expect growth to continue in 2018, albeit at a gradually slower pace as capacity constraints take effect, before a more marked deceleration in activity occurs in 2019.

Temporary setback for the Danish economy

Following six consecutive quarters of expansion, the Danish economy contracted in the third quarter last year, by 0.5 percent on a quarterly basis. However, we believe that the negative surprise was a temporary phenomenon in an otherwise positive economy. To some extent, the negative growth was driven by a drop in car sales due to uncertainty about car registration fees and by a large negative contribution from inventories. Even so, the negative reading from Q3 prompts us to lower our 2017 GDP forecast, although we still expect a solid rebound in GDP growth in Q4. In general, we continue to expect the economy to grow solidly as we move into 2018, supported by a strong global backdrop and positive fundamentals for both private consumption and investments.

Ignore the weak Q3



Due to the weaker overhang from the negative GDP growth in Q3, we only lift our 2018 growth estimate from 1.6 percent to 1.7 percent. This is despite a slightly stronger quarterly growth profile, particularly in the first half of the year, stemming from our more positive outlook for the global economy and notably the eurozone. We expect the pace of growth to slow gradually as the cycle matures and available resources dwindle further. In 2019, we anticipate that growth will decelerate more markedly,

primarily driven by slower global growth and tighter financial conditions.

Supportive backdrop

Our view that the negative growth in Q3 was a oneoff is also supported by the latest improvement in sentiment indicators, which ended 2017 on a strong note. Furthermore, the labour market has not shown any signs of weakness, with employment now only slightly below its pre-financial crisis record. The recovery in the housing market has also become more broad-based, albeit with the largest increases still seen in and around the bigger cities. Even though we expect the pace of improvement to cool, especially in the most expensive areas of the housing market, given that the already implemented macroprudential measures will take effect and that interest rates will increase later in the forecast horizon, we do not foresee any major downturn.

Consumers continue to reduce debt

Despite this solid fundamental backdrop for private consumption, household spending has disappointed somewhat in 2017. This is partly due to temporary factors, but it also highlights a high propensity to reduce debt. We expect that private consumption will continue to support growth as we move into 2018. However, given the current focus on savings, we expect that spending will be far below the credit-infused surge seen in the years prior to the financial crisis.

Inflation to accelerate

As the economy has reached its full potential and the unemployment rate has dipped below its structural level, labour shortages have begun to emerge. The outlook for further tightening of the labour market will add upward pressure on both wages and inflation in 2018. So far, the rise in employment has been accompanied by an increasing labour force. Nevertheless, in our view, it will take further improvement in the work force or higher productivity growth in the years ahead to sustain the current level of economic expansion without risking a more severe overheating of the economy.

Finland

Strong momentum will carry into the new year

The Finnish economy finished 2017 with strong momentum that will carry over to the new year. Growth was broad-based with investments and net exports giving a welcome boost. With somewhat stronger and longer support from the global economy, we raise our forecast for 2018-19 GDP growth moderately.

Last year played out well for Finland

The year 2017 ended on a high note in Finland, as all major economic indicators for the last quarter posted robust figures, supporting our 3.3 percent GDP growth forecast for the year. Furthermore, November data revealed that the soft spot in the Finnish labour market, seen in the third quarter, is now in the past. Employment increased in October-November by around 65,000 persons on average from the previous year, whereas the average increase for the entire Q3 2017 was a meagre 13,000. The broadbased nature of the expansion gives us more confidence that the strong momentum will carry over to the new year, and hence, we raise our forecasts for 2018-19 GDP growth moderately.

So far, growth has been almost entirely driven by productivity growth, as private sector companies have been restoring profitability after a long period of weak demand and inflexible wages. The competitiveness pact⁵ that became effective in 2017 has helped to lower unit labour costs and, together with still relatively good global demand, hours worked should increase in 2018-19.

Promising 2018 outlook

The business barometers for the consumer and corporate sector for Finland, as well as for Europe, finished 2017 at very high levels, indicating that demand conditions have truly turned around. The true verification of increased confidence in the business cycle outlook is the fact that investment activity ignited in the second part of the previous year, supporting the expectations that growth has finally become self-sufficient. In Finland, in the third quarter alone, investments in machinery and equipment, which are at the core of industrial investments, increased by a total of 35 percent from the previous year. Business investments should also show healthy growth in 2018, as the pent-up replacement cycle and productivity enhancements continue.

Residential construction investments will have another year of robust growth ahead in 2018, yet the fastest

phase of growth is now in the past. The non-residential construction cycle is already maturing, clearly revealed by the non-residential construction starts.

The upbeat consumer sentiment contributed to stable consumption growth in 2017. However, the pace of private consumption in 2017, forecasted at 1.8 percent, is far from the pace seen before the recession, when the average growth in 2000-08 was a little above 3 percent annually. The weaker growth in the real disposable income of the household sector in the post-crisis period is an obvious explanation for the more meagre growth in consumption. The pick-up in inflation will eat up a part of the increase of wages in 2018-19, yet we expect real incomes to grow due to larger nominal wage increases and increased employment.

Concerning foreign trade, persistent growth recovery in the eurozone is an essential factor affecting the outlook for Finnish exports. As the eurozone economy is expected to grow faster in 2018 than we previously estimated, it is likely to produce a more positive outcome for Finnish exports as well. However, a prolonged expansion in domestic demand will boost imports, and in total, we expect net exports to contribute less to GDP growth in 2018-19 than our 2.0 percentage points contribution forecast for 2017. In 2019, Finnish growth will moderate along with the weakening global business cycle and maturing domestic demand. Finnish inflation, despite a moderate uptick, will not reach the ECB's 2 percent target.

Key variables

Percentage change	2016	2017f	2018f	2019f
GDP	1.9	3.3	2.3	1.4
Household cons.	1.8	1.8	1.7	1.2
Investments	7.2	8.6	4.1	2.0
Net export*	-1.2	2.0	0.3	0.2
Unemployment**	8.8	8.5	7.9	7.8
Inflation	0.4	0.7	1.4	1.5
General govt balance***	-1.8	-1.0	-0.9	-0.8
EMU debt***	63.1	61.7	60.4	59.2

* Contribution to GDP growth **Percent of the labour force ***Percent of GDP Sources: Macrobond and Handelsbanken

social security contributions from employers' top employees and extending the annual working time by 24 hours without additional pay.

⁵ The pact, signed in June 2016 and implemented in 2017, was an agreement between the government and labour parties to reduce unit labour costs by freezing wages, reducing public sector pay, transferring part of

Key ratios

Real GDP forecasts

			(Previous		(Previous		(Previous
			forecast		forecast		forecast
	2016	2017f	2017)	2018f	2018)	2019f	2019)
Sweden*	3.0	2.7	2.9	2.7	2.4	1.7	1.8
Norway	1.1	1.9	1.5	0.9	1.1	1.3	1.3
Norway Mainland	1.0	1.9	2.0	2.3	2.1	2.0	1.9
Finland*	1.9	3.3	3.3	2.3	2.0	1.4	1.1
Denmark	2.0	1.9	2.2	1.7	1.6	1.1	0.8
EMU	1.8	2.3	2.0	2.0	1.5	1.4	1.2
USA*	1.5	2.3	2.1	2.5	2.0	0.6	0.5
UK	1.9	1.5	1.6	1.3	1.3	1.3	1.5
The Netherlands	2.1	3.3	3.1	2.8	2.2	1.5	0.9
Japan	1.0	1.6	1.6	1.0	0.7	0.3	0.1
China	6.7	6.7	6.7	6.3	6.3	5.8	5.8

^{*}Calendar adjusted

Source: Handelsbanken Capital Markets

Inflation forecasts

			(Previous		(Previous		(Previous
			forecast		forecast		forecast
	2016	2017f	2017)	2018f	2018)	2019f	2019)
Sweden	1.0	1.8	1.8	1.8	1.7	2.4	2.1
Sweden (CPIF)	1.4	2.0	2.0	1.8	1.8	1.9	1.9
Norway	3.6	1.8	1.9	1.7	1.3	1.5	1.4
Norway (core)	3.0	1.4	1.4	1.5	1.5	1.5	1.4
Finland	0.4	0.7	0.8	1.4	1.2	1.5	1.4
Denmark	0.3	1.2	1.2	1.8	1.7	1.8	1.6
EMU	0.2	1.5	1.5	1.8	1.6	1.7	1.4
USA (core)	1.8	1.6	1.6	2.0	2.0	1.9	1.7
UK	0.7	2.7	2.6	2.5	2.6	1.9	1.9
The Netherlands	0.3	1.4	1.4	1.9	2.0	2.6	1.9

Source: Handelsbanken Capital Markets

Unemployment forecasts

			(Previous		(Previous		(Previous
			forecast		forecast		forecast
	2016	2017f	2017)	2018f	2018)	2019f	2019)
Sweden	6.9	6.7	6.7	6.7	6.8	6.9	7.0
Norway	4.7	4.2	4.2	3.9	4.0	3.6	3.8
Finland	8.8	8.5	8.5	7.9	8.1	7.8	7.9
Denmark	6.2	5.8	5.8	5.3	5.5	5.3	6.0
EMU	10.0	9.1	9.2	8.6	8.6	8.3	8.4
USA	4.9	4.4	4.4	3.9	4.3	5.0	5.1
UK	4.9	4.4	4.4	4.5	4.5	4.7	4.7
The Netherlands	6.0	4.9	4.8	3.9	4.3	4.0	4.6

Source: Handelsbanken Capital Markets

Currency forecasts

	Jan 16	Q1 2018	Q2 2018	Q3 2018	End 2018	End 2019
EUR/SEK	9.83	9.70	9.60	9.30	9.20	9.30
USD/SEK	8.03	8.43	8.35	8.09	7.67	7.44
GBP/SEK	11.07	10.54	10.21	9.79	9.68	9.79
NOK/SEK	1.02	1.02	1.02	1.00	1.00	1.02
DKK/SEK	1.32	1.30	1.29	1.25	1.23	1.25
CHF/SEK	8.35	8.29	8.21	7.88	7.67	7.88
JPY/SEK	7.26	7.67	7.95	8.01	7.90	7.67
CNY/SEK	1.25	1.28	1.26	1.23	1.18	1.18
FUD/UCD	4.00	4.45	4.45	4.45	4.00	4.05
EUR/USD	1.22	1.15	1.15	1.15	1.20	1.25
USD/JPY	110.68	110.00	105.00	101.00	97.00	97.00
EUR/GBP	0.888	0.920	0.940	0.950	0.950	0.950
GBP/USD	1.38	1.25	1.22	1.21	1.26	1.32
EUR/CHF	1.18	1.17	1.17	1.18	1.20	1.18
USD/CNY	6.44	6.60	6.65	6.60	6.50	6.30
EUR/DKK	7.45	7.45	7.45	7.46	7.46	7.46
SEK/DKK	0.76	0.77	0.78	0.80	0.81	0.80
USD/DKK	6.09	6.48	6.48	6.49	6.22	5.97
GBP/DKK	8.39	8.10	7.93	7.85	7.85	7.85
CHF/DKK	6.33	6.37	6.37	6.32	6.22	6.32
JPY/DKK	5.50	5.89	6.17	6.42	6.41	6.15
EUR/NOK	9.63	9.50	9.40	9.30	9.20	9.10
SEK/NOK	0.98	0.98	0.98	1.00	1.00	0.98
USD/NOK	7.87	8.26	8.17	8.09	7.67	7.28
GBP/NOK	10.84	10.33	10.00	9.79	9.68	9.58
CHF/NOK	8.18	8.12	8.03	7.88	7.67	7.71
JPY/NOK	7.11	7.51	7.78	8.01	7.90	7.51

Source: Handelsbanken Capital Markets

Interest rate forecasts

Policy rates	Jan 16	Q1 2018	Q2 2018	Q3 2018	End 2018	End 2019
Sweden	-0.50	-0.50	-0.50	-0.25	-0.25	0.25
US (range midpoint)	1.375	1.625	1.875	2.125	2.125	1.375
Eurozone	-0.40	-0.40	-0.40	-0.40	-0.40	0.00
Norway	0.50	0.50	0.50	0.50	0.50	0.50
Denmark	-0.65	-0.65	-0.65	-0.65	-0.55	0.00
UK	0.50	0.50	0.50	0.50	0.50	0.50
3m interbank rates	Jan 16	Q1 2018	Q2 2018	Q3 2018	End 2018	End 2019
Sweden	-0.42	-0.40	-0.30	-0.10	0.00	0.40
US	1.73	1.80	2.00	2.20	2.30	1.70
Eurozone	-0.33	-0.30	-0.30	-0.25	-0.20	0.10
Norway	0.85	0.85	0.85	0.85	0.85	0.85
Denmark	-0.31	-0.30	-0.30	-0.25	-0.20	0.20
2y govt. yields	Jan 16	Q1 2018	Q2 2018	Q3 2018	End 2018	End 2019
Sweden	-0.35	-0.30	-0.20	0.00	0.10	0.40
US	2.02	2.00	2.25	2.40	2.00	1.25
Eurozone (Germany)	-0.58	-0.60	-0.55	-0.45	-0.35	-0.20
Norway	0.42	0.50	0.50	0.50	0.50	0.50
Denmark	-0.52	-0.50	-0.45	-0.35	-0.25	-0.05
Finland	-0.43	-0.55	-0.50	-0.45	-0.20	-0.05
UK	0.58	0.50	0.50	0.50	0.50	0.50
5y govt. yields	Jan 16	Q1 2018	Q2 2018	Q3 2018	End 2018	End 2019
Sweden	0.22	0.30	0.45	0.70	0.80	0.80
US	2.34	2.20	2.40	2.50	2.20	1.50
Eurozone (Germany)	-0.13	-0.10	-0.05	0.10	0.25	0.25
Norway	1.16	1.10	1.20	1.20	1.20	1.20
Denmark	0.08	0.10	0.15	0.30	0.55	0.55
Finland	0.05	-0.05	0.05	0.25	0.45	0.50
UK	0.85	0.80	0.80	0.90	0.90	0.90
10y govt. yields	Jan 16	Q1 2018	Q2 2018	Q3 2018	End 2018	End 2019
Sweden	0.82	0.90	1.00	1.30	1.50	1.40
Sweden US	0.82 2.54	0.90 2.50	1.00 2.50	1.30 2.60	1.50 2.50	1.40 1.80
Sweden US Eurozone (Germany)	0.82 2.54 0.51	0.90 2.50 0.55	1.00 2.50 0.60	1.30 2.60 0.80	1.50 2.50 1.00	1.40 1.80 0.90
Sweden US Eurozone (Germany) Norway	0.82 2.54 0.51 1.72	0.90 2.50 0.55 1.70	1.00 2.50 0.60 1.80	1.30 2.60 0.80 1.80	1.50 2.50 1.00 1.80	1.40 1.80 0.90 1.80
Sweden US Eurozone (Germany) Norway Denmark	0.82 2.54 0.51 1.72 0.57	0.90 2.50 0.55 1.70 0.60	1.00 2.50 0.60 1.80 0.65	1.30 2.60 0.80 1.80 0.85	1.50 2.50 1.00 1.80 1.10	1.40 1.80 0.90 1.80 1.00
Sweden US Eurozone (Germany) Norway Denmark Finland	0.82 2.54 0.51 1.72 0.57 0.66	0.90 2.50 0.55 1.70 0.60 0.65	1.00 2.50 0.60 1.80 0.65 0.75	1.30 2.60 0.80 1.80 0.85 0.95	1.50 2.50 1.00 1.80 1.10 1.20	1.40 1.80 0.90 1.80 1.00 1.10
Sweden US Eurozone (Germany) Norway Denmark	0.82 2.54 0.51 1.72 0.57	0.90 2.50 0.55 1.70 0.60	1.00 2.50 0.60 1.80 0.65	1.30 2.60 0.80 1.80 0.85	1.50 2.50 1.00 1.80 1.10	1.40 1.80 0.90 1.80 1.00
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps	0.82 2.54 0.51 1.72 0.57 0.66 1.31	0.90 2.50 0.55 1.70 0.60 0.65 1.40	1.00 2.50 0.60 1.80 0.65 0.75 1.40	1.30 2.60 0.80 1.80 0.85 0.95 1.40	1.50 2.50 1.00 1.80 1.10 1.20 1.40	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Forway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK 10y swaps	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50 1.14 Jan 16	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55 1.10 Q1 2018	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60 1.10 Q2 2018	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70 0.80 1.20	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00 1.20 End 2018	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00 1.20 End 2019
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK 10y swaps Sweden	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50 1.14 Jan 16 1.28	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55 1.10 Q1 2018 1.35	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60 1.10 Q2 2018 1.45	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70 0.80 1.20 Q3 2018 1.75	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00 1.20 End 2018 1.90	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00 1.20 End 2019 1.70
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK 10y swaps Sweden US	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50 1.14 Jan 16 1.28 2.52	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55 1.10 Q1 2018 1.35 2.40	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60 1.10 Q2 2018 1.45 2.60	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70 0.80 1.20 Q3 2018 1.75 2.70	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00 1.20 End 2018 1.90 2.60	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00 1.20 End 2019 1.70 2.40
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK 10y swaps Sweden US Eurozone Norway Denmark UK Eurozone Norway Denmark UK Eurozone Norway Denmark UK Eurozone Norway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50 1.14 Jan 16 1.28 2.52 0.95	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55 1.10 Q1 2018 1.35 2.40 1.00	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60 1.10 Q2 2018 1.45 2.60 1.05	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70 0.80 1.20 Q3 2018 1.75 2.70 1.30	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00 1.20 End 2018 1.90 2.60 1.50	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00 1.20 End 2019 1.70 2.40 1.50
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK 10y swaps Sweden US Eurozone Norway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50 1.14 Jan 16 1.28 2.52 0.95 2.02	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55 1.10 Q1 2018 1.35 2.40 1.00 2.10	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60 1.10 Q2 2018 1.45 2.60 1.05 2.20	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70 0.80 1.20 Q3 2018 1.75 2.70 1.30 2.20	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00 1.20 End 2018 1.90 2.60 1.50 2.20	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00 1.20 End 2019 2.40 1.50 2.20
Sweden US Eurozone (Germany) Norway Denmark Finland UK 2y swaps Sweden US Eurozone Norway Denmark UK 5y swaps Sweden US Eurozone Norway Denmark UK 10y swaps Sweden US Eurozone Norway Denmark UK	0.82 2.54 0.51 1.72 0.57 0.66 1.31 Jan 16 -0.11 2.20 -0.13 1.18 -0.01 0.85 Jan 16 0.56 2.39 0.38 1.61 0.50 1.14 Jan 16 1.28 2.52 0.95	0.90 2.50 0.55 1.70 0.60 0.65 1.40 Q1 2018 -0.05 2.10 -0.10 1.20 0.00 0.80 Q1 2018 0.60 2.30 0.40 1.60 0.55 1.10 Q1 2018 1.35 2.40 1.00	1.00 2.50 0.60 1.80 0.65 0.75 1.40 Q2 2018 0.05 2.40 -0.05 1.20 0.05 0.80 Q2 2018 0.75 2.50 0.45 1.70 0.60 1.10 Q2 2018 1.45 2.60 1.05	1.30 2.60 0.80 1.80 0.85 0.95 1.40 Q3 2018 0.20 2.50 0.00 1.20 0.10 0.80 Q3 2018 1.00 2.60 0.65 1.70 0.80 1.20 Q3 2018 1.75 2.70 1.30	1.50 2.50 1.00 1.80 1.10 1.20 1.40 End 2018 0.30 2.10 0.25 1.20 0.40 0.80 End 2018 1.10 2.30 0.85 1.70 1.00 1.20 End 2018 1.90 2.60 1.50	1.40 1.80 0.90 1.80 1.00 1.10 1.40 End 2019 0.60 1.40 0.35 1.20 0.60 0.80 End 2019 1.00 1.90 0.85 1.70 1.00 1.20 End 2019 1.70 2.40 1.50

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 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. Accordingly, to the extent permitted by law, neither SHB, nor any of its directors, officers or employees, nor any other person, accept any liability whatsoever for any loss, however it arises, from any use of such research reports or its contents or otherwise arising in connection therewith.

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.

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 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 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 Reports regarding fixed-income products are prepared by SHB and distributed by SHB to major U.S. institutional investors under Rule 15a-6(a)(2). Reports regarding equity products are prepared by SHB and distributed in the United States by Handelsbanken Markets Securities Inc. ("HMSI") under Rule 15a-6(a)(3). When distributed by HMSI, HMSI takes responsibility for the report. Any U.S. person receiving these research reports that desires to effect transactions in any equity product 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 and Trading Strategy

Tolga Kulahcigil	T44 201 010 00 12				
London	+44 207 578 86 12				
Fredrik Lundgren	+46 13 28 91 10		Malin Nilén	+46 8 701 27 70	
Linköping			Stockholm		
Mika Rämänen	+358 10 444 62 20		Petter Fjellheim	+47 22 82 30 29	
Helsinki	- · · · - · · · ·		Oslo		
Petter Holm	+46 26 172 103		Fredrik Lundgren	+46 40 243 900	
Gävle			Malmö		
Jaan Kivilo	+46 31 774 83 39		Snorre Tysland	+352 274 868 251	
Gothenburg	7-10-10 10 12 00		Luxembourg		
Kristian Nielsen	+45 46 79 12 69		Ove Larsson	+46 90 154 719	
Copenhagen			Luleå/Umeå		
Regional sales					
Thomas Grandin		+46 8 701 345 83			
Syndication					
Håkan Larsson		+46 8 701 345 19			
FX Sales					
Corporate Sales Bo Fredriksson		+46 8 701 345 31			
		+46 8 701 11 41			
Fixed Income Sales Henrik Franzén		146 0 704 44 44			
Sales					
Ulf Stejmar	Head of Corporate Bonds	+46 8 463 45 79			
	Acquisition Finance				
Måns Niklasson	Head of Corporate Loans and	+46 8 701 52 84			
Per Eldestrand	Head of Debt Capital Markets	Sweden +46 8 701 22 03			
Tony Lindlöf	Head of Debt Capital Markets	+46 8 701 25 10			
Debt Capital M	arkets				
			Lars Henriksson	Strategist FX	+46 8 463 45
			Nils Kristian Knudsen	Senior Strategist FX/FI	+47 22 82 30 1
			Martin Jansson	Senior Commodity Strategist	+46 8 461 23 4
Janne Ronkanen	Senior Economist, Finland	+358 10 444 2403	Claes Måhlén	Chief Strategist	+46 8 463 45 3
Tiina Helenius	Head, Macro Research	+358 10 444 2404	Trading Strategy		
Finland	Hood Moore Deserve	250 40 444 0404			
			Halfdan Grangård 71 81	Senior Economist, Norway	+47 22 39
Johan Löf	Senior Economist, Sweden	+46 8 701 5093		•	
			Marius Gonsholt Hov	Senior Economist, Norway	+47 22 39 73 4
Tiolona Bomovan	Senior Economist	14007011000	Nils Kristian Knudsen	Senior Strategist FX/FI	+47 22 82 30 1
Helena Bornevall	Scenario Analysis and	+46 8 701 18 59	Norway Kari Due-Andresen	Head, Macro Research, Norway; UK	+47 22 39 70 0
Sweden			Names		
Eva Dorenius	Chief Editor	+46 8 701 50 54	bjarke Noed-Frederiksen	Latin America	T45 40 75 12 2
Web Editor			Bjarke Roed-Frederiksen	Senior Economist, China and	+45 46 79 12 2
Christina Nyman	Head of Forecasting	+46 8 701 51 58	Rasmus Gudum-Sessingø	Senior Economist, Denmark and Eurozone	+45 46 79 16 1
Lena Fahlen	Deputy Head	+46 8 701 83 29	Daamus Cudum Caasiaan	Denmark and Netherlands	+45 46 79 12 (
Ann Öberg	Donuty Hood	+46 8 701 28 37	Jes Asmussen	Head, Macro Research,	. 45 46 70 12 (

Svenska Handelsbanken AB (publ)

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

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

Handelsbanken Markets 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