16 October 2018

Yield Outlook

Higher US yields to set the global 'yield-agenda'

The US bond market has been setting the direction in global bond markets over the past two weeks. Since the beginning of September, 10Y US Treasury yields have jumped more than 30bp to currently 3.16%. The move higher in yields has been especially noteworthy given the poor performance for global equity markets in the same period.

On 14 October we published *FI Research: Next stop is 3.50% for 10Y US treasury yields* where we looked at the drivers for US yields in particular over the coming three to six months.

We argue that even after the recent move higher in US yields we still have upside potential and accordingly we have changed our forecast for 10Y US yields, which we now expect to hit 3.30% (3.05%), 3.50% (3.20%) and 3.50% (3.50%) on a 3, 6 and 12 month horizon (old forecasts in brackets).

Basically, our view that US yields will continue to move higher over the next three to six months is based on four pillars.

#1: The macroeconomic-economic backdrop is still constructive

Optimism among US businesses and consumers remains extremely high, supporting our view that the expansion is going to continue. US fiscal policy remains accommodative next year with the one-year fiscal impact more or less as large as for this year. This should lead to further tightening of the US labour market and may imply upward risks to inflation. Headline inflation exceeds core inflation due to the higher energy prices, implying that real wage growth is actually quite weak at the moment. Overall, we expect growth to remain high next year, but probably slightly lower than we see now. We think GDP growth around 2.5% is more realistic compared to the nearly 3% for this year, but this is still significantly above potential GDP growth, which is probably around 1.75-2.00%.

#2: Fed remains on autopilot until June 2019

The Fed seems on track to deliver one more hike this year, in December, which is also a consensus among analysts and priced by markets. Growth is strong, optimism is high, the unemployment rate is low, wage growth is increasing (although at a gradual pace) and core inflation is running near the 2% target. We also expect the Fed to continue hiking next year, as the expansion seems likely to continue. After 3% is reached, we believe it is more 'stop and go' for the Fed, as further hikes depend on how the economy is doing and how markets are reacting to monetary tightening. At least, we expect the Fed to hike once more in H2 19 (i.e. a total of four times from now until year-end 2019).

#3: Higher US term premium

We expect a further move higher in the US term-premium (the extra premium an investor demands for buying a longer-dated bond e.g. a 10Y bond instead of 10 one-year bonds over the next ten years) as supply and demand factors increasingly become bond negative.

We expect supply of bonds will on the one hand, continue to rise in 2019 due to fiscal expansion and a growing refinancing need. On the other hand, we expect demand from

Quick links

Eurozone forecasts

US forecasts

UK forecasts

Denmark forecasts

Sweden forecasts

Norway forecasts

Forecasts table

Policy rate outlook

Country	Spot	+3m	+6m	+12m
USD	2.25	2.50	2.75	3.00
EUR	-0.40	-0.40	-0.40	-0.40
GBP	0.75	0.75	0.75	1.00
DKK	-0.65	-0.65	-0.65	-0.65
SEK	-0.50	-0.25	-0.25	0.00
NOK	0.75	0.75	1.00	1.25

Source: Danske Bank

10-year government bond yield outlook

Country	Spot	+3m	+6m	+12m
USD	3.17	3.30	3.50	3.50
GER	0.51	0.60	0.80	0.90
GBP	1.62	1.75	1.90	2.10
DKK	0.46	0.55	0.75	0.90
SEK	0.71	0.80	0.85	1.00
NOK	2.04	2.15	2.35	2.45

Note: EUR = Germany
Source: Danske Bank

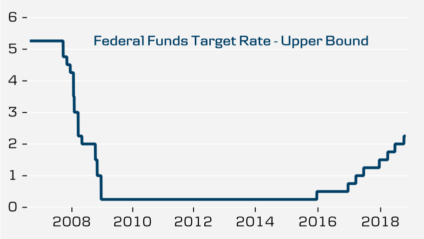
Chief Analyst
Arne Lohmann Rasmussen
+45 4512 8532
arr@danskebank.dk

foreign investors will be put under further pressure as the FX hedging costs that reflect the rate differential at the short-end of the curve will continue to rise. If a Japanese or a EUR based investor buys a 10Y US treasury bond and hedges the currency risk with a 3 months FX forward the higher 10Y yield will be eroded by the hedging costs.

We also see room for a general lift in US interest rate volatility. Inflation risks have become more pronounced and long-yields are no longer capped at 3%, which seemed to be the market view until recently.

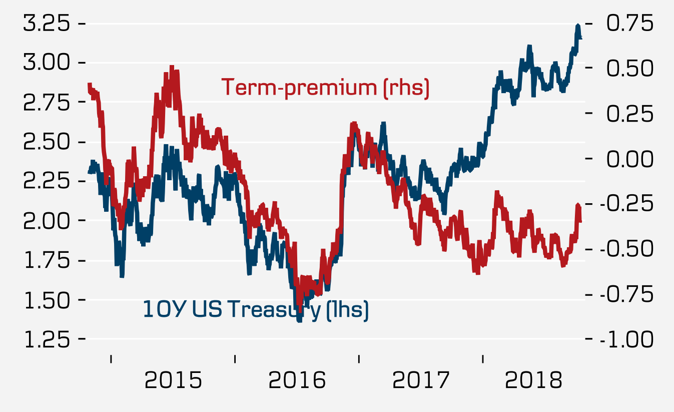
The term-premium has been negative in the US treasury market since 2017. Hence, the move higher in yields has been due to the Fed rate hikes and change in rate expectations. This is illustrated in the graph below the left. However, importantly the recent move higher in yields has been due to a higher term-premium as shown below in the graph to the right. It indicates that investors now demand a higher premium to buy US long bonds.

Fed hikes to continue



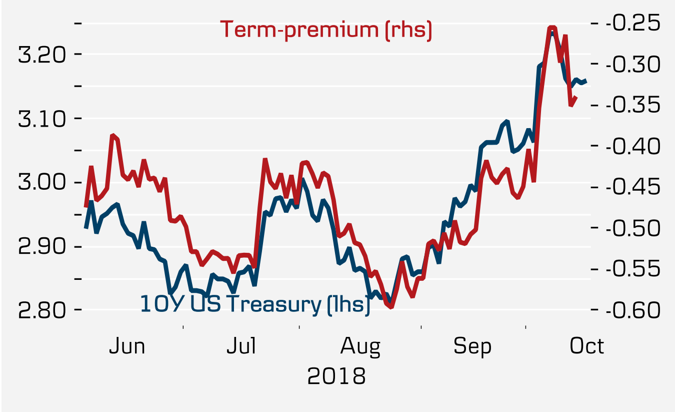
Source: Macrobond Financial

Stable and negative term-premium since 2017 as rising rate expectations pushed yields higher…



Source: Danske Bank, Bloomberg

….but it seems that the term-premium is now moving higher, pushing nominal 10 yields higher

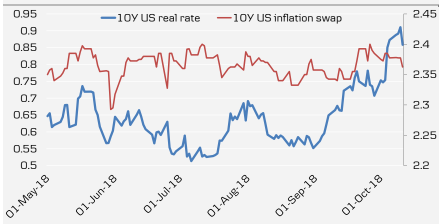


Source: Danske Bank, Bloomberg

#4: Real rates have started to move higher

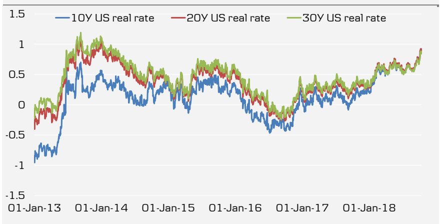
Over the past couple of months we have seen real 'market' rates moving higher. Given the economic healing, revisions to real rates estimates and focus on the Fed going 'above neutral', real rates could be pushed further up in 2019.

The recent sell-off has been characterised by a higher real-rate, %



Source: Danske Bank

US real rates are now close to 1% for the first time since 2014



Source: Danske Bank

Still no strong drivers for higher EUR rates for the rest of 2018

Economic momentum in the euro area also has abated due to headwinds from the external side and political risks around Italy coming back into focus. With the EU-US trade spat put on hold for now, we see scope for business confidence to recover somewhat in Q4 and still look for robust growth above potential of 2.0% in 2018 and 1.7% in 2019.

Despite the ECB's new-found optimism regarding the inflation outlook, uncertainty persists on the timing and degree of pass-through from higher wages to core inflation. We expect core inflation to rise only gradually throughout 2018, and also 2019, in light of lingering downside risks to growth. We foresee the first ECB hike of 20bp only in December 2019 (broadly in line with market pricing).

We continue to see modest upward pressure on yields and rates in Europe in 2019. The first ECB rate hike is moving closer and the ECB QE programme is widely expected to have ended. The latter has created some concerns that we could see a jump in yields such as we saw in the US in 2013, when the Federal Reserve scaled back on bond purchases (tapering). We see this risk as relatively small.

Our new yield forecast for 10Y US treasury yields will also if correct, tend to push German and Scandinavian longer-dated yields higher. We have consequently revised our 12M forecast for German 10Y yields higher to 0.90% from 0.8% previously.

Wider spread between USD and EUR rates

We continue to see a further widening of the two-year spread and 3M money market spread between USD and EUR rates. We expect the Fed to hike one more time this year and to continue hiking next year. We expect 3M USD Libor to reach 3.30% on a 12M horizon. 3M EUR Libor is expected to move only marginally higher over the same time horizon, as the ECB is not expected to lift the policy rate before December next year.

Importantly, we still expect the Fed to raise the Fed funds rate above the longer run dot of 3.0% (the Fed's estimate of the natural rate of interest when the economy is normalised) in coming years. We see a peak at 3.25% in 2020.

Sweden: rate hikes will soon arrive

As mentioned last month, we are approaching the first Riksbank rate hike since 2011. We believe that the first 25 basis point move will come in December. The current Riksbank rate path implies two hikes per year (December and July) over the coming three years.

Admittedly, until recently we were doubtful about a second hike in June, but on the back of new information we believe that the probabilities have flipped. Inflation came in markedly higher than we expected in September. Further, comments from food-chains suggest that for various reasons, there will be a need to raise food prices somewhat further next spring. On the back of this, we have raised our inflation forecast, which is now almost identical with the Riksbank's up to next summer. Hence, our updated yield forecast now includes a second rate hike in July 2019.

We plan to publish the next issue of Yield Outlook in mid-November.

Contents and contributors

Eurozone forecasts

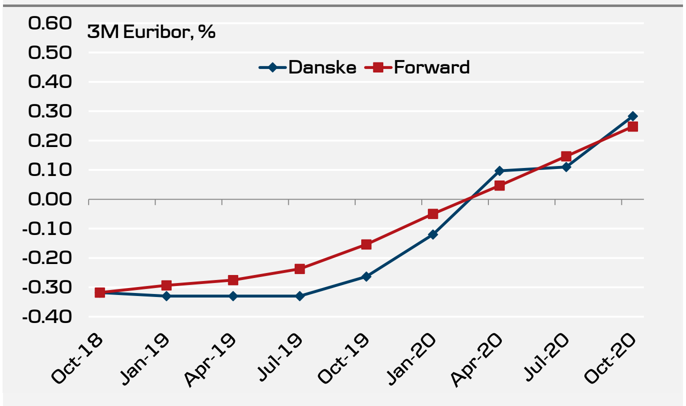
- Economic momentum in the euro area has abated due to headwinds from the external side and political risks around Italy coming back into focus. With the EU-US trade spat put on hold for now, we see scope for business confidence to recover somewhat in Q4 and still look for robust growth above potential of 2.0% in 2018 and 1.7% in 2019. Despite the ECB's new-found optimism regarding the inflation outlook, uncertainty persists on the timing and degree of pass-through from higher wages to core inflation. We expect core inflation to rise only gradually throughout 2018, and also 2019, in light of lingering downside risks to growth. We foresee the first ECB hike of 20bp only in December 2019 (broadly in line with market pricing).
- We still expect a steeper EUR yield curve on a 12M horizon. The ECB still maintains a relatively tight grip on the short end of the curve. However, this is not the case for the 10Y segment of the curve, which we expect to be pushed higher by rising US yields, the end of ECB QE from the ECB and the pricing of rate hikes in 2019-20. That said, the demand for Germany is expected to stay. Overall, we forecast that 10Y Germany will rise to 0.9% on a 12M horizon. If the global trade dispute evolves further, it could weigh on risk sentiment and keep yields down.

EUR forecasts summary

16/10/2018	--- Forecast ---				--- Fcst vs Fwd in bp ---		
EUR	Spot	+3m	+6m	+12m	+3m	+6m	+12m
			Money market				
Refi	0.00	0.00	0.00	0.00	-	-	-
Deposit	-0.40	-0.40	-0.40	-0.40	-	-	-
3M	-0.32	-0.33	-0.33	-0.26	-3	-5	-11
			Government bonds				
2-year	-0.55	-0.50	-0.40	-0.30	-	-	-
5-year	-0.08	0.00	0.10	0.30	-	-	-
10-year	0.51	0.60	0.80	0.90	-	-	-
			Swap rates				
2-year	-0.10	-0.05	0.05	0.15	-3	-1	-10
5-year	0.43	0.45	0.55	0.75	-5	-3	+1
10-year	1.05	1.10	1.30	1.40	-1	+14	+12

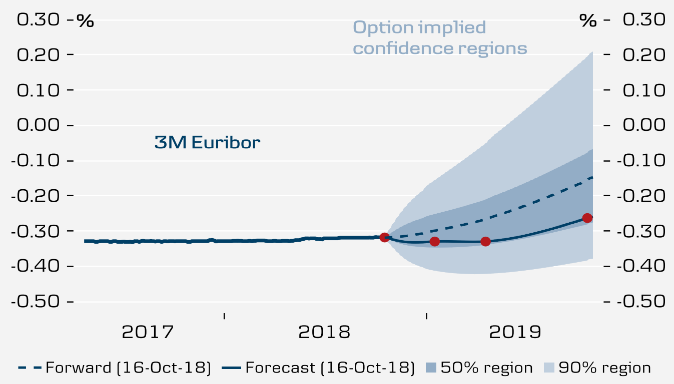
Source: Danske Bank

Danske Bank forecast and forwards



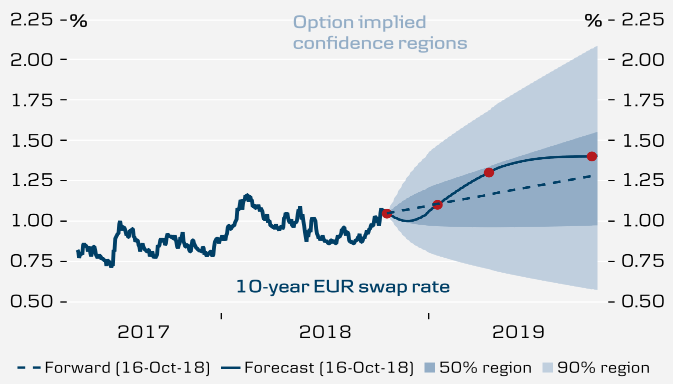
Source: Danske Bank

3M Euribor



Source: Macrobond Financial, Danske Bank

10Y EUR swap rates



Source: Macrobond Financial, Danske Bank

US forecasts

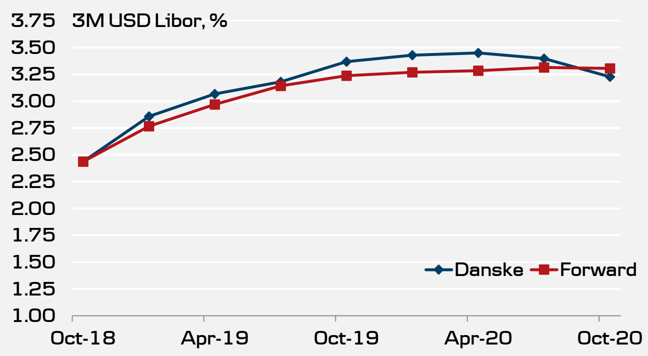
- The Fed seems on track to deliver one more hike this year in December, which is also a consensus among analysts and priced by markets. Growth is strong, optimism is high, the unemployment rate is low, wage growth is increasing (although at a gradual pace) and core inflation is running near the 2% target. We also expect the Fed to continue hiking next year, as the expansion seems to continue but the committee is monitoring the yield curve, as many FOMC members are concerned about an inversion, which is considered a good recession indicator. We do not forecast an inversion.
- We still see a case for both higher 2Y and 10Y yields. The short end is pushed higher as our Fed rate path is not priced into the money market curve. In respect of the long end, a repricing of the US term premium is expected. We assume an effect on the yield level from the more expansive US fiscal policy, which has boosted US bond supply. The move in the USD FX forwards has made FX hedging of USD assets very expensive and it is more attractive to buy EUR- or even JPY-denominated bonds than US bonds despite the higher yield level. Hence, we have revised our forecast for 10Y US Treasury yields higher from 3.25% to now 3.5%. We expect that level to be reached in three to six months' time.

USD forecasts summary

16/10/2018	--- Forecast ---				--- Fcst vs Fwd in bp ---		
USD	Spot	+3m	+6m	+12m	+3m	+6m	+12m
				Money market			
Fed Funds	2.25	2.50	2.75	3.00	-	-	-
3M	2.44	2.86	3.07	3.37	+9	+10	+13
				Government bonds			
2-year	2.87	3.00	3.20	3.30	-	-	-
5-year	3.03	3.20	3.30	3.40	-	-	-
10-year	3.17	3.30	3.50	3.50	-	-	-
				Swap rates			
2-year	3.07	3.20	3.40	3.50	+3	+17	+22
5-year	3.16	3.30	3.40	3.50	+10	+18	+26
10-year	3.23	3.35	3.55	3.55	+10	+28	+27

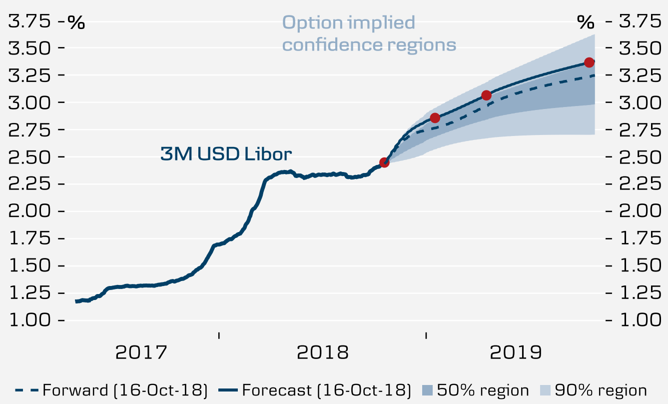
Source: Danske Bank

Danske Bank forecast and forwards



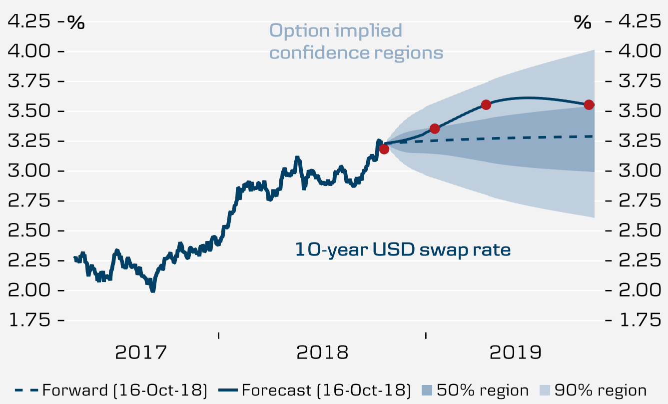
Source: Danske Bank

3M USD Libor rates



Source: Macrobond Financial, Danske Bank

10Y USD swap rates



Source: Macrobond Financial, Danske Bank

UK forecasts

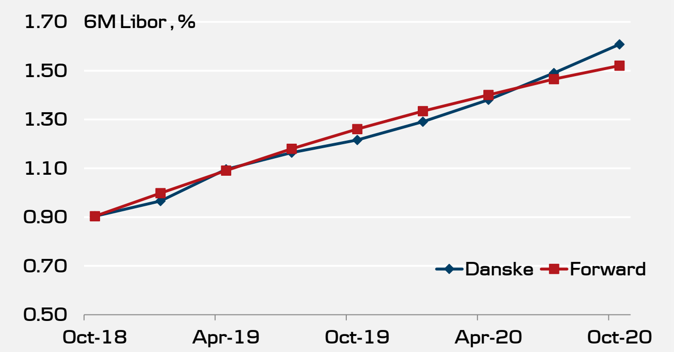
- UK GDP growth disappointed in August, but the weak monthly print should not be over interpreted as the %3m/3m GDP growth remains strong at 0.7% q/q. Growth is still mainly driven by services, and while the service sector PMI inched lower in September to 53.9, from 54.3 in August, we still look for GDP growth of around 0.4% on average per quarter going forward. CPI inflation inched higher to 2.7% y/y in August. We still expect the downward pressure on CPI inflation to continue this year due to the fading impact of the previous depreciation of sterling.
- Monetary policy. As expected, the Bank of England (BoE) voted unanimously to keep the Bank Rate at 0.75% in September. We expect the BoE to hike around once a year and our base case is that the next hike will arrive in May 2019.
- The UK money market curve is relatively flat, with the next BoE rate hike priced to arrive in September 2019. While this is slightly dovish compared to our expectations, we think the market's pricing is fair for now – especially given the uncertainty related to Brexit. Over the medium term, we generally forecast higher yields across the curve driven by a further BoE rate hike and higher global yields.

UK forecasts summary

16/10/2018		--- Forecast ---			--- Fcst vs Fwd in bp ---		
GBP	Spot	+3m	+6m	+12m	+3m	+6m	+12m
				Money market			
Repo	0.75	0.75	0.75	1.00	-	-	-
3M	0.81	0.82	1.02	1.07	-7	+4	-9
				Government bonds			
2-year	0.82	1.00	1.10	1.30	+14	+18	+27
5-year	1.17	1.35	1.45	1.70	+12	+17	+34
10-year	1.62	1.75	1.90	2.10	+10	+21	+33
				Swap rates			
2-year	1.16	1.30	1.40	1.60	+6	+8	+15
5-year	1.48	1.65	1.75	2.00	+12	+18	+35
10-year	1.72	1.85	2.00	2.20	+10	+22	+37

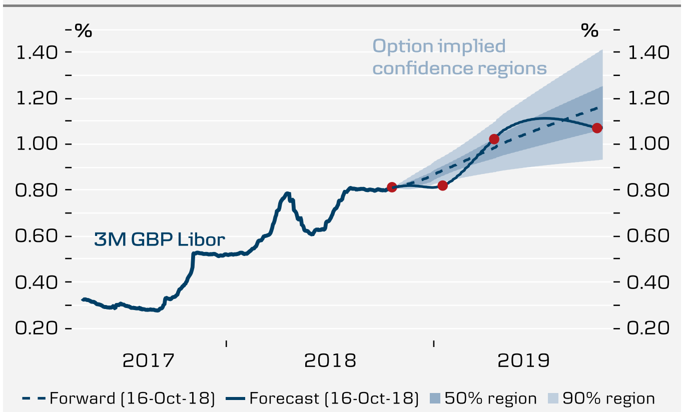
Source: Danske Bank

Danske Bank forecast and forwards



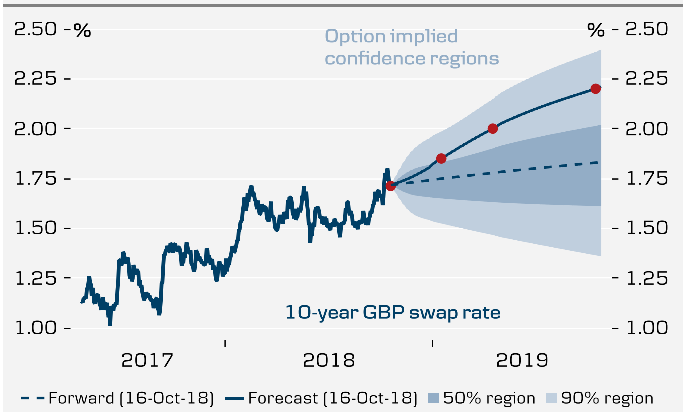
Source: Danske Bank

3M GBP Libor rates



Source: Macrobond Financial, Danske Bank

10Y UK swap rates



Source: Macrobond Financial, Danske Bank

Denmark forecasts

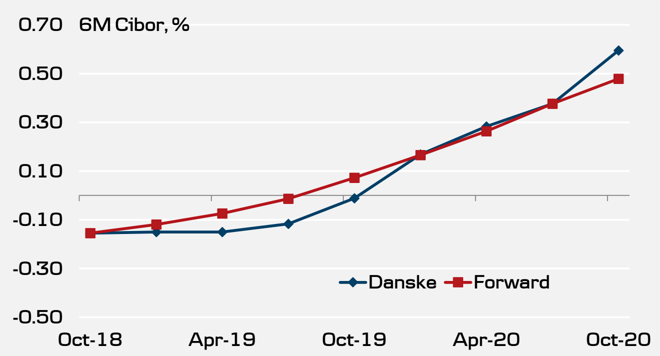
- Recently we have seen a bigger forward FX premium in EUR/DKK and the spot in EUR/DKK has moved marginally above the central parity at 7.46038. It makes it more likely that DN will have to intervene in the FX market to keep EUR/DKK stable. However, we expect that to be more than necessary and do not see a need for independent Danish rate hikes.
- The 2019 budget shows the Ministry of Finance plans to buy back more than DKK50bn worth of the new government-guaranteed mortgage bonds that are set to finance social housing. This is to be funded by a major draw down on the government account in 2019 rather than increasing the supply of government bonds. Hence, a substantial volume of liquid funds is likely to enter the Danish market, which will push Danish yields lower.
- We therefore still expect the 10Y DKK-German yield spread to hit zero. The spread is being reduced by foreign demand for Danish bonds, the expected larger surplus liquid funds and the 'large' forward discount in EUR/DKK, which makes short-term Danish securities attractive to foreign investors.
- We expect Danmarks Nationalbank to shadow the ECB in 2019, i.e. raise the certificates of deposit rate by 20bp in December 2019.

DKK forecasts summary

16/10/2018	--- Forecast ---				--- Fcst vs Fwd in bp ---		
DKK	Spot	+3m	+6m	+12m	+3m	+6m	+12m
				Money market			
CD	-0.65	-0.65	-0.65	-0.65	-	-	-
Repo	0.05	0.05	0.05	0.05	-	-	-
3M	-0.31	-0.30	-0.30	-0.23	-2	-4	-11
6M	-0.16	-0.15	-0.15	-0.01	-3	-8	-8
				Government bonds			
2-year	-0.54	-0.50	-0.40	-0.30	-	-	-
5-year	-0.05	0.05	0.15	0.35	-	-	-
10-year	0.46	0.55	0.75	0.90	-	-	-
				Swap rates			
2-year	0.03	0.05	0.15	0.25	-5	-4	-12
5-year	0.55	0.55	0.65	0.85	-8	-6	-1
10-year	1.17	1.25	1.45	1.55	+2	+16	+15

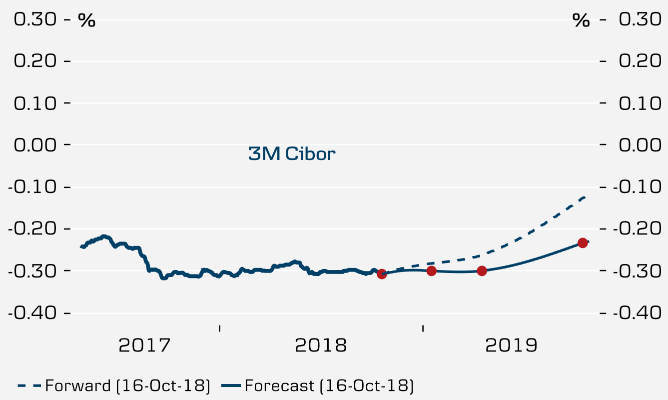
Source: Danske Bank

Danske Bank forecast and forwards



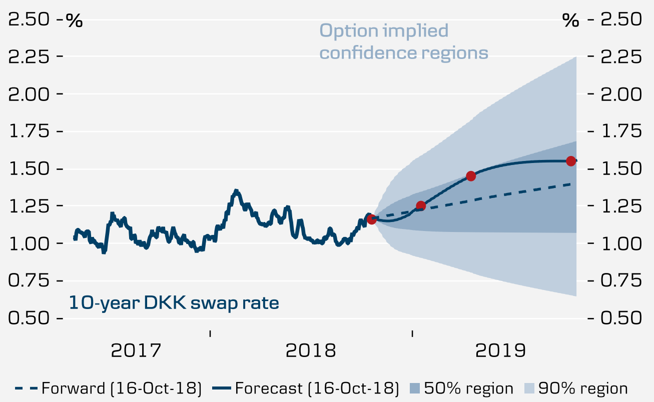
Source: Danske Bank

3M Cibor rate



Source: Macrobond Financial, Danske Bank

10Y DKK swap rates



Source: Macrobond Financial, Danske Bank

Sweden forecasts

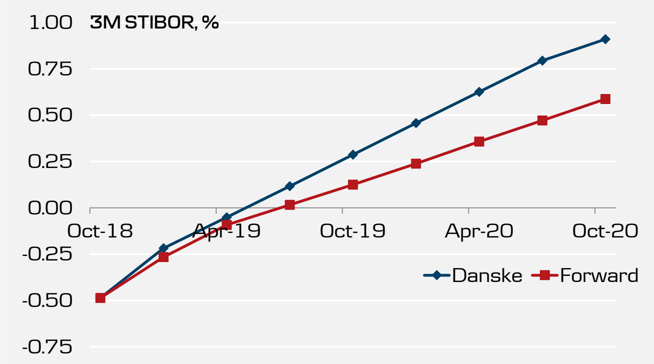
- As mentioned last month, we are approaching the first Riksbank rate hike since 2011. We believe that the first 25bp move will come in December. The current Riksbank rate path implies two hikes per year (December and July) over the coming three years. Admittedly, until recently we were doubtful about a second hike in June. But on the back of new information we believe that probabilities have flipped. Inflation came in markedly higher than we thought in September. Also comments from food-chains suggest that for various reasons there will be a need to raise food prices somewhat further next spring. On the back of this, we have raised our inflation forecast, which is now almost identical to the Riksbank's up to next summer. Hence, our updated yield forecast now includes a second rate hike in July 2019.
- The Swedish money market curve is well aligned with the Riksbank's rate path through 2019 but gradually slips below during 2020-21. We find it hard to believe that the Riksbank will signal a more aggressive pace of rate hikes during next year, not least considering that the ECB is likely to stay on hold for quite some time next year. But risk premia in the 2-5 year segment appear to be on the low side. In other word, as the RB starts hiking and when we eventually get closer to the point where the ECB also starts to move higher, this segment should be the one most exposed to higher yields. Longer-dated rates will also be affected of course, but to a lesser extent. In short, we expect curve flattening from 5 years and out.

SEK forecasts summary

16/10/2018	--- Forecast ---				--- Fcst vs Fwd in bp ---		
SEK	Spot	+3m	+6m	+12m	+3m	+6m	+12m
			Money market				
Repo	-0.50	-0.25	-0.25	0.00	-	-	-
3M	-0.49	-0.25	-0.15	0.00	+2	-6	-12
			Government bonds				
2-year	-0.40	-0.30	-0.10	0.20	-	-	-
5-year	0.18	0.30	0.40	0.60	-	-	-
10-year	0.71	0.80	0.85	1.00	-	-	-
			Swap rates				
2-year	0.05	0.25	0.40	0.65	+7	+10	+11
5-year	0.69	0.75	0.85	1.05	-5	-5	-3
10-year	1.36	1.40	1.40	1.50	-3	-9	-12

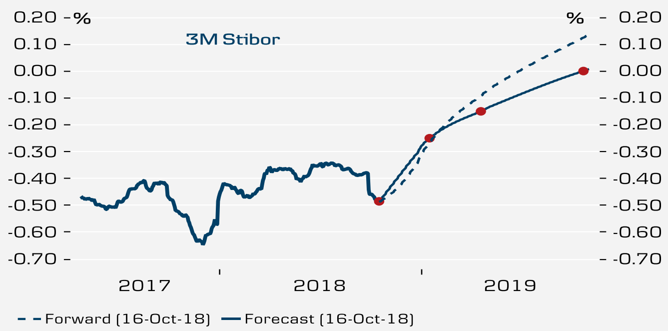
Source: Danske Bank

Danske Bank forecast and forwards



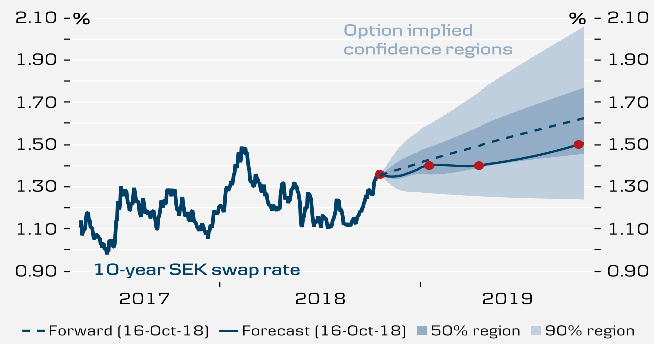
Source: Danske Bank

3M Stibor rate



Source: Macrobond Financial, Danske Bank

10Y SEK swap rates



Source: Macrobond Financial, Danske Bank

Norway forecasts

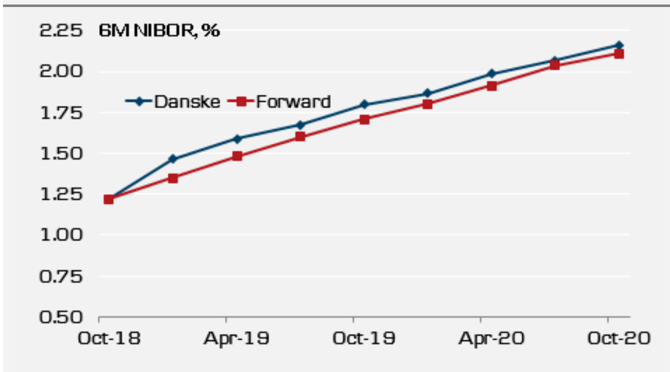
- Norges Bank hiked the target rate on 20 September by 25bp (new sight deposit rate 0.75%). The move was highly expected, but was still a milestone as this was the first hike in more than seven years. Contrary to expectations, the interest rate paths were adjusted downwards. However, Norges Bank points out that this does not represent a change of the strategy of a gradual normalisation of interest rates.
- Norges Bank signalled that the next hike should be expected in March 2019. The Monetary Policy Report 3/18's new rate path indicates slightly less than two hikes per year in 2019-21. The market at present is close to the Norges Bank money market projection for 2019 and early 2020, but is below thereafter.
- The tailwind for the Norwegian economy appears to be picking up. Oil industry related orders have been strong. The oil price is high – around USD80/b. This points towards a recovery of manufacturing production going forward. The output gap appears to be close to zero at present and will probably turn positive during the autumn – indicating higher wage growth. Core inflation in August and September of 1.9% is higher than expected by Norges Bank and close to the inflation target. However, the high inflation is partly related to temporary factors (food prices due to drought).
- We expect 5Y and 10Y yields to widen further versus peers in 2018-19, as the Norwegian economy is improving and as Norges Bank hikes rates before the ECB.

NOK forecasts summary

16/10/2018	--- Forecast ---				--- Fcst vs Fwd in bp ---		
NOK	Spot	+3m	+6m	+12m	+3m	+6m	+12m
			Money market				
Deposit	0.75	0.75	1.00	1.25	-	-	-
3M	1.09	1.30	1.40	1.65	+10	+3	+4
			Government bonds				
2-year	0.80	0.95	1.25	1.50	-	-	-
5-year	1.74	1.85	2.00	2.20	-	-	-
10-year	2.04	2.15	2.35	2.45	-	-	-
			Swap rates				
2-year	1.58	1.65	1.95	2.20	-5	+14	+20
5-year	2.05	2.20	2.35	2.55	+7	+15	+23
10-year	2.39	2.50	2.70	2.80	+6	+22	+25

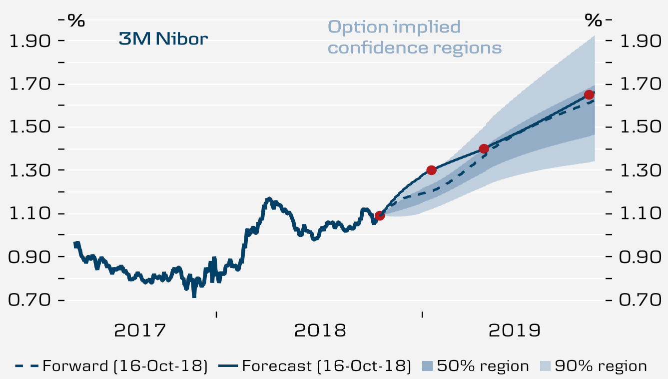
Source: Danske Bank

Danske Bank forecast and forwards



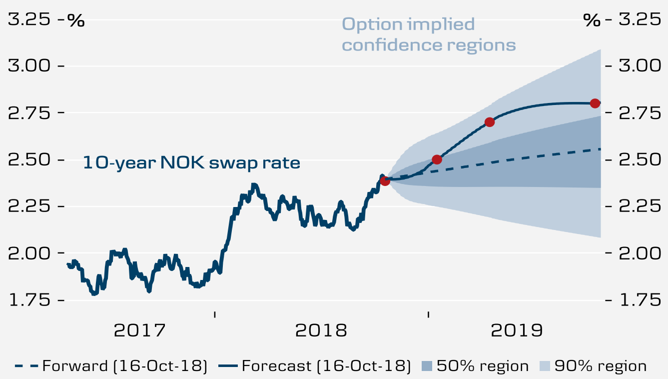
Source: Danske Bank

3M Nibor rate



Source: Macrobond Financial, Danske Bank

10Y NOK swap rates



Source: Macrobond Financial, Danske Bank

Forecasts

Forecasts

	Horizon	Policy rate	3m xlbor	2-yr swap	5-yr swap	10-yr swap	2-yr gov	5-yr gov	10-yr gov
USD	Spot	2.25	2.44	3.07	3.16	3.23	2.87	3.03	3.17
	+3m	2.50	2.86	3.20	3.30	3.35	3.00	3.20	3.30
	+6m	2.75	3.07	3.40	3.40	3.55	3.20	3.30	3.50
	+12m	3.00	3.37	3.50	3.50	3.55	3.30	3.40	3.50
EUR*	Spot	-0.40	-0.32	-0.10	0.42	1.04	-0.56	-0.09	0.50
	+3m	-0.40	-0.33	-0.05	0.45	1.10	-0.50	0.00	0.60
	+6m	-0.40	-0.33	0.05	0.55	1.30	-0.40	0.10	0.80
	+12m	-0.40	-0.26	0.15	0.75	1.40	-0.30	0.30	0.90
GBP	Spot	0.75	0.81	1.16	1.48	1.72	0.82	1.17	1.62
	+3m	0.75	0.82	1.30	1.65	1.85	1.00	1.35	1.75
	+6m	0.75	1.02	1.40	1.75	2.00	1.10	1.45	1.90
	+12m	1.00	1.07	1.60	2.00	2.20	1.30	1.70	2.10
DKK	Spot	-0.65	-0.31	0.03	0.55	1.17	-0.54	-0.05	0.46
	+3m	-0.65	-0.30	0.05	0.55	1.25	-0.50	0.05	0.55
	+6m	-0.65	-0.30	0.15	0.65	1.45	-0.40	0.15	0.75
	+12m	-0.65	-0.23	0.25	0.85	1.55	-0.30	0.35	0.90
SEK	Spot	-0.50	-0.49	0.05	0.69	1.36	-0.40	0.18	0.71
	+3m	-0.25	-0.25	0.25	0.75	1.40	-0.30	0.30	0.80
	+6m	-0.25	-0.15	0.40	0.85	1.40	-0.10	0.40	0.85
	+12m	0.00	0.00	0.65	1.05	1.50	0.20	0.60	1.00
NOK	Spot	0.75	1.09	1.58	2.05	2.39	0.80	1.73	2.05
	+3m	0.75	1.30	1.65	2.20	2.50	0.95	1.85	2.15
	+6m	1.00	1.40	1.95	2.35	2.70	1.25	2.00	2.35
	+12m	1.25	1.65	2.20	2.55	2.80	1.50	2.20	2.45

Note: * German government bonds are used, EUR swap rates are used

** German government bonds are used, EUR swap rates are used*

Source: Danske Bank

Disclosures

This research report has been prepared by Danske Bank A/S ('Danske Bank'). The author of this research report is Arne Lohmann Rasmussen, Chief Analyst.

Analyst certification

Each research analyst responsible for the content of this research report certifies that the views expressed in the research report accurately reflect the research analyst's personal view about the financial instruments and issuers covered by the research report. Each responsible research analyst further certifies that no part of the compensation of the research analyst was, is or will be, directly or indirectly, related to the specific recommendations expressed in the research report.

Regulation

Danske Bank is authorised and subject to regulation by the Danish Financial Supervisory Authority and is subject to the rules and regulation of the relevant regulators in all other jurisdictions where it conducts business. Danske Bank is subject to limited regulation by the Financial Conduct Authority and the Prudential Regulation Authority (UK). Details on the extent of the regulation by the Financial Conduct Authority and the Prudential Regulation Authority are available from Danske Bank on request.

Danske Bank's research reports are prepared in accordance with the recommendations of the Danish Securities Dealers Association.

Conflicts of interest

Danske Bank has established procedures to prevent conflicts of interest and to ensure the provision of high-quality research based on research objectivity and independence. These procedures are documented in Danske Bank's research policies. Employees within Danske Bank's Research Departments have been instructed that any request that might impair the objectivity and independence of research shall be referred to Research Management and the Compliance Department. Danske Bank's Research Departments are organised independently from, and do not report to, other business areas within Danske Bank.

Research analysts are remunerated in part based on the overall profitability of Danske Bank, which includes investment banking revenues, but do not receive bonuses or other remuneration linked to specific corporate finance or debt capital transactions.

Financial models and/or methodology used in this research report

Calculations and presentations in this research report are based on standard econometric tools and methodology as well as publicly available statistics for each individual security, issuer and/or country. Documentation can be obtained from the authors on request.

Risk warning

Major risks connected with recommendations or opinions in this research report, including as sensitivity analysis of relevant assumptions, are stated throughout the text.

Expected updates

Monthly.

Date of first publication

See the front page of this research report for the date of first publication.

General disclaimer

This research report has been prepared by Danske Bank (a division of Danske Bank A/S). It is provided for informational purposes only. It does not constitute or form part of, and shall under no circumstances be considered as, an offer to sell or a solicitation of an offer to purchase or sell any relevant financial instruments (i.e. financial instruments mentioned herein or other financial instruments of any issuer mentioned herein and/or options, warrants, rights or other interests with respect to any such financial instruments) ('Relevant Financial Instruments').

The research report has been prepared independently and solely on the basis of publicly available information that Danske Bank considers to be reliable. While reasonable care has been taken to ensure that its contents are not untrue or misleading, no representation is made as to its accuracy or completeness and Danske Bank, its affiliates and subsidiaries accept no liability whatsoever for any direct or consequential loss, including without limitation any loss of profits, arising from reliance on this research report.

The opinions expressed herein are the opinions of the research analysts responsible for the research report and reflect their judgement as of the date hereof. These opinions are subject to change and Danske Bank does not undertake to notify any recipient of this research report of any such change nor of any other changes related to the information provided herein.

This research report is not intended for, and may not be redistributed to, retail customers in the United Kingdom or the United States.

This research report is protected by copyright and is intended solely for the designated addressee. It may not be reproduced or distributed, in whole or in part, by any recipient for any purpose without Danske Bank's prior written consent.

Disclaimer related to distribution in the United States

This research report was created by Danske Bank A/S and is distributed in the United States by Danske Markets Inc., a U.S. registered broker-dealer and subsidiary of Danske Bank A/A, pursuant to SEC Rule 15a-6 and related interpretations issued by the U.S. Securities and Exchange Commission. The research report is intended for distribution in the United States solely to 'U.S. institutional investors' as defined in SEC Rule 15a-6. Danske Markets Inc. accepts responsibility for this research report in connection with distribution in the United States solely to 'U.S. institutional investors'.

Danske Bank is not subject to U.S. rules with regard to the preparation of research reports and the independence of research analysts. In addition, the research analysts of Danske Bank who have prepared this research report are not registered or qualified as research analysts with the NYSE or FINRA but satisfy the applicable requirements of a non-U.S. jurisdiction.

Any U.S. investor recipient of this research report who wishes to purchase or sell any Relevant Financial Instrument may do so only by contacting Danske Markets Inc. directly and should be aware that investing in non-U.S. financial instruments may entail certain risks. Financial instruments of non-U.S. issuers may not be registered with the U.S. Securities and Exchange Commission and may not be subject to the reporting and auditing standards of the U.S. Securities and Exchange Commission.

Report completed: 16 October 2018, 16:26 CEST
Report first disseminated: 16 October 2018, 18:20 CEST