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Research Report

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Wirtschaftliche Untersuchungen,
Berichte und Sachverhalte



IW-Report 37/18

IW Financial Expert Survey

Fourth Quarter 2018
Markus Demary

Köln, Cologne, October 15, 2018

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JEL Classification:

G12 – Asset pricing

G17 – Financial forecasting

Abstract

The experts of the IW Financial Expert Survey predict a steeper yield curve with a larger increase in long-term than in short-term interest rates by the end of the first quarter of 2019. Moreover, the average forecasts indicate higher stock market indices, a mild depreciation of the Euro vis-à-vis the US-Dollar with a larger appreciation in the first quarter of 2019. Moreover, the experts predict a larger drop in oil prices by the end of the first quarter of 2019. However, despite the expectation of higher interest rates, the short-term interest rate is predicted to remain in negative territory. The 3-month Euribor is, on average, expected to reach -0.27 percent at the end of the first quarter of 2019, while the yield on German government bonds with 10-year maturity is expected to reach 0.75 percent by then. Stock markets are, on average, expected to increase by 5.5 percent (Stoxx) and 7.6 percent (DAX) by the end of the first quarter of 2019. During that same period, the experts predict a mild depreciation of the Euro by 0.4 percent vis-à-vis the US Dollar by the end of the year followed by an appreciation of 1.6 percent by the end of the first quarter of 2019. In addition to that, the experts predict oil prices to drop by 7.3 percent in the forthcoming six months.

The expectation of an increase in the long rate and a slight increase in the short rate hints at a financial market outlook characterised by a cautious approach to monetary normalisation. In this cautious approach, the ECB lets the market determine the first increases in long-term interest rates before it stops intervening at the long end of the yield curve, while keeping the short end of the yield curve lower. This cautious approach to monetary policy normalization is reflected in the projection of the yield curve. Moreover, the experts expect that the development of the Euro and the development of oil prices as well as the development of the stock market will support the ECB's cautious approach to monetary normalization instead of forcing a faster exit from low interest rates. These expectations are in line with the experts' view on the ECB's forward guidance. Most experts expect the ECB to state at its December 2018 press conference that it expects inflation to converge towards the policy objective of an inflation rate of lower, but close to 2 percent. Moreover, they expect the ECB to state that monetary policy stimulus is still necessary for reaching its policy target. The experts agree that the key policy interest rates will remain at their current levels at least until the summer of 2019 as highlighted by the ECB and most of the surveyed experts expect the ECB to end net asset purchases by the end of the year, but also to reinvest the principle payments from maturing securities.

The evaluation of the forecasting performance of the latest forecasts yielded the result that Commerbank and Hamburger Sparkasse performed best in predicting trends in the long-term ranking, which covers all forecasts from June 2014 to June 2018. When it comes to point prediction, in the long-term evaluation of the period running from June 2014 to June 2018, the experts of National-Bank performed best in predicting all indicators.

1 The IW Financial Expert Survey

Since the second quarter of 2017, the IW is conducting the former forecasting test of the Center for European Economic Research (ZEW). The ZEW has been conducting the survey of financial market experts since the beginning of 2001. We changed the name of the former ZEW forecasting test to IW Financial Expert Survey.

The participating forecasters of financial companies submit their forecast to the IW on a quarterly basis. The IW calculates mean predictions and forecasting intervals and evaluates the participants' performance in making trend forecasts and point forecasts. The indicators used for the IW Financial Expert Survey are the 3-month Euribor (called "short rate"), the yield of German government bonds with 10-year maturity (called "long rate"), the Stoxx 50 Europe Index, the DAX 30 Index, the EUR-USD exchange rate, and the oil price (brent). Moreover, the IW surveys alternating questions on the current stance of monetary policy or on macroeconomic trends that are relevant for financial markets.

2 Current forecasts

This section contains an analysis of the current forecasts for the end of the fourth quarter of 2018 and the end of the first quarter of 2019. The individual point forecasts, which the experts submitted, were aggregated to a mean forecast. Moreover, trend forecasts were calculated from the individual point forecast and the most recent data points of the indicators.

2.1 Interest rates

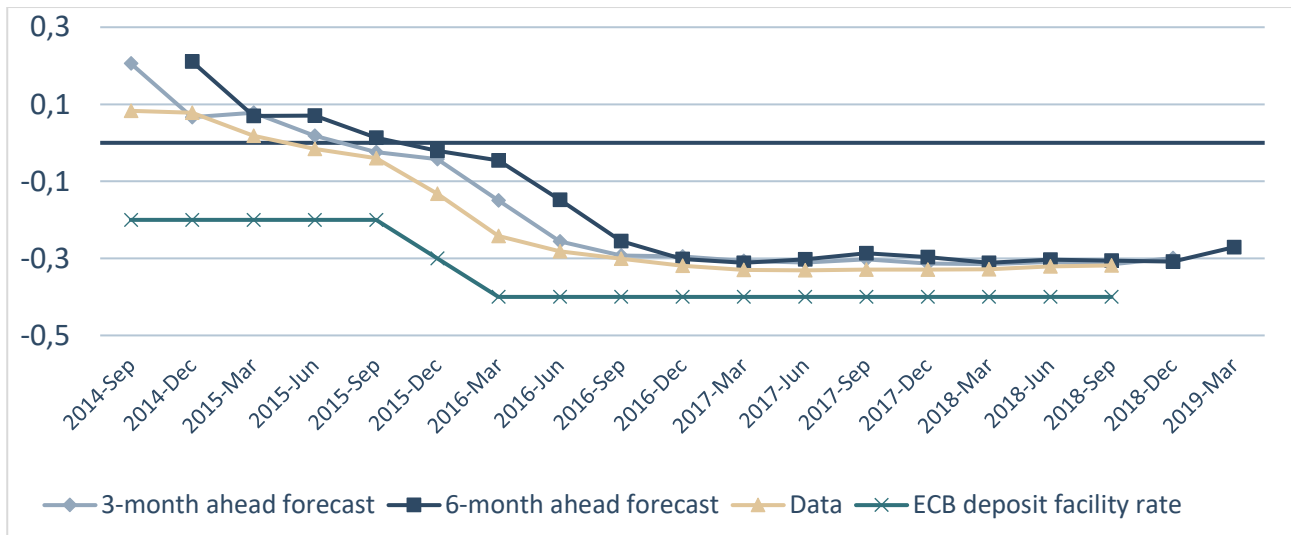
During the period we surveyed the experts, i.e. from the beginning of the sample period in the third quarter of 2014 to the end of the third quarter of 2018, the short-term interest rate was characterized by a slow downward trend from 0.08 percent to -0.32 percent at the end of the second quarter of 2017. The short rate remained from the end of the first quarter of 2017 to the end of the first quarter of 2018 at that lower floor of -0.33 percent. It only rose marginally to -0.32 percent by the end of the second quarter of 2018 (figure 2-1). It can be seen from the data, that the short-term interest rate is highly influenced by the ECB's deposit facility rate.

The figure 2-1 contains the data at the last day of each quarter together with the mean prediction of the experts, i.e. the average over all individual point forecasts. While the mean prediction over-predicted the short-rate for most of the time during the early years, the over-prediction became smaller over time, especially during the time, where the short-rate converged to the value -0.33 percent. One reason for the over-prediction could be that the experts experienced for the first time a low and even negative interest rate environment, which challenged forecasting. The experts forecasting models might have contained a zero lower bound on interest rates, first, which was then lowered cautiously step-by-step, when interest rates proved to become negative. After the short-rate reached its floor of -0.33 percent, the over-prediction became smaller over time, probably because the experts' lower bound on interest rates did not need additional downward adjustments, since the interest rate has remained at that floor since then.

The interest rate forecasts of the short-rate seem to be very precise now. The mean forecasts for the end of the fourth quarter of 2018 and the end of the first quarter 2019 are -0.30 percent and -0.27 percent with a standard deviation of 0.03 and 0.06 percentage points (table 2-1).

Figure 2-1: Point forecasts: short-term interest rate

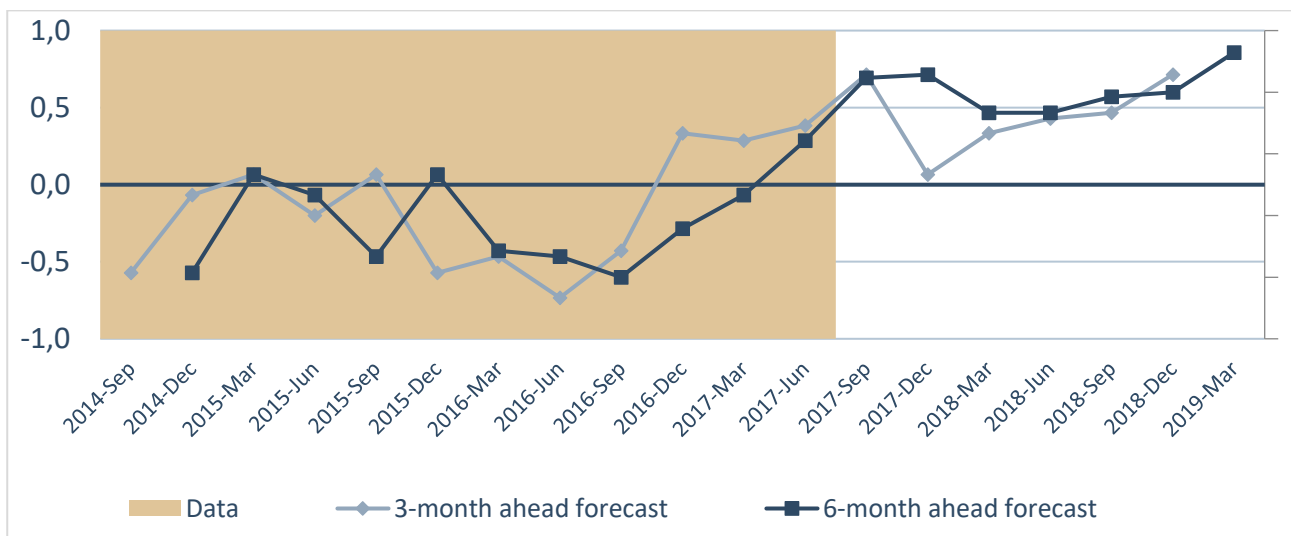
3-Month Euribor, in percent



Source: Bloomberg, IW Financial Expert Survey

Figure 2-2: Trend forecasts: short-term interest rates

Diffusion index: number of respondents with positive trend predictions minus number of respondents with negative trend predictions divided by all respondents, shaded area: periods with a downward trend in the data.



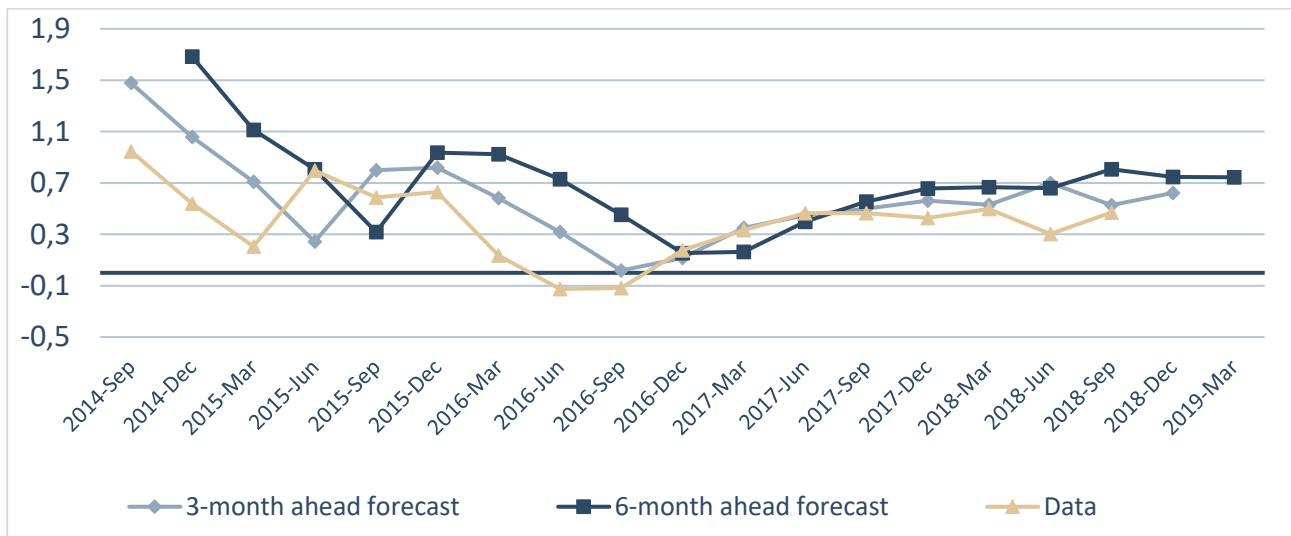
Source: Bloomberg, IW Financial Expert Survey

From the trend forecasts can be seen that trend predictions of the short-rate in an environment of negative interest rates has been more precise compared to point predictions (figure 2-2). The

figure contains the trend forecasts for the next 3 and 6 months as so-called diffusion indices. These indices were calculated as the number of experts who predict a positive trend minus the number of experts who predict a negative trend divided by the number of forecasters. The diffusion indices can fluctuate between -1 and 1, with -1 indicating that all experts agree on a negative trend, 1 indicating that all experts agree on a positive trend and 0 indicating that half of the experts expect a positive trend, while the other half expects a negative trend. Predicting no change is not possible here because the data has more digits than the predictions that the experts report. From the figure can be seen that most experts expected a declining short-rate during the time the short rate actually declined, but also that most experts expected a much earlier trend reversal. The expectation of a trend reversal does not show up in the mean forecasts of figure 2-1, because it averages out due to some experts expecting interest rates to decline further. While the short-rate has stopped declining in the third quarter of 2017, the experts predicted a trend reversal for the end of the last quarter in 2016. Although the mean prediction for the end of the fourth quarter of 2018 and the end of the first quarter of 2019 indicates the short rate to stay near its past value, most experts are in favour of increasing interest rates. Most experts expect the short-term interest rate to increase by the end of the fourth quarter of 2018 and by the end of the first quarter of 2019. As indicated by the point forecasts, the experts expect the increase in the short-term interest rate to be very small.

Figure 2-3: Long-term interest rate

Yield on German government bonds with a maturity of 10 years, in percent



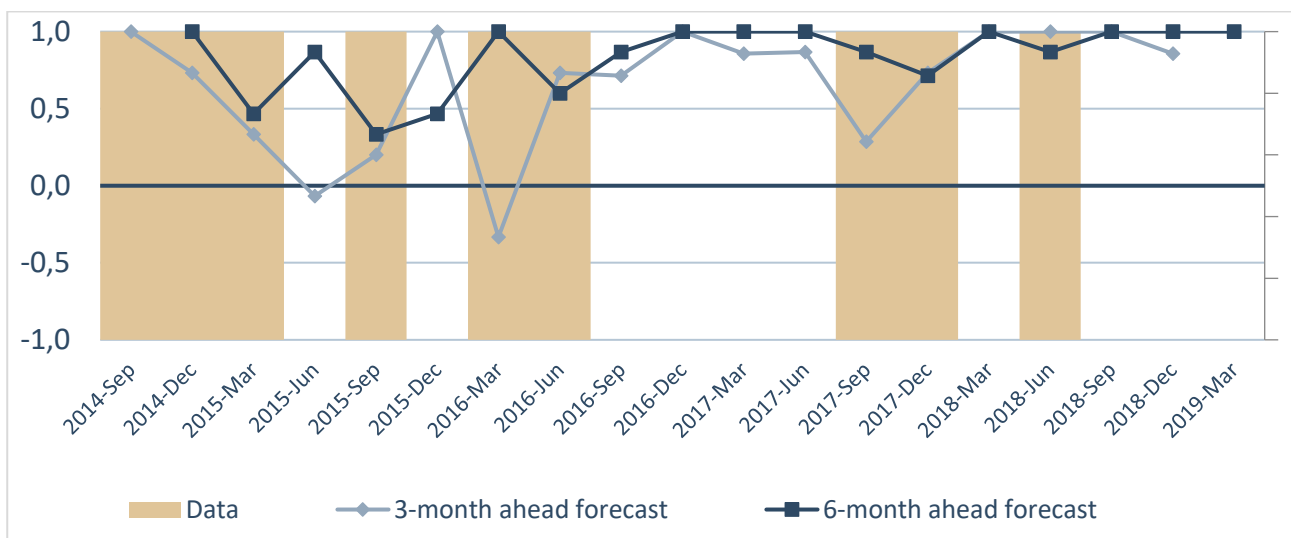
Source: Bloomberg, IW Financial Expert Survey

The long-term interest rate declined from 0.95 percent at the end of the third quarter of 2014 to -0.13 percent at the end of the second quarter in 2016. It then recovered to 0.5 percent at the end of the first quarter of 2018 and then dropped to 0.30 by the end of the second quarter of 2018 (figure 2-3).

The figure 2-3 also shows that forecasting the long rate in a low interest rate environment is challenging. The experts over-predicted on average the two declines of the long rate in the period between the third quarter of 2014 and the last quarter of 2016, while forecasts improved with the beginning of the year 2017, i.e. that forecast errors have become smaller and the over-prediction of the data has vanished. Experts expect on average the long-rate to increase from 0.47 percent to 0.62 and 0.75 percent by the end of the fourth quarter of 2018 and the first quarter of 2019 with standard deviations of 0.15 and 0.13 percentage points (table 2-1).

Figure 2-4: Trend forecasts: long-term interest rates

Diffusion index: number of respondents with positive trend predictions minus number of respondents with negative trend predictions divided by all respondents, shaded area: periods with a downward trend in the data.



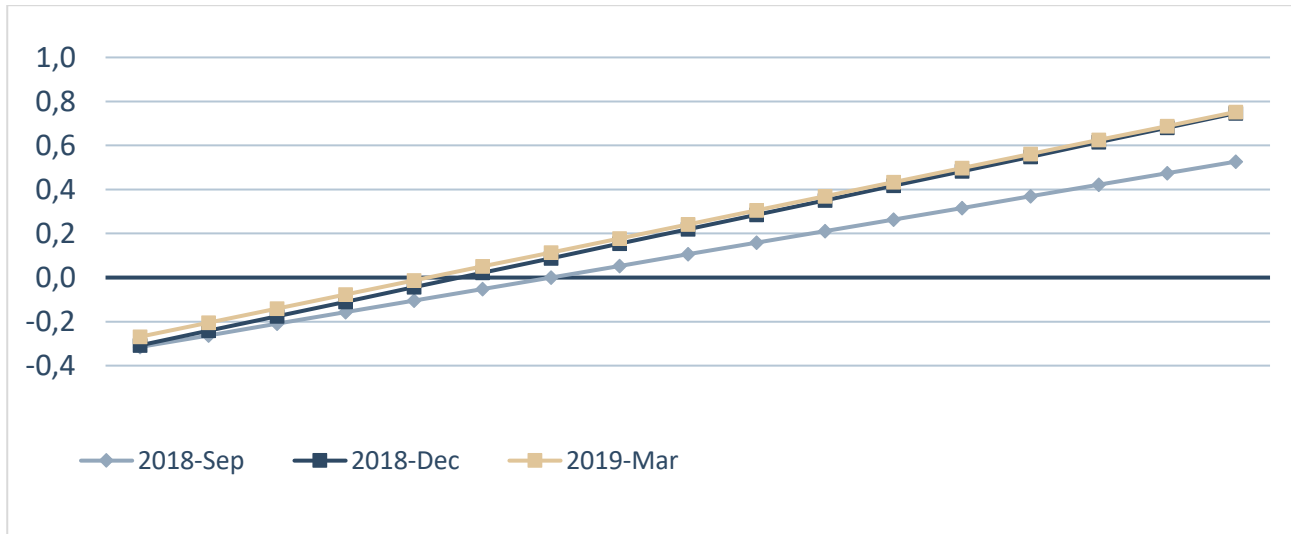
Source: Bloomberg, IW Financial Expert Survey

The majority of experts was most of the time optimistic when it came to predicting the trend in the long-rate, while the pessimists were in the minority (figure 2-4). During the periods of declining yields, most experts expected a positive trend for the next 3 and 6 months. While most experts erred on the direction of the long-rate during the periods of declining yields, they were very accurate during the periods of increasing yields. For the end of the fourth quarter of 2018 and the end of the first quarter of 2019, all experts expect increasing long-term interest rates.

Figure 2-5 contains the prediction of the yield curve, for which yields between 3-month maturity and 10-year maturity were interpolated linearly. From the figure can be seen, that the experts predict the yield curve to become steeper. While they predict only the short end of the yield curve to increase by 0.05 percentage points, they predict the long end to increase by 0.25 percentage points to up to 0.75 percent by the end of the first quarter of 2019. The expectation of a steeper yield curve is consistent with the expectation of normalizing interest rates.

Figure 2-5: Estimated yield curve

Interest rates from 3-month maturity to 10-year maturity, linearly interpolated



Source: Bloomberg, IW Financial Expert Survey

Table 2-1: Summary statistics: interest rates

End of survey: March 29 2018, 14 respondents for the short rate and the long rate

| | Short rate | Long rate | Short rate | Long rate |
|------------------------|------------------------|-----------|------------------------|-----------|
| Sep 28 2018 value | -0.32 | 0.47 | -0.32 | 0.47 |
| | 3-month-ahead forecast | | 6-month-ahead forecast | |
| Mean Forecast | -0.30 | 0.62 | -0.27 | 0.75 |
| Change in perc. points | 0.02 | 0.15 | 0.05 | 0.28 |
| Standard deviation | 0.03 | 0.14 | 0.06 | 0.13 |
| Lowest forecast | -0.33 | 0.30 | -0.33 | 0.50 |
| Highest forecast | -0.20 | 0.90 | -0.10 | 1.00 |

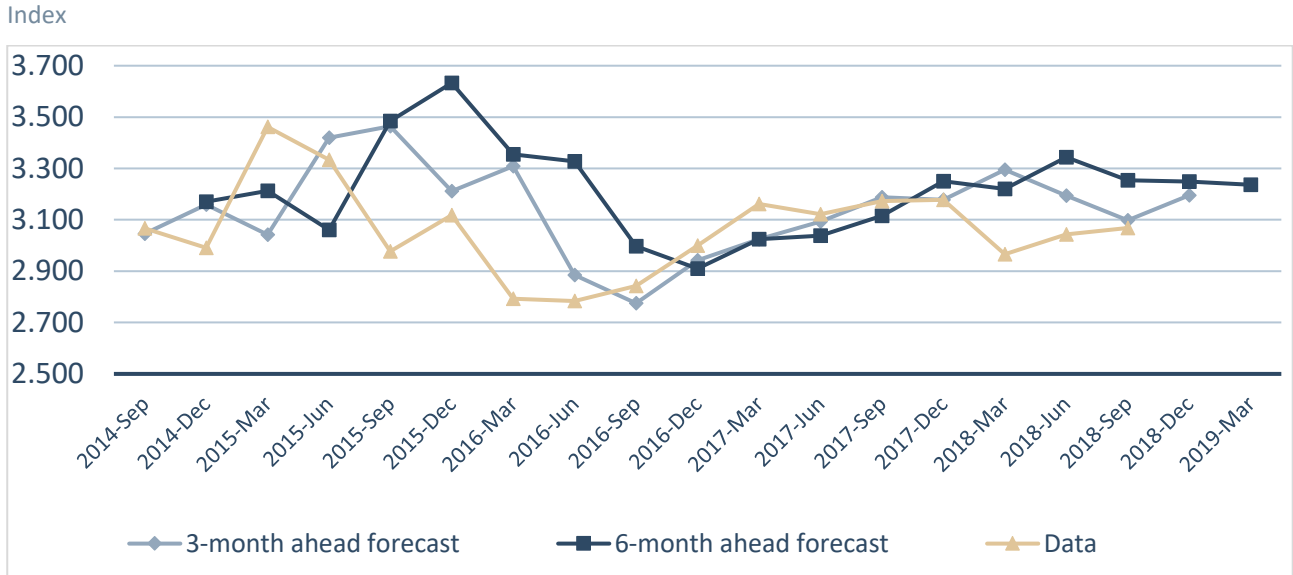
Source: Bloomberg, IW Financial Expert Survey

2.2 Stock Market Performance

The Stoxx index trended upward from the end of the third quarter of 2014 to the first quarter of 2015, after which it declined until the end of the first quarter of 2016. After that, it increased until the end the first quarter of 2017. Since then, the Stoxx index moved sideways with a drop

at the end of the first quarter of 2018. It recovered by the end of the second quarter 2018 (figure 2-6).

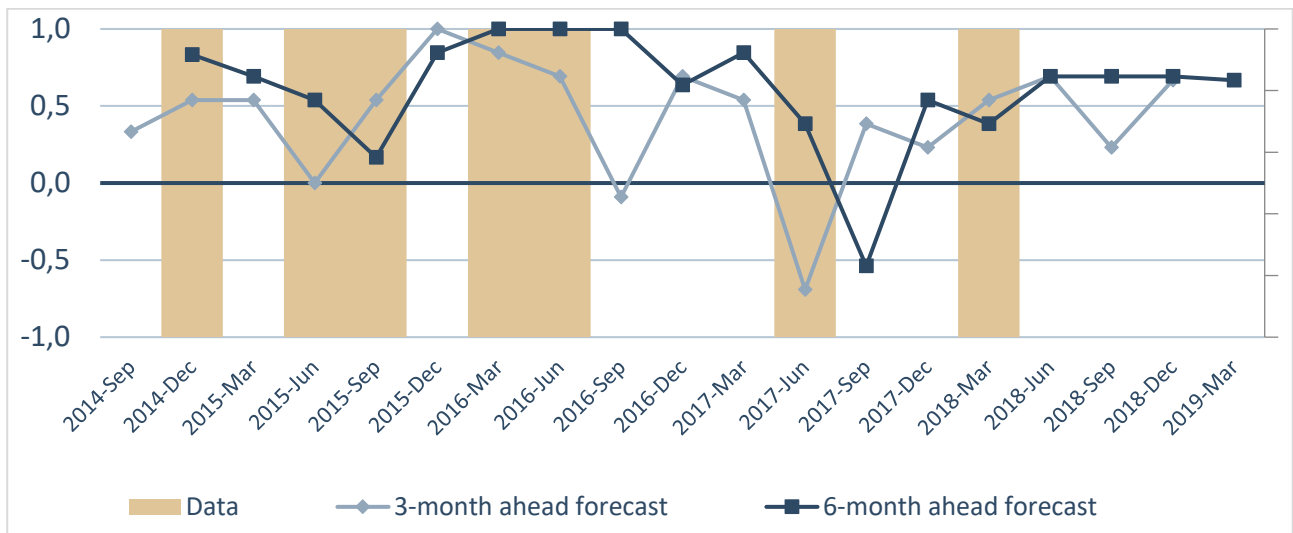
Figure 2-6: Point forecasts: Stoxx 50 Europe



Source: Bloomberg, IW Financial Expert Survey

Figure 2-7: Trend forecasts: Stoxx Europe Index

Diffusion index: number of respondents with positive trend predictions minus number of respondents with negative trend predictions divided by all respondents, shaded area: periods with a downward trend in the data.



Source: Bloomberg, IW Financial Expert Survey

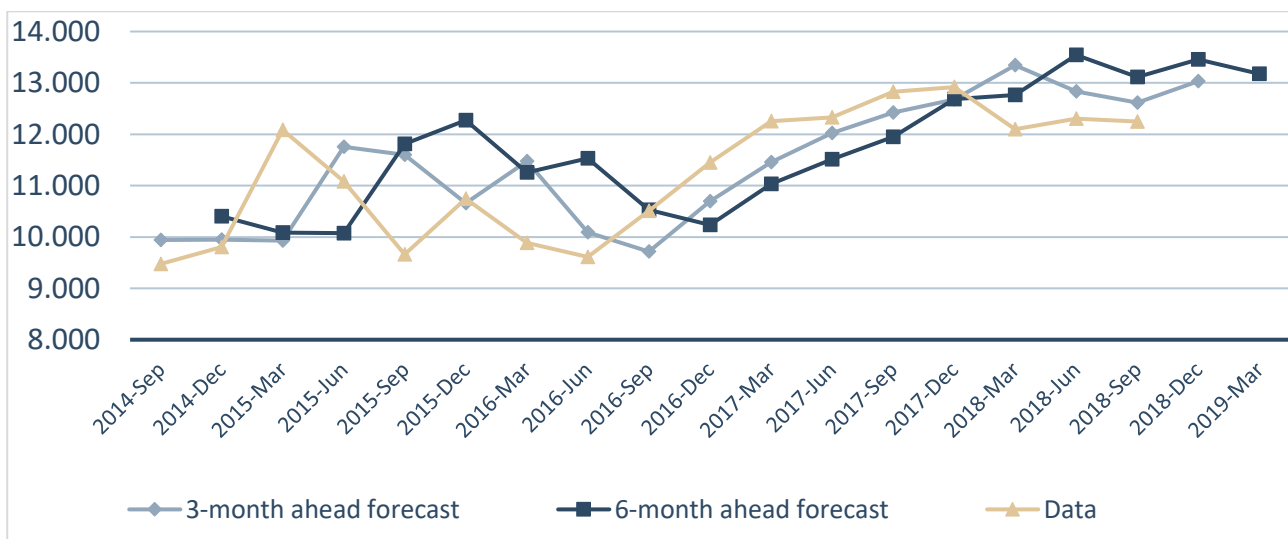
In contrast to their interest rate forecast, the experts' stock market forecasts tended less towards over-prediction. There is, in fact, only one period between 2015 and 2017, in which the

experts over-predicted the Stoxx index in the years 2015 and 2016. However, their forecasts became more precise in the year 2017 with smaller forecasting errors. For the first and the second quarter of 2018, the experts started to over-predict the growth on the Stoxx index (figure 2-6).

The analysis of the experts' trend forecasts reveals that they were optimistic during the periods of declining stock prices, but they lost their confidence in 2017. However, the experts regained their confidence in rising stock prices in 2019. For the end of the fourth quarter of 2018 and first quarter of 2019, the majority of experts expect a rising Stoxx index as can be seen from figure 2-7. On average, the experts predict the index to increase from 3.068 points at the end of the third quarter of 2018 to 3.195 points at the end of the fourth quarter of 2018 and to 3.227 points at the end of the first quarter of 2019 (Table 2-2). This would correspond to increases of 4.2 percent and 5.5 percent since September 2018

Figure 2-8: DAX 30 Index

Index



Source: Bloomberg, IW Financial Expert Survey

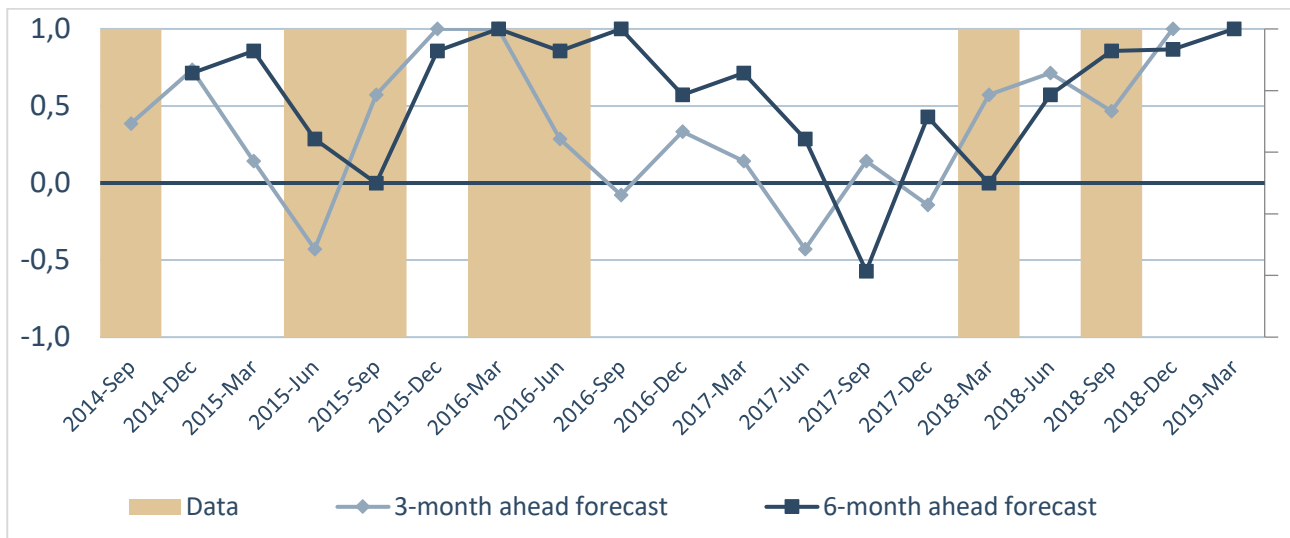
The DAX index increased from the end of the third quarter of 2014 to the first quarter of 2015, after which it dropped until the end of the second quarter of 2016. After that, the DAX experienced a long upward trend until the end of the year 2017. In the first quarter of 2018, the DAX has dropped, but it recovered by the end of the second quarter of 2018 (figure 2-8).

In 2015 and in the first half of 2016 experts over-predicted the growth of the DAX on average. However, forecast errors became smaller during the positive trend growth, which the DAX experienced since then. However, the experts under-predicted the positive trend growth (figure 2-8). At the end of the first as well as the second quarter of 2018, the experts over-predicted the trend growth again.

The over-prediction of the DAX also shows up in the trend forecasts. Here, most of the experts expected increasing stock prices in times, in which the DAX declined, e.g. in 2016. After that, more and more experts became pessimistic and under-predicted the growth of the DAX, e.g. in the year 2017 (figure 2-9). The larger number of pessimist is one reason, why the mean forecast was below the DAX index during the time of the positive trend growth in 2016 and 2017.

Figure 2-9: Trend forecasts: DAX 30

Diffusion index: number of respondents with positive trend predictions minus number of respondents with negative trend predictions divided by all respondents, shaded area: periods with a downward trend in the data.



Source: Bloomberg, IW Financial Expert Survey

Table 2-2: Summary statistics: stock market indices

End of survey: Dec 29 2017, 13 respondents for the Stoxx 50 and 14 respondents for the DAX 30

| | Stoxx 50 | DAX 30 | Stoxx 50 | DAX 30 |
|---------------------|-------------------------------|--------|-------------------------------|--------|
| March 29 2018 value | 3,068 | 12,247 | 3,068 | 12,247 |
| | 3-month-ahead forecast | | 6-month-ahead forecast | |
| Mean Forecast | 3,195 | 13,031 | 3,227 | 13,173 |
| Change in percent | 4.2 | 6.4 | 5.5 | 7.6 |
| Standard deviation | 138 | 463 | 169 | 489 |
| Lowest forecast | 3,050 | 12,300 | 3,000 | 12,500 |
| Highest forecast | 3,530 | 14,000 | 3,600 | 14,000 |

Source: Bloomberg, IW Financial Expert Survey

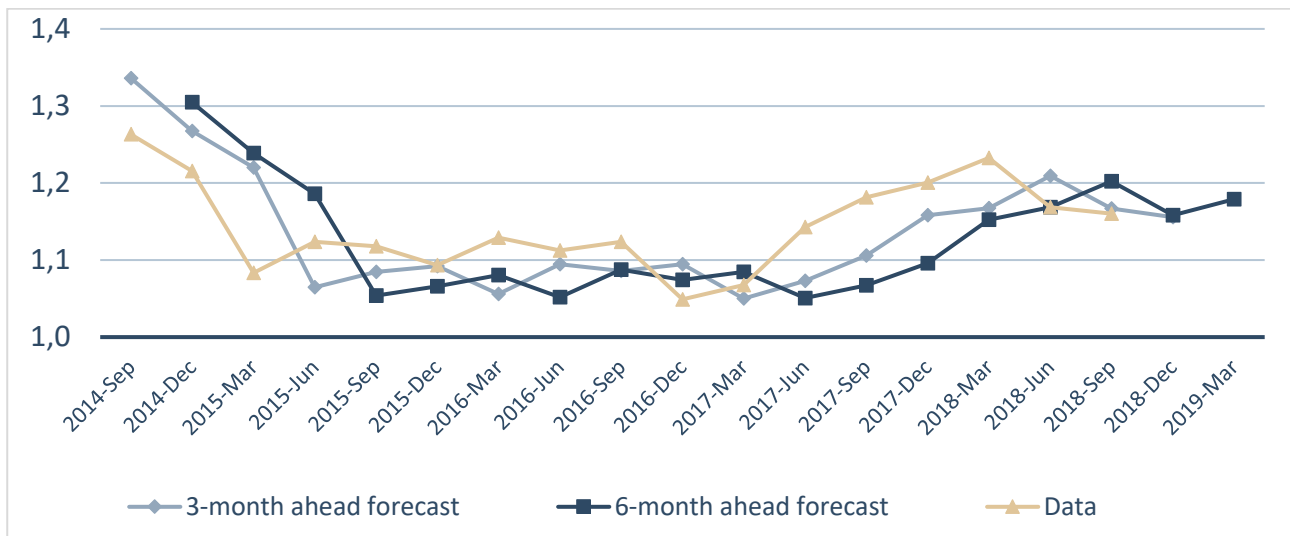
Confidence has returned, however. For the fourth quarter of 2018 and the first quarter of 2019, all experts expect the DAX to increase (figure 2-9). On average, they predict the DAX to rise from 12.247 points at the end of the third quarter of 2018 to 13.031 at the end of the fourth quarter of 2018 and to 13.173 at the end of the first quarter of 2019, which corresponds to growth rates of 6.4 percent and 7.6 percent.

2.3 Foreign Exchange

The EUR-USD exchange rate decline from 1.263 EUR per one USD at the end of the third quarter of 2014 to 1.083 Euro per one USD at the end of the first quarter of 2015. It then moved more or less sideways until the end of the third quarter of 2016. The EUR-USD exchange rate dropped at the end of the year 2016, while it increase from 1.124 EUR per one USD to 1.232 EUR per one USD since then. It stayed more or less at that level at the end of the second quarter of 2018 (figure 2-10).

Figure 2-10: Point forecasts: EUR-USD exchange rate

US Dollars per 1 Euro



Source: Bloomberg, IW Financial Expert Survey

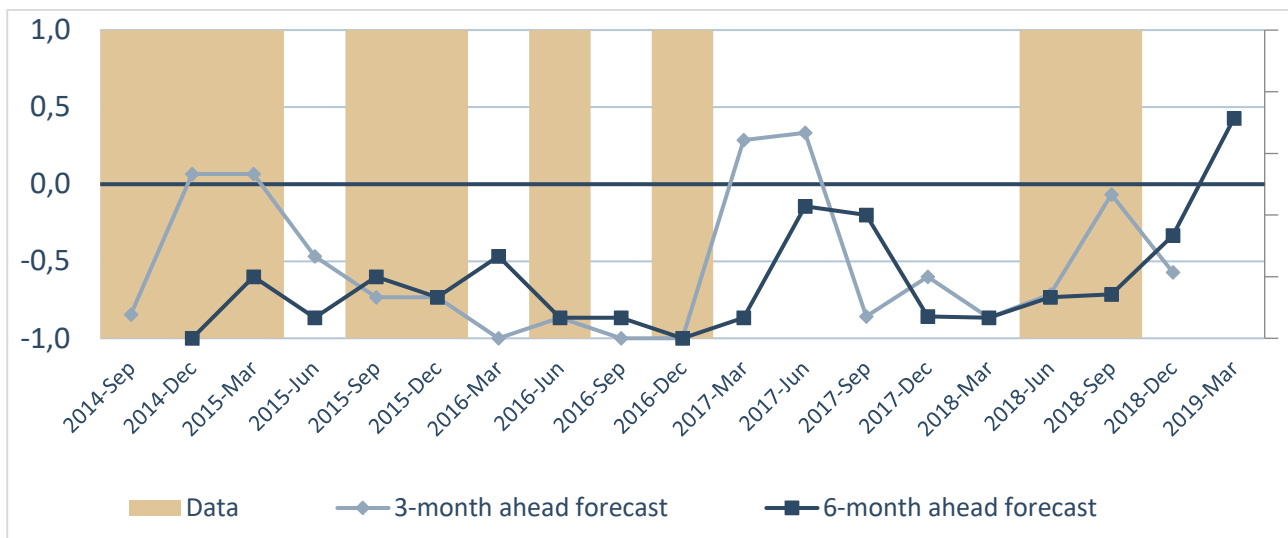
The experts over-predicted the exchange rate between the end of 2014 and the end of the first half of 2015. In fact, the exchange rate declined faster than expected by the experts. In the years 2015 to 2017, when the exchange rate moved more or less sideways, the forecasts converged. However, from the end of the second half of 2017 on the exchange rate increased faster than predicted by the experts leading to an under-prediction of the mean forecasts (figure 2-10).

From the trend forecasts can be seen that the majority of experts expected a declining exchange rate for most of the time. Also for the fourth quarter of 2018 most experts expect a decline,

while there is a small majority for an increase in the exchange rate by the end of the first quarter of 2019 (figure 2-11).

Figure 2-11: Trend forecasts: EUR-USD exchange rate

Diffusion index: number of respondents with positive trend predictions minus number of respondents with negative trend predictions divided by all respondents, shaded area: periods with a downward trend in the data.



Source: Bloomberg, IW Financial Expert Survey

Table 2-3: Summary statistics: foreign exchange

End of survey: Dec 29 2017, 15 respondents, in US Dollars per 1 Euro

| | EUR-USD | EUR-USD |
|---------------------|-------------------------------|-------------------------------|
| March 29 2018 value | 1.160 | 1.160 |
| | 3-month-ahead forecast | 6-month-ahead forecast |
| Mean Forecast | 1.156 | 1.179 |
| Change in percent | -0.404 | 1.597 |
| Standard deviation | 0.020 | 0.031 |
| Lowest forecast | 1.120 | 1.120 |
| Highest forecast | 1.200 | 1.250 |

Source: Bloomberg, IW Financial Expert Survey

On average, the experts expect the exchange rate to decline from 1.160 EUR per one USD at the end of the third quarter of 2018 to 1.156 EUR per one USD at the end of the fourth quarter of 2018 and to 1.179 EUR per one USD at the end of the first quarter of 2019. This corresponds to

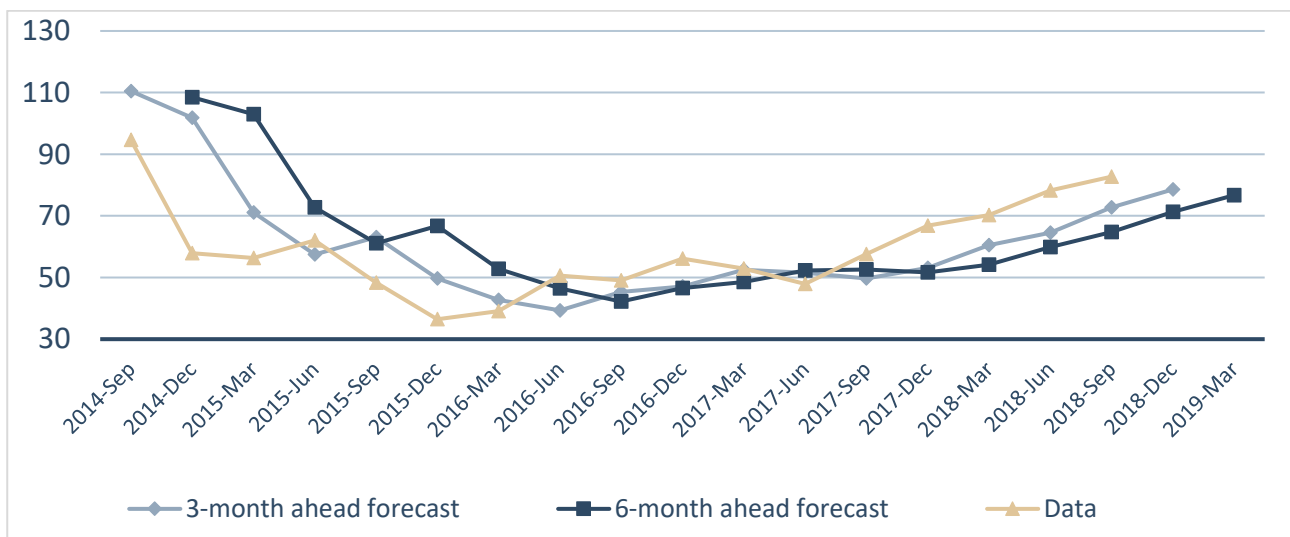
a decline by -0.4 percent by the end of the year, but to an increase by 1.6 percent by the end of the first quarter of 2019 (table 2-3).

2.4 Oil Prices

The oil price dropped from 94.7 USD per barrel at the end of the third quarter of 2014 to 94.7 USD per barrel at the end of the year 2015. Since then the oil price experienced a slow, but long upward movement to currently 82.72 USD per barrel (figure 2-12).

Figure 2-12: Oil prices

Brent, London, US Dollars per barrel



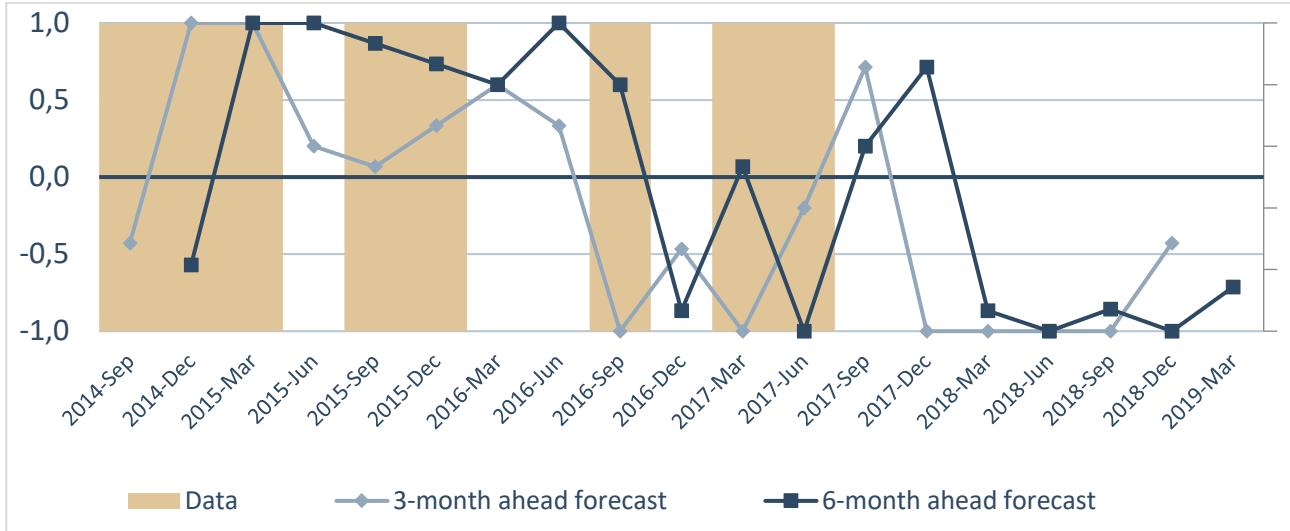
Source: Bloomberg, IW Financial Expert Survey

The forecasters over-predicted oil prices until March 2016, i.e. that oil prices declined faster than predicted by the experts. From the end of the second quarter of 2016 to the end of the third quarter of 2017, expectations converged and tracked the data well since then. However, since the end of the third quarter of 2017 the experts under-predicted oil prices, i.e. oil prices rose faster than predicted by the experts.

While the majority of experts expected rising oil prices from the end of the first quarter of 2015 to the end of the third quarter of 2016, forecasters got pessimistic then. From the end of the year 2016 to the end of the first half of 2017, the majority of experts expected declining oil prices. After, that the majority of forecasters was optimistic for two quarters. For all quarters of 2018 and the first quarter of 2019 the majority of experts predicts declining oil prices (figure 2-13).

Figure 2-13: Trend forecasts: oil prices

Diffusion index: number of respondents with positive trend predictions minus number of respondents with negative trend predictions divided by all respondents, shaded area: periods with a downward trend in the data.



Source: Bloomberg, IW Financial Expert Survey

Experts expect on average that oil prices fall from 82.7 USD per barrel to 78.6 and 76.7 USD per barrel, which corresponds to a decline by 5.0 and 7.3 percent (table 2-4).

Table 2-4: Summary statistics: oil prices

End of survey: March 29 2018, 15 respondents

| | Oil prices | Oil prices |
|---------------------|------------------------|------------------------|
| March 29 2018 value | 82.7 | 82.7 |
| | 3-month-ahead forecast | 6-month-ahead forecast |
| Mean Forecast | 78.6 | 76.7 |
| Change in percent | -5.0 | -7.3 |
| Standard deviation | 5.9 | 6.4 |
| Lowest forecast | 70.0 | 68.0 |
| Highest forecast | 90.0 | 90.0 |

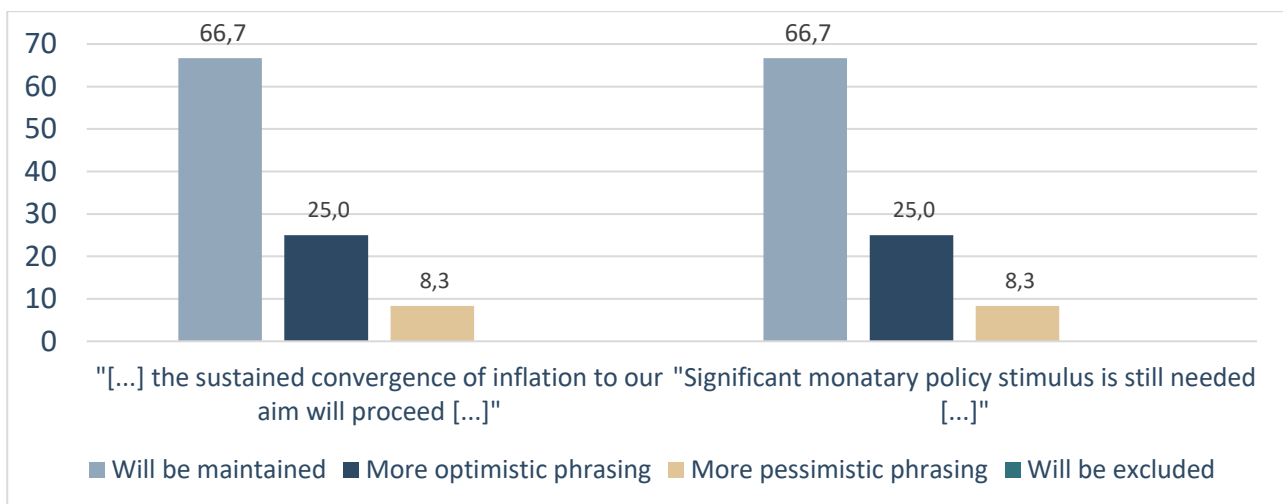
Source: Bloomberg, IW Financial Expert Survey

3 The ECB's Forward Guidance

Each quarter we ask the participants alternating questions on current topics. At this time, we were interested in the forward guidance of the European Central Bank (ECB). The Forward Guidance describes the path of the ECB's policy interest rate in the future as seen by the ECB conditional on their forecasts of inflation and growth as well as conditional on their policy objective of an inflation rate of smaller than, but close to 2 percent of the medium-term.

Figure 3-1: The ECB's inflation outlook

Percentage of respondents.



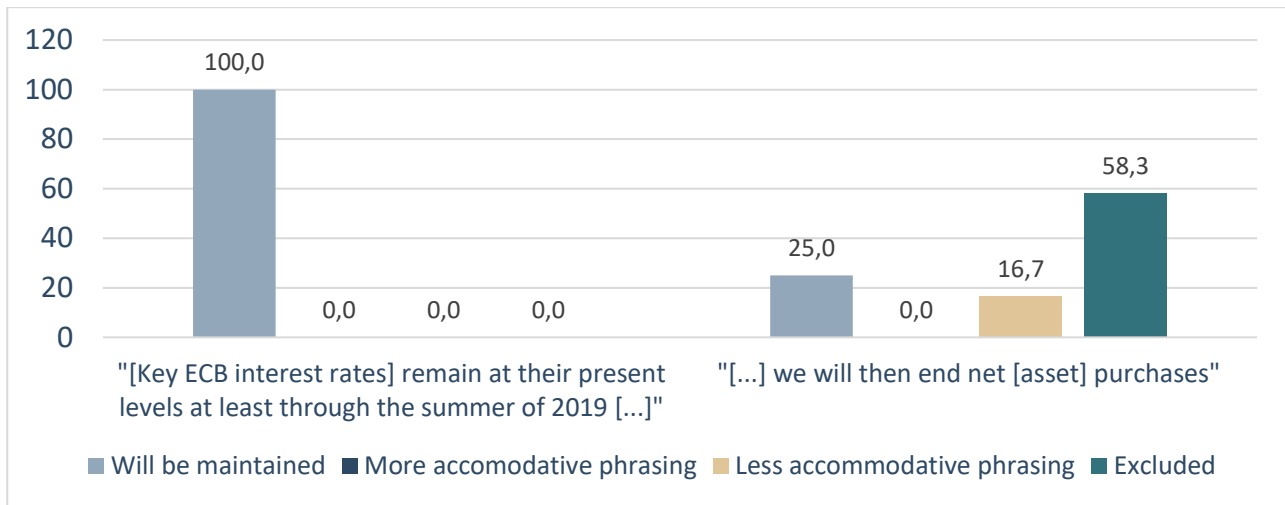
Source: IW Financial Expert Survey

Two thirds of the surveyed experts expect the ECB at their December press conference to keep its formulation that the Governing Council is confident that inflation will return to its target value, but that accommodative monetary policy measures are still necessary for reaching that goal (figure 3-1). However, one quarter of the experts expect the ECB to change to a more optimistic formulation.

All experts expect the ECB to keep its policy interest rates at their current level for at least summer 2019. More than three quarters of the experts expect the ECB to state that it will end the net purchases of government securities by the end of the year or that it will skip this formulation, because it is no longer relevant when net asset purchases end. However, 16.7 percent of the experts expects the ECB to formulate their forward guidance with respect to net asset purchases less expansionary, while no expert expects the ECB to become more expansionary with respect to net asset purchases (Figure 3-2).

Figure 3-2: The ECB's forward guidance on policy instruments

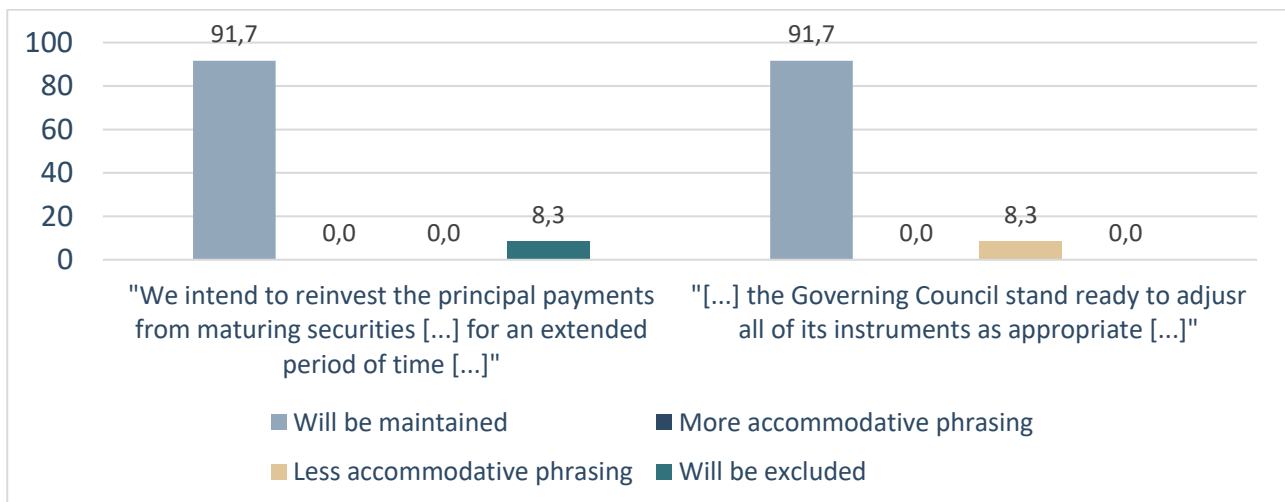
Percentage of respondents.



Source: IW Financial Expert Survey

Figure 3-3: The ECB's forward guidance on policy instruments

Number of respondents.



Source: IW Financial Expert Survey

Close to all experts expect the ECB to reinvest the principles on maturing bonds. In addition to that close to all experts expect the ECB to state that it will increase policy accommodation if necessary (figure 3-2).

4 Ranking of the best performing forecasters

This section contains the results of the ranking of the best forecasters.

4.1 Trend Forecasts

In the short-term ranking, which measures the predictive accuracy of the last two 3-month ahead forecasts and the last 6-month ahead forecast, Allianz, Commerzbank, Hamburger Sparkasse and National-Bank share the first place. All of them predicted 66.7 percent of the trends for all six indicators correctly. Nord/LB, Postbank, Santander and Weberbank are on rank two with an accuracy rate of 61.1 percent in predicting trends correctly, while LBBW is on rank three with an accuracy rate of 60.0 percent.

In the long-term ranking, which covers the last 16 quarters, Commerzbank and Hamburger Sparkasse reached rank one with a success rate of 58.6 percent for both forecasters. DZ Bank reached rank two with a success rate of 56.1 percent. Deka Bank reached rank three with an accuracy rate of 55.7 percent (Table 4-1).

Table 4-1: The best performing trend forecasters

Forecast evaluation based on the number of precisely predicted trends, in percent

| | Short-term ranking | Long-term ranking |
|----------|--|---|
| | Evaluation period: March 2018 to June 2018 | Evaluation period: June 2014 to June 2018 |
| 1 | Allianz Commerzbank Hamburger Sparkasse National-Bank | Commerzbank Hamburger Sparkasse |
| | 66.7 percent | 58.6 percent |
| 2 | Nord/LB Postbank Santander Bank Weberbank | DZ Bank |
| | 61.1 percent | 56.1 percent |
| 3 | LBBW | Deka Bank |
| | 60.0 percent | 55.7 |

Source: Bloomberg, IW Financial Expert Survey

Table 4-2: The best performing trend forecasters: single indicators

Forecast evaluation based on Theil's U defined as the root mean squared forecast error of the forecaster divided by the root mean squared error of a random walk forecast, evaluation period: March 2015 to March 2018

| | Short rate | Long rate | Stoxx 50 | DAX 30 | EUR-USD | Oil price |
|--|----------------------------------|---------------|---|-------------------------------|---|---------------------------|
| Evaluation period: June 2014 to June 2018 | | | | | | |
| 1 | Hamburger Sparkasse | Commerzbank | UniCredit | DekaBank | Allianz Helaba | Weberbank |
| | 87.9 | 69.7 | 69.0 | 72.7 | 69.7 | 51.5 |
| 2 | Nord/LB | National-Bank | Allianz Commerzbank DZ Bank Hamburger Sparkasse Weberbank | Weberbank | Bayerische Landesbank | National-Bank Postbank |
| | 75.8 | 60.6 | 57.6 | 66.7 | 60.6 | 48.5 |
| 3 | Bayerische Landesbank DZ Bank | UniCredit | Santander Bank | Commerzbank Santander Bank | Commerzbank Hamburger Sparkasse Nord/LB | UniCredit |
| | 72.7 | 55.2 | 54.5 | 60.6 | 57.6 | 48.4 |

Source: Bloomberg, IW Financial Expert Survey

The accuracy rates of the trend forecasts of the long-term ranking for individual indices can be found in Table 4-2. Hamburger Sparkasse again reached the first rank for forecasting the short-term interest rate with a success rate of 87.9 percent followed by Nord/LB with a success rate of 75.8 percent. The best forecaster for the long-term interest rate was again Commerzbank with a success rate of 69.7 percent followed by National-Bank with an accuracy rate of 60.6 percent. UniCredit was the best forecaster for the Stoxx with a success rate of 69.0 percent and DekaBank was the best forecaster for the DAX with an accuracy rate of 72.7 percent. Allianz and Helaba share rank one for the best forecasters of the EUR-USD exchange rate with both having a success rate of 69.7 percent, followed by Bayerische Landesbank with a success rate of 60.6 percent. Weberbank had the most success in forecasting oil prices with an accuracy rate of 51.5 followed by National-Bank and Postbank with accuracy rates of 48.5 percent both.

4.2 Point Forecasts

In the short-term all indicators ranking of the survey, Deutsche Bank reached the first rank followed by National-Bank on rank two and Commerzbank on rank three.

In the long-term ranking National-Bank could defend rank one, while Commerzbank and Nord/LB could defend rank two and rank three (table 4-3).

Table 4-3: The best performing point forecasters

Forecast evaluation based on Theil's U defined as the root mean squared forecast error of the forecaster divided by the root mean squared error of a random walk forecast

| | Short-term ranking | Long-term ranking |
|----------|--|---|
| | Evaluation period: March 2018 to June 2018 | Evaluation period: June 2014 to June 2018 |
| 1 | Deutsche Bank 1.310 | National-Bank 1.042 |
| 2 | National-Bank 1.438 | Commerzbank 1.157 |
| 3 | Commerzbank 1.549 | Nord/LB 1.171 |

Source: Bloomberg, IW Financial Expert Survey

Hamburger Sparkasse had the lowest forecast error variance in predicting the short-term interest rate followed by DZ Bank and Commerzbank. Their predictions were better than the random walk forecast. National-Bank defended rank one in predicting the long-term interest rate with predictions that had a lower variance of the forecast errors compared to the random walk forecast. DekaBank was again best in predicting the Stoxx Index. Hamburger Sparkasse climbed on rank one in predicting the DAX with a lower forecast error variance compared to the random walk forecast. Nord/LB was currently best at predicting the EUR-USD exchange rate although its prediction could no beat the random walk forecast. Best at predicting the oil price was again Weberbank followed by Allianz and DZ Bank. Their forecasts were more accurate than the random walk benchmark (table 4-4).

Table 4-4: The best performing point forecasters: single indicators

Forecast evaluation based on Theil's U defined as the root mean squared forecast error of the forecaster divided by the root mean squared error of a random walk forecast

| | Short rate | Long rate | Stoxx 50 | DAX 30 | EUR-USD | Oil price |
|--|---------------------|---------------|-------------|---------------------|---------|-----------|
| Evaluation period: June 2014 to June 2018 | | | | | | |
| 1 | Hamburger Sparkasse | National-Bank | DekaBank | Hamburger Sparkasse | Nord/LB | Weberbank |
| | 0.825 | 0.984 | 1.088 | 0.964 | 1.020 | 0.906 |
| 2 | DZ Bank | Commerzbank | Allianz | DekaBank | Allianz | Allianz |
| | 0.831 | 1.083 | 1.331 | 1.064 | 1.051 | 0.936 |
| 3 | Commerzbank | Nord/LB | Commerzbank | Helaba | DZ Bank | DZ Bank |
| | 0.836 | 1.198 | 1.448 | 1.084 | 1.087 | 0.981 |

Source: Bloomberg, IW Financial Expert Survey

5 Conclusion

The experts of the IW Financial Expert Survey predicted a steeper yield curve with a larger increase in long-term than in short-term interest rates by the end of the first quarter of 2019. Moreover, the average forecasts indicate higher stock market indices, a mild depreciation of the Euro vis-à-vis the US-Dollar that could end in 2019 and a larger drop in oil prices by the end of the first quarter of 2019. However, despite the expectation of higher interest rates, the short-term interest rate is predicted to remain in negative territory. The 3-month Euribor is, on average, expected to reach -0.27 percent at the end of the first quarter of 2019, while the yield on German government bonds with 10-year maturity is expected to reach 0.75 percent by then. Stock markets are, on average, expected to increase by 5.5 percent (Stoxx) and 7.6 percent (DAX 30) by the end of the first quarter of 2019. During that same period, the experts predict a mild depreciation of the Euro by 0.4 percent vis-à-vis the US Dollar by the end of the year followed by an appreciation of 1.6 percent by the end of the first quarter of 2019. In addition to that, the experts predict oil prices to drop by 7.3 percent in the forthcoming six months.

The expectation of an increase in the long rate and a slight increase in the short rate hints at a financial market outlook characterised by a cautious approach to monetary normalisation. In this cautious approach, the ECB lets the market determine the first increases in long-term interest rates before it stops intervening at the long end of the yield curve, while keeping the short end of the yield curve lower. This cautious approach to monetary policy normalization is reflected in the projection of the yield curve. Moreover, the experts expect that the development of the Euro and the development of oil prices as well as the development of the stock market

will support the ECB's cautious approach to monetary normalization instead of forcing a faster exit from low interest rates. These expectations are in line with the experts' view on the ECB's forward guidance. Most experts expect the ECB to state at its December 2018 press conference that it expects inflation to converge towards the policy objective of an inflation rate of lower, but close to 2 percent. Moreover, they expect that ECB to state that monetary policy stimulus is still necessary for reaching that target. Moreover, the experts agree that the key policy interest rates will remain at their current levels at least until the summer of 2019 as highlighted by the ECB. Moreover, most of them expect the ECB to end net asset purchases by the end of the year, but also to reinvest the principle payments from maturing securities.

The evaluation of the forecasting performance of the latest forecasts yielded the result that Commerbank and Hamburger Sparkasse performed best in predicting trends in the long-term ranking, which covers all forecasts from June 2014 to June 2018. When it comes to point prediction, in the long-term evaluation of the period running from June 2014 to June 2018, the experts of National-Bank performed best in predicting all indicators.

6 Appendix: Individual Forecasts

Table 6-1: Individual forecasts: short-term interest rate

In percent

| Forecaster | End of December 2018 | End of March 2019 |
|-----------------------|----------------------|-------------------|
| Allianz | | |
| Bayerische Landesbank | -0.33 | -0.33 |
| Commerzbank | -0.30 | -0.30 |
| DekaBank | -0.31 | -0.30 |
| Deutsche Bank | -0.30 | -0.10 |
| DZ Bank | -0.30 | -0.25 |
| Hamburger Sparkasse | -0.30 | -0.25 |
| Helaba | -0.30 | -0.30 |
| LBBW | -0.30 | -0.30 |
| National-Bank | -0.32 | -0.30 |
| Nord/LB | -0.31 | -0.28 |
| Postbank | -0.30 | -0.30 |
| Santander Bank | -0.30 | -0.28 |
| UniCredit | -0.32 | -0.30 |
| Weberbank | -0.20 | -0.20 |

Source: IW Financial Expert Survey

Table 6-2: Individual forecasts: long-term interest rate

In percent

| Forecaster | End of December 2018 | End of March 2019 |
|-----------------------|----------------------|-------------------|
| Allianz | | |
| Bayerische Landesbank | 0.70 | 0.80 |
| Commerzbank | 0.60 | 0.70 |
| DekaBank | 0.50 | 0.65 |
| Deutsche Bank | 0.90 | 1.00 |
| DZ Bank | 0.30 | 0.50 |
| Hamburger Sparkasse | 0.65 | 0.80 |
| Helaba | 0.80 | 0.80 |
| LBBW | 0.60 | 0.80 |
| National-Bank | 0.55 | 0.63 |
| Nord/LB | 0.50 | 0.70 |
| Postbank | 0.60 | 0.70 |
| Santander Bank | 0.60 | 0.70 |
| UniCredit | 0.60 | 0.65 |
| Weberbank | 0.80 | 1.00 |

Source: IW Financial Expert Survey

Table 6-3: Individual forecasts: Stoxx Index

In index points

| Forecaster | End of December 2018 | End of March 2019 |
|-----------------------|----------------------|-------------------|
| Allianz | | |
| Bayerische Landesbank | 3,140 | 3,190 |
| Commerzbank | 3,200 | 3,200 |
| DekaBank | 3,050 | 3,000 |
| Deutsche Bank | | |
| DZ Bank | 3,200 | 3,250 |
| Hamburger Sparkasse | 3,400 | 3,500 |
| Helaba | 3,100 | 3,200 |
| LBBW | | |
| National-Bank | 3,530 | 3,600 |
| Nord/LB | 3,075 | 3,200 |
| Postbank | 3,150 | 3,150 |
| Santander Bank | 3,250 | 3,350 |
| UniCredit | 3,200 | 3,000 |
| Weberbank | 3,050 | 3,200 |

Source: IW Financial Expert Survey

Table 6-4: Individual forecasts: DAX 30 Index

In index points

| Forecaster | End of December 2018 | End of March 2019 |
|-----------------------|----------------------|-------------------|
| Allianz | | |
| Bayerische Landesbank | 12,800 | 13,100 |
| Commerzbank | 13,500 | 13,500 |
| DekaBank | 13,400 | 12,500 |
| Deutsche Bank | | |
| DZ Bank | 12,600 | 12,900 |
| Hamburger Sparkasse | 13,600 | 14,000 |
| Helaba | 12,300 | 12,700 |
| LBBW | 14,000 | 14,000 |
| National-Bank | 12,900 | 13,200 |
| Nord/LB | 12,600 | 13,100 |
| Postbank | 12,750 | 12,750 |
| Santander Bank | 13,200 | 13,600 |
| UniCredit | 13,000 | 12,500 |
| Weberbank | 12,750 | 13,400 |

Source: IW Financial Expert Survey

Table 6-5: Individual forecasts: EUR-USD exchange rate

In US Dollars per 1 Euro

| Forecaster | End of December 2018 | End of March 2019 |
|-----------------------|----------------------|-------------------|
| Allianz | | |
| Bayerische Landesbank | 1.15 | 1.18 |
| Commerzbank | 1.16 | 1.18 |
| DekaBank | 1.16 | 1.19 |
| Deutsche Bank | 1,17 | 1.25 |
| DZ Bank | 1.12 | 1.15 |
| Hamburger Sparkasse | 1.15 | 1.12 |
| Helaba | 1.15 | 1.20 |
| LBBW | 1.12 | 1.14 |
| National-Bank | 1.16 | 1.16 |
| Nord/LB | 1.16 | 1.18 |
| Postbank | 1.18 | 1.20 |
| Santander Bank | 1.15 | 1.18 |
| UniCredit | 1.20 | 1.21 |
| Weberbank | 1.15 | 1.17 |

Source: IW Financial Expert Survey

Table 6-6: Individual forecasts: oil prices

Brent, in US Dollars per barrel

| Forecaster | End of December 2018 | End of March 2019 |
|-----------------------|----------------------|-------------------|
| Allianz | | |
| Bayerische Landesbank | 85 | 85 |
| Commerzbank | 70 | 68 |
| DekaBank | 70 | 68 |
| Deutsche Bank | 80 | 76 |
| DZ Bank | 75 | 70 |
| Hamburger Sparkasse | 80 | 75 |
| Helaba | 72 | 73 |
| LBBW | 75 | 80 |
| National-Bank | 80 | 79 |
| Nord/LB | 85 | 82 |
| Postbank | 78 | 75 |
| Santander Bank | 85 | 82 |
| UniCredit | 75 | 71 |
| Weberbank | 90 | 90 |

Source: IW Financial Expert Survey

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