



Summary

United States

A soft commitment to overshoot the inflation objective

The explicit statement that its inflation objective is symmetric suggests that the Fed would accept to temporarily overshoot its inflation target. This would put it in a better position to fight future downturns.

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Global

Improvements across the board... or just about

Economic outlook improves in several developed countries.

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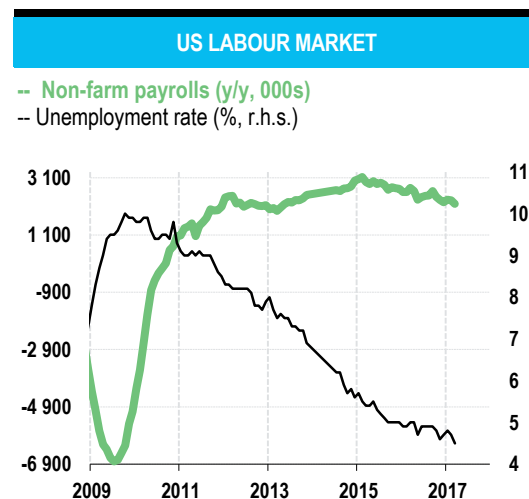
Also in



A preference for savings?

■ Job creations and wages slowed in March ■ Still, the unemployment rate reaches a new cyclical low of 4.5%

The US economy probably slowed in the first quarter of this year. The nowcast model from the Atlanta Fed, which is quite accurate for the advanced estimate of GDP growth, currently points to a quarterly annualised rate of 1.2%. We will know for sure three weeks from now, but we can already blame the slowdown on private consumption. Real consumer spending decreased in both January and February. Even if March were to have rebounded strongly, the quarterly average would still be weak. The rebound in inflation, especially energy inflation, is part of the story, as nominal consumption increased over the period, albeit less robustly than at the end of 2016. This is all the more surprising given that households' disposable income is quite vigorous, thanks to the very dynamic labour market. Admittedly, non-farm payrolls decelerated in March ("only" 98k positions added), but one month does not make a trend. Even if hourly earnings are quite soft, when the very low rate of unemployment (4.5% in March) is taken into account, they are not that disappointing. Our preferred measure – the average hourly earnings of non-supervisory production workers – was up 2.3% from one year to the other in March. The dynamic labour market feeds household income and confidence, so consumption should be dynamic as well. Why the discrepancy? Americans are eager to save that extra cash. The personal saving ratio is up again, from 5.2% in December to 5.6% in February...



Source: US Bureau of Labor Statistics

| THE WEEK ON THE MARKETS | | | | |
|-------------------------|-------|---------|------|----|
| Week 31-3 17 > 6-4-17 | | | | |
| ▼ CAC 40 | 5 123 | ► 5 121 | -0.0 | % |
| ▼ S&P 500 | 2 363 | ► 2 357 | -0.2 | % |
| ↗ Volatility (VIX) | 12.4 | ► 12.4 | +0.0 | % |
| ▼ Euribor 3M (%) | -0.33 | ► -0.33 | -0.1 | bp |
| ↗ Libor \$ 3M (%) | 1.15 | ► 1.15 | +0.1 | bp |
| ▼ OAT 10y (%) | 0.97 | ► 0.90 | -6.3 | bp |
| ▼ Bund 10y (%) | 0.33 | ► 0.26 | -6.8 | bp |
| ▼ US Tr. 10y (%) | 2.40 | ► 2.34 | -5.2 | bp |
| ▼ Euro vs dollar | 1.07 | ► 1.07 | -0.4 | % |
| ↗ Gold (ounce, \$) | 1 247 | ► 1 252 | +0.4 | % |
| ↗ Oil (Brent, \$) | 52.6 | ► 54.7 | +4.0 | % |

Source: Thomson Reuters



United States

A soft commitment to overshoot the inflation objective

- Low real neutral interest rates and low inflation expectations imply that the effective lower bound of interest rates will be reached more frequently going forward.
- In order to ensure reaching its inflation target on average, a central bank will have to accept a temporary inflation overshooting.
- The explicit statement by the FOMC that its inflation objective is symmetric reflects a concern about this issue.

Calculations by economists from the Federal Reserve Board show that the combination of a low real neutral rate of interest with well anchored inflation expectations of 2% imply that the US economy runs the risk of spending a significant amount of time at the effective lower bound of interest rates during the next downturn. This in turn may trigger negative consequences making it even more difficult to subsequently reach the inflation objective. The explicit statement that its inflation objective is symmetric suggests that the Fed is sensitive to this issue and would accept to temporarily overshoot its inflation target.

2% inflation on average over the cycle

If you want peace, prepare for the next war. The Roman saying is very much applicable to the world of central banking. In August last year, speaking at the annual Jackson Hole conference, Janet Yellen explained what the Federal Reserve could do when the next recession hits. In addition to rate cuts and forward guidance, balance sheet expansion (QE) would become a standard part of the toolkit. Against this background, it now seems a debate is developing on the inflation objective. The minutes of the 14-15 March FOMC meeting which were released earlier this week mention that *"a few members expressed the view that the Committee should avoid policy actions or communications that might be interpreted as suggesting that the Committee's 2 percent inflation objective was actually a ceiling"*¹. This also led to the statement released on 15 March including the sentence that *"the Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal"*. Concretely speaking this means that reaching the 2% objective over an entire cycle would require periods with above 2% inflation to compensate for periods of below 2%, typically at times of recession or subdued growth.

This boils down to committing to temporarily overshoot the inflation target and is reminiscent of a similar decision of the Bank of Japan last September. However, the strategy of the latter was very explicit by referring to its ambition to fundamentally alter the way in which inflation expectations are formed by households and companies. The Fed's communication is very implicit in this respect and it begs the

question whether in the case of the US it makes economic sense to accept an overshooting of inflation which may last many months? In addition it is also necessary to reflect on possible negative consequences.

The effective lower bound

The overshooting topic has been analysed in great detail in a recent paper by two economists from the Federal Reserve Board, Michael Kiley and John Roberts². The authors start from the observation that the decline in the long term average rate of inflation and of long horizon inflation expectations, in combination with an estimated decline in the real neutral short term rate of interest³, imply that given the historical volatility of growth and interest rates, going forward a significant percentage of time would be spent at the effective lower bound (ELB), i.e. the level below which interest rates cannot drop. Unless the central bank applies a negative rate on excess reserves held by banks with the central bank, this implies that the ELB will be close to zero⁴. With long term inflation at 2% and a real neutral short term rate of interest at 1% a simple statistical analysis shows that 25% of the time the ELB would be binding. Under certain economic assumptions this could rise to 40% of the time. This creates a major policy challenge. Recurrent prolonged periods of very low interest rates and subdued growth could lead to ever lower inflation expectations ("un-anchoring"): economic agents could consider that the central bank would not be able to achieve its inflation objective. This loss of credibility would reduce the effectiveness of monetary policy. Big increases in the balance sheet of the central bank (QE) might end up having less of an impact⁵. Asset price volatility could increase and financial stability concerns could be triggered. Potential GDP growth would suffer because lingering uncertainty would weigh on the willingness of companies to invest.

Soft overshooting

The rationale for accepting to temporarily overshoot the inflation objective is that in doing so the inflation objective would be reached *on average* over the business cycle. The simulations conducted by Kiley and Roberts show that a risk-adjusted monetary policy rule⁶ ensures that the inflation objective is indeed reached on average. However *"this hinges on policymakers pursuing inflation levels that are notably above 2 percent –in our simulations, near 3 percent–*

¹ Source: Federal Reserve Board, Minutes of the Federal Open Market Committee, March 14–15, 2017

² Michael T. Kiley and John M. Roberts, Monetary policy in a low interest rate world, Brookings Papers on Economic Activity Conference Drafts, March 23-24, 2017

³ This is the real rate consistent with price stability and economic activity at its potential level. It is often referred to as r^* .

⁴ In the eurozone this rate dropped well below zero in view of the combination of a negative deposit rate and quantitative easing by the ECB.

⁵ This would happen when the bond market risk premium (the term premium) is already low to start with because of earlier phases of QE in which case the possibility to drive down the term premium and hence bond yields via QE would be hampered.

⁶ Risk-adjusted refers to the effort of avoiding that inflation would end up being too low on average. Monetary policy rule refers to setting the policy rate based on inflation dynamics, the output gap, etc.



during periods when the ELB does not bind". Three comments need to be made here. The first is that accepting inflation as high as 3% does not mean that the Federal Reserve would start behaving irresponsibly: there would be an acceptance of temporarily higher inflation but the overshooting would be soft, i.e. limited in time and extent. The second one concerns the credibility of such a change: investors, companies, households may wonder whether the central bank will be able to resist the temptation to swiftly tighten when inflation has moved above 2%⁷. Concern that it would do so would weigh on the effectiveness of the accommodative monetary policy environment. One can also wonder whether the sensitivity of policymakers when converging towards 3% inflation would be higher than when approaching 2%. The third comment is closely related to this point: how would bond markets react to the new policy rule? Moving from the old to the new rule would imply higher yields because the bond market would need to price that during certain stages of the business cycle 3% inflation would be tolerated. This process could be disruptive for equity markets, the corporate bond market, mortgage bonds, etc. This could act as a drag on growth, at least temporarily.

Changing the inflation objective?

Kiley and Roberts make the important point that accepting higher inflation to some degree in certain phases of the business cycle, although ensuring that the inflation objective would be met on average, would not take away the fact that the effective lower bound would be met with greater frequency than before. A way to address this would be to aim for a higher inflation target: "*such a shift would likely lower the frequency of ELB episodes and their undesirable effects*". However, higher inflation on average would come at a cost so we are faced with a dilemma: being frequently at the ELB implies real economic costs but accepting higher average inflation comes at a cost as well. The jury is still out on this one.

Conclusion: soft overshooting, soft commitment

The Kiley and Roberts paper raises important points and is a reflection of a broader concern of monetary policy effectiveness under the 'new normal' of low real interest rates. The explicit reference to the symmetric nature of the inflation target suggests that the FOMC is concerned about the risk of a premature tightening of financial and monetary conditions as inflation reaches the target: market participants could anticipate a more aggressive action coming from the FOMC thereby driving up bond yields which would weigh on the real economy⁸. The statement mentioned above that the 2% inflation objective is not a ceiling expresses this concern. It is an implicit commitment to accept slightly higher inflation thereby echoing insights provided in the Kiley and Roberts paper. However, the commitment is a soft one, witness the discussion in the FOMC minutes of the most recent meeting. "*Several participants remarked ... it was important for the Committee to remove accommodation gradually ... These participants emphasized that a sustained return to 2 percent inflation was particularly important in light of the persistent shortfall of inflation from its objective over the past several years*". Several other participants argued however that circumstances could warrant a *faster* pace of scaling back accommodation than implied in the median Federal funds rate projections of the FOMC members.

This debate has also an important international dimension to it. If the Federal Reserve were to become more explicit about accepting an upward drift in inflation before tightening more aggressively, eyes would turn towards the ECB. If the latter were to stick to "close to but below 2%" as its inflation objective, *ceteris paribus* this could very well put the euro under some upward pressure thereby weighing on the eurozone inflation outlook.

⁷ In that case the central bank would act in a time-inconsistent way by reneging on an earlier commitment to accept a higher inflation level thereby losing its credibility and hence ability to reach its objectives.

⁸ Looking at the evolution of US Treasury yields since December last year, investors seem to be pretty relaxed about this.



Global

Improvements across the board... or just about

- Economic indicators are picking up in most of the developed countries.
- Eurozone growth is more robust, at an annualised rate of nearly 2% in first-quarter 2017.
- The rebound is also better distributed, as the economic cycles of the 19 Eurozone member countries are tending to move more in sync.
- The United States reported an upturn in oil and shale gas-related activities, and corporate investment in this sector probably rebounded at the beginning of the year.

For once, economic trends on both sides of the Atlantic are moving in sync, and are looking rather upbeat. Granted, the Eurozone is still showing a major output and jobs deficit compared to the United States. At 9.6% in January, its unemployment rate is twice as high as in the US, and gross domestic product (GDP) has been slow to return to pre-crisis levels (see chart). Growth has yet to return to its long-term potential, as it already has in the United States. Yet European growth is accelerating and could match that of the US in first-quarter 2017.

Eurozone growth: an upward slope of 2%

Eurozone cyclical data have been rather satisfactory in recent months. The purchasing managers index (PMI) averaged more than 55 points in January-March, which is compatible with economic expansion of 2% a year, or even higher. Moreover, the member countries are no longer split by widely contrasting performances, and there is even a certain degree of convergence, for the first time since the creation of the Economic and Monetary Union (EMU)¹. Germany is no longer the economy's sole growth engine: Italy and Spain also contributed to the first-quarter rally. In France, the survey data in our Nowcast index coincides with GDP trends, signalling stronger growth².

Domestic - especially household - demand is the main support factor for European growth. Private consumption hasn't faltered despite rising energy bills, which can be explained by falling unemployment (less of a concern in European Commission surveys) and stronger lending activities. Here too, the improvements are widespread. In Spain, for example, which has long been insensitive to the improvement in Eurozone financing conditions, consumer loans have surged by 4% a year. As a result, it is gradually closing the demand shortfall.

¹ See Guillet, T., Lalande, E.: "Economic cycles in the eurozone are converging again", INSEE, Economic Note, March 2017.

² In Q1 2017, our "Nowcast" models indicated growth of 0.4% (annualised growth of 1.6%), which is slightly higher than the INSEE figure of 0.3%. For a more detailed presentation, see Baudchon, H., Proutat, J.L.: *France, recovery under surveillance*, BNP Paribas, Eco Week n°15-36, October 2015.

GDP growth trends

In volume, 2008 = 100

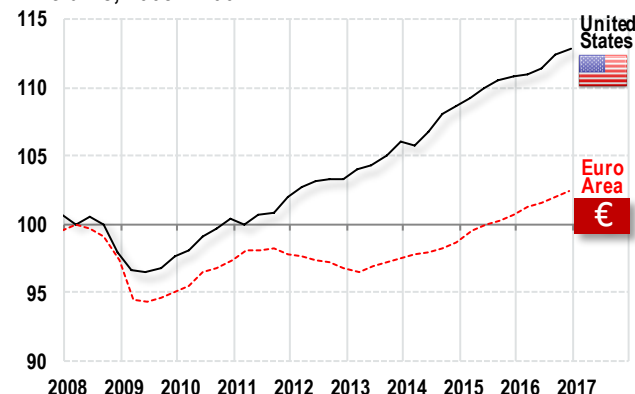


Chart 1

Sources: Eurostat, US Bureau of Economic Analysis

Corporate investment is following the accelerator principle: bolstered by a flurry of new orders at the beginning of the year, investment should be more dynamic. This is also suggested by the upturn in capacity utilisation rates in industry.

United States: looking beyond the Trump bump

In the United States, we can see the same trends, which are not only relying on a "Trump" effect.. Based on the key ISM index, and the new orders component in particular, US companies also stepped up expenditure on capital goods in the first quarter. Yet they were not responding to an increase in private consumption (automobile sales are slowing), but rather to foreign demand. In the emerging countries, import volumes have been rising strongly in recent months, driven in part by China, which has returned to an expansionist policy³. Looking beyond textbook gearing effects, this has triggered an upturn in oil prices, which is beneficial for the US. With crude oil prices currently at about USD 50 a barrel, US production of oil and shale gas has become profitable again, especially since breakeven points have fallen. Production and the number of wells have both increased strongly since the beginning of the year.

In the unconventional energy sector, given its heavy accumulation of debt, the rebound in prospects has squeezed corporate spreads (the yield spread with regard to government bonds), creating an additional support factor for investment.

³ Since spring 2016, the Chinese authorities have clearly opted for an expansionist policy again. See Peltier, C.: "China: stability, a complicated goal", BNP Paribas, Eco Emerging, Q1 2017.



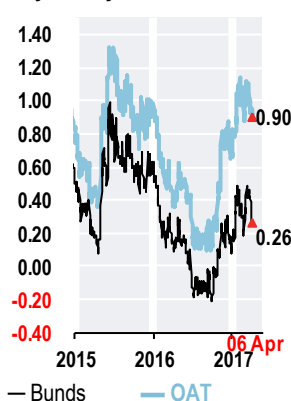
Markets overview

The essentials

Week 31-3 17 > 6-4-17

| | | | |
|--------------------|-------|---------|---------|
| ➤ CAC 40 | 5 123 | ➤ 5 121 | -0.0 % |
| ➤ S&P 500 | 2 363 | ➤ 2 357 | -0.2 % |
| ➤ Volatility (VIX) | 12.4 | ➤ 12.4 | +0.0 % |
| ➤ Euribor 3M (%) | -0.33 | ➤ -0.33 | -0.1 bp |
| ➤ Libor \$ 3M (%) | 1.15 | ➤ 1.15 | +0.1 bp |
| ➤ OAT 10y (%) | 0.97 | ➤ 0.90 | -6.3 bp |
| ➤ Bund 10y (%) | 0.33 | ➤ 0.26 | -6.8 bp |
| ➤ US Tr. 10y (%) | 2.40 | ➤ 2.34 | -5.2 bp |
| ➤ Euro vs dollar | 1.07 | ➤ 1.07 | -0.4 % |
| ➤ Gold (ounce, \$) | 1 247 | ➤ 1 252 | +0.4 % |
| ➤ Oil (Brent, \$) | 52.6 | ➤ 54.7 | +4.0 % |

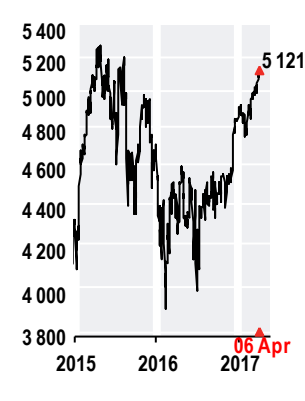
10 y bond yield, OAT vs Bund



Euro-dollar



CAC 40



Money & Bond Markets

| Interest Rates | highest' 17 | lowest' 17 |
|----------------|----------------|----------------|
| € ECB | 0.00 at 02/01 | 0.00 at 02/01 |
| Eonia | -0.35 at 04/01 | -0.36 at 22/02 |
| Euribor 3M | -0.33 at 02/01 | -0.33 at 22/02 |
| Euribor 12M | -0.12 at 02/01 | -0.12 at 06/04 |
| \$ FED | 1.00 at 16/03 | 0.75 at 02/01 |
| Libor 3M | 1.15 at 22/03 | 1.00 at 02/01 |
| Libor 12M | 1.80 at 15/03 | 1.68 at 06/01 |
| £ BoE | 0.25 at 02/01 | 0.25 at 02/01 |
| Libor 3M | 0.34 at 05/01 | 0.34 at 04/04 |
| Libor 12M | 0.71 at 09/01 | 0.71 at 05/04 |

At 6-4-17

| Yield (%) | highest' 17 | lowest' 17 |
|--------------|----------------|----------------|
| € AVG 5-7y | 0.45 at 17/03 | 0.23 at 02/01 |
| Bund 2y | -0.80 at 25/01 | -0.96 at 24/02 |
| Bund 10y | 0.26 at 10/03 | 0.09 at 02/01 |
| OAT 10y | 0.90 at 06/02 | 0.67 at 02/01 |
| Corp. BBB | 1.45 at 01/02 | 1.41 at 24/02 |
| \$ Treas. 2y | 1.25 at 14/03 | 1.14 at 24/02 |
| Treas. 10y | 2.34 at 13/03 | 2.32 at 24/02 |
| Corp. BBB | 3.68 at 14/03 | 3.62 at 24/02 |
| £ Treas. 2y | 0.11 at 06/01 | 0.01 at 28/02 |
| Treas. 10y | 1.04 at 26/01 | 1.00 at 04/04 |

At 6-4-17

10y bond yield & spreads

| | | |
|-------|-------------|--------|
| 7.18% | Greece | 691 pb |
| 3.91% | Portugal | 364 pb |
| 2.26% | Italy | 199 pb |
| 1.62% | Spain | 135 pb |
| 0.92% | Ireland | 65 pb |
| 0.90% | France | 63 pb |
| 0.78% | Belgium | 51 pb |
| 0.49% | Netherlands | 22 pb |
| 0.45% | Austria | 18 pb |
| 0.38% | Finland | 11 pb |
| 0.26% | Germany | |

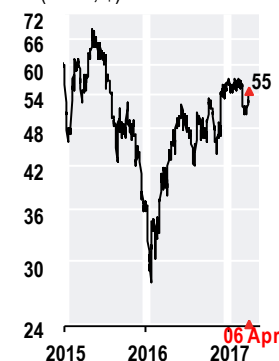
Commodities

| Spot price in dollars | lowest' 17 | 2017(€) |
|-----------------------|----------------|---------|
| Oil, Brent | 55 at 22/03 | -4.5% |
| Gold (ounce) | 1 156 at 03/01 | +7.1% |
| Metals, LMEX | 2 639 at 03/01 | +6.9% |
| Copper (ton) | 5 487 at 03/01 | +4.4% |
| CRB Foods | 330 at 06/04 | -3.6% |
| wheat (ton) | 153 at 02/01 | +3.2% |
| Corn (ton) | 130 at 23/03 | -0.7% |

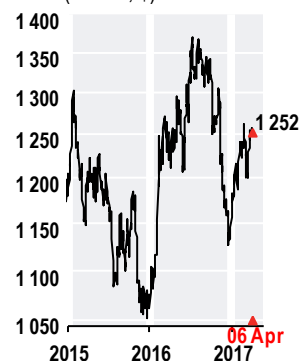
At 6-4-17

Variations

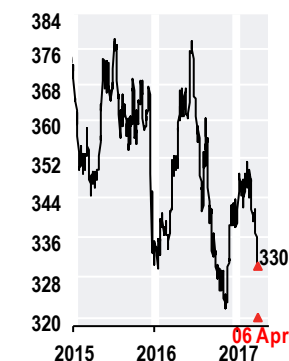
Oil (Brent, \$)



Gold (Ounce, \$)



CRB Foods



Exchange Rates

| 1€ = | highest' 17 | lowest' 17 | 2017 |
|------|-----------------|-----------------|-------|
| USD | 1.09 at 27/03 | 1.04 at 03/01 | +1.0% |
| GBP | 0.85 at 16/01 | 0.84 at 23/02 | -0.1% |
| CHF | 1.07 at 10/03 | 1.06 at 08/02 | -0.2% |
| JPY | 118.18 at 06/01 | 117.86 at 04/04 | -3.9% |
| AUD | 1.41 at 02/01 | 1.37 at 23/02 | -3.1% |
| CNY | 7.48 at 27/03 | 7.22 at 03/01 | +0.3% |
| BRL | 3.44 at 18/01 | 3.24 at 15/02 | -3.2% |
| RUB | 60.03 at 31/01 | 59.89 at 05/04 | -6.8% |
| INR | 68.89 at 31/01 | 68.89 at 06/04 | -3.8% |

At 6-4-17

Variations

Equity indices

| Index | highest' 17 | lowest' 17 | 2017 | 2017(€) |
|---------|-----------------|-----------------|--------|---------|
| CAC 40 | 5 123 at 31/03 | 4 749 at 31/01 | +5.3% | +5.3% |
| S&P500 | 2 396 at 01/03 | 2 239 at 02/01 | +5.3% | +4.2% |
| DAX | 12 313 at 31/03 | 11 510 at 06/02 | +6.5% | +6.5% |
| Nikkei | 19 634 at 13/03 | 18 597 at 06/04 | -2.7% | +1.3% |
| China* | 67 at 20/03 | 59 at 02/01 | +14.2% | +12.8% |
| India* | 530 at 06/04 | 445 at 03/01 | +12.9% | +17.3% |
| Brazil* | 1 848 at 22/02 | 1 654 at 02/01 | +5.9% | +9.4% |
| Russia* | 622 at 03/01 | 537 at 09/03 | -7.8% | -2.6% |

At 6-4-17

Variations

* MSCI index



Economic forecasts

| En % | GDP Growth | | | Inflation | | | Curr. account / GDP | | | Fiscal balances / GDP | | |
|----------------------|------------|------------|------------|------------|------------|------------|---------------------|-------------|-------------|-----------------------|-------------|-------------|
| | 2016 e | 2017 e | 2018 e | 2016 e | 2017 e | 2018 e | 2016 e | 2017 e | 2018 e | 2016 e | 2017 e | 2018 e |
| Advanced | 1.6 | 2.0 | 2.1 | 0.8 | 2.0 | 1.9 | | | | | | |
| United States | 1.6 | 2.4 | 2.7 | 1.3 | 2.5 | 2.6 | -2.5 | -2.4 | -2.4 | -3.4 | -4.2 | -5.0 |
| Japan | 1.0 | 1.2 | 0.9 | -0.1 | 0.7 | 1.0 | 3.8 | 4.2 | 4.6 | -4.7 | -4.4 | -4.1 |
| United Kingdom | 1.8 | 1.8 | 1.1 | 0.6 | 2.7 | 2.6 | -4.7 | -4.1 | -3.2 | -3.0 | -2.7 | -3.1 |
| Euro Area | 1.7 | 1.6 | 1.6 | 0.2 | 1.7 | 1.2 | 3.4 | 3.0 | 3.1 | -1.7 | -1.4 | -1.2 |
| Germany | 1.8 | 1.8 | 2.0 | 0.4 | 2.0 | 1.6 | 8.8 | 8.3 | 8.5 | 0.6 | 0.7 | 0.6 |
| France | 1.1 | 1.3 | 1.5 | 0.3 | 1.4 | 1.0 | -1.2 | -0.9 | -1.1 | -3.3 | -3.0 | -2.7 |
| Italy | 0.9 | 0.6 | 0.6 | -0.1 | 1.6 | 0.9 | 2.1 | 2.2 | 2.1 | -2.4 | -2.4 | -2.5 |
| Spain | 3.3 | 2.6 | 2.0 | -0.3 | 2.3 | 1.5 | 1.8 | 2.1 | 2.1 | -4.6 | -3.6 | -3.0 |
| Netherlands | 2.1 | 2.1 | 1.6 | 0.1 | 1.2 | 1.4 | 8.7 | 8.7 | 8.3 | -0.5 | 0.0 | 0.3 |
| Belgium | 1.2 | 1.4 | 1.5 | 1.8 | 2.1 | 1.9 | 0.7 | 0.5 | 0.5 | -3.0 | -2.3 | -2.2 |
| Emerging | 4.2 | 4.5 | 5.0 | 4.8 | 4.6 | 4.4 | | | | | | |
| China | 6.7 | 6.2 | 6.4 | 2.0 | 2.7 | 2.5 | 1.9 | 1.6 | 1.4 | -2.9 | -3.5 | -3.3 |
| India | 7.5 | 7.3 | 7.8 | 4.9 | 4.9 | 5.2 | -1.1 | -0.8 | -1.5 | -3.8 | -3.5 | -3.2 |
| Brazil | -3.5 | 1.0 | 3.0 | 8.8 | 4.1 | 4.3 | -1.2 | -1.4 | -2.1 | -8.9 | -9.6 | -8.3 |
| Russia | -0.6 | 1.2 | 2.0 | 7.1 | 4.2 | 4.3 | 1.7 | 2.4 | 2.0 | -3.5 | -3.1 | -2.8 |
| World | 3.1 | 3.4 | 3.8 | 3.1 | 3.5 | 3.3 | | | | | | |

Source : BNP Paribas Group Economic Research (e: Estimates & forecasts)

Financial forecasts

| Interest rates | | 2016 | | | | 2017 | | | | 2016 | 2017e | 2018e |
|----------------|---------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|
| End period | | Q1 | Q2 | Q3 | Q4 | Q1e | Q2e | Q3e | Q4e | | | |
| US | Fed Funds | 0.25-0.5 | 0.25-0.5 | 0.25-0.5 | 0.5-0.75 | 0.50-0.75 | 0.75-1.00 | 1.00-1.25 | 1.25-1.50 | 0.5-0.75 | 1.25-1.50 | 2.25-2.50 |
| | 3-month Libor \$ | 0.63 | 0.65 | 0.85 | 1.00 | 1.05 | 1.25 | 1.50 | 1.75 | 1.00 | 1.75 | 2.50 |
| | 10-year T-notes | 1.79 | 1.49 | 1.61 | 2.45 | 2.60 | 3.00 | 3.25 | 3.50 | 2.45 | 3.50 | 4.00 |
| EMU | Refinancing rate | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| | 3-month Euribor | -0.24 | -0.29 | -0.30 | -0.32 | -0.33 | -0.33 | -0.30 | -0.30 | -0.32 | -0.30 | -0.05 |
| | 10-year Bund | 0.16 | -0.13 | -0.19 | 0.11 | 0.30 | 0.50 | 0.75 | 1.00 | 0.11 | 1.00 | 1.60 |
| | 10-year OAT | 0.41 | 0.20 | 0.12 | 0.69 | 0.95 | 0.95 | 1.15 | 1.45 | 0.69 | 1.45 | 2.00 |
| | 10-year BTP | 1.23 | 1.35 | 1.19 | 1.84 | 2.10 | 2.20 | 2.60 | 3.00 | 1.84 | 3.00 | 3.40 |
| UK | Base rate | 0.50 | 0.50 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| | 3-month Libor £ | 0.59 | 0.56 | 0.38 | 0.37 | 0.40 | 0.40 | 0.40 | 0.40 | 0.37 | 0.40 | 0.40 |
| | 10-year Gilt | 1.42 | 1.02 | 0.76 | 1.24 | 1.25 | 1.55 | 1.75 | 1.90 | 1.24 | 1.90 | 2.50 |
| Japan | Overnight call rate | -0.00 | -0.06 | -0.06 | -0.06 | -0.10 | -0.10 | -0.10 | -0.10 | -0.06 | -0.10 | -0.10 |
| | 3-month JPY Libor | 0.10 | 0.06 | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 0.05 | 0.05 |
| | 10-year JGB | -0.04 | -0.23 | -0.08 | 0.05 | 0.10 | 0.10 | 0.10 | 0.30 | 0.05 | 0.30 | 0.40 |

| Exchange rates | | 2016 | | | | 2017 | | | | 2016 | 2017e | 2018e |
|----------------|-----------|------|------|------|------|------|------|------|------|------|-------|-------|
| End period | | Q1 | Q2 | Q3 | Q4 | Q1e | Q2e | Q3e | Q4e | | | |
| USD | EUR / USD | 1.14 | 1.11 | 1.12 | 1.05 | 1.04 | 1.02 | 1.02 | 1.00 | 1.05 | 1.00 | 1.06 |
| | USD / JPY | 112 | 103 | 101 | 117 | 118 | 121 | 124 | 128 | 117 | 128 | 130 |
| EUR | EUR / GBP | 0.79 | 0.83 | 0.87 | 0.85 | 0.83 | 0.82 | 0.82 | 0.80 | 0.85 | 0.80 | 0.82 |
| | EUR / CHF | 1.09 | 1.08 | 1.09 | 1.07 | 1.08 | 1.10 | 1.12 | 1.12 | 1.07 | 1.12 | 1.15 |
| | EUR/JPY | 128 | 114 | 114 | 123 | 123 | 123 | 126 | 128 | 123 | 128 | 138 |

Source : BNP Paribas Group Economic Research / GlobalMarkets (e: Estimates & forecasts)



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Group Economic Research

■ **William DE VIJDER**
Chief Economist

+33(0)1 55 77 47 31

william.devijlder@bnpparibas.com

ADVANCED ECONOMIES AND STATISTICS

■ **Jean-Luc PROUTAT**
Head

+33(0)1 58 16 73 32

jean-luc.proutat@bnpparibas.com

■ **Alexandra ESTIOT**
Works coordination - United States - United Kingdom - Globalisation

+33(0)1 58 16 81 69

alexandra.estiot@bnpparibas.com

■ **Hélène BAUDCHON**
France (short-term outlook and forecasts) - Labour markets

+33(0)1 58 16 03 63

helene.baudchon@bnpparibas.com

■ **Frédérique CERISIER**
Euro Area (European governance and public finances), Spain, Portugal

+33(0)1 43 16 95 52

frederique.cerisier@bnpparibas.com

■ **Thibault MERCIER**
Euro Area (short-term outlook and monetary policy), France (structural reforms)

+33(0)1 57 43 02 91

thibault.mercier@bnpparibas.com

■ **Manuel NUNEZ**
Japan, Ireland - Projects

+33(0)1 42 98 27 62

manuel.a.nunez@bnpparibas.com

■ **Catherine STEPHAN**
Nordic countries - World trade - Education, health, social conditions

+33(0)1 55 77 71 89

catherine.stephan@bnpparibas.com

■ **Raymond VAN DER PUTTEN**
Germany, Netherlands, Austria, Switzerland - Energy, climate - Long-term projections

+33(0)1 42 98 53 99

raymond.vanderputten@bnpparibas.com

■ **Tarik RHARRAB**
Statistics and Modelling

+33(0)1 43 16 95 56

tarik.rharrab@bnpparibas.com

BANKING ECONOMICS

■ **Laurent QUIGNON**
Head

+33(0)1 42 98 56 54

laurent.quignon@bnpparibas.com

■ **Céline CHOULET**

+33(0)1 43 16 95 54

celine.choulet@bnpparibas.com

■ **Thomas HUMBLLOT**

+33(0)1 40 14 30 77

thomas.humblot@bnpparibas.com

EMERGING ECONOMIES AND COUNTRY RISK

■ **François FAURE**
Head - South Africa, Argentina - Methodology

+33(0)1 42 98 79 82

francois.faure@bnpparibas.com

■ **Christine PELTIER**
Deputy Head - Greater China, Vietnam, other North Asia countries - Methodology

+33(0)1 42 98 56 27

christine.peltier@bnpparibas.com

■ **Stéphane ALBY**
Africa (French-speaking countries)

+33(0)1 42 98 02 04

stephane.alby@bnpparibas.com

■ **Sylvain BELLEFONTAINE**
Turkey, Brazil, Mexico, Central & South America - Methodology

+33(0)1 42 98 26 77

sylvain.bellefontaine@bnpparibas.com

■ **Pascal DEVAUX**
Middle East, Balkan countries, Nigeria, Angola - Scoring

+33(0)1 43 16 95 51

pascal.devau@bnpparibas.com

■ **Anna DORBEC**
CIS, Central European countries

+33(0)1 42 98 48 45

anna.dorbec@bnpparibas.com

■ **Johanna MELKA**
Asia, Russia

+33(0)1 58 16 05 84

johanna.melka@bnpparibas.com

■ **Alexandra WENTZINGER**
Chile, Uruguay, Paraguay

+33(0)1 42 98 74 26

alexandra.wentzinger@bnpparibas.com

■ **Michel BERNARDINI**
Public Relation Officer

+33(0)1 42 98 05 71

michel.bernardini@bnpparibas.com



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Registered Office: 16 boulevard des Italiens – 75009 PARIS
Tel : +33 (0) 1.42.98.12.34
Internet : www.group.bnpparibas.com - www.economic-research.bnpparibas.com

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