ECOWEEK

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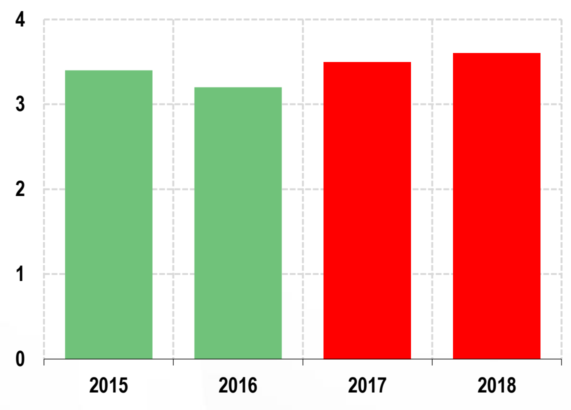
Neither satisfactory nor worrying

■ The IMF projects world growth to accelerate slightly ■ In the short-run, risks are on the upside, thanks to the European rebound ■ In the medium term, risks are on the downside…

The International Monetary Fund (IMF) chose not to amend its world growth forecasts, published in April. Global growth is projected to accelerate from 3.2% in 2016 to 3.5% in 2017 and 3.6% in 2018. This no event hides a downward revision to the US outlook as the previously expected fiscal boost is now seen as less likely to materialise. Admittedly, the fiscal debate did not even start in Washington, with all efforts from the current administration having been wasted over the failed repeal of Obamacare. On top of that, the American underlying momentum is not that strong. Even if GDP growth accelerated in the second quarter (+2.6%, quarterly annualised rate) the rebound is rather limited after yet an another weak start in Q1 (+1.2%). The Fed remains confident that the economy is set to keep on growing fast enough to allow the normalisation of its monetary policy to keep going. Still, the recent slowdown in inflation appears to worry the FOMC enough for its members choosing to stress their willingness to monitor future developments.

WORLD GDP GROWTH, ACTUAL AND PROJECTIONS



Source: IMF

This downward revision is offset by a better outlook in Europe, with the IMF highlighting upside risks to its forecasts. Indeed, the European sky is getting clearer. The Flash estimates for Q2 GDP will be released on August 1st and we will have to wait another fortnight for Germany's figures. While the Spanish recovery remains as solid as ever (+0.9% q/q and +3.1% y/y in Q2), the strong performance from France lets it be hoped that activity will have once more expanded faster in Europe than in the US. French GDP was up a quarterly 0.5% despite a strong negative contribution from the inventory change. From one year to the other, the performance (+1.8%) is the strongest since mid-2011.

In short, the IMF is quite optimistic for the short run. As for the medium term, it sees risks tilting on the downside. A possible correction in equity valuations, the still too speed growth in Chinese credit and a too abrupt reaction to the normalisation of the US monetary policy are the main risks highlighted. While world growth is set to accelerate, the IMF reminds us that the performance will remain way weaker than before the economic and financial crisis. The world economy still suffers from its consequences, which make it more sensitive to shocks. This is especially the case for the developed world, where over-capacities remain large, where investment has been weak for years explaining the disappointing performance of productivity. In short, this year and next will be another two years of a cyclical limited rebound. And just that...

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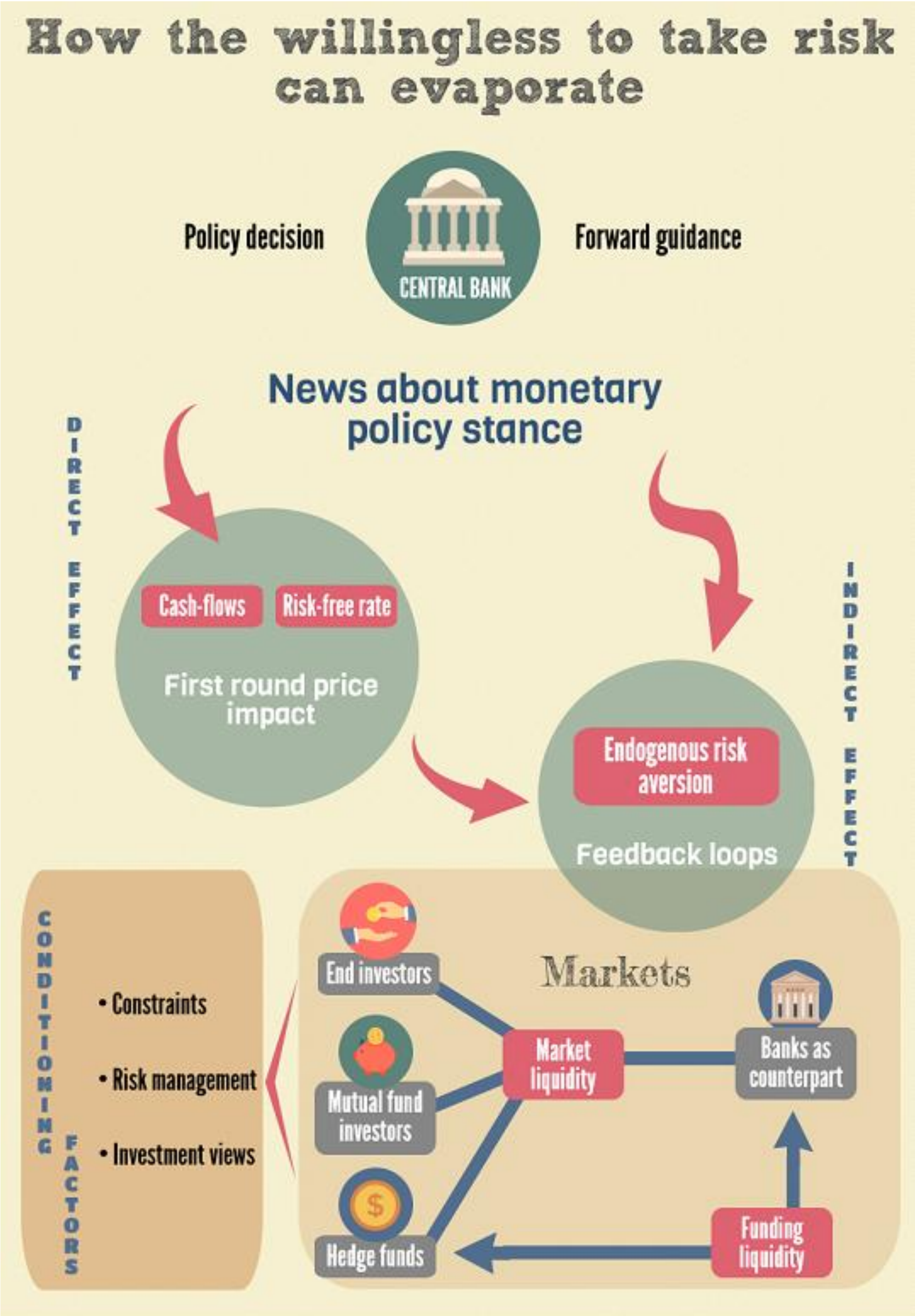
Eco WEEK

BNP PARIBAS

The bank for a changing world

Recommended reading



How the willingness to take risk can evaporate

■ News about monetary policy news influences asset prices via changes in expected cash-flows, the risk-free rate of interest and the required risk premium ■ Big fluctuations in the risk premium explain why asset prices are more volatile than news about 'fundamentals' ■ These fluctuations reflect the heterogeneous nature of market participants

The difficult task of monetary policy normalisation

According to Janet Yellen, the reduction of the size of the balance sheet of the Federal Reserve will be like "watching paint dry". In plain English this means 'boring'. The metaphor reflects the concern about the reaction of financial markets, and indirectly the economy at large, to monetary policy normalisation. In an era of unconventional monetary policy, normalisation is a stepwise process consisting of stopping asset purchases, hiking the policy rate, shrinking the balance sheet. Policy normalisation makes communication particularly important, even more so when monetary policy has been very easy for a very long time and when different tools have been used to that end (policy rate at the zero lower bound or lower, quantitative easing, forward guidance).

Communication is easier when the central bank is in an easing mode: if the message is insufficiently clear, re-iterating it with greater insistence will help. When tightening, the exercise is tricky and when the message is misunderstood, sudden asset price corrections, possibly with negative consequences for the real economy, can follow. A recent ECB paper[1] on communication of monetary policy in uncertain times, argues that the central bank needs to provide as much detail as possible so as to avoid that its future policy would become a source of uncertainty. 'Detail' relates to being clear about the reaction function and about its policy intentions. The latter are typically state-dependent: they depend on the evolution of the variables which determine the objective of the central bank, so when a given inflation target is the only objective, this means the determinants of the inflation dynamics. "*State-contingent forward guidance allows economic agents to endogenously adjust their expectations in light of new economic developments, thereby requiring fewer re-adjustments of central bank communication if these developments differ from the original expectations.*" Moreover, the authors advocate that in order to increase predictability of future actions, the ECB would be clear on the specific indicators it is looking at to assess its policy stance. With a toolkit consisting of three instruments (policy rate, balance sheet, forward guidance), whereby the use of one instrument influences the extent to which another should be used (like in the US where balance sheet reduction is a substitute for rate hikes), communication is more important than ever.

Why news matters

Why are financial markets so sensitive to news in general and news about monetary policy in particular? With the price of an asset being equal to the net present value of future cash-flows, monetary policy news (including changes in expectations) influences this price via changes in expected cash-flows (a tightening eventually leading to slower growth), a higher discount rate via an increase in the risk-free rate of interest and a change in the required risk premium. If the required risk premium were constant, it shouldn't be too difficult to assess the likely impact on asset prices of monetary policy news. In reality of course, the required risk premium fluctuates, which implies that asset prices are more volatile than the news about 'fundamentals'.

Danielson and his co-authors argue that this phenomenon reflects endogenous risk[2]: "*while the seeds of the volatility are exogenous (and driven by fundamental news), a large part of its eventual realized magnitude is due to the amplification of the exogenous news within the system… In the main, price movements have two components — a portion due to the incorporation of fundamentals news, and an endogenous feedback component due to the trading patterns of the market participants over and above the incorporation of fundamentals news.*" This means that the amplification is driven by the endogenous evolution of risk aversion.

The financial sector and hedge funds

Given the diversity of financial market participants, the dynamics of risk aversion (and its inverse, the willingness to take risk) are complex. In Danielson et al. (2013) it is related to fluctuations in the capital of the financial sector, which influences their access to funding and the risk capacity of the financial system. Bookstaber, Paddrik and Tivnan analyse the feedback loops in great detail focussing on the interaction between hedge funds and banks[3]. They "*focus on hedge funds because leverage is the critical feature that creates asset-based fire sales. The hedge fund uses its capital and cash borrowed from the prime broker of a bank/dealer to finance its buying of assets*." Let's consider a news shock which causes a big drop in the price of an asset in which a given hedge fund has a big position. How is this shock amplified in the financial system? The hedge fund may be forced to liquidate positions because clients withdraw money and/or because it is faced with reduced access to funding. The authors call these asset-based fire sales. They can create contagion effects between hedge funds when they share certain positions ('crowded trade'). In addition there will be contagion between assets. The asset which drops first based on the initial shock causes forced selling which will affect other positions as well. The latter can even suffer more than the asset which was hit in the first place. Market liquidity will influence the extent of the drop in prices (which in turn can generate feedback loops). In addition there may be

[1] Günter Coenen, Michael Ehrmann, Gaetano Gaballo, Peter Hoffmann, Anton Nakov, Stefano Nardelli, Eric Persson, Georg Strasser, Communication of monetary policy in unconventional times, ECB Discussion Paper, n° 2080, June 2017

[2] Jon Danielsson, Hyun Song Shin, Jean–Pierre Zigrand (2013), Endogenous and Systemic Risk, chapter in Quantifying Systemic Risk, Joseph G. Haubrich and Andrew W. Lo (editors), University of Chicago Press

[3] Rick Bookstaber, Mark Paddrik and Brian Tivnan (2014), An Agent-based Model for Financial Vulnerability, Office of Financial Research, Working Paper 14-05

funding-based fire sales. They are triggered by a disruption in funding at the broker/dealer level because of a decline in the value of collateral or an erosion of confidence: *"the funding restrictions for the bank/dealer can reduce the funding available to the hedge fund through the prime broker, leading to asset liquidations."*

Constraints, risk management, views

Imagine now a world where investors are not leveraged. In such a world, shocks can impact investors via constraints, risk management and changes in investment views. In terms of constraints, long-horizon investors like pension funds or insurance companies could be held back from buying assets which have dropped significantly in price because of regulation in terms of respectively asset/liability mismatch and capital requirements. Under certain conditions they might even be forced to sell as well. In both cases, market liquidity could act even more as a constraint, very much along the lines of what was described in the previous paragraph. "*If fire sales of assets begin to drive down market prices … market makers can incur losses. Post-crisis reforms have made dealers much stronger, reducing the probability that this could lead to their distress or failure. Nevertheless, trading losses still make their funding more expensive and reduce their headroom over regulatory capital requirements, reducing incentives to take risks. That can mean shedding their inventory and stepping back from absorbing asset sales by others.*"[4]

Risk management can contribute to a selling wave in different ways.

1. Call option replication and floor-protection strategies will force the portfolio manager to sell risky assets (typically equities) and increase cash levels as prices go down.
2. Exposure management can trigger sell orders and contribute to contagion. Suppose an investor has built exposure to a high yield multi-sector bond index via an index tracking fund. If he becomes concerned about the outlook for one sector of this index, he may have no other option than to reduce his position, thereby impacting the other sectors as well.
3. When prices decline, risk aversion may increase, all the more so when the risk level of a portfolio is significantly higher than the long term average. The latter can be called the preferred habitat and in times of stress it may act as a magnet and become a catalyst for reducing portfolio risk.
4. Managing commercial risk also plays a role. Under the (realistic) assumption that relative performance rankings influence flows into and out of mutual funds, fund managers will try to avoid underperformance versus peers. When market volatility increases, the risk of underperformance versus competitors can increase, so the aversion to underperformance may trigger short-termism on behalf of fund managers. Managers in a given peer group may act in the same way creating a selling wave.[5]
5. Closely related to the previous point, relative performance versus a benchmark can "*lead to an increase in the effective risk-aversion of a benchmarked institutional investor, particular so as his "surplus performance" relative to the index declines*"[6]. This means that as the excess return goes down, risk versus the benchmark will be scaled back.

Investment views can cause fluctuations in the required risk premium as well. Anticipation effects can play a role whereby the manager gives a bigger weight than before to momentum when deciding where to invest. Reduced confidence in forecasts on the back of increased volatility and uncertainty may cause a decline in the expected Sharpe ratio (the risk-adjusted excess return of an asset versus holding cash) or the expected information ratio (the risk-adjusted excess return of a portfolio versus a benchmark). The ensuing risk reduction of the portfolio would contribute to the decline of risky asset prices (equities, corporate bonds, etc.).

Conclusion

At first glance, fluctuations of risk aversion may be puzzling. Danielson et al. (2013) wonder "*How can it be that human beings are risk averse one day … only to become contagiously risk-loving not too long thereafter*"? In their view risk constraints on individual traders or desks play a key role as well as changes in haircuts and the implied change of leverage by credit providers. Several other factors can be added to their list: confidence in one's market views, benchmarking versus competitors, regulatory constraints, contagion across assets, etc. In times of increased uncertainty about the outlook for key market drivers, in particular monetary policy, these factors will probably cause a shortening of the investment horizon, all the more so if central banks insist that their policy has become very much data-dependent.

William De Vijlder

[4] Yuliya Baranova, Jamie Coen, Pippa Lowe, Joseph Noss and Laura Silvestri (2017), Simulating stress across the financial system: the resilience of corporate bond markets and the role of investment funds, Bank of England, Financial Stability Paper No. 42

[5] Michael Feroli, Anil K Kashyap, Kermit Schoenholtz and Hyun Song Shin, Market Tantrums and Monetary Policy, Chicago Booth Paper No. 14-09, Working Paper No. 101

[6] Matthijs Breugem and Adrian Buss (2017), Institutional investors and information acquisition: implications for asset prices and informational efficiency, NBER Working Paper 23561

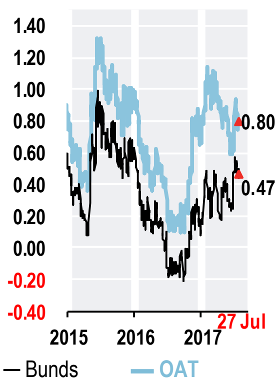
Markets overview

The essentials

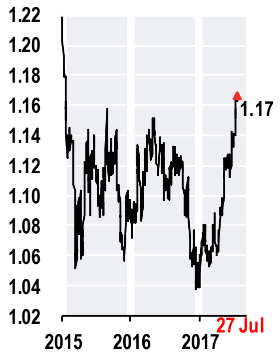
Week 21-7 17 > 27-7-17

↗ **CAC 40**	5 118	▸	**5 187**	**+1.4**	%
↗ **S&P 500**	2 473	▸	**2 475**	**+0.1**	%
↗ Volatility (VIX)	9.4	▸	10.1	+0.8	%
↗ **Euribor 3M (%)**	-0.33	▸	**-0.33**	**+0.2**	bp
↘ Libor $ 3M (%)	1.31	▸	1.31	-0.3	bp
↗ OAT 10y (%)	0.75	▸	0.80	+5.0	bp
↗ Bund 10y (%)	0.44	▸	0.47	+2.3	bp
↗ US Tr. 10y (%)	2.23	▸	2.31	+7.9	bp
↗ **Euro vs dollar**	1.17	▸	**1.17**	**+0.1**	%
↗ Gold (ounce, $)	1 252	▸	1 259	+0.6	%
↗ **Oil (Brent, $)**	48.7	▸	**51.3**	**+5.4**	%

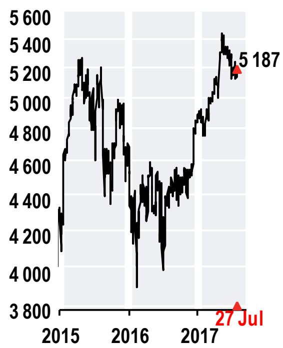
10 y bond yield, OAT vs Bund



Euro-dollar



CAC 40



Money & Bond Markets

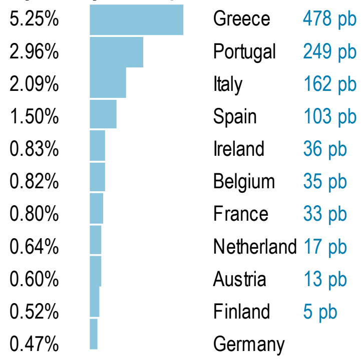
Interest Rates		highest' 17		lowest' 17	
€ ECB	**0.00**	0.00	at 02/01	0.00	at 02/01
Eonia	**-0.36**	-0.33	at 02/06	-0.37	at 05/06
Euribor 3M	**-0.33**	-0.32	at 02/01	-0.33	at 10/04
Euribor 12M	**-0.15**	-0.08	at 02/01	-0.16	at 23/06
$ FED	**1.25**	1.25	at 15/06	0.75	at 02/01
Libor 3M	**1.31**	1.32	at 25/07	1.00	at 02/01
Libor 12M	**1.73**	1.83	at 15/03	1.68	at 06/01
£ BoE	**0.25**	0.25	at 02/01	0.25	at 02/01
Libor 3M	**0.29**	0.37	at 05/01	0.29	at 27/07
Libor 12M	**0.63**	0.78	at 09/01	0.61	at 14/06

At 27-7-17

Yield (%)		highest' 17		lowest' 17	
€ AVG 5-7y	**0.36**	0.68	at 17/03	0.18	at 21/06
Bund 2y	**-0.71**	-0.60	at 27/06	-0.96	at 24/02
Bund 10y	**0.47**	0.57	at 06/07	0.09	at 02/01
OAT 10y	**0.80**	1.14	at 06/02	0.59	at 14/06
Corp. BBB	**1.32**	1.65	at 01/02	1.29	at 26/06
$ Treas. 2y	**1.37**	1.41	at 03/07	1.14	at 24/02
Treas. 10y	**2.31**	2.61	at 13/03	2.14	at 26/06
Corp. BBB	**3.48**	3.90	at 14/03	3.44	at 21/07
£ Treas. 2y	**0.20**	0.33	at 29/06	0.01	at 28/02
Treas. 10y	**1.25**	1.51	at 26/01	0.87	at 14/06

At 27-7-17

10y bond yield & spreads

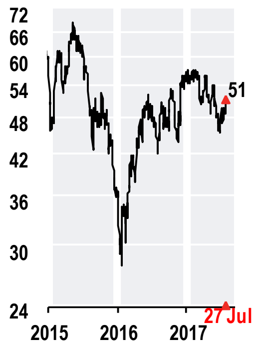


Commodities

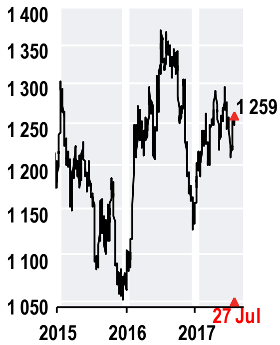
Spot price in dollars		lowest' 17			2017(€)
Oil, Brent	**51**	46	at	26/06	**-18.2%**
Gold (ounce)	**1 259**	1 156	at	03/01	**-1.6%**
Metals, LMEX	**2 975**	2 639	at	03/01	**+1.1%**
Copper (ton)	**6 298**	5 462	at	08/05	**+3.1%**
CRB Foods	**363**	325	at	24/04	**-3.1%**
w heat (ton)	**177**	146	at	24/04	**+9.5%**
Corn (ton)	**135**	130	at	23/03	**-7.7%**

At 27-7-17 *Variations*

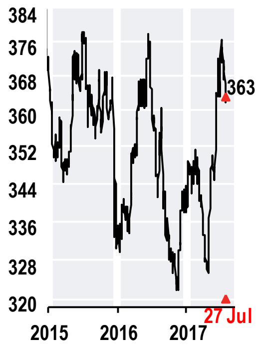
Oil (Brent, $)



Gold (Ounce, $)



CRB Foods



Exchange Rates

1€ =		highest' 17			lowest' 17			2017
USD	**1.17**	1.17	at	27/07	1.04	at	03/01	**+10.6%**
GBP	**0.89**	0.90	at	21/07	0.84	at	19/04	+4.4%
CHF	**1.12**	1.12	at	27/07	1.06	at	08/02	+4.8%
JPY	**130.20**	130.72	at	11/07	115.57	at	17/04	+5.8%
AUD	**1.46**	1.52	at	01/06	1.37	at	23/02	+0.5%
CNY	**7.86**	7.89	at	21/07	7.22	at	03/01	+7.2%
BRL	**3.68**	3.78	at	06/07	3.24	at	15/02	+7.3%
RUB	**69.29**	70.10	at	25/07	59.66	at	17/04	+7.6%
INR	**74.78**	75.08	at	25/07	68.18	at	07/04	+4.5%

At 27-7-17 *Variations*

Equity indices

	Index	highest' 17			lowest' 17			2017	2017(€)
CAC 40	**5 187**	5 432	at	05/05	4 749	at	31/01	+6.7%	**+6.7%**
S&P500	**2 475**	2 478	at	26/07	2 239	at	02/01	+10.6%	**-0.0%**
DAX	**12 212**	12 889	at	19/06	11 510	at	06/02	+6.4%	**+6.4%**
Nikkei	**20 080**	20 230	at	20/06	18 336	at	14/04	+5.0%	**-0.7%**
China*	**78**	78	at	27/07	59	at	02/01	+33.7%	**+20.2%**
India*	**570**	570	at	27/07	445	at	03/01	+20.6%	**+15.4%**
Brazil*	**1 849**	2 001	at	22/02	1 639	at	21/06	+7.3%	**+0.0%**
Russia*	**526**	622	at	03/01	497	at	22/06	-14.5%	**-21.0%**

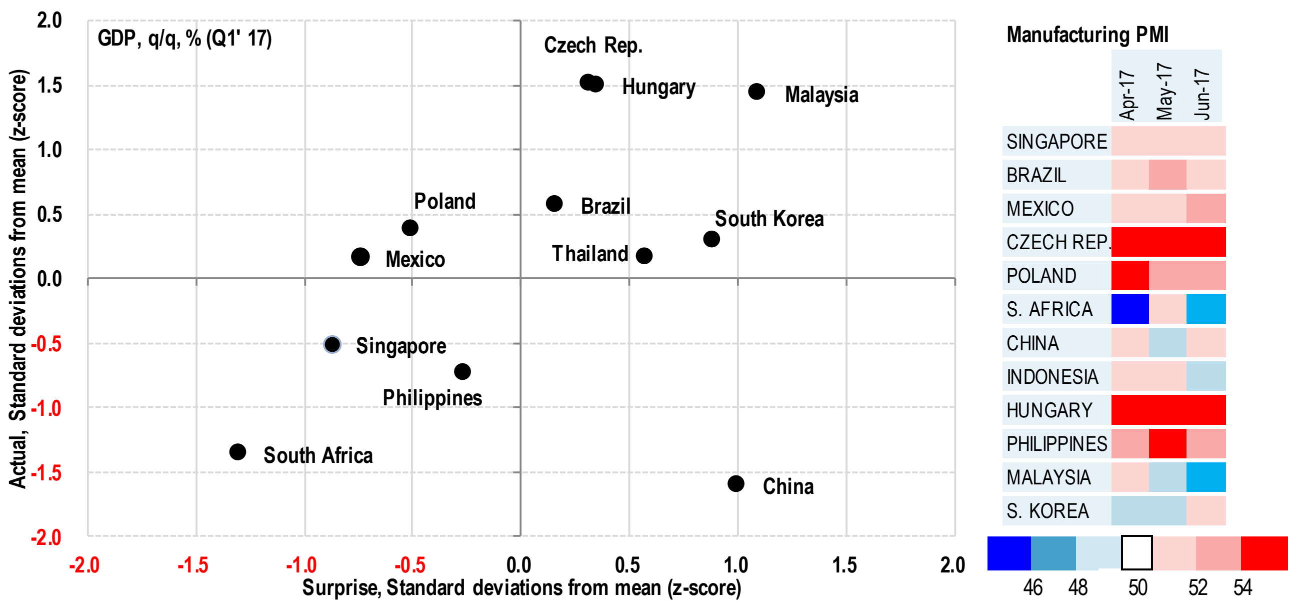
At 27-7-17 *Variations*

* MSCI index

Pulse

Emerging countries

Real GDP growth for Q1 2017 has surprised positively in slightly more than half of the countries. Growth in Eastern Europe is above the long term average whereas in Asia the picture is more varied. The Q2 PMI data, which are highly correlated with GDP growth, show an equally varied picture although only 3 countries out of 12 have a PMI below 50.



Note: z-score is a score which indicates how many standard deviations an observation is from the mean: z=(x-µ)/σ where x: observation, µ: mean, σ: standard deviation. On the X-axis, x corresponds at the last known surprise for each indictor represented on the graph, µ and σ corresponds respectively to the mean and the standard deviation of the last 24 value for monthly data and the last 8 quarters for quarterly data. On the Y-axis, x corresponds at the last known value of indicator, µ and σ corresponds respectively to the mean and the standard deviation for this indicator since 2000 (for China since 2011).

Sources: Bloomberg, Markit, BNP Paribas

Indicators preview

The beginning of August has the usual batch of important data in the US, in addition to the Eurozone GDP numbers and the Bank of England meeting. Eurozone inflation on 17 August will be important in setting expectations for the ECB meeting of 7 September.

To watch from July 28th to August 31st

Date	Country	Indicator	Frequency	Period	Prior	Survey
31 July 2017	Germany	Retail sales (real) % sa	m/m	June	5%	2%
	Germany	Unemployment rate %		July	5,7%	5,7%
	Eurozone	Unemployment rate %		June	9,3%	9,2%
01-Aug-2017	Germany	PMI		July	58,3	58,3
	Eurozone	GDP (flash) %	q/q		0,6%	0,6%
	United States	ISM manufacturing		July	57,8	56,5
03-Aug-2017	United Kingdom	BoE Rate Announcement %			0,25%	0,25%
	United States	ISM non-manufacturing		July	57,4	56,1
04-Aug-2017	United States	Unemployment rate %		July	4,4%	4,3%
	United States	Non-farm payrolls (chg) K		July	222k	190k
11-Aug-2017	United States	CPI %	m/m	July		
16-Aug-2017	Eurozone	GDP (prel) %	q/q			
	United States	FOMC Minutes				
17-Aug-2017	Eurozone	HICP %	m/m	July		
24-Aug-2017	United Kingdom	GDP (prel) %	q/q	Q2	0,3%	
25-Aug-2017	Germany	Ifo business climate		August	116	
30-Aug-2017	Eurozone	Economic sentiment		August		
31-Aug-2017	Eurozone	Unemployment rate %		July		

Economic scenario

UNITED STATES

- GDP growth keeps on a decent 2% pace and may have picked-up in Q2. However the fiscal outlook remains uncertain. A fiscal stimulus still is possible, but it would not be implemented before end-2017. Potential effects are thus uncertain.
- The labour market is buoyant than ever. Still, the support to households' disposable income is not as strong as it looks as wage inflation remains limited.
- With inflation relatively muted at this stage of the cycle, the Fed is in no rush to increase rates.. We forecast the Fed Funds target rates to come at 1.25/1.50% by year-end, 2/2.5% by mid 2018.

Annual growth, %	2016	2017 e	2018 e
GDP	**1.6**	**2.3**	**2.6**
Private consumption	2.7	2.8	2.8
Gross Fixed Capital Formation	-0.5	5.0	5.5
Exports	0.4	3.0	2.6
Consumer Price Index (CPI)	1.3	1.9	2.3
CPI ex food and energy	2.2	2.1	2.7
Unemployment rate	4.9	4.6	4.2
Current account balance	-2.6	-2.8	-3.1
Fed. Govt. Budget Balance (% of GDP)	-3.1	-2.9	-3.5
Gross Fed. Govt. Debt (% GDP)	75.9	76.2	76.8

CHINA

- After a period of stabilisation since Q2 2016, growth is expected to slow down moderately in the short term.
- Exports should continue to rebound and infrastructure projects will continue to drive investment. However the downside risks are high due to the reduction in industrial production capacity, risks of a downturn in the real estate market and greater financial instability, and slow growth of household revenues.
- The authorities are expected to maintain an expansionist fiscal policy, while the central bank continues to tighten monetary conditions very cautiously.

Annual growth, %	2016	2017 e	2018 e
GDP	**6.7**	**6.6**	**6.4**
Industrial output	6.0	6.5	6.0
Gross Fixed Capital Formation (nominal)	8.1	8.5	8.0
Exports (nominal)	-7.7	6.0	5.0
Consumer Price Index (CPI)	2.0	1.8	2.3
Producer Price Index (PPI)	6.0	6.5	6.0
Current account (% GDP)	1.8	1.4	1.1
Gen. Govt. Balance (% of GDP)	-3.8	-3.2	-3.0
Foreign reserves ($bn)	3 011	3 024	3 072

EUROZONE

- The recovery is getting stronger and broader: the dispersion of economic performances among member states is receding.
- Despite the cyclical recovery, core inflation still shows no sign of a convincing upward trend. For the recovery to enter its inflationary phase the economy has to improve further, until the point at which wages will tend to increase.
- The level of slack remains uncertain though. Broader measures of labor underutilization reach 18%, double the level of the current unemployment rate. The ECB is expected to remain cautious.

Annual growth, %	2016	2017 e	2018 e
GDP	**1.7**	**2.1**	**1.6**
Private consumption	1.9	1.5	1.4
Gross Fixed Capital Formation	3.5	1.9	2.6
Exports	2.9	4.5	3.9
Consumer Price Index (CPI)	0.2	1.5	1.3
CPI ex food and energy	0.9	1.1	1.4
Unemployment rate	10.0	9.3	8.8
Current account balance	3.3	3.6	3.5
Gen. Govt. Balance (% of GDP)	-1.5	-1.4	-1.3
Public Debt (% GDP)	91.3	90.3	89.0

FRANCE

- A clear growth acceleration is underway. Higher rates of growth should resume. Households' consumption is supported by the jobs recovery but restrained by the upturn in inflation. Investment and exports dynamics are favourable. Risks lie slightly on the upside.
- We expect the output gap to slowly narrow and the unemployment rate to progressively decline, containing the rise in inflation.
- Fiscal policy should continue to combine growth supportive measures and consolidation ones. The fiscal deficit should not be a lot more reduced but it should remain below the 3% threshold.

Annual growth, %	2016	2017 e	2018 e
GDP	**1.1**	**1.6**	**1.6**
Private consumption	1.8	1.4	1.6
Gross Fixed Capital Formation	2.7	2.4	3.1
Exports	1.2	2.9	3.7
Consumer Price Index (HCPI)	0.3	1.3	1.0
CPI ex food and energy	0.6	0.7	0.9
Unemployment rate	10.1	9.6	9.3
Current account balance	-0.9	-1.1	-0.9
Gen. Govt. Balance (% of GDP)	-3.4	-3.0	-2.8
Public Debt (% GDP)	96.3	96.3	96.2

Sources: BNP Paribas Group Economic Research, European Commission ;e: Estimates and forecasts

Economic forecasts

%	GDP Growth 2016	GDP Growth 2017 e	GDP Growth 2018 e	Inflation 2016	Inflation 2017 e	Inflation 2018 e
Advanced	**1.7**	**2.0**	**2.0**	**0.8**	**1.6**	**1.8**
United-States	1.6	2.3	2.6	1.3	1.9	2.3
Japan	1.0	1.2	1.0	-0.1	0.4	0.7
United-Kingdom	1.8	1.5	1.0	0.6	2.8	2.8
Euro Area	**1.7**	**2.1**	**1.6**	**0.2**	**1.5**	**1.3**
Germany	1.8	2.0	1.9	0.4	1.8	1.7
France	1.1	1.6	1.6	0.3	1.3	1.0
Italy	1.0	1.2	0.6	-0.1	1.6	1.2
Spain	3.2	2.8	2.2	-0.3	2.1	1.6
Emerging	**4.1**	**4.6**	**4.8**	**4.4**	**3.2**	**3.5**
China	6.7	6.6	6.4	2.0	1.8	2.3
India	7.1	7.5	7.9	4.5	4.6	4.9
Brazil	-3.6	0.5	3.0	8.8	3.6	4.0
Russia	-0.2	1.4	1.6	7.1	4.5	4.5
World	**3.1**	**3.6**	**3.6**	**2.8**	**2.5**	**2.8**

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

Financial forecasts

Interest rates

We are in the process of updating the interest rates forecasts.

Exchange Rates		2017				2018						
End of period		Q1	Q2	Q3e	Q4e	Q1e	Q2e	Q3e	Q4e	**2016**	**2017e**	**2018e**
USD	EUR / USD	1.07	1.14	1.15	1.13	1.15	1.17	1.19	1.20	1.05	1.13	1.20
	USD / JPY	111	112	115	118	120	118	116	114	117	118	114
	GBP / USD	1.25	1.30	1.31	1.26	1.29	1.31	1.37	1.41	1.24	1.26	1.41
	USD / CHF	1.00	0.96	0.97	0.99	0.97	0.96	0.94	0.96	1.02	0.99	0.96
EUR	EUR / GBP	0.86	0.88	0.88	0.90	0.89	0.89	0.87	0.85	0.85	0.90	0.85
	EUR / CHF	1.07	1.09	1.12	1.12	1.12	1.12	1.12	1.15	1.07	1.12	1.15
	EUR / JPY	119	128	132	133	138	138	138	137	123	133	137

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

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