

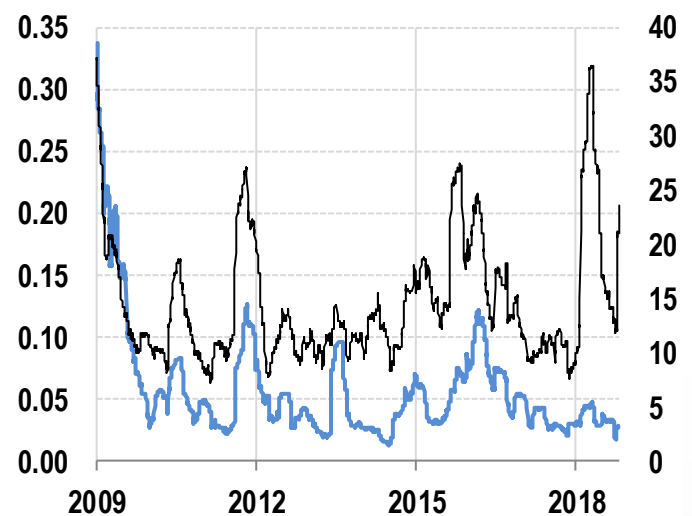
## What explains the increase in equity market volatility?

■ Equity markets continue to be particularly volatile ■ Understandably this has weighed on government bond yields ■ The volatility of high yield bonds remains low however. This could indicate that recent equity market swings are driven by other factors than worries about the outlook for GDP growth or monetary policy

In recent days equity markets have again witnessed big swings. The standard deviation of daily changes of the S&P500 over a 60 day moving window has jumped and although earlier this year the move was even more impressive, chart 1 shows that 2018 is the year of the comeback of volatility. Theoretically, the underlying causes are possibly concern about the interest rate outlook, about prospects for growth or simply fluctuations in the required risk premium. This last factor might reflect swings in uncertainty about economic fundamentals (economic or earnings growth, interest rates) or economic policy (protectionist fears), geopolitical developments, etc. The nature of the underlying source of volatility is not without importance: growth uncertainty may end up causing a growth slowdown whereas interest rate uncertainty might have a more limited impact on subsequent growth. In order to shed light on this, the chart also shows the volatility of the daily change of the US high yield bond index. A growth downturn causes an increase in defaults, so increased uncertainty about growth should see a pickup in high yield bond volatility. What about interest rate uncertainty? The corporate bond yield consists of a 'risk free' rate (the yield on treasury bonds) and a risk premium (the credit spread), so fluctuations in interest expectations should be reflected in increased high yield bond volatility, both via the volatility of the risk free component and the spread component (expectations of tighter policy can end up triggering concerns about a pickup in corporate defaults). Most of the time, equity volatility and high yield bond volatility are highly correlated which suggests they are driven by common factors (the growth and interest outlook, fluctuations in risk appetite). Early on this year, the increase in high yield bond volatility was limited considering the jump in equity volatility and the relationship between the two in previous years. The disconnect has been even more outspoken as of late. This could mean that 1) corporate bond investors are complacent, which begs the question why 2) that changes in the

### US: VOLATILITY OF EQUITIES AND HIGH YIELD BONDS

— US high yield standard deviation of daily change in yields (60 days moving window)  
— S&P500 standard deviation of daily change (60 days moving window) [RHS]



Sources: Thomson Reuters, BNP Paribas

outlook for interest rates and growth have not been the driving factor behind the equity market swings 3) that equity investors are far more jittery and, in comparison to high yield bond investors, tend to overreact to macro news or 4) that equity markets are driven by worries about individual company earnings rather than by macro developments.

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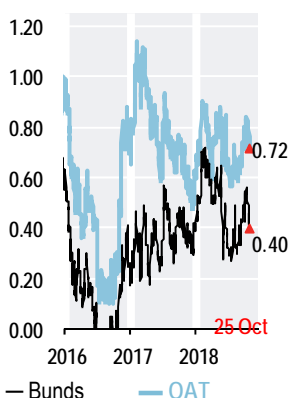
## Markets overview

## The essentials

Week 19-10-18 &gt; 25-10-18

↘ CAC 40	5 085	▶ 5 032	-1.0 %
↘ S&P 500	2 768	▶ 2 706	-2.2 %
↗ Volatility (VIX)	19.9	▶ 24.2	+4.3 pb
↗ Euribor 3M (%)	-0.32	▶ -0.32	+0.0 bp
↗ Libor \$ 3M (%)	2.48	▶ 2.51	+3.1 bp
↘ OAT 10y (%)	0.79	▶ 0.72	-7.7 bp
↘ Bund 10y (%)	0.43	▶ 0.40	-3.7 bp
↘ US Tr. 10y (%)	3.20	▶ 3.14	-6.6 bp
↘ Euro vs dollar	1.15	▶ 1.14	-1.0 %
↗ Gold (ounce, \$)	1 227	▶ 1 229	+0.2 %
↘ Oil (Brent, \$)	80.1	▶ 76.9	-3.9 %

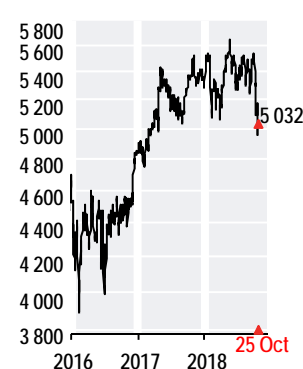
10y bond yield, OAT vs Bund



Euro-dollar



CAC 40



## Money &amp; Bond Markets

Interest Rates	highest' 18	lowest' 18
€ ECB	0.00 at 01/01	0.00 at 01/01
Eonia	-0.37 at 31/08	-0.37 at 18/05
Euribor 3M	-0.32 at 01/10	-0.33 at 01/01
Euribor 12M	-0.15 at 24/10	-0.19 at 19/02
\$ FED	2.25 at 27/09	1.50 at 01/01
Libor 3M	2.51 at 24/10	1.69 at 01/01
Libor 12M	3.04 at 24/10	2.11 at 01/01
£ BoE	0.75 at 02/08	0.50 at 01/01
Libor 3M	0.81 at 15/10	0.52 at 04/01
Libor 12M	1.06 at 10/10	0.76 at 03/01

At 25-10-18

Yield (%)	highest' 18	lowest' 18
€ AVG 5-7y	0.92 at 19/10	0.41 at 18/04
Bund 2y	-0.61 at 25/09	-0.79 at 29/05
Bund 10y	0.40 at 15/02	0.27 at 19/07
OAT 10y	0.72 at 08/02	0.57 at 13/07
Corp. BBB	1.80 at 25/10	1.17 at 08/01
\$ Treas. 2y	2.85 at 22/10	1.89 at 01/01
Treas. 10y	3.14 at 08/10	2.41 at 01/01
Corp. BBB	4.59 at 22/10	3.59 at 01/01
£ Treas. 2y	0.72 at 05/10	0.40 at 01/01
Treas. 10y	1.45 at 10/10	1.23 at 01/01

At 25-10-18

10y bond yield &amp; spreads

4.84%	Greece	444 pb
3.50%	Italy	309 pb
1.94%	Portugal	154 pb
1.61%	Spain	120 pb
0.81%	Belgium	41 pb
0.72%	France	31 pb
0.68%	Ireland	28 pb
0.67%	Finland	27 pb
0.64%	Austria	24 pb
0.53%	Netherlands	13 pb
0.40%	Germany	

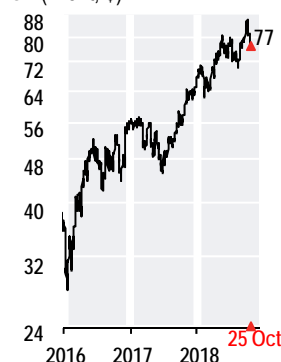
## Commodities

Spot price in dollars	lowest' 18	2018(€)
Oil, Brent	76.9 at 13/02	+21.9%
Gold (ounce)	1 179 at 17/08	-0.5%
Metals, LMEX	2 820 at 15/08	-8.5%
Copper (ton)	5 759 at 15/08	-8.4%
CRB Foods	316 at 30/08	+4.4%
wheat (ton)	155 at 16/01	+26.3%
Corn (ton)	115 at 18/09	+6.5%

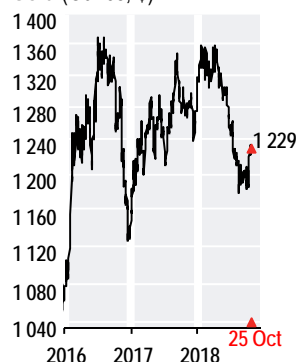
At 25-10-18

Variations

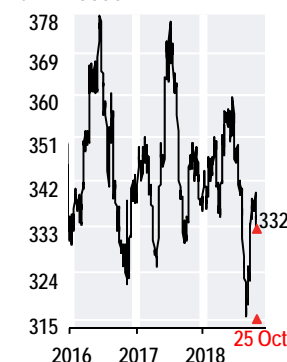
Oil (Brent, \$)



Gold (Ounce, \$)



CRB Foods



## Exchange Rates

1€ =	highest' 18	lowest' 18	2018
USD	1.25 at 25/01	1.13 at 15/08	-5.2%
GBP	0.91 at 28/08	0.86 at 17/04	+0.0%
CHF	1.20 at 19/04	1.12 at 07/09	-2.6%
JPY	128.07 at 02/02	124.96 at 15/08	-5.3%
AUD	1.61 at 11/09	1.53 at 09/01	+4.7%
CNY	7.91 at 25/09	7.42 at 29/05	+1.1%
BRL	4.21 at 14/09	3.87 at 08/01	+5.6%
RUB	74.71 at 10/09	68.06 at 09/01	+8.1%
INR	83.34 at 11/10	75.92 at 08/01	+8.7%

At 25-10-18

Variations

## Equity indices

Index	highest' 18	lowest' 18	2018	2018(€)
CAC 40	5 032 at 22/05	4 953 at 24/10	-5.3%	-5.3%
S&P500	2 706 at 20/09	2 581 at 08/02	+1.2%	+6.8%
DAX	11 307 at 23/01	11 192 at 24/10	-12.5%	-12.5%
Nikkei	21 269 at 02/10	20 618 at 23/03	-6.6%	-1.3%
China*	70 at 26/01	70 at 11/10	-20.8%	-16.7%
India*	492 at 29/01	491 at 23/10	-7.6%	-15.0%
Brazil*	1 969 at 26/01	1 561 at 11/09	+8.5%	+2.7%
Russia*	596 at 26/02	551 at 23/08	+10.5%	+4.0%

At 25-10-18

Variations

\* MSCI index



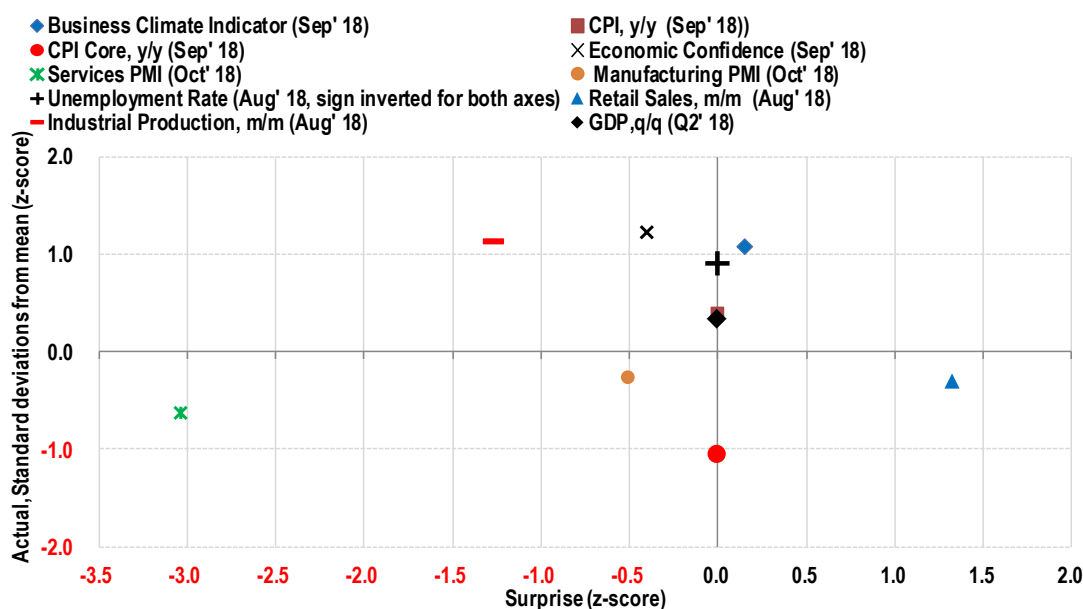
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## Pulse

## Eurozone: heading towards slower growth

Judging by recent macroeconomic indicators, beating consensus expectations is becoming increasingly challenging. Moreover, certain indicators are now close to or even below their long term average. These developments point towards a softer growth outlook. At yesterday's ECB press conference, Mario Draghi described this as a loss of momentum whereby growth normalises, coming from a pace which was well above the potential growth rate. The view that it's a normalisation and not a downturn is based on a combination of factors: income growth, corporate earnings growth, credit growth, low interest rates. Uncertainty has increased (Brexit, market volatility, Italy's budget) but to quote the ECB "risks remain balanced".



Note: z-score is a score which indicates how many standard deviations an observation is from the mean:  $z = (x - \mu) / \sigma$  where  $x$ : observation,  $\mu$ : mean,  $\sigma$ : standard deviation. On the X-axis,  $x$  corresponds at the last known surprise for each indicator represented on the graph,  $\mu$  and  $\sigma$  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,  $\mu$  and  $\sigma$  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 focus next week will be on the US labour market data on Friday but many other important data will be released as well: French and eurozone GDP for the third quarter, inflation in France and Germany, eurozone economic and consumer confidence. We will also have the ISM in the US and Markit PMI for the manufacturing sector in several countries. Finally there are monetary policy meetings at the Bank of England and the Bank of Japan.

Date	Country	Event	Period	Survey	Prior
10/29/18	United Kingdom	CBI Retailing Reported Sales	Oct	--	23
10/30/18	Japan	Jobless Rate	Sep	--	2.4%
10/30/18	France	GDP QoQ	3Q	--	0.2%
10/30/18	Eurozone	Economic Confidence	Oct	--	110.9
10/30/18	Eurozone	GDP SA QoQ	3Q	--	0.4%
10/30/18	Eurozone	Consumer Confidence	Oct	--	--
10/30/18	Germany	CPI EU Harmonized MoM	Oct	--	0.4%
10/30/18	United States	Conf. Board Consumer Confidence	Oct	135.0	138.4
10/31/18	United Kingdom	GfK Consumer Confidence	Oct	--	-9
10/31/18	Japan	Consumer Confidence Index	Oct	--	43.4
10/31/18	France	CPI EU Harmonized MoM	Oct	--	-0.2%
10/31/18	Eurozone	Unemployment Rate	Sep	--	8.1%
10/31/18	Japan	BOJ Policy Balance Rate	oct-31	--	-0.100%
11/1/18	United Kingdom	Bank of England Bank Rate	nov-01	--	0.750%
11/1/18	United Kingdom	Bank of England Inflation Report			
11/1/18	United States	ISM Manufacturing	Oct	59.0	59.8
11/2/18	France	Markit France Manufacturing PMI	Oct	--	--
11/2/18	Eurozone	Markit Eurozone Manufacturing PMI	Oct	--	--
11/2/18	United States	Change in Nonfarm Payrolls	Oct	--	134000
11/2/18	United States	Unemployment Rate	Oct	--	3.7%
11/2/18	United States	Durable Goods Orders	Sep	--	--

Sources : Bloomberg, BNP Paribas



## Scénario économique

### ETATS-UNIS

- La croissance américaine avoisinerait 2,8 % en 2018. Elle serait soutenue par les baisses d'impôts ainsi que par l'expansion du crédit. La retombée des indices du commerce mondial introduit, néanmoins, un risque baissier sur la prévision.
- L'inflation accélère (elle devrait temporairement dépasser 3%) dans le sillage de la hausse des prix du pétrole et du fait de tensions salariales un peu plus marquées.
- Les taux de la « Fed » remontent, à 2,75% au T1 2019.

### CHINE

- La croissance économique va ralentir en 2018-2019. Les perspectives d'exportations sont fortement assombries par la mise en place des mesures protectionnistes américaines. Les difficultés du secteur manufacturier exportateur et le moindre dynamisme du marché immobilier devraient peser sur la demande interne.
- Afin de contenir le ralentissement, la banque centrale a commencé à assouplir ses conditions de crédit et de liquidité, mais la réduction des risques d'instabilité financière devrait néanmoins rester une priorité. La politique budgétaire sera aussi expansionniste et les dépenses en infrastructures augmenter.

### ZONE EURO

- La croissance, moins rapide que prévu en début d'année, resterait voisine de 2,0% en 2018 essentiellement grâce au soutien de la demande intérieure privée (consommation et investissement).
- Si l'inflation rebondit (2% en août) c'est essentiellement du fait du renchérissement du pétrole. Hors énergie et alimentation, elle reste assez inerte (proche de 1%). La BCE devrait, ainsi, rester très accommodante (prolongation des achats jusqu'en décembre, pas de hausse du taux Refi avant 2020).

### FRANCE

- La croissance ralentit mais reste supérieure à la croissance potentielle. La consommation des ménages devrait être soutenue par les baisses d'impôts à venir et la hausse de l'emploi mais les gains de pouvoir d'achat sont réduits par l'inflation. L'investissement des entreprises reste dans une dynamique favorable, l'environnement extérieur est moins porteur. Un redressement mesuré de l'inflation sous-jacente se dessine mais reste à confirmer.

### TAUX & CHANGES

- Aux Etats-Unis, la forte croissance du PIB et le taux de chômage très bas ouvrent la voie à des remontées de taux (nous en attendons une de plus en 2018 et une autre au T1 2019) puis la Fed devrait attendre de voir les effets sur l'économie. Ainsi, les rendements des bons du Trésor devraient augmenter mais de façon modérée car les marchés estiment que le resserrement est bien engagé. La BCE a annoncé la fin de son programme d'assouplissement quantitatif fin 2018, avec une première remontée du taux de dépôt après l'été 2019; les rendements obligataires devraient donc augmenter. Au Japon, la politique monétaire devrait rester inchangée.
- La réduction de l'écart entre les rendements US et ceux de la zone euro renforcerait l'euro, d'autant plus qu'il reste inférieur à sa valeur intrinsèque de long terme (environ 1,34).

### SYNTHESE

%	Croissance du PIB			Inflation		
	2017	2018 e	2019 e	2017	2018 e	2019 e
<b>Avancés</b>	<b>2.2</b>	<b>2.2</b>	<b>1.5</b>	<b>1.8</b>	<b>2.1</b>	<b>1.9</b>
États-Unis	2.2	2.8	1.8	2.1	2.5	2.1
Japon	1.7	0.9	0.6	0.5	1.0	1.0
Royaume-Uni	1.7	1.3	1.6	2.7	2.4	2.1
<b>Zone euro</b>	<b>2.5</b>	<b>2.0</b>	<b>1.5</b>	<b>1.5</b>	<b>1.9</b>	<b>1.9</b>
Allemagne	2.5	1.9	1.6	1.7	1.9	2.1
France	2.3	1.7	1.6	1.2	2.1	1.6
Italie	1.6	1.2	1.0	1.3	1.5	1.9
Espagne	3.0	2.7	2.0	2.0	1.8	1.8
<b>Emergents</b>	<b>5.9</b>	<b>5.8</b>	<b>5.8</b>	<b>2.4</b>	<b>2.9</b>	<b>2.9</b>
Chine	6.9	6.4	6.1	1.6	2.1	1.9
Inde	6.7	7.4	7.6	3.6	4.8	4.6
Brésil	1.0	1.5	3.0	3.4	3.7	3.7
Russie	1.5	1.7	1.7	3.7	2.7	4.1

Source : BNPP Group Economic Research (e: Estimations, prévisions)

### TAUX D'INTERET & TAUX DE CHANGE

Taux d'intérêt, %		2018	2019							
Fin de période		T4e	T1e	T2e	T3e	T4e	2017	2018e	2019e	
<b>E-Unis</b>	Fed Funds	2.50	2.75	2.75	2.75	2.75	1.50	2.50	2.75	
	Libor 3m \$	2.36	2.80	2.85	2.65	2.55	1.69	2.36	2.55	
	Treas. 10a	3.10	3.15	3.20	3.10	3.00	2.41	3.10	3.00	
<b>Z. euro</b>	Refi BCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Euribor 3M	-0.30	-0.30	-0.25	-0.20	-0.15	-0.33	-0.30	-0.15	
	Bund 10a	0.75	0.85	1.00	1.10	1.20	0.42	0.75	1.20	
	OAT 10a	1.00	1.10	1.25	1.35	1.45	0.66	1.00	1.45	
<b>R-Uni</b>	Taux BoE	0.75	0.75	1.00	1.00	1.25	0.50	0.75	1.25	
	Gilt 10a	1.55	1.70	1.80	1.90	2.00	1.23	1.55	2.00	
<b>Japon</b>	Taux BoJ	-0.10	-0.10	-0.10	-0.10	-0.10	-0.04	-0.10	-0.10	
	JGB 10a	0.14	0.12	0.10	0.04	0.02	0.05	0.14	0.02	

Taux de change		2019							
Fin de période		T4e	T1e	T2e	T3e	T4e	2017	2018e	2019e
USD	EUR / USD	1.20	1.22	1.25	1.28	1.30	1.20	1.20	1.30
	USD / JPY	106	102	100	99	98	113	106	98
	GBP / USD	1.30	1.34	1.40	1.45	1.49	1.35	1.30	1.49
	USD / CHF	0.97	0.97	0.96	0.95	0.94	0.97	0.97	0.94
EUR	EUR / GBP	0.92	0.91	0.89	0.88	0.87	0.89	0.92	0.87
	EUR / CHF	1.16	1.18	1.20	1.22	1.22	1.17	1.16	1.22
	EUR / JPY	127	124	125	127	127	135	127	127

Source : BNP Paribas Group Economic Research / GlobalMarkets



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