Market outlook: Fiscal launch

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BNP PARIBAS

The bank for a changing world

Expect the unexpected

Donald Trump's presidency could have far-reaching global effects. The next two years are unlikely to be boring.

Fed likely to hike six times by end-2018

Rate hikes by the Federal Reserve should push the 10-year US Treasury yield to 3.0% by the end of 2017 and to 3.5% by the end of 2018.

Higher Yields and Steeper curves

But divergence in monetary policies will drive EU-US yield spread.

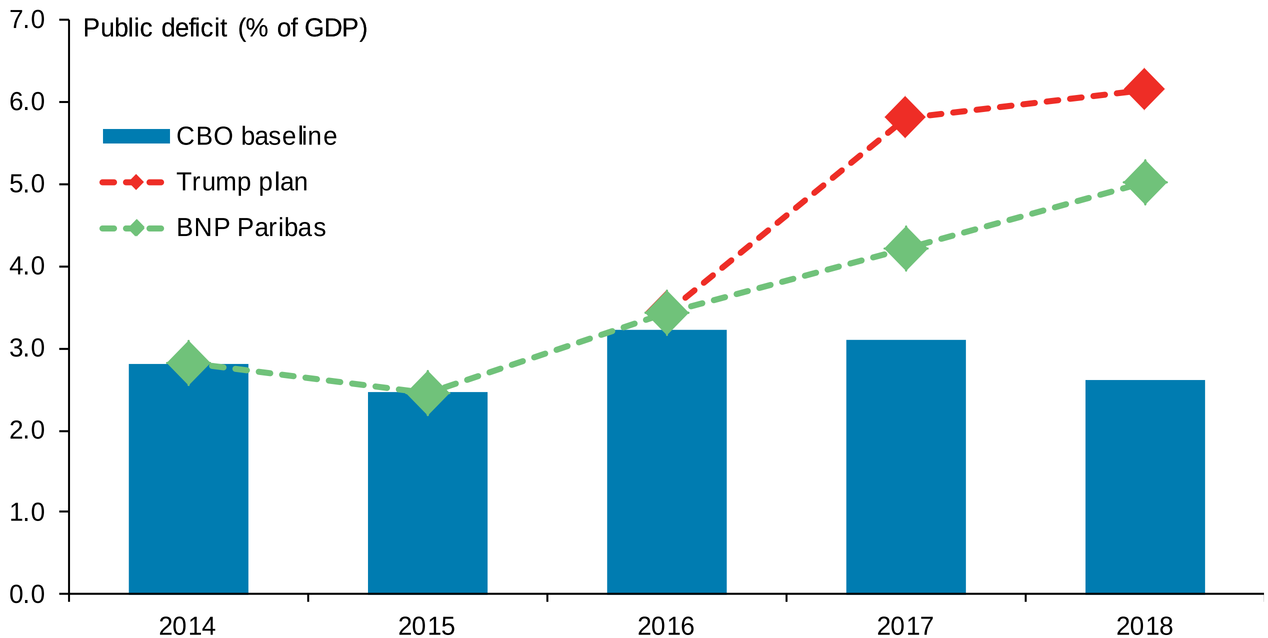
Eurozone growth more resilient

While growth is likely to remain above potential and HICP inflation is rising,
spare capacity still exists in the economy, which will keep core inflation low.

UK to begin Brexit negotiations

The UK is likely to trigger Article 50 in 2017, kick-starting Brexit negotiations. Higher inflation and uncertainty should weigh on growth in 2017.

US: PROSPECTIVE TRUMP FISCAL DEFICITS



Source: CRFB, Tax Policy Center, CBO, BNP Paribas

- Donald Trump has proposed across-the-board individual and corporate tax cuts as well as an increase in public spending
- If fully implemented, his plan would increase the deficit by c. 3.5% of GDP over the next decade relative to the CBO's baseline
- But the supply-side response could reduce this
- Question marks:
  - size of infrastructure spending increase
  - timing of fiscal policy measures
  - fiscal policy multipliers
  - what about existing trade agreements

Tax cuts and higher spending

TRUMP'S VICTORY: IMPLICATIONS FOR EUROPE

- The impact on the eurozone economy is not clear cut
- The potential positive spillovers from stronger US growth could be offset by the impact on
  - global trade from protectionism
  - emerging markets (which are important trading partners)
- A less interventionist foreign policy from the US might be seen as weakening Europe amid already high political uncertainty. However, it could also trigger new initiatives

Comments by V. Constancio (ECB) n 14 November 2016

"The markets' perception that the **U.S**. is embarking into a new phase of **expansionary budgetary policy has lifted optimism**, with visible effect in financial markets last week.

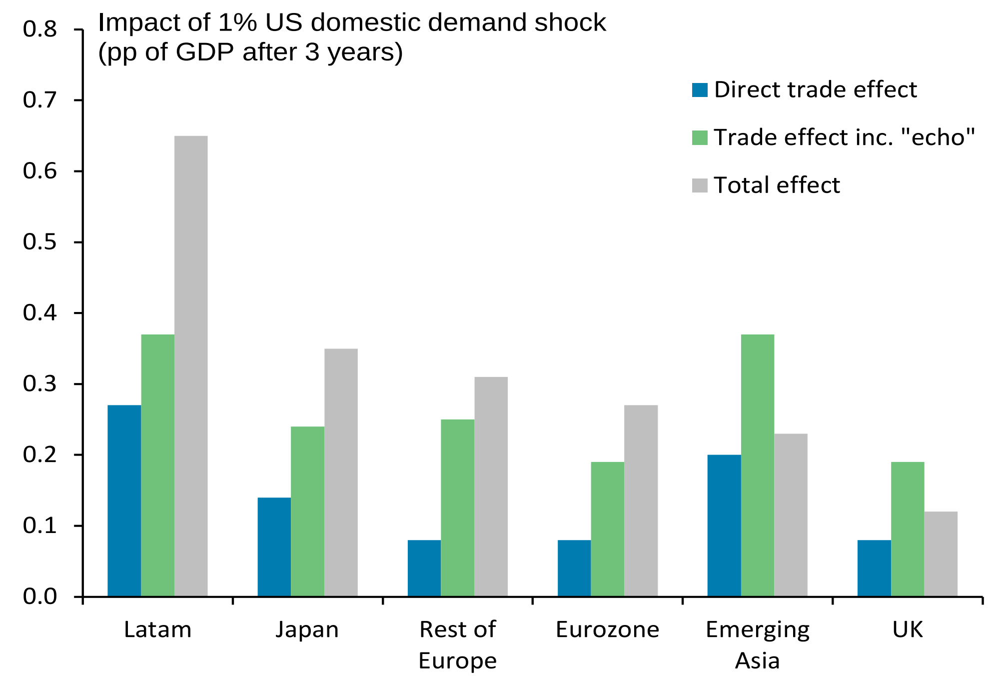
"We **should be cautious in drawing hasty, positive conclusions from those market developments** because they may not necessarily indicate that the world economy will have an accelerating recovery with higher growth".

Factors which could mitigate or even more than offset the positive impact of US fiscal stimulus

- The **possibility of rising protectionism**
- The negative impact on **emerging market economies**, with the "significant capital outflows and exchange rate depreciations already underway" having the potential to "hinder future growth"
- "**Europe's internal problems** "

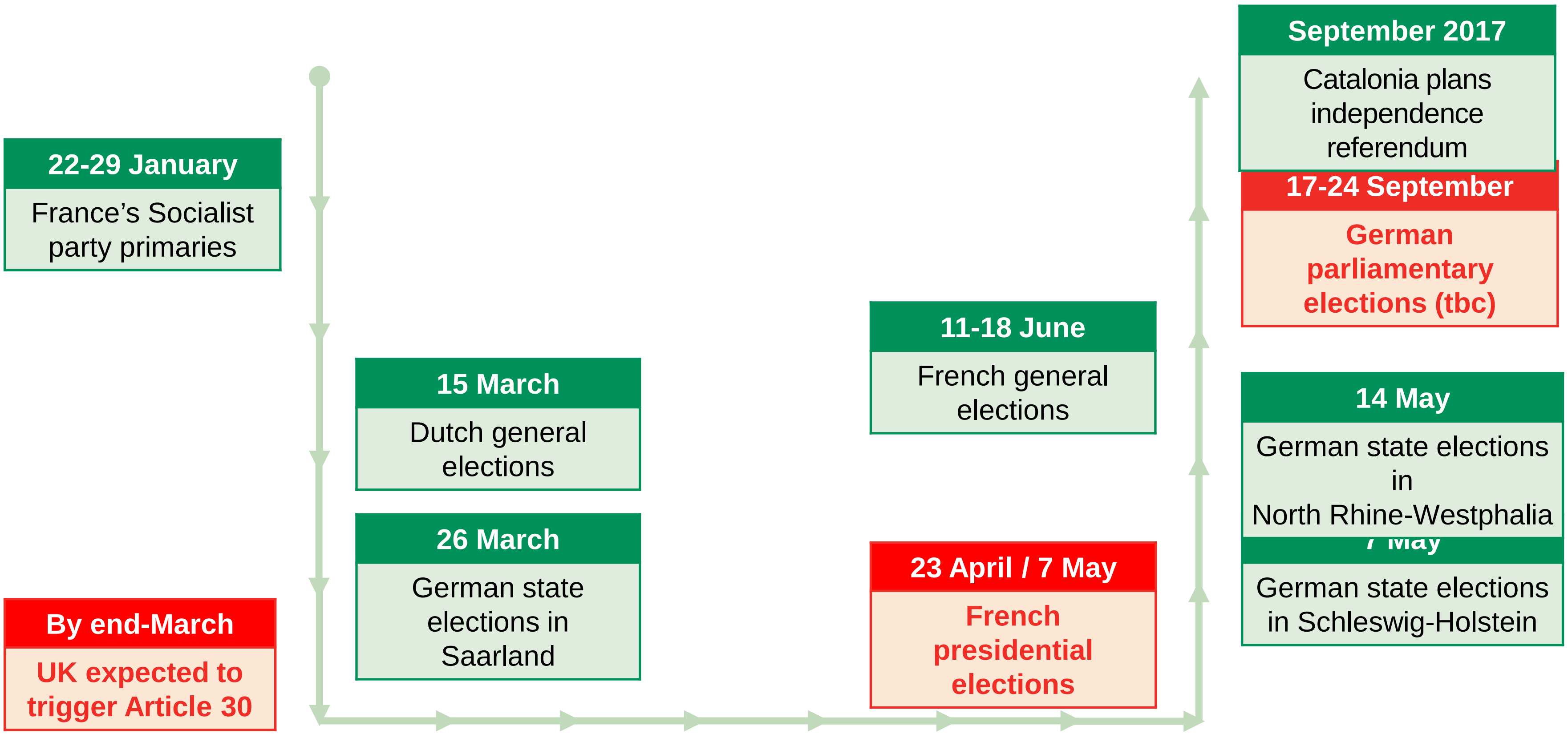
Source: ECB website

ECB estimates of US impact



- A 1% US demand shock would boost eurozone GDP by around 0.3% on average…
- … of which only 0.1pp comes from direct trade links, while 0.2pp comes from the trade "echo" effect
- Positive shocks transmit more slowly (2-10 quarters) than negative shocks (1-3 quarters)
- We see risks of a subdued "echo" effect of Trump stimulus

Eurozone: Political roadmap



Source: BNP Paribas

Hurdle after hurdle

BNP Paribas economic forecasts

Economic forecasts (% y/y)

				2017			
	2016	**2017**	**2018**	**Q1[1]**	**Q2[1]**	**Q3[1]**	**Q4[1]**
US							
GDP	1.6	2.4	2.8	2.3	2.5	2.3	2.4
CPI	1.3	2.4	2.5	2.4	2.3	2.5	2.4
Core CPI	2.2	2.2	2.6	2.1	2.2	2.2	2.3
Eurozone							
GDP	1.7	1.5	1.5	1.6	1.6	1.5	1.3
HICP	0.2	1.6	1.2	1.6	1.5	1.7	1.7
Core HICP	0.9	1.0	1.2	0.8	0.9	1.0	1.2
Germany							
GDP	1.8	1.8	1.9	1.8	1.7	1.9	1.8
HICP	0.4	2.0	1.4	2.1	2.0	2.1	2.0
France							
GDP	1.1	1.3	1.5	1.0	1.4	1.4	1.3
HICP	0.3	1.0	0.9	1.1	0.9	0.9	1.1
Italy							
GDP	0.9	0.6	0.7	0.7	0.8	0.6	0.5
HICP	-0.1	1.1	0.9	0.9	1.2	1.2	1.1
Spain							
GDP	3.3	2.4	2.0	2.9	2.5	2.2	1.9
HICP	-0.3	2.2	1.4	2.4	2.3	2.2	1.9
UK							
GDP	2.1	1.1	1.6	1.8	1.2	0.8	0.7
CPI	0.6	2.8	2.6	2.3	2.8	2.9	3.1
Core CPI	1.3	2.5	2.6	1.9	2.4	2.7	2.8

Footnotes: (1) forecast

Source: BNP Paribas (Market Economics)

US

- Full implementation of Mr Trump's measures would boost demand at a time when the economy is close to full employment
- Wages are likely to pick up during 2017 and especially in 2018, pushing up unit labour costs and domestic prices
- We see two rate hikes in 2017 and four in 2018, in addition to the December 2016 move, taking rates to 2.00-2.25%

Eurozone

- Stronger than expected end 2016. Spillovers from abroad contributed to eurozone growth accelerating in Q4 2016
- Growth should continue to be about 0.5pp above potential this year and next
- QE impact fading with the EUR effective exchange rate having had appreciated by nearly 10% since April 2015
- Higher inflation will imply a squeeze on real incomes and, potentially, spending

Overview 2017: G10 rates climbing out of the trough

Yields rising everywhere in 2017 – and beyond. We expect G10 rate levels to rise, led by the US, due to (1) improved economic fundamentals; (2) reductions in monetary accommodation; (3) meagre valuations; and (4) increasing fiscal stimulus and net supply.

US: what hasn't troughed? It's now clear that in the US real GDP, CPI, wages and employment all troughed during 2016 (or previously), returning the US economy to trend growth, near-target core inflation and near-full employment. On top of which, the new administration plans to add fiscal stimulus to the mix. In this context, monetary policy increasingly appears excessively stimulative, and term premium generally too low. We expect yields to rise across the curve. And, given the uncertain interaction between Fed policy and term premium, we see an outright short in US as a better-quality position than a curve trade.

Elsewhere: similar, but slower. Outside the US, growth, inflation and employment are all moving the right way too (with a bit of help from the stronger dollar), but more slowly. As a result, policy accommodation will not be withdrawn – in the euro area and Japan negative rates and QE will continue, and rates will be unchanged in the UK and Australia – but the outlook for monetary accommodation has shifted from 'more is coming' to 'less is coming': and fiscal stimulus and net supply will increase. We expect, with policy rates still locked down, that yield curves outside the US will steepen. Given what's priced into the forwards, the execution of this view needs care: 10s30s looks more promising in the euro area and Japan; 2s10s looks best in the UK and Australia.

Why aren't yields already higher? By pre-financial crisis standards, yields still look much too low given the prevailing and prospective fundamentals. Why? Perhaps the situation reflects a broad supply and demand imbalance, the result of a global savings glut on the one hand (intensified by regulation) and the cumulative effect of quantitative easing (QE) programmes on the other: term premia certainly remain unusually low. Perhaps it is the continuing fear of deflation risk: breakeven inflation remains below levels prevailing before the financial crisis. Or perhaps it is QE, which still continues in the euro area, the UK and Japan, suppressing real yields around the world. To the extent that any of these is valid, it's worth noting that they will all weaken during 2017: globally, government issuance will rise and central bank buying will fall during 2017. The near-term risk to inflation appears likely to be more on the upside than the downside. So it is our central case is that yields will indeed rise during 2017 as issuance gradually comes into the market – with January, of course, being one of the largest supply months of the year.

Risks. The greatest risk to our 2017 forecast comes, we believe, not from economic fundamentals but from event risk: uncertainties around elections in Europe and the policies of the incoming US administration abound. We are conscious that where our 2016 forecasts were most wrong was in the UK (see below). But unless there is an unexpected political event of sufficient magnitude to derail the economic fundamentals, we expect that G10 rates will continue to rise.

Euro area rates: Facing headwinds

We expect yields at the long end of the bond curve to rise in 2017 due to upward pressure from a rise in US yields and rising concern about ECB tapering in 2018.

The resumption of European government bond supply in January – with supply of nearly EUR 100bn for the busiest month of the year in supply terms – together with higher than expected inflation numbers haven led to a resumption of the bear market.

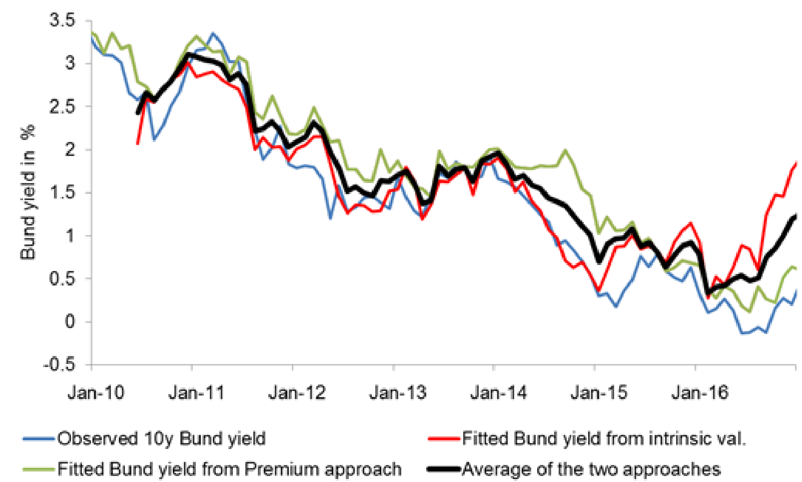
From a quantitative standpoint, despite the recent sell-off, current level of 10y Bund remains below our fitted values.

Finally, with the ECB cutting its monthly QE purchases from EUR 80bn to EUR 60bn from April and removing the deposit rate constraint, lower purchases at the long end of core curves should lead to selling pressure on long-dated maturities.

The euro economy is following the US recovery with a lag; with US yields rising, euro-sovereign yields *should* be rising too, especially as euro-QE has pulled the spread to post-EMU lows (chart opposite). Where the ECB owns fewer of the outstanding bonds, euro-yields are slowly catching up with the US (eg FR & IT). The distortion is where the ECB owns more of the outstandings (eg GE, NL, SP). So, rising euro-yields can be benign.

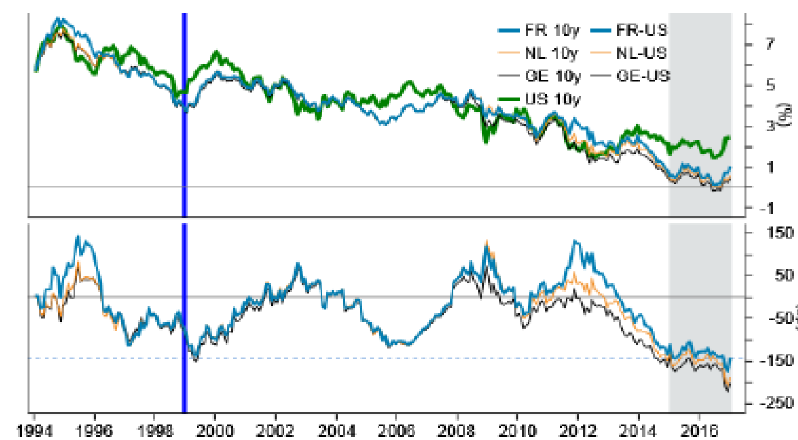
Curve to steepen. We expect the removal of the depo floor constraint to allow a further fall in the average maturity of QE purchases. In addition, the ECB's TLTROs offer protection to the curve up to the 4y area. The ECB's final operation in March should attract strong demand, potentially up to EUR 300bn. Hedges will reinforce receiving interest in 4y swaps.

Our models' fitted values for 10y Bund yield have risen



Source: BNP Paribas

Euro yields following US yields – as usual

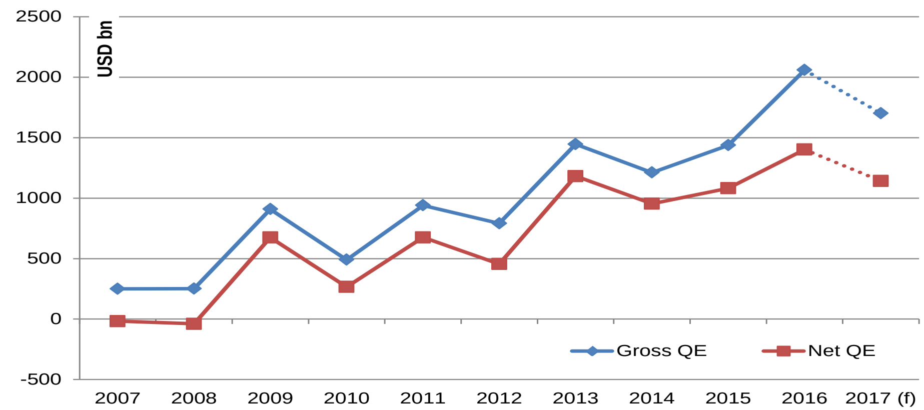


Source: BNP Paribas

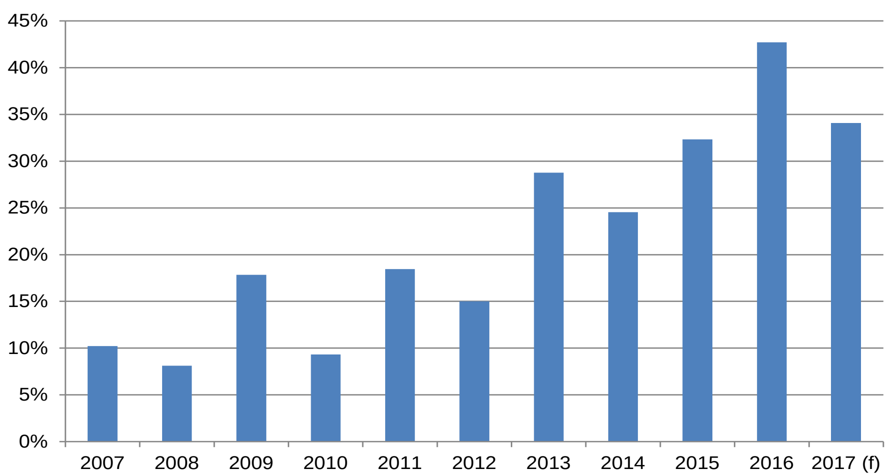
Global Govvies supply: less support from Central Banks

- We expect global supply/demand conditions to be less supportive for govvies in 2017.
- Gross supply will increase substantially, driven by the US.
- Purchases from QE will decline from 2016 (smaller QE in EUR, no more QE in UK).

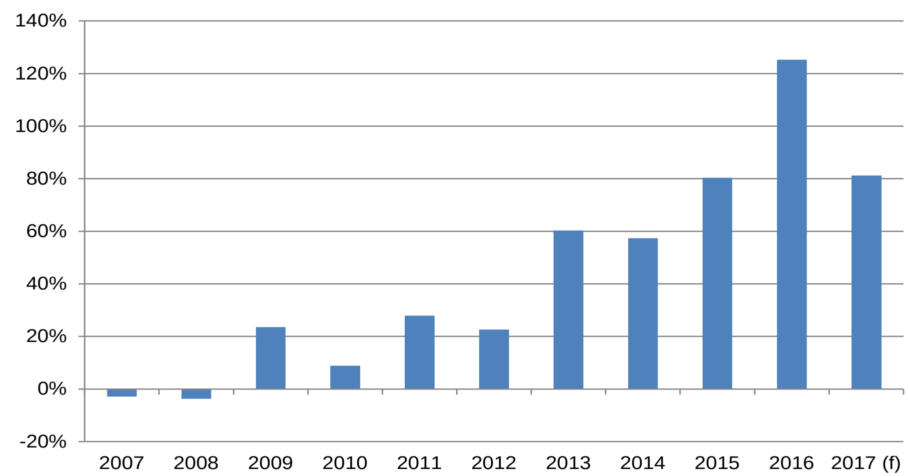
Gross and net QE purchases across all major areas



Total gross QE/Gross supply



Total net QE/net supply



Sources: BNP Paribas

Less Negative Net supply = Higher Real Interest Rates

Euro area government bonds supply

We expect a 2.4% rise in EGB gross issuance in 2017 (equal to EUR 20bn). This is mostly due to a EUR 21bn increase in redemptions compared with 2016.

Net issuance should remain almost unchanged at EUR 200bn in 2017 (EUR 201bn in 2016).

Ireland, the Netherlands & Finland face the largest increases in gross issuance in 2017.

Germany should face the largest increase in net issuance (EUR 27bn more than in 2016).

PSPP purchases of government bonds are expected to drop by 15% in 2017, as the ECB will scale down the size of its purchases from Q2 2017 to EUR 60bn from EUR 80bn. As a result, PSPP purchases will be equivalent to 58% of 2017 expected gross issuance, versus 70% in 2016.

Net supply net of PSPP purchases will remain a very large negative amount in 2017, at EUR -297bn, although this is a smaller negative amount than 2016's EUR -383bn.

In addition, net issuance net of PSPP purchases will remain negative in all countries, with Germany the stand out (as it was in 2016), with the largest negative amount of EUR -91bn.

BNP Paribas 2017 supply forecasts & comparison vs 2016

	2017 Forecasts			2017 vs 2016		2016 Realized		
Gross & Net Issuance in EUR bn	Redemptions	Gross Issuance	Net Issuance	Gross Issuance (% change)	Net Issuance (EUR change)	Redemptions	Gross Issuance	Net Issuance
Germany	142.0	160	18.0	0.3%	27.0	168.5	160	-9.0
France	115.2	185	69.8	-1.1%	7.8	125.0	187	62.0
Italy	210.9	260	49.1	4.3%	-24.6	175.7	249	73.7
Spain	83.8	125	41.2	4.2%	1.3	80.1	120	39.9
Belgium	28.2	35	6.8	-7.0%	-5.0	25.9	38	11.8
Netherlands	35.4	33	-2.4	26.0%	-0.4	28.1	26	-1.9
Austria	17.9	21	3.1	-7.9%	-8.1	11.6	23	11.2
Finland	11.0	13	2.0	13.0%	-3.0	6.5	12	5.0
Ireland	6.3	11	4.7	31.0%	4.4	8.1	8	0.3
Portugal	6.8	14	7.2	-4.1%	-0.6	6.8	15	7.8
Total	657.5	857	200	2.4%	-1.2	636.3	837	201

*For France all figures are net of buybacks

BNP Paribas 2017 PSPP purchases vs gross & net supply estimates

	2017 Forecasts			2017 vs 2016		2016 Realized		
PSPP vs Gross & Net Issuance	PSPP purchases	PSPP / Gross Issuance (%)	Net Issuance net of PSPP (EURbn)	Gross Issuance net of PSPP (EUR change)	Net Issuance net of PSPP (EUR change)	PSPP purchases	PSPP / Gross Issuance (%)	Net Issuance net of PSPP (EURbn)
Germany	108.7	68%	-90.7	19.0	45.5	127.2	80%	-136.2
France	110.4	60%	-40.6	16.8	26.6	129.2	69%	-67.2
Italy	108.5	42%	-59.4	29.1	-6.1	127.0	51%	-53.3
Spain	73.5	59%	-32.3	17.5	13.8	86.0	72%	-46.1
Belgium	22.0	63%	-15.2	1.1	-1.2	25.7	68%	-13.9
Netherlands	29.0	88%	-31.4	11.7	4.5	34.0	130%	-35.9
Austria	15.3	73%	-12.2	0.7	-5.6	17.9	78%	-6.6
Finland	10.4	80%	-8.4	3.3	-1.2	12.2	106%	-7.2
Ireland	9.8	89%	-5.1	4.3	6.1	11.4	136%	-11.1
Portugal	9.2	66%	-2.0	2.9	2.9	12.7	87%	-4.9
Total	496.9	58%	-297	106.3	85.1	583.4	70%	-383

*For France all figures are net of buybacks

Source: BNP Paribas

Other Supply: Covered Bonds issuance to remain stable in 2017

- EUR Covered: expect stable supply
  - Distorted market: ECB has c.€200bn of covered bonds vs. c.€800bn market (25%)
  - We expect similar level of supply in 2017 compared to 2016 (2016: €115bn)
  - Heavy supply in January (€24bn) with big size deal (€1-2bn)/dual tranches which was well absorbed by the market. Supply to be more quiet in Q1.
- EUR SSA on the rise
  - SSA supply is expected to increase close to EUR 400bn this year versus EUR 371bn in 2016
  - This is mainly due to the rise in EFSF plans to issue EUR 40bn, up from 14bn in 2016.
  - Other Agencies (EU, ESM Cades) should see their supply down this year compared to 2016
  - No significant changes for most other issuers
- European Banks Supply: the year of MREL
  - Model for MREL will be Non-Preferred Senior (NPS), except UK, Switzerland, Germany
  - We expect €325bn of issuance in 2017, vs. €320bn YTD in 2016
- Corporate supply on a downward trend
  - Profit repatriation in the US has potential to reduce supply in the USD market
  - Expected lower reverse yankee supply in the EUR market as $ market remains more competitive for $ funders
- Flat ABS Supply
  - Assuming unchanged retained volume for 2017, ABS supply is expected to amount EUR 220bn (EUR 80-85bn placed and EUR 140bn retained), flat from 2016.

Source: BNP Paribas, Dealogic

BNP Paribas G10 rate forecasts

Rates	Spot	Jun-17 BNPP forecast	Jun-17 Forecast vs spot	Jun-17 Market-implied forward	Jun-17 Forecast vs forward	Dec-17 BNPP forecast	Dec-17 Forecast vs spot	Dec-17 Market-implied forward	Dec-17 Forecast vs forward	Dec-18 BNPP forecast	Dec-18 Forecast vs spot	Dec-18 Market-implied forward	Dec-18 Forecast vs forward
US													
Fed Funds Target	0.66	**0.50-0.75**				**1.00-1.25**				**2.00-2.25**			
2y	1.19	**1.60**	+41	1.51	**+9**	**1.90**	+71	1.82	**+8**	**2.50**	+131	2.43	**+7**
5y	1.94	**2.25**	+31	2.20	**+5**	**2.50**	+56	2.41	**+9**	**3.00**	+106	2.75	**+25**
10y	2.46	**2.75**	+29	2.58	**+17**	**3.00**	+54	2.69	**+31**	**3.50**	+104	2.86	**+64**
30y	3.06	**3.40**	+34	3.14	**+26**	**3.55**	+49	3.20	**+35**	**4.00**	+94	3.31	**+69**
GER													
EONIA	-0.35	**-0.35**				**-0.35**				**-0.35**			
2y	-0.78	**-0.60**	+18	-0.90	**+30**	**-0.60**	+18	-0.95	**+35**	**0.00**	+78	-0.90	**+90**
5y	-0.52	**-0.20**	+32	-0.40	**+20**	**-0.10**	+42	-0.31	**+21**	**0.60**	+112	-0.10	**+70**
10y	0.27	**0.50**	+23	0.43	**+7**	**0.70**	+43	0.52	**+18**	**1.20**	+93	0.68	**+52**
30y	1.05	**1.20**	+15	1.09	**+11**	**1.40**	+35	1.13	**+27**	**1.70**	+65	1.21	**+49**
JGB													
Call rate	-0.05	**-0.10**				**-0.10**				**-0.10**			
2y	-0.20	**-0.10**	+10	-0.20	**+10**	**-0.05**	+15	-0.20	**+15**	**-0.05**	+15	-0.17	**+12**
5y	-0.11	**-0.05**	+6	-0.09	**+4**	**0.00**	+11	-0.08	**+8**	**0.00**	+11	-0.03	**+3**
10y	0.05	**0.05**	-0	0.08	**-3**	**0.15**	+10	0.10	**+5**	**0.15**	+10	0.17	**-2**
30y	0.75	**0.65**	-10	0.76	**-11**	**0.85**	+10	0.77	**+8**	**0.95**	+20	0.80	**+15**
UK													
Bank Rate	0.25	**0.25**				**0.25**				**0.25**			
SONIA	0.21	**0.21**				**0.21**				**0.21**			
2y	0.14	**0.20**	+6	0.18	**+2**	**0.20**	+6	0.31	**-11**	**0.40**	+26	0.69	**-29**
5y	0.55	**0.75**	+20	0.77	**-2**	**0.90**	+35	0.93	**-3**	**1.20**	+65	1.22	**-2**
10y	1.33	**1.65**	+32	1.52	**+13**	**1.90**	+57	1.64	**+26**	**2.15**	+82	1.88	**+27**
30y	1.97	**2.20**	+23	2.03	**+17**	**2.40**	+43	2.08	**+32**	**2.65**	+68	2.16	**+49**
AUD													
Cash rate	1.50	**1.50**				**1.50**				**1.50**			
2y	1.85	**1.80**	-5	2.05	**-25**	**2.20**	+35	2.25	**-5**	**2.80**	+95	2.66	**+14**
5y	2.34	**2.30**	-4	2.43	**-13**	**2.60**	+26	2.61	**-1**	**3.10**	+76	2.96	**+14**
10y	2.80	**2.90**	+10	2.89	**+1**	**3.20**	+40	3.00	**+20**	**3.50**	+70	3.21	**+29**

Source: BNP Paribas Spot rates as at 4 January

APPENDICES

US rates: Regime shift to higher rates, breakevens and vol

Regime shift to higher rates, term premia, breakevens and volatility. We expect significant fiscal stimulus under the Trump administration to generate above-trend growth (2.2% in 2017 and 2.8% in 2018) and above-target inflation (averaging 2.4% over the next two years). This will cement the regime shift to higher US rates and term premia. **10y US Treasury yield to rise to 3.00% during the first half of 2017.**

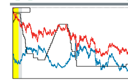
Using both a term premium framework or a nominal rate decomposition, we find 10y US Treasury yields are 150-200bp too low. **A rise in term premia will increase yields and steepen the 5s10s curve.**

(I) Term premia to rise. The 10y US term premium, as calculated by the Federal Reserve's ACM model, is around 10bp. Modeling the term premium with inflation and real policy rates, we find the 10y US term premium is 200-300bp too low.

(II) Real yields and inflation breakevens to rise. Decomposing the nominal rate into real and inflation components, 10y US real yields look 100-150bp too low, using our real-rate anchor model or compared to more 'normal' levels in 2004-07. The 10y US breakevens look 50bp too low, with core and headline inflation expected to stabilize around 2.5% y/y. The 10y nominal rates implied by real and inflation components could be 150-200bp higher.

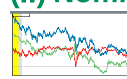
Fiscal stimulus will result in a faster pace of Federal Reserve tightening as monetary conditions remain very accommodative. A hawkish Fed reaction function to an improving economic outlook will temper the ability of the curve to bear steepen. **Consequently, we have greater conviction in short duration than curve steepeners.**

(I) Term premium to recover across the curve



Source: Macrobond, BNP Paribas

(II) Nominal yields to rise with higher real yields and breakevens



Source: Macrobond, BNP Paribas

US rates: Front end is not pricing enough Fed tightening

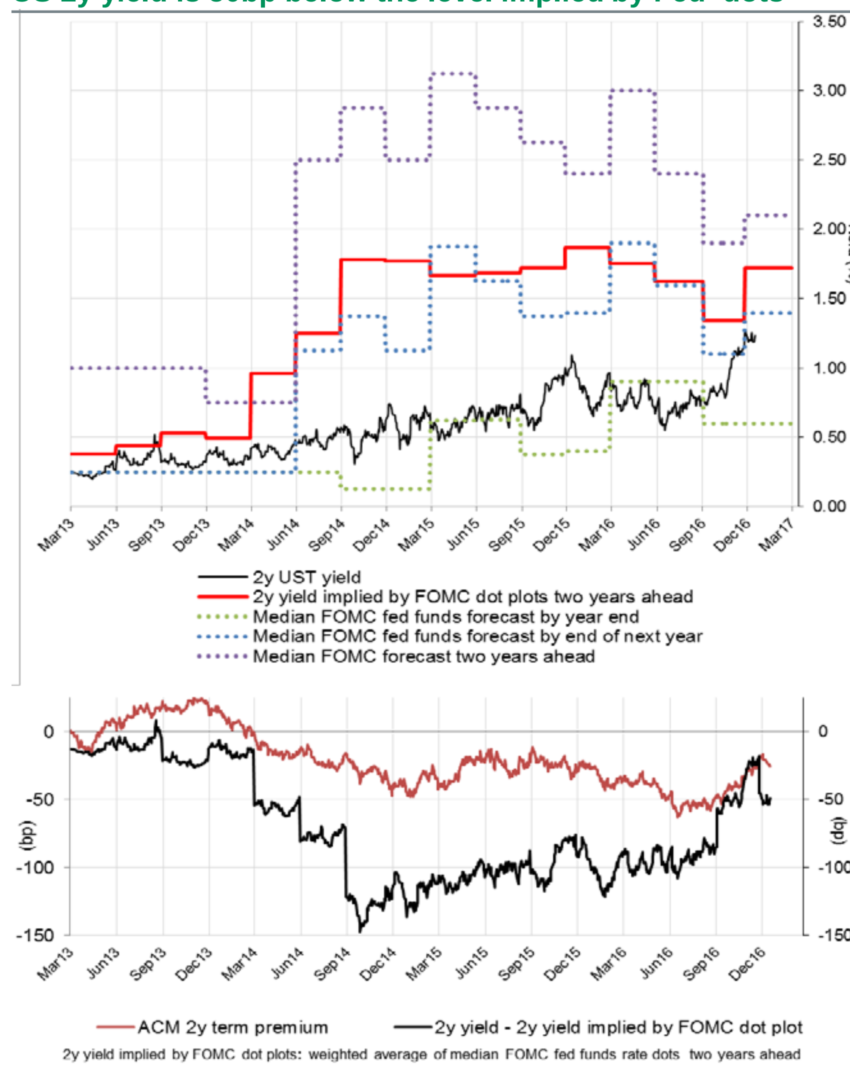
Fiscal stimulus to result in a faster pace of Fed policy normalization. Monetary conditions remain very accommodative, and fiscal stimulus with the economy at/below full employment should result in higher growth and inflation. We expect the Fed to react by increasing the pace of rate hikes.

Money market is not pricing enough Fed tightening ahead. With about two 25bp rate hikes priced into each of the next two years, the money market is pricing in less than the median Fed dots and less than our economists' forecast of a 25bp/quarter rate hike cycle starting in Q3 2017 through 2018. **2y US Treasury yield to rise to 1.60% in 2017.**

Pricing in the Fed dots implies 2y UST yield at 1.72%. At December's FOMC meeting, the Fed dot plot showed forecasts of three hikes in 2017 (up from two), and three hikes in 2018. The gap between the 2y Treasury yield and Fed median-implied 2y yield is now at -50bp, back to pre-election levels.

2y UST term premium is still negative at -0.25%. Our expectations of an increase in 2y term premia back into positive territory would take the 2y UST treasury yields to at least 1.50%.

US 2y yield is 50bp below the level implied by Fed 'dots'



Source: Macrobond, BNP Paribas

Euro area spreads: Idiosyncratic risks return

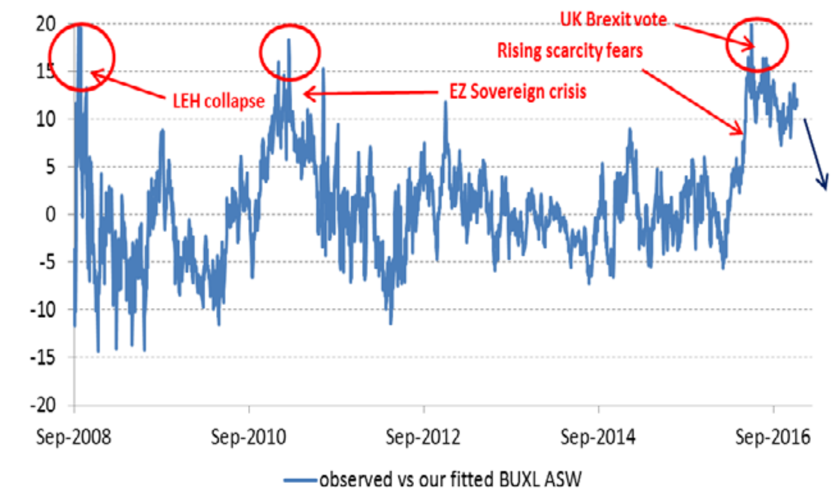
A reduction of QE purchases at the long end of the curve due to the removal of the depo floor constraint and increase in basket to include 1y maturities suggests the German ASW curve will continue to invert in H1 2017. As the chart opposite shows, the embedded scarcity premium on the 30y Bund ASW remains high. We expect a gradual normalisation of the 30y Bund ASW to the low 20s, while 2y to 5y maturities will remain bid in coming months.

Widening pressure on sovereign spreads will be capped by PSPP purchases during H1 2017, but the weight of the political risk together with volatility has increased. **Systemic risk (ECB tapering) replaced by idiosyncratic risk** (reflecting upcoming or political risk). We expect the 10y BTP/Bund spread to trade within a 150-180bp range in 2017 and 10y SPGB/Bund spread in a 125-155bp range.

SSA/Bund spreads tightened modestly going into the new year, in line with the seasonal tightening of the Bund ASW. With new supply now kicking in and the seasonal ASW tightening ending soon, spreads are likely to rewiden going into February. However, the move is likely to be limited by the already relatively wide level of SSA/Bund spreads and of the Bund ASW and the prospect of a fall in the latter's scarcity premium in coming months.

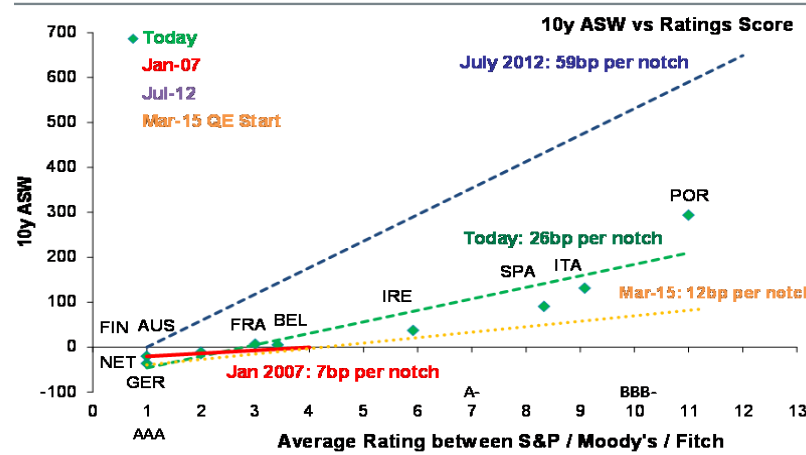
We are generally less positive on the outlook for EIB which we expect to underperform ahead of the UK triggering Article 50. We favour being short 10y EIB versus Bund (entered at 12bp, targeting 25bp) as a cheap hedge against potential renewed stress in H1 2017.

A significant scarcity premium remains on 30y Bund ASW



Source: BNP Paribas

Current credit ratings slope (vs 10y ASW) vs min and max



Source: BNP Paribas

US supply: Treasury net supply nearly to triple in 2017

Year	Gross redemp. (notes & bonds)	Budget Deficit (fiscal year)	Net Cash Raised (calendar year)	Gross Financing requirement (notes bonds & bills)	Fed QE	Fed at auctions	Gross Financing requirement less Fed (notes bonds & bills)	Net bills supply	Net notes & bonds (ignoring Fed)	Net supply to the market: notes & bonds net of Fed (*)	Change in supply to the market (%)	T-Bills Outstanding (bn)	US Marketable Debt Sec. (bn)	Percentage T-bills (%)
2000	508	-237	-335	174	0	58	116	-90	-245	-303		647	2967	21.8
2001	527	-127	-18	510	0	69	441	164	-182	-251		811	2983	27.2
2002	415	158	235	650	0	92	557	78	157	65		889	3205	27.7
2003	419	374	340	758	0	103	655	40	300	196		929	3575	26.0
2004	564	413	364	928	0	118	809	74	289	171		1003	3960	25.3
2005	496	319	210	706	0	115	591	-40	250	135		964	4184	23.0
2006	616	248	152	768	0	122	646	-20	172	50		944	4342	21.7
2007	633	162	179	812	0	130	682	60	119	-11		1004	4537	22.1
2008	649	455	1243	1892	0	107	1785	863	380	273		1867	5798	32.2
2009	646	1416	1477	2124	300	88	1736	-73	1551	1162	326%	1793	7272	24.7
2010	713	1294	1586	2299	150	73	2076	-21	1607	1384	19%	1773	8863	20.0
2011	800	1297	1051	1851	450	70	1331	-252	1303	783	-43%	1521	9937	15.3
2012**	1313	1089	1100	2413	0	49	2364	108	992	942	20%	1629	11053	14.7
2013	1304	680	799	2103	540	0	1563	-37	836	296	-69%	1592	11869	13.4
2014	1448	483	633	2081	250	0	1831	-134	767	517	75%	1458	12518	11.6
2015	1494	450	684	2179	0	4	2175	56	628	625	21%	1514	13207	11.5
2016--	1865	**587**	755	2620	0	216	2404	**350**	405	189	-70%	1864	13951	13.4
2017--	*1820*	***815***	*864*	*2684*	*0*	*194*	*2490*	***100***	*764*	*570*	*201%*	*1964*	*14572*	*13.5*
2018--	*1825*	***1010***	*1010*	*2835*	*0*	*419*	*2415*	***100***	*910*	*491*	*-14%*	*2064*	*15177*	*13.6*

* Amount available to the public
** Operation Twist
-- Estimate: increase of Net T-Bills supply +$100bn in both 2017 & 2018

Treasury cash balance has increased in 2016 by USD 168bn, but this is expected to be lower in 2017 and 2018.

Despite expected large redemptions of the SOMA portfolio, the net financing requirement net of Fed purchases should increase substantially in 2017.

We assume T-bill issuance will increase by USD 100bn in both 2017 and 2018 because: (1) Both money market reform and implementation of HQLA will lead to an increased demand for bills. (2) The current percentage of T-bills outstanding at 12.6% is relatively low, compared to the historical average of 22.5%. We expect a modest increase and target a minimum 13.6% by year-end 2018.

Source: US Treasury, Federal Reserve, BNP Paribas

Europe: Estimates of monthly gross & net supply net of PSPP

BNP Paribas 2017 estimates of gross supply of net of PSPP purchases

2017 Gross Supply minus PSPP (EUR bn)	Est. Jan	Est. Feb	Est. Mar	Est. Apr	Est. May	Est. Jun	Est. Jul	Est. Aug	Est. Sep	Est. Oct	Est. Nov	Est. Dec	Total	PSPP / Gross Supply
Austria	-0.4	4.0	-0.7	-0.2	-0.1	-0.1	0.0	-0.3	0.1	4.6	-1.2	0.0	6	73%
Belgium	2.3	0.3	0.9	7.1	-1.8	2.0	1.5	-1.2	2.5	-0.1	1.0	-1.4	13	63%
Finland	0.6	-1.1	3.4	-0.8	-0.8	0.3	-0.8	2.8	-0.8	0.3	0.3	-0.7	3	80%
France	8.9	8.7	7.5	15.5	9.9	9.3	13.8	2.3	12.8	5.8	7.9	-2.8	100	53%
Germany	0.2	2.4	3.7	4.6	7.2	3.2	2.1	13.3	3.7	6.1	6.7	-2.0	51	68%
Ireland	2.9	0.3	-1.1	0.2	0.3	-0.8	-0.8	-0.5	0.5	0.5	0.2	-0.6	1	89%
Italy	15.7	15.9	11.4	25.4	13.2	7.5	15.7	3.1	15.6	23.0	11.9	-7.0	151	42%
Netherlands	-1.5	-3.1	4.0	-1.0	1.3	3.7	0.8	-1.5	2.6	0.0	0.5	-1.9	4	88%
Portugal	2.8	-1.0	1.3	0.7	0.6	0.3	0.5	0.6	0.0	0.2	-0.7	-0.6	5	66%
Spain	11.5	0.0	6.0	1.3	5.0	5.8	11.6	0.0	3.4	3.9	2.2	0.8	51	59%
2017 Grand Total	**43.0**	**26.4**	**36.4**	**52.9**	**34.7**	**31.2**	**44.4**	**18.6**	**40.5**	**44.2**	**28.8**	**-16.0**	385	56%

*Assuming EUR 25bn of buybacks in France in 2017

**Heatmaps apply horizontally for each country separately

BNP Paribas 2017 estimates of net supply net of PSPP purchases

2017 Net Supply minus PSPP (EUR bn)	Est. Jan	Est. Feb	Est. Mar	Est. Apr	Est. May	Est. Jun	Est. Jul	Est. Aug	Est. Sep	Est. Oct	Est. Nov	Est. Dec	Total	(Net Supply - PSPP) / Gross Supply
Austria	-0.4	-5.9	-0.7	-0.2	-0.1	-0.1	0.0	-0.3	-7.9	4.6	-1.2	0.0	-12	-58%
Belgium	2.3	0.3	-8.6	7.1	-1.8	-9.2	1.5	-1.2	-5.1	-0.1	1.0	-1.4	-15	-43%
Finland	0.6	-1.1	3.4	-5.8	-0.8	0.3	-0.8	2.8	-6.8	0.3	0.3	-0.7	-8	-65%
France	8.9	-9.7	7.5	-11.7	9.9	9.3	-22.0	2.3	12.8	-28.1	7.9	-2.8	-16	-7%
Germany	-19.8	-13.6	-10.3	-13.4	7.2	-9.8	-16.9	13.3	-9.3	-9.9	6.7	-15.0	-91	-57%
Ireland	2.9	0.3	-1.1	0.2	0.3	-0.8	-0.8	-0.5	0.5	-5.7	0.2	-0.6	-5	-46%
Italy	15.7	-19.9	3.6	8.3	-14.3	-16.4	15.7	-31.5	2.3	10.0	-26.0	-7.0	-59	-23%
Netherlands	-12.3	-3.1	4.0	-12.5	1.3	3.7	-12.2	-1.5	2.6	0.0	0.5	-1.9	-31	-95%
Portugal	2.8	-1.0	1.3	0.7	0.6	0.3	0.5	0.6	0.0	-6.6	-0.7	-0.6	-2	-15%
Spain	-9.9	0.0	6.0	1.3	-16.6	5.8	-8.5	0.0	3.4	-16.8	2.2	0.8	-32	-26%
2017 Grand Total	**-9.3**	**-53.7**	**5.1**	**-25.8**	**-14.4**	**-16.9**	**-43.4**	**-16.0**	**-7.4**	**-52.4**	**-9.1**	**-29.0**	-272	-31%

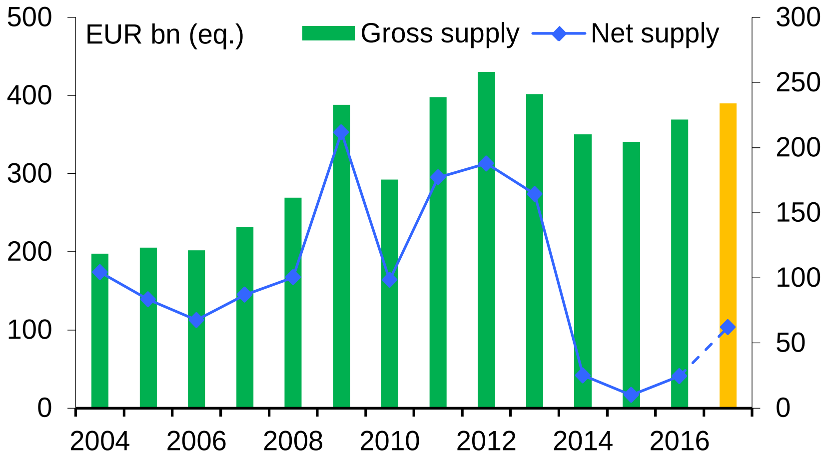
*Assuming EUR 25bn of buybacks in France in 2017

**Heatmaps apply horizontally for each country separately

Source: BNP Paribas

European SSAs: Supply is on the rise

European SSAs: Gross & net supply since 2004



European SSAs: Supply forecasts for 2017

European SSAs	Gross Supply	Redemptions	Net Supply
FY 2015	**341**	**331**	**10**
of which Supras	115	94	22
FY 2016	**371**	**345**	**27**
of which Supras	124	103	21
FY 2017	**390**	**328**	**62**
of which Supras	140	102	38

All sources: BNP Paribas

- Main changes compared to 2016:
  - EFSF plans to issue EUR 40bn, up from 14bn in 2016, 14bn net of redemptions. Note that EUR 13bn will be used to finance the new short-term debt relief plan for Greece.
  - ESM will on the contrary benefit from a 6bn debt relief from the plan. EUR 17bn are intended to be issued, down from 24.5bn in 2016,14bn net of redemptions. ESM intends to launch an inaugural bond in USD towards the end of 2017.
  - EU plans to issue EUR 2bn, down from 5bn in 2016, 0.85bn net of redemptions.
  - CADES has planned to raise EUR 9bn, down from 14bn. Its net supply would thus fall to -5bn.

- We do not expect significant changes for most other issuers, including for KfW, RENTEN, AFD, OKB, and EIB, even though the latter announced a 60bn funding programme, down from 66bn in 2016: EIB has the authorisation to issue up to EUR 65bn, which is more likely when including some prefunding for 2018.

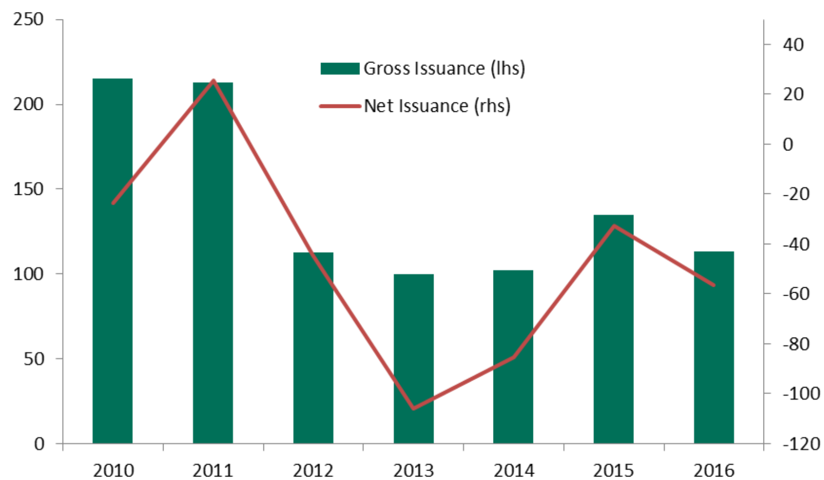
European SSAs: Some forecasts

			2016 Supply			2017 Forecasts (in eq. EUR bn)		2017 vs 2016
		Gross supply	Redemptions	Net supply	Gross supply	Redemptions	Net supply	Gross diff
SUP	COE	3	3	1	3	3	0	0.0
SUP	EBRD	5	5	0	5	7	-1	0.0
SUP	EFSF	14	14	1	40	26	14	26.0
SUP	EIB	67	65	3	65	56	9	-2.3
SUP	ESM	24	5	19	17	3	14	-7.4
SUP	EU	5	6	-2	2	1	1	-2.8
SUP	EUROF	1	3	-2	1	2	-1	0.0
SUP	NIB	6	4	3	6	4	3	0.0
Sub-total	**Supras**	126	103	23	140	102	38	13.5
GER	KFW	76	69	7	75	63	12	-0.8
GER	RENTEN	12	13	-1	12	11	1	0.0
FRA	AGFRNC	5	2	3	6	3	3	0.7
FRA	CADES	13	17	-3	9	14	-5	-4.4
AUS	OKB	4	5	-1	5	3	1	0.2

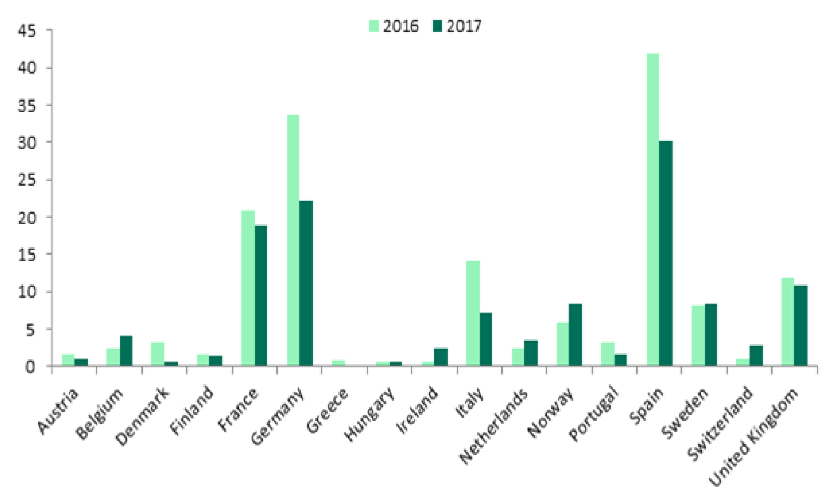
Supply: Covered Bonds issuance to remain stable in 2017

- Distorted market: ECB has c.€200bn of covered bonds vs. c.€800bn market (25%)
- We expect similar level of supply in 2017 compared to 2016 (2016: €115bn)
- Heavy supply in January (€24bn) with big size deal (€1-2bn)/dual tranches which was well absorbed by the market. Supply to be more quiet in Q1.

Annual gross and net supply of EUR benchmark covered bonds



Maturing EUR benchmark covered bond by country



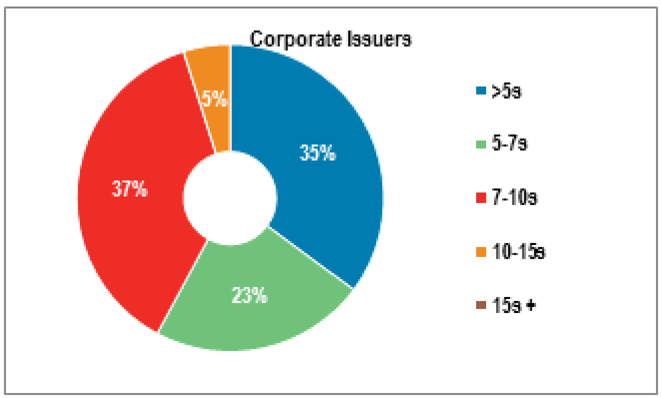
Source: BNP Paribas, Dealogic

Other Supply: strong start of the year

January Issuances over the years

		Jan-2015		Jan-2016		Jan-2017	
		Volume	No. of deals	Volume	No. of deals	Volume	No. of deals
Corporates	€/£	21.5bn	32	5.42bn	8	33.7bn	52
FIG	€/£	65bn	72	44.62bn	52	60.4bn	72
SSA	€/£/$	94bn	63	103.36bn	74	140.7bn	93

- More frontloading in anticipation of a highly volatile year during which we would expect political headwinds to drive sentiment and impact investor perception of issuer names.



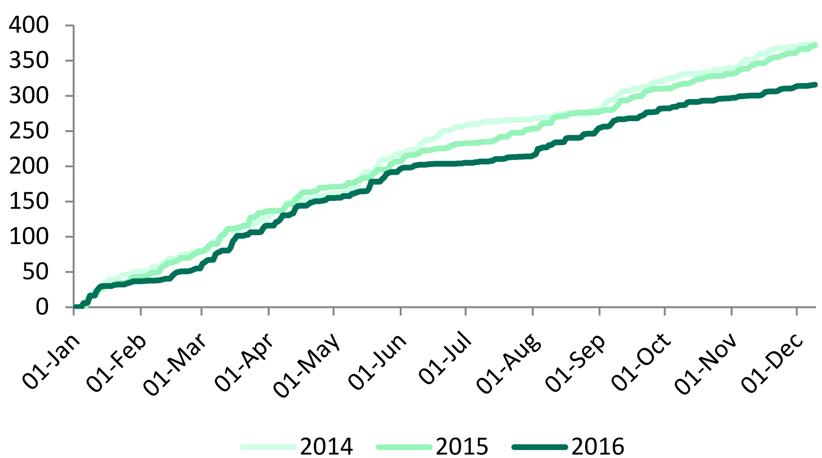
Corporate supply on a downward trend in 2017

- Profit repatriation in the US has potential to reduce supply in the USD market
- Expected lower reverse yankee supply in the EUR market as $ market remains more competitive for $ funders

European Banks Supply: the year of MREL

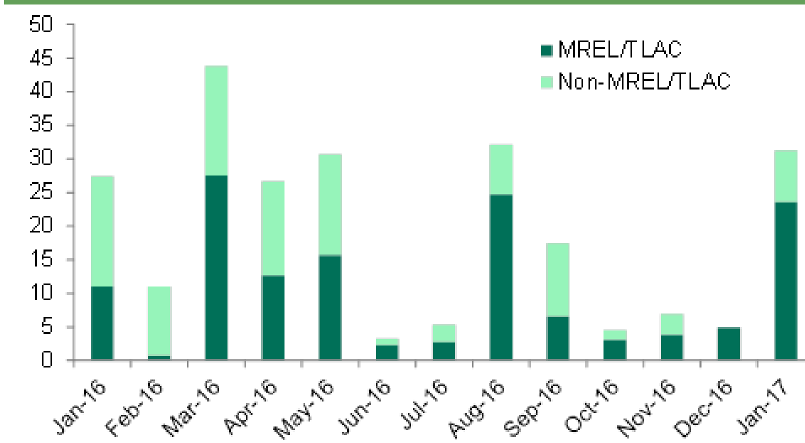
- Expect all European jurisdictions to pass new laws to implement MREL/TLAC
- Model for MREL will be Non-Preferred Senior (NPS), except UK, Switzerland, Germany
- NPS will replace Senior funding, lead to less issuance of LT2s
- We expect €325bn of issuance in 2017, vs. €320bn YTD in 2016:
  - €170bn of preferred (old) Seniors, vs. €240bn of redemptions, €198bn issued in 2016
  - €50bn of HoldCo Seniors, vs. €56bn issued in 2016
  - €60bn of non-preferred Senior/T3 (vs. €3.5bn in 2016)
  - €25bn of T2s (vs. €22bn of redemptions/calls in 2017, €36bn issued in 2016)
  - €20bn of AT1s (€21bn issued in 2016, €110bn currently outstanding)

Expect similar supply in 2017



Source: BNP Paribas, Dealogic

Focus already shifted to MREL in 2016



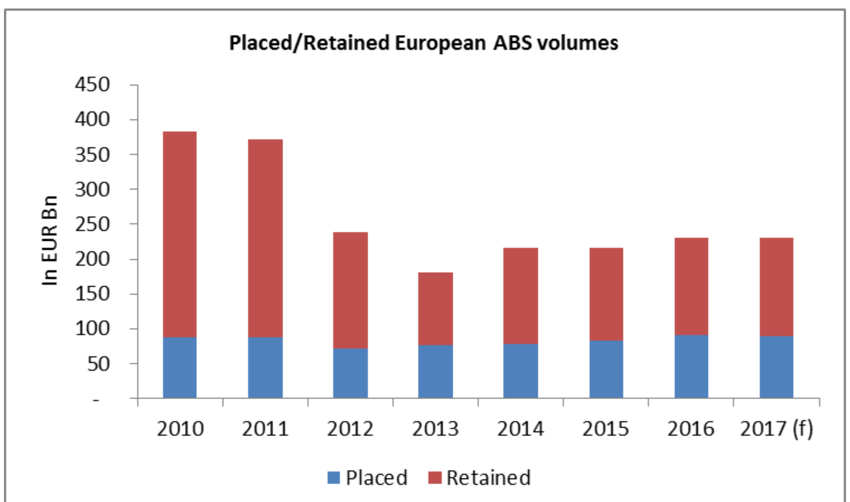
Note: Benchmark issues only in EUR, USD, GBP.

Flat ABS Supply

- A lot of uncertainties will persist in 2017 with effects of new regulation, QE policy, economic backdrop, political uncertainties

- Placed volume expected to be flat overall i.e. EUR 80-85bn but with some discrepancies between markets
  - Uptick in EUR CLO issuance (strong global demand for the asset class)
  - Reduction in UK RMBS issuance from banks (driven by attractiveness Term Funding Scheme for UK banks)
  - Pick up in UK RMBS issuance from private equity sponsors (FinCo) to finance large portfolio acquisitions (like Cerberus acquisition of UKAR portfolio last year)
  - Stable EUR RMBS (ECB's ABSPP eligible sectors)
  - Stable ABS (auto and other)

- **Assuming unchanged retained volume for 2017, ABS supply is expected to amount EUR 220bn (EUR 80-85bn placed and EUR 140bn retained), flat from 2016.**



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In addition, there is a mitigation measure to manage conflicts of interest for each transaction with controls put in place to restrict the information flow, involvement of personnel and handling of client relations between each transaction in such a way that the different interests are appropriately protected. Gifts and Entertainment policy is to monitor physical gifts, benefits and invitation to events that is in line with the firm policy and Anti-Bribery regulations. BNP Paribas maintains several policies with respect to conflicts of interest including our Personal Account Dealing and Outside Business Interests policies which sit alongside our general Conflicts of Interest Policy, along with several policies that the firm has in place to prevent and avoid conflicts of interest.

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