GLOBAL MACRO RESEARCH

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Top of Mind

2016 Update, and a Peek at 2017

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2016 in review

Click the icon to access the original report.
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Notable quotes from our interviews

"[U]sing the Fed's balance sheet explicitly for fiscal policy would amount to turning it into the 'industrial bank' of US Congress. And that is a very slippery slope." –Charles Plosser, former President, Philadelphia Fed (Issue 44, Mar. 23)

"I have backed QQE from the start; at the same time, I recognized that the program could not be sustained long enough to meet an inflation target that was too ambitious." -Sayuri Shirai, former Policy Board member, BOJ (Issue 50, Oct. 6)

"The capacity for globalization is increasing relentlessly... So the risks to globalization with a big 'G' are very, very few and far between. At the end of the day, flow prevails over friction." -Parag Khanna, global strategist and book author (Issue 49, Sep. 29)

"The one thing that I'm pretty confident about is that the road we're on right now—the 'new normal' road of low growth, increasing inequality, and excessive reliance on central bank policies to repress financial volatility—is going to end." –Mohamed A. El-Erian, Chief Economic Advisor, Allianz (Issue 42, Feb. 9)

"The cash in your pocket, at least in the upstream energy business, is essentially a function of the price of oil times the quantity of production. We can't do anything about price. But the North American shale industry has been able to do magical things in terms of increasing quantity and reducing cost." -David Leuschen, Founder, Riverstone (Issue 52, Nov. 22)

"Money-financed fiscal expansions... involve the government either directly funding public expenditure or giving money directly to people, some of which they will spend... [which] is much more direct, understandable and powerful than when we rely on negative interest rates and QE." -Adair Turner, Former Chairman, UK Financial Services Authority (Issue 44, Mar. 23)

"Maintaining full access to the single market would require the UK to adopt current and future EU laws on the internal market without participating in the decision making, accept strict monitoring and judicial enforcement mechanisms, and allow the free movement of EU citizens. This is likely politically impossible for the UK." -Jean-Claude Piris, former Director General, EU Council Legal Services (Issue 48, July 28)

The [UK's] vote to leave the EU rejected aspects of globalization. But voters' greatest concern was migration, which should not be confused with hostility to trade." –William Hague, former UK Foreign Secretary (Issue 49, Sep. 29)

"I think we have seen an important shift in big-picture asset allocation in favor of TIPS as inflation has risen." –Mihir Worah, CIO for Real Return and Asset Allocation, PIMCO (Issue 53, Dec. 7)

"The pension impact of these so-called expansionary monetary policies is working in the opposite direction to their expected effect of boosting investment, spending, and growth." –Ros Altmann, former UK Pensions Minister (Issue 50, Oct. 6)

"[In the years ahead], I think you will see radical parties exercise significant power at all levels of government [in Europe]." –Matthew Goodwin, Professor of Politics and International Relations, University of Kent (Issue 47, Sep. 24)

"Last summer, you could not find anybody in the political system who thought Trump would even come close to the nomination—and I mean anybody. That's one reason he won it." -Larry Sabato, Director, UVA Center for Politics (Issue 51, Oct. 18)

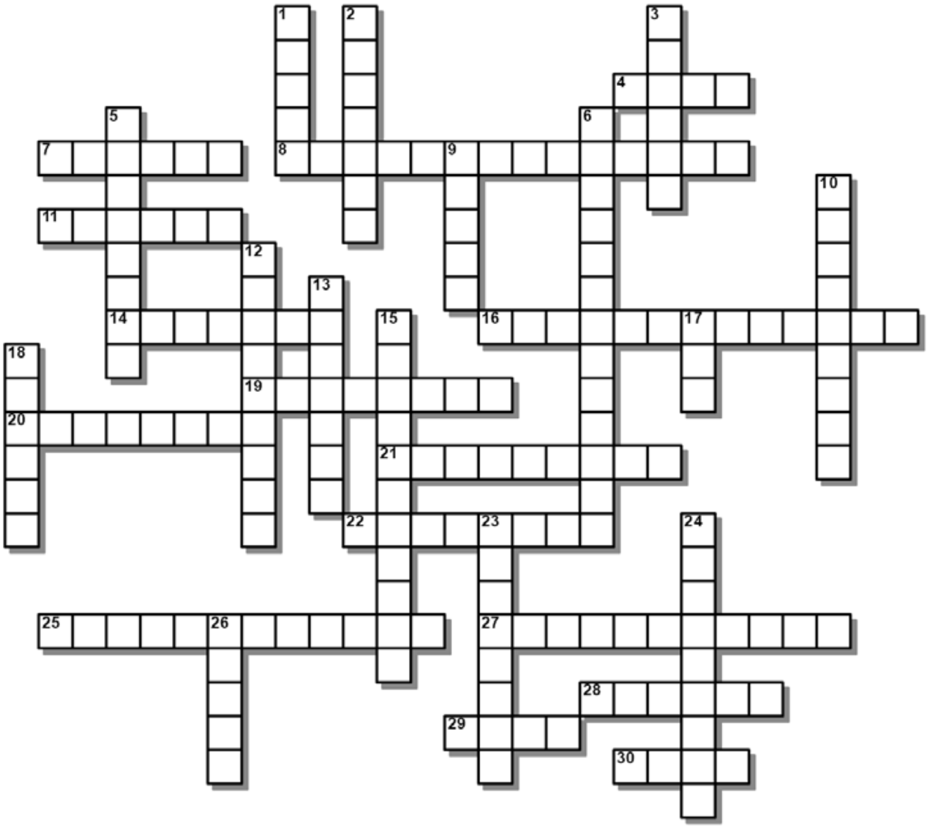
"The [TPP] deal is about regulations, copyright, and patent protections. It's not about removing the remaining trade barriers." –Dean Baker, co-founder and co-director, Center for Economic Policy Research (Issue 49, Sep. 29)

"We have effectively stripped politicians of the incentives and tools [like closed-door negotiations and pork-barrel spending] they need to organize their world. –Jonathan Rauch, Senior Fellow, Brookings Institution (Issue 51, Oct. 18)

"The sharp loss in manufacturing jobs over the last several decades due to technological advances and offshoring substantially cut the number of industrial workers, who had dominated the political landscape... As a result, parties like the Democrats in the US and Labour in the UK had to find new constituencies." -David Brady, Professor of Political Science, Stanford University (Issue 47, June 23)

Source: Goldman Sachs Global Investment Research Top of Mind reports from 2016.

Revisiting 2016 themes, crossword-style



Across:

4. Flatter yield curves resulting from QE have raised concerns about ______ profitability and credit creation (Issue 50).
7. This region, which imports 43% of global traded goods, accounted for roughly half of the trade slowdown in 2011 (Issue 49).
8. Given their majority in both chambers of US Congress, Republicans are able to use the budget ______ process to pass significant fiscal policy changes (Issue 51).
11. A total of _____ non-OPEC countries have agreed to reduce output in 1H17 as part of OPEC's first cut since the GFC (Issue 52).
14. The UK will not formally begin the process of exiting the EU until it invokes ______ 50 (Issue 48).
16. While a missed coupon on senior or subordinated debt usually marks a default event, the coupon payment on AT1s is ______, akin to an equity dividend (Issue 43).
19. The ECB and BOJ's need to buy increasingly longer-maturity bonds from long-duration investors hesitant to sell them had generated concerns about QE-driven bond ______ (Issue 50).
20. The median S&P 500 firm derives roughly one-third of its ______ from overseas (Issue 42).
21. The election of Donald Trump super-charged the US (and global) ______ narrative (Issue 53).
22. GS Japan economists interpreted the BOJ's yield-curve targeting as a move toward "stealth _____" of asset purchases (Issue 50).
25. North American "shale scale winners" are Exploration and Production (E&P) companies that have large exposure to shale plays and the ability to achieve above-average ______ gains (Issue 52).
27. Many of the drivers of the strong ______ between oil prices and risky assets have subsided, suggesting investors in risky assets likely have less to fear from the oil complex today (Issue 52).
28. Asset purchase programs have increased the scope for ______ expansion, with lower long-term interest rates reducing debt servicing costs, and central bank remittances financing higher deficits (Issue 44).
29. Rising US Treasury rates since July have led to over $910bn in losses for the US ______ market (Issue 53).
30. A collapse in the sensitivity of trade to growth, which has been most acute in Asia, has given rise to fears that we are past the point of ______ trade (Issue 49).

Down:

1. The vice president of Brazil who became president when Dilma Rousseff was impeached this year (Issue 45).
2. A one-standard deviation increase in the US Economic Policy Uncertainty index ______ the GS Current Activity Indicator (CAI) by about ¼pp over the following six months (Issue 47).
3. This country's stock market was the best performing EM index globally in 2016 (returning roughly 50% YTD in USD terms) despite a deep economic recession and political upheaval (Issue 45).
5. The economist who coined the term "helicopter drop" in 1969 for central banks dropping money from the sky to raise citizens' incomes (Issue 44).
6. Political instability has historically corresponded with a decline in the share of ______ employment (Issue 47).
9. Concerns about growth and a potential sharp currency depreciation in this country roiled markets in early 2016 (Issue 42).
10. Brazil has experienced the unusual combination of contracting activity and high ______ (Issue 45).
12. Credit spreads were trading at levels rarely seen outside of ______ in early 2016 (Issue 43).
13. The collapse in oil prices was one driver behind investor concern about potential higher ______ rates in 2016 (Issue 43).
15. Economic Policy ______ has spiked in the wake of Brexit and with the election of Donald Trump (Issue 47).
17. If the UK and EU do not complete Withdrawal Treaty negotiations within ______ years, the UK will automatically be out of the EU, unless the parties unanimously agree to extend negotiations (Issue 48).
18. The leader of the UK Labour party, who has substantial grassroots support from Labour voters, but less support from MPs (Issue 48).
23. The dovish tilt to Fed policy earlier this year, reportedly in response to rising concerns about developments abroad, raised questions about whether the Fed had shifted its ______ function (Issue 46).
24. The evolution of ______ conditions has had a sizable impact on US growth this year, acting as a drag in 1H and providing a boost in 2H (Issue 46).
26. "______ syndrome" is a term one of our interviewees used to describe the US political system's deteriorating capacity to organize, solve problems, and get things done (Issue 51).

Puzzle made at http:www.SuperCrosswordCreator.com. Solutions on pg. 31.

2016, and a peek at 2017

2016 was chock-full of surprises, both in markets and in politics. Ironically, though, 9 of the 12 themes we thought *might* be **Top of Mind** in 2016 effectively made it into our reports this year (our highest batting average yet!—see them on pg. 31). We continue our year-end tradition of taking stock of our 2016 themes, updating/revisiting our favorite graphics for each issue, and highlighting what to look for in 2017.

The year began with a perfect storm of worries that had become all too familiar already in 2015. Oil prices plunged and fears of faltering growth and a sharp depreciation of China's currency escalated, driving disruptive sell-offs in credit and other risk assets. Confidence in global growth faltered, particularly after an anemic US GDP report for Q1.

But oh, how the world has changed. Today, the price of crude oil is almost exactly double its January low in the wake of announced production cuts by **OPEC** and key non-OPEC producers (Russia). We expect WTI oil prices to move higher to a peak of $57.50/bbl in 1H17 as the cuts push the oil market into deficit and whittle down the current large inventory surplus. But we also expect shale producers to respond to the higher prices, implying limited upside from there.

The rebound in oil prices led to a remarkable turnaround in **credit markets**, with HY Metals & Mining and E&Ps returning 49% and 36%, respectively, YTD; default rates normalizing; and spreads no longer pricing recession risk. We expect a further moderate compression of spreads in 2017 given expectations of a generally positive macro environment, gradual improvement in credit fundamentals, and, of course, our somewhat rosier oil outlook.

And fears about **China** have generally receded into the background as Chinese policymakers continued an ambitious stimulus program that helped stabilize growth. A more dovish tilt by the Fed in response to the tightening of **financial conditions** caused by the Q1 sell-off also assuaged market fears. But we warn that China risk is not far from the surface. Capital outflow pressures have resumed amid the renewed strengthening in the US dollar. And policies that re-ignited growth in the short-term have just increased concerns about the future, particularly as credit growth has climbed. These potentially destabilizing trends merit watching next year, despite our mainline view of orderly currency moves and a continued bumpy deceleration in Chinese growth. (Side note: Meeting growth targets will be paramount next year amid China's leadership transition.)

It was not long after the market left China, oil, and credit concerns in the dust that **political uncertainty** took center stage—a place where it has solidly remained since. **Brazil** had its president impeached amid one of the country's longest recessions/depressions on record; French primaries established an unexpected presidential candidate in former Prime Minister François Fillon; and Italy will enter the new year with an interim government following the resignation of Matteo Renzi.

And we've not forgotten about one of the biggest political shocks of the year (decade, century?!): the UK's vote in favor of **Brexit**. The now infamous Article 50, which needs to be activated to formally start the UK's withdrawal process, still has not been triggered, and likely won't be before March. Meanwhile, UK and EU priorities for their future relationship remain at odds, leaving market participants closely watching "soft Brexit"/"hard Brexit" swings in the headlines. That said, UK growth has proved remarkably resilient, and assets have held up with the exception of sterling, which is 10% weaker than before the referendum. Next year, we expect a formal start to Brexit talks, a moderation in UK growth, and further declines in sterling as uncertainty over Brexit sinks in.

While it was hard to trump (sorry, we couldn't resist!) the shock of Brexit, we dare say that Donald Trump defying almost all polls and betting markets to win the **US Presidential election** did just that. Trump's cabinet and policy leanings are still being sorted out, but there appears to be potential for significant change ahead, be it in taxes, or environmental policy. There is no question that the policies of the new administration and their market implications will be Top of Mind throughout 2017.

The unexpected election outcome also super-charged the narrative around two themes already in train: the global trade slowdown and reflation. Trump's protectionist rhetoric—and the considerable executive power he will have on trade policy—do not bode well for **global trade** growth, which had already slowed considerably in recent years, or for some multi-lateral trade deals on the table (think the Trans-Pacific Partnership or TPP). Although we are keeping an eye on potential protectionist measures (a particular risk for EM Asia and Mexico, but also a likely drag on US growth), we otherwise see signs of a moderate improvement in trade ahead. Key to watch: how countries respond to the apparent shelving of the TPP (e.g., bilateral vs. multi-lateral trade talks).

On **reflation**, we expect fiscal expansion and some further tightening in the labor market to sustain inflationary momentum in the US alongside moderately stronger growth, with US 10-year yields expected to end 2017 at 2.75%. This should be good news for equity markets at first: We expect the S&P 500 to rise to 2400 through 1Q2017, but then see the index settling to 2300 by year-end as rates rise further and investors recalibrate their policy outlooks. We still caution that equities are vulnerable should rates move too much, too fast, given stretched valuations following years of exceptionally low rates.

Lastly, despite recent market optimism about fiscal expansion providing more **stimulus**, **central bank policy** will never be too far from investors' minds next year. (And let's not forget that ECB and BOJ asset purchases in fact enable more fiscal spend, so the lines between monetary and fiscal policy continue to blur.) We expect an acceleration of divergence as the Fed follows last week's hike with three more in 2017 while the ECB and BOJ continue their asset purchases under new and apparently more sustainable parameters.

Between this divergence, Trump, China, and a number of important European elections, 2017 is sure to be yet another interesting year for markets. We provide hints on our best guesses for 2017 themes throughout the piece (think green). We wish you a happy, healthy, and prosperous New Year.

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China Ripple Effects

www.istockphoto.com.

"Markets have overreacted to China for the same reasons they will overreact to virtually any news: changes in the volatility and liquidity paradigms."

–Mohammed A. El-Erian, Chief Economic Advisor, Allianz

Published: February 9, 2016

Where we stand now:

- **Broader concerns about China risk derailing global growth and markets proved somewhat short-lived.** After the S&P 500 hit its low for the year on February 11, two days after we published, better economic data and a sense that the Fed would react to global concerns—confirmed by the dovish March FOMC meeting—helped improve market sentiment. Political events in the western hemisphere have since broadly taken center stage in global markets, leaving China concerns in the background. But the reality is that growth—on some level—did take a hit; for example, US GDP growth came in at an anemic 1.1% annualized in 1H2016, owing in part to weakness in the industrial sector and energy-related activity but largely due to tighter financial conditions primarily in the wake of China concerns. China growth itself also remained relatively weak in 1H as measured by the GS China Current Activity Indicator, which declined towards 4% in 1Q and began to climb slowly thereafter.
- **Stabilizing growth in China has helped push China to the background of investor concerns.** In order to stabilize growth and meet official GDP targets, China's policymakers continued to pursue an ambitious stimulus plan begun in early 2015 that entailed pausing fiscal reforms, sharply cutting interest rates, loosening housing policies, and increasing credit growth. The result: GDP growth looks set to meet the target of 6.5%-7% for 2016, and producer prices are rising after years of deflation.
- **But policies that re-ignited growth in the short-term just increase concern about the future, especially in terms of credit.** We estimate that total credit growth adjusted for muni bond issuance accelerated from 13% yoy in 1Q15 to 17% yoy as of 2Q16, and to 20% yoy when including shadow lending not captured in official statistics. In short, the potential credit problems in China have not receded, and indeed have likely grown given the very fast pace of credit expansion.
- **Policymakers have taken note of these potentially destabilizing dynamics and have refocused on risk management**; indeed, China's recent Central Economic Work Conference to plan for next year's economic policy included strong statements on controlling financial risks. Risk management measures employed in recent months include increasing short-term repo rates, reining in off-balance sheet exposures such as wealth management products, and rolling out measures to try to curb home price appreciation. Fiscal policy also seems likely to tighten at least slightly in coming months. But any tightening will likely prove short-lived given that meeting growth targets will remain critical in 2017—a year of leadership transition.
- **Our RMB view has also become more negative, presenting risk to the US dollar and S&P 500.** When we published at the height of market anxiety around China, we were relatively constructive on the RMB, arguing that a large, one-off devaluation was unlikely and envisioning only a "mild" trade-weighted depreciation (against the CFETS basket, the CNY has depreciated 4.5% since then). But capital outflow pressures have remained, particularly in the context of US dollar strength. Despite the government's official focus on a trade-weighted currency basket, higher $/CNY fixings are still a powerful signal that can easily re-ignite capital flight, as households and firms anticipate a faster pace of depreciation. Indeed, the PBOC's FX reserves fell US$69bn to US$3,052bn in November, the largest decline since January. The US election has reinforced these dynamics given the strengthening dollar and potential for trade frictions, motivating tighter restrictions on capital flows. Global markets have so far taken these developments in stride, but the risk of a repeat of related equity market volatility remains, which could impact the pace of Fed tightening and dollar strength (see also pg. 14).

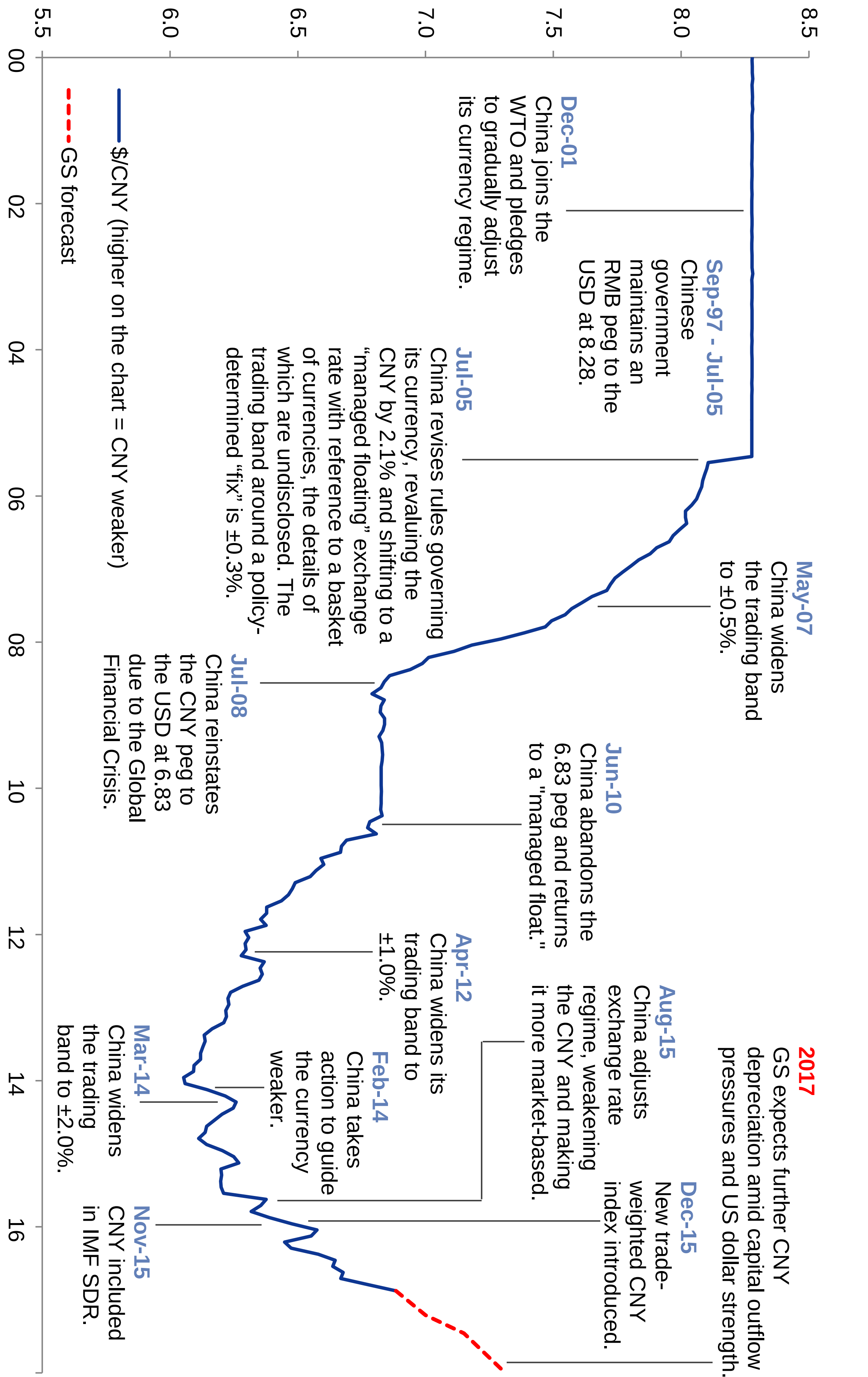
What to look for in 2017 (and beyond):

- **A potential resurgence in Chinese growth fears early next year, but more broadly, a continued bumpy deceleration.** We expect sequential GDP growth to decelerate into 1Q17 to c.5.5% annualized on recent tightening measures. But we expect a rapid pivot back to stimulus should the growth target look at risk, especially given next year's leadership transition.
- **Continued concerns about China credit growth.** Although policymakers have introduced tightening measures to reduce the risk of asset price bubbles, China's reliance on credit growth, which undermines financial stability, remains a key risk.
- **RMB downside, posing potential risk to the stronger US dollar and global stock markets.** We forecast a $/CNY fix of 7.00, 7.15 and 7.30 in 3, 6 and 12 months, respectively, and long $/CNY is one of our 2016 Top Trades. The pace of capital outflows and the evolution of the fix warrant monitoring; in our view, as long as the fix simply offsets dollar strength and capital outflows are contained, global risk appetite should hold up.
- **China remains a key risk to watch.**

Thanks to: Silvia Ardagna, Robin Brooks, Michael Cahill, Kenneth Ho, Yu Song, MK Tang and Andrew Tilton.

Update: RMB weaker, but with less fear

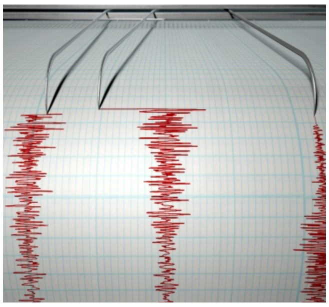
Looking back on the renminbi



An earlier version of this chart appeared on pg. 19 of Top of Mind Issue #42: China Ripple Effects.

Source: Federal Reserve Board, Haver Analytics, various news sources; annotated by Goldman Sachs Global Investment Research.

Credit Tremors


www.istockphoto.com.

> "I'm fairly convinced that we are already at the end of the benign cycle or nearing it. We are in the bottom of the 8th or 9th inning, and unless the Fed steps in to add liquidity to the market, which seems unlikely, I don't expect extra innings."
>
> **– Edward I. Altman, Director of Research in Credit and Debt Markets, NYU**

Published: March 2, 2016

Where we stand now:

- **US credit markets staged a remarkable turnaround after the turbulent start to 2016.** US IG and HY spreads currently stand in the 56th and 31st percentiles since 1985, compared to 88th and 87th at the end of February, just before we published. With spreads no longer pricing high risk of recession, credit is now mostly a carry play.
- **Commodity-exposed sectors, which were at the center of investor concerns, have outperformed sharply.** HY Metals & Mining and Energy have returned 49% and 36%, respectively, this year, compared with a -2% and -15% return as of late February. We remain tactically bullish on HY Energy; given the GS forecast for WTI oil prices to rise to $57.50/bbl 1H17, we expect the sector to generate excess returns, although we are likely in the latter stages of this trade. In contrast, we do not think the outperformance of HY Metals & Mining can be sustained given tight valuations and challenging fundamentals.
- **Credit markets have generally moved "over the commodities hump" that was driving defaults and technicals.**
  - **HY defaults appear to be normalizing, driven by improvement in commodity-exposed sectors.** Our central thesis for defaults earlier this year was "what happens in commodities stays mostly in commodities." Indeed, there has been little contagion from Energy and Metals & Mining to the broader credit markets. The 12-month trailing issuer-weighted HY default rate rose from 3% at the start of 2016 to 5.6% as of the end of the October—but ex-Oil & Gas and Metals & Mining, it has hovered near post-crisis lows at around 1.9%. HY defaults have shown tangible signs of improvement in recent months, with a decline in the dollar amount of defaulted bonds and a change in composition toward non-commodity-related sectors.
  - **Similarly, downgrades have slowed and shifted away from commodities.** Of the $1.3 tn of bonds downgraded in 2016, 42% were in Energy and Metals & Mining, with the lion's share occurring in Q1. However, within the most vulnerable rating buckets today, Energy and Metals & Mining issuers have no bonds outstanding on downgrade watch. Instead, the biggest pocket of downgrade risk is currently in retail.
- **After a disappointing first quarter, the trend in credit quality appears to be slowly improving.** IG and HY net leverage has stabilized, although it remains high by historical standards, and interest coverage ratios have remained healthy, especially when excluding Energy and Metals & Mining. Moreover, ROAs and revenue growth have rebounded slightly from the recession-like levels reached in Q1; while far from spectacular, this is nonetheless a welcome development.

What to look for in 2017 (and beyond):

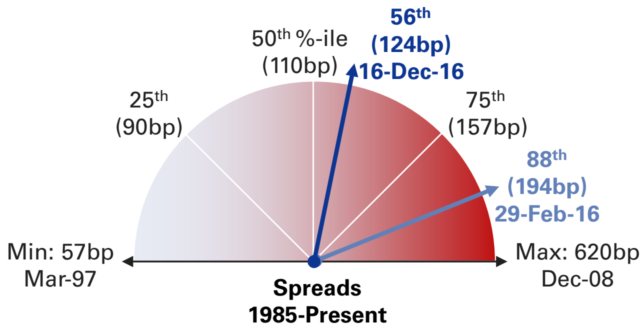
- **Moderate compression of spreads,** with US IG and HY cash spreads tightening by end-2017 to 111 and 430bp, respectively. We see a generally positive macro environment for credit going forward, with the top-down drivers of credit risk appetite remaining fairly supportive while bottom-up balance sheet fundamentals continue to gradually improve.
- **Further declines in default rates and downgrades.** We expect the HY default rate to fall to 4% by end-2017.
- **Further improvement in leverage, earnings, and revenue growth.** Watch US tax reforms, as a lower statutory corporate tax rate would be a tailwind for earnings and credit quality.
- **More dispersion across sectors** driven by the incoming administration's policy agenda. We are constructive on IG Banks and Energy as well as HY Building Products (key beneficiaries of easier fiscal policy); neutral on IG and HY Healthcare and Pharma and IG Cable/Media; and negative on HY Media, HY and IG retail, HY and IG Technology, and HY Metals and Mining.
- **The risk of an inflation shock**. While our base case is for credit spreads to resist rising rates, as they did in previous hiking cycles, this will depend on a credit-friendly mix of growth and inflation. With the US economy already effectively at full capacity, the risk that high inflation dominates the growth impulse from easier fiscal policy merits watching.
- **No inflection in the credit cycle yet.** Although market participants will likely shift their attention from commodity exposure to the potential for a negative turn in the credit cycle, we do not expect an inflection in 2017. Key to this view is the strong "business cycle" component in the behavior of HY defaults coupled with low US recession risk. When the cycle does eventually inflect, we expect credit losses to mean revert faster than in the 2001/2002 and 1990/1991 cycles, given higher levels of interest coverage today relative to those periods.

Thanks to: Lotfi Karoui, Bridget Bartlett, Jason Gilbert, Chris Henson, and Spencer Rogers.

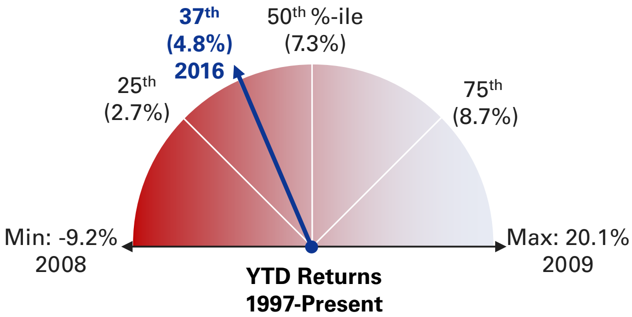
For more on these views, see 2017 Global Credit Outlook: New gear; same direction and Credit Outlook: Insights into 2017.

Update: Tighter spreads, more leverage

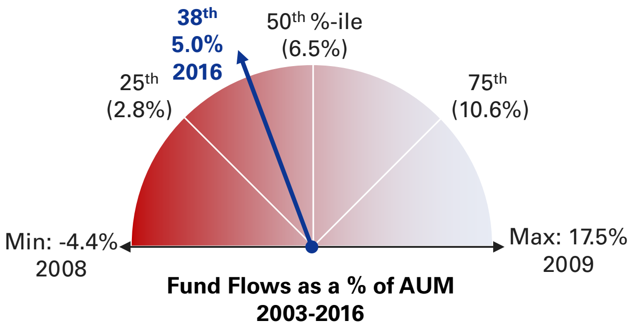
IG



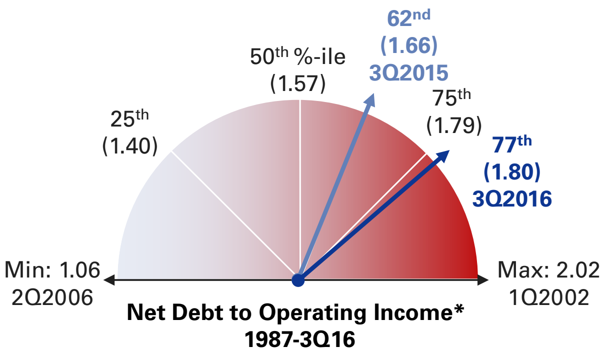
IG spreads are wider than they have been 56% of the time in the last 30 years, vs. 88% on 29 Feb.



IG returns YTD have been better this year than in seven of the last 20 years.

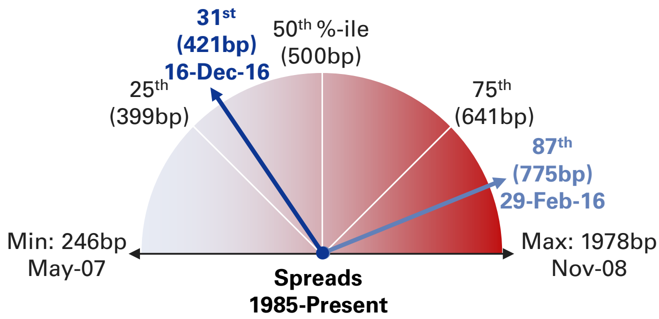


Cumulative YTD IG mutual fund and ETF flows in 2016 (as a % of AUM at the start of the year) were larger than in five other years since 2003.

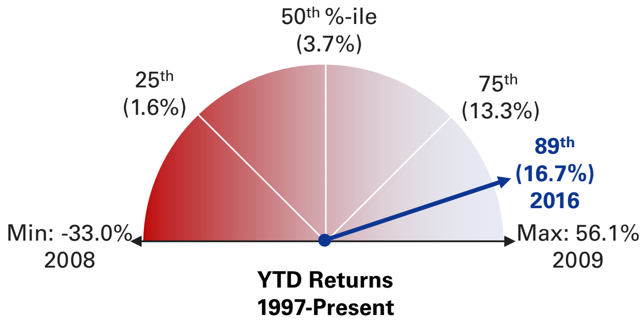


The median IG net leverage ratio is higher now than it has been 77% of the time since 1987, vs. 62% in 3Q15.

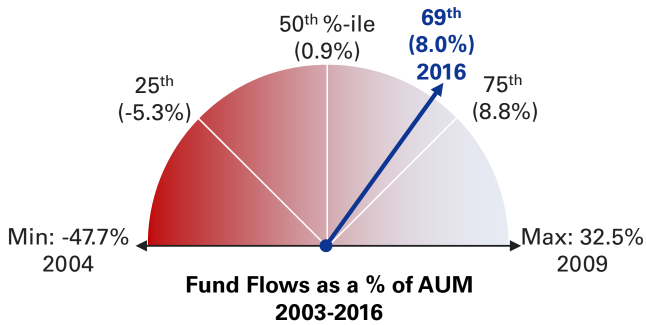
HY



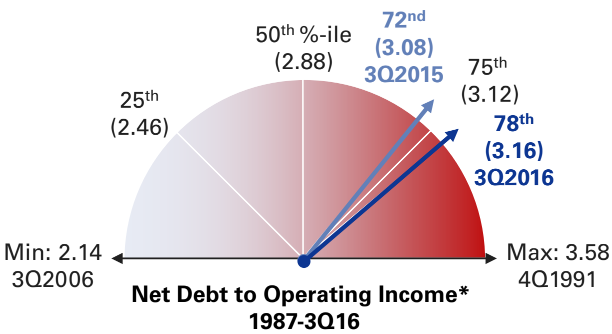
HY spreads are wider than they have been 31% of the time in the last 30 years, vs. 87% on 29 Feb.



HY returns YTD have been better this year than in all but two of the last 20 years.



Cumulative YTD HY mutual fund and ETF flows in 2016 (as a % of AUM at the start of the year) were larger than in all but four years since 2003.



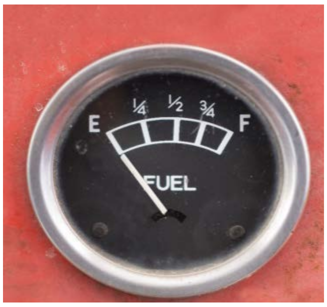
The median HY net leverage ratio is higher now than it has been 78% of the time since 1987, vs. 72% in 3Q15.

An earlier version of this graphic appeared on pg. 13 of Top of Mind Issue #43: Credit Tremors. Gauges show metrics on a percentile basis relative to history, including recessions. Prior points of comparison (in lighter blue) show data available when this graphic was first published.

**Seasonally adjusted cross-sectional median ratio of net debt to operating income before depreciation.*

Source: BAML, EPFR, S&P Compustat, The Yield Book Inc., Citi Index, Haver Analytics, Goldman Sachs Global Investment Research.

Policy Stimulus: Running on Empty?



> "I am not convinced that expanding QE—in terms of amount, type, or horizon of asset purchases—is going to have a major effect… Since monetary finance is always an option, saying that we are out of ammunition to stimulate demand is just completely wrong."
>
> **–Adair Turner, Former Chairman, UK Financial Services Authority**
>
> Published: March 23, 2016

Where we stand now:

- **We have seen little evidence that central banks (CBs) are "running on empty" but considerable evidence that they are recalibrating their policies to make them more effective and sustainable (see also pg. 22).**
  - o **Asset purchase programs:** Both the ECB and BOJ have effectively begun to reduce or position themselves to reduce their pace of asset purchases, apparently with an eye to increase the sustainability/longevity of QE, leaving the market scratching its head on whether these shifts constitute a "taper" (although both CBs deny that they are):
    - **ECB:** On December 8, the ECB announced a nine-month extension of the Asset Purchase Programme (APP) until end-2017 (from March 2017) at a reduced pace of €60bn a month (from €80bn a month), which is lower than we expected. But the ECB emphasized that it sought to maintain "a sustained market presence" and suggested the APP could continue longer if necessary. The ECB also introduced greater flexibility in the pace of purchases, but said reducing the monthly pace below €60bn is "far, far away."
    - **BOJ:** On September 21, the BOJ announced QQE with Yield Curve Control, whereby it would target 0% for 10-year JGB yields. The BOJ is maintaining a ¥80tn/year expansion of asset purchases for now, although it effectively abandoned its previous monetary base target, which could be construed as "stealth tapering" required to increase QQE's sustainability.
  - o **Negative interest rates:** Japan and all of the European economies that had negative policy rates have left them unchanged (so no forays into deeper negative territory). We think the ECB is likely to resist pushing rates more negative, whereas any further accommodation by the BOJ would likely take the form of rate cuts in the absence of better choices.
- **The focus on outright monetary financing, aka, "helicopter money," has ebbed** as governments have maintained an outwardly cautious stance on the slippery slope of financing deficits with money creation. In particular, the market's hope for explicit monetary financing in Japan, where we argued it could be effective and mechanically easier to implement than in the Euro area, were dashed when the BOJ's September "Comprehensive Assessment" included no hint of it.
- **But the line between monetary and fiscal policy remains blurred as fiscal expansion gains ground, often with the help of CB policies**. Fiscal easing is now in train in almost every major developed country (see here and here) and of course potentially super-charged in the US under Donald Trump. There is increasing conviction that CB asset purchases have provided headroom for fiscal expansion via lower debt servicing costs, although concerns about rising deficits remain.

What to look for in 2017 (and beyond):

- **Monetary policy divergence: Still-easy monetary policy in Europe and Japan, and more rate hikes in the US.**
  - o **ECB:** We maintain that the ECB will continue its APP through 2018, progressively reducing the pace of purchases from €60bn per month after December of next year. We do not expect a rate hike until end-2019, later than the market expects.
  - o **BOJ:** We believe that the BOJ is unlikely to ease further in 2017 unless it needs to counter sharp yen appreciation.
  - o **Fed:** We forecast three hikes during 2017, putting the funds rate range at 1.25-1.50% by the end of next year.
- **Further fiscal expansion (in some cases substantial), which will support growth.**
  - o **Euro area:** We expect a fiscal easing of 0.5% of GDP in 2017 and 0.2% of GDP in 2018, driven by greater fiscal space from improving budget balances (i.e., low interest payments and positive growth) and the ECB's APP. Political considerations ahead of elections in France and Germany may also play a role. Growth impact in 2017/2018: 0.4pp/0.2pp, respectively.
  - o **Japan:** We expect to see spending under the economic stimulus package announced this summer to come into play from 2017. Growth impact in 2017: 0.4pp.
  - o **US:** We expect a scaled-down version of the fiscal proposals of President-elect Trump and the Republican House leadership, with a net easing of $200bn per year or 1% of GDP, consisting mostly of individual and corporate tax cuts. Growth impact in 2017/2018: 0.3pp/0.5pp, respectively.
- **Outright helicopter money still not taking off; but the very blurred line between monetary and fiscal policy persisting.**

Thanks to: Naohiko Baba, Lasse Holboell Nielsen, and Huw Pill.

Update: Still a lot of stimulus

6

Number of central banks with official interest rates below zero

$13.4tn

Combined assets of the Fed, ECB, BOE, and BOJ as of 3Q16

€1tn

Excess reserves and deposit facility usage subject to the ECB's negative interest rate as of end-October

24

Minimum estimated months before the ECB would run out of German bunds to purchase under current QE parameters[1]

58%

Share of Euro area government bonds maturing in <10 years with a negative yield to maturity

2001

Year of the first-ever QE program, which was launched by the BOJ and lasted until March 2006

61%

Share of Japanese survey respondents who do not expect negative rates to help the recovery[2]

20+

Years that Japan's key overnight interest rate has been below 1%

56bp

Market's expectation for inflation in Japan in 10 years (based on inflation swaps)

86%

Share of Japanese government bonds maturing in <10 years with a negative yield to maturity

An earlier version of this graphic appeared on pg. 12 of Top of Mind Issue #44: Policy Stimulus: Running on Empty?

[1] On our estimates, the combined impact of the ECB's measures announced December 8, 2016, will allow the German Bundesbank to continue purchasing government securities until at least the end of 2018. See also *Macro Rates Views: "ECB QE Announcement: Our First Take" (8 December 2016)*.

[2] Results of poll conducted by *The Asahi Shimbun* on February 13-14, 2016.

Brazil at a Crossroads

"A president working in the context of Brazil's checks and balances must be adept at building multi-party coalitions to get anything done… My fear is that a Temer administration would run into [problems with this]."

–Riordan Roett, Professor of Latin American Studies, Johns Hopkins SAIS

Published: April 27, 2016

Where we stand now:

- **Brazil's economic environment has continued to worsen, extending one of the country's longest recessions/depressions on record.** As of 3Q2016, real GDP was at the same level as in 3Q2010, with final private-sector domestic demand down a cumulative 13.1% vs. 2Q2014. We expect real GDP in 2016 of -3.4%.
- Against this backdrop, **the labor market has continued to deteriorate.** The unemployment rate reached 12.1% in seasonally adjusted terms in October, while average real wages were down 2.1% yoy.
- **Inflation has moderated gradually** on a combination of economic weakness, lower pressures from administered prices and food prices, and better-anchored inflation expectations, among other factors. As of November 2016, the average of the three core inflation measures we follow was 7.09% yoy, compared to 9.07% at the end of last year. This enabled the central bank to initiate an easing cycle with a 25bp cut in October and another 25bp cut in November, bringing the policy rate to 13.75%.
- **The Senate voted 61 to 20 in August to impeach and permanently remove former President Dilma Rousseff**. Former Vice President Michel Temer is serving the remainder of the presidential term, which will end on December 31, 2018. Polls show that just 10% of the public thinks Temer's government is doing a good/great job, below Rousseff's 13% prior to her impeachment. The share that thinks Temer is doing a bad/very bad job remains below what hers was (51% vs. 65%).
- **Fiscal adjustment has been front and center on the policy agenda**. The consolidated public sector primary fiscal balance in the 12 months through October was -2.2% of GDP (compared to -1.9% in December 2015), while the overall public sector fiscal deficit was extraordinarily high at 8.8% of GDP. Gross general government debt was 70% of GDP, vs. 66% at end-2015. So far, the Temer administration appears to be pursuing a gradual fiscal adjustment in lieu of a more decisive, front-loaded one. Instead of deep spending cuts or higher taxes, the government is focusing on a constitutional amendment that caps the growth of primary fiscal spending and on social security reform to contain the explosive growth in social security spending.
- Despite the difficult macro backdrop, **Brazilian assets have continued to perform well**; MSCI Brazil is up about 50% year-to-date in USD and the BRL has appreciated roughly 17% against the USD. This owes partly to expectations that a new administration could (1) be more inclined to take steps to address the country's rapidly deteriorating fiscal picture, and (2) prove capable of building the political consensus to move forward with critical but unpopular and politically sensitive reforms.

What to look for in 2017 (and beyond):

- **A shallow recovery, with real GDP growth of 1.1%** driven by the inventory cycle, private investment spending, and net exports. However, the economy should continue to face headwinds from exigent financing and bank credit conditions, high levels of household indebtedness as a share of disposable income, and weak external demand. The labor market is likely to deteriorate further, and we expect the unemployment to reach new highs—topping 12.5%—by mid-2017.
- **A continued moderation of inflation, enabling the central bank to continue easing.** We expect inflation to fall to 4.8% in 2017, and the policy rate to end the year at 11%.
- **Whether the Temer administration can deliver fiscal reform.** Failure to deliver tangible and credible measures to reduce the fiscal deficit could significantly delay the economic recovery and potentially trigger adverse market dynamics. With presidential elections scheduled for October 2018, the window for approval of meaningful reforms may close by 2H2017.
- **Further opportunity in the BRL** given a significantly stronger current account picture, generous real carry, and the prospect of improving growth. Our 3/6/12-month BRL/USD targets are 3.20/3.30/3.40, and one of our Top Trades is to be long an equally-weighted basket of BRL, RUB, INR and ZAR, vs. short an equally-weighted basket of KRW and SGD.
- **Upside to Brazilian equities.** We recommend going long Bovespa (alongside India and Poland equities) in one of our other Top EM Trades for the year. We do not expect EM equities to stage a rally in 2017 similar to the powerful one of this year, but we do see the Brazilian market as being relatively more insulate to risks related to higher core rates, China growth, or US trade policy than other EMs. Given the high level of real policy rates, Brazil has scope for monetary easing, which in turn should propel the domestic growth story in 2017.

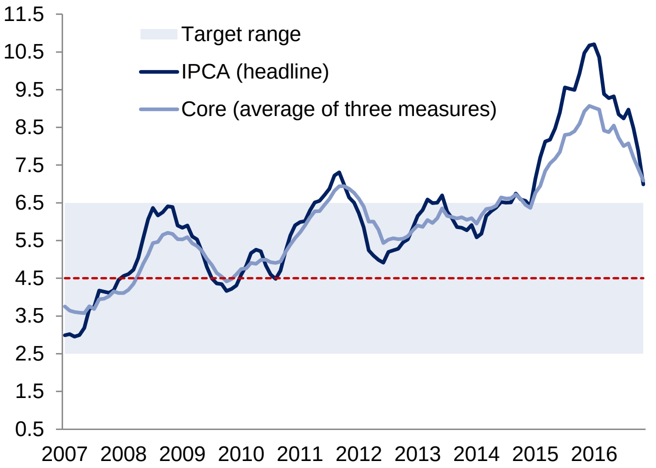
Thanks to: Alberto Ramos, Caesar Maasry, and Kamakshya Trivedi.

Update: Economic, political woes extend

Earlier versions of these charts appeared on pgs. 3 and 6 of Top of Mind Issue #45: Brazil at a Crossroads. Special thanks to the Brazil team for these series.

Inflation: moderating, but still high

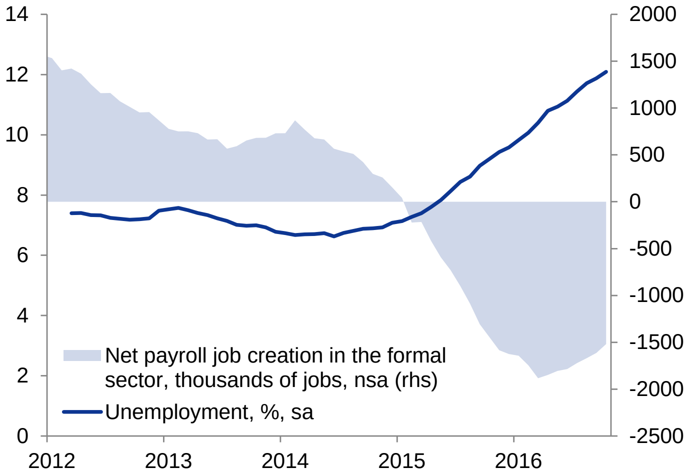
Brazil's headline/core inflation, % yoy, eop



Source: Haver Analytics, IBGE.

Labor market: ongoing and significant deterioration

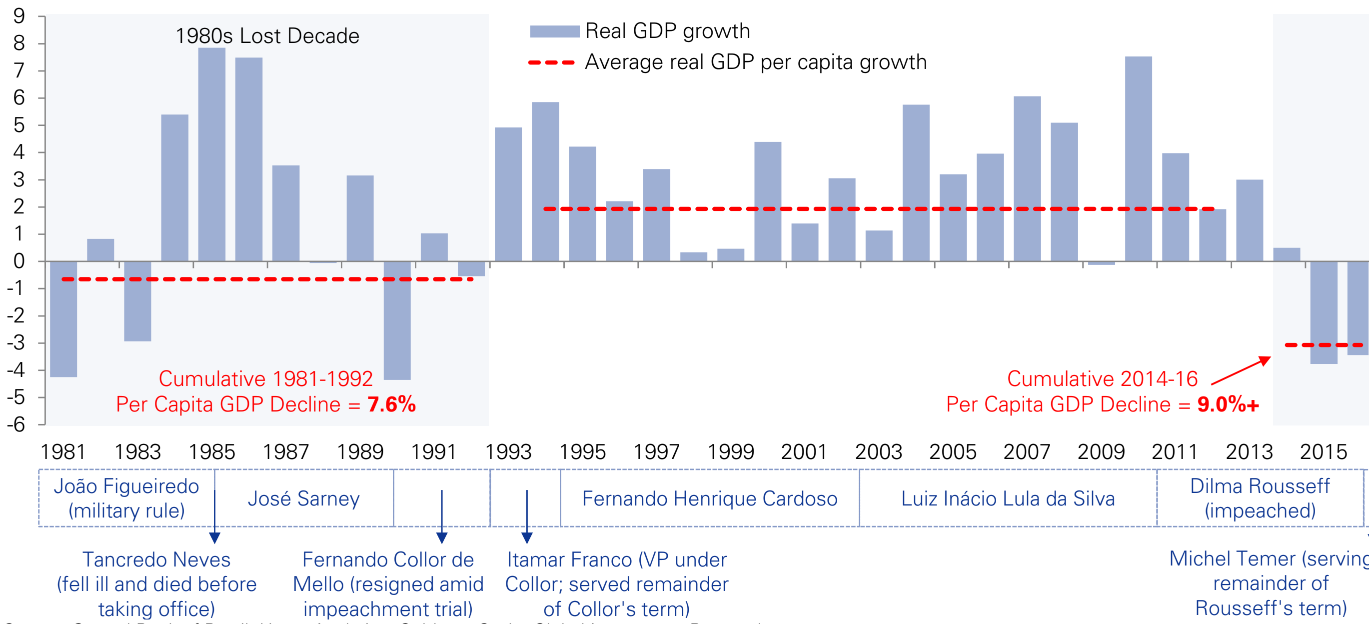
Brazil's unemployment rate, %; net payroll job creation, thousands (rhs)



Source: IBGE, Haver Analytics, MTE.

Replicating the " lost decade"

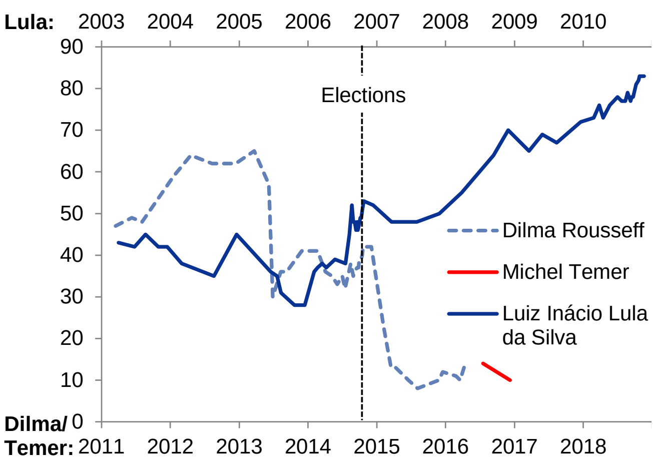
Brazil's real GDP growth and average real GDP/capita growth, %; annotated with presidential terms



Source: Central Bank of Brazil, Haver Analytics, Goldman Sachs Global Investment Research.

Political dynamics: under new management

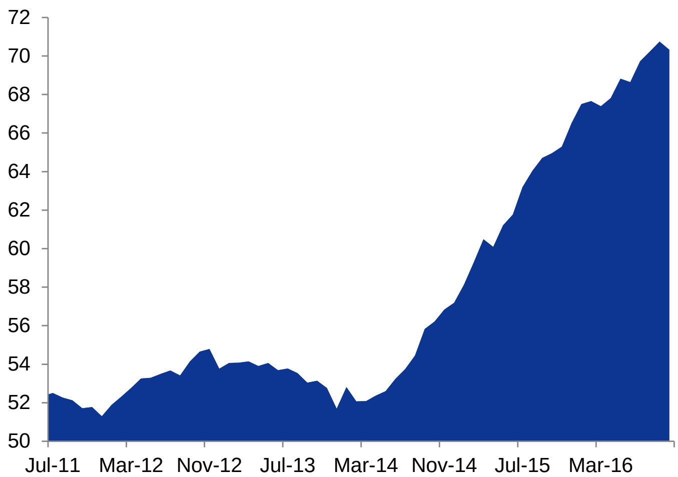
Share deeming each president's government as great/good, %



Source: Datafolha (dates of last survey: December 7-8, 2016).

Key to watch: badly needed fiscal adjustment

Brazil's gross general government debt, % of GDP



Source: Haver Analytics.

Factoring in Financial Conditions

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> "Policymakers must take into account all information to assess what is happening and how monetary policy will affect it. That includes asset prices as well as indicators of economic activity, the labor markets, and inflation expectations."
>
> **– Frederic Mishkin, Professor, Columbia University Graduate School of Business**
>
> Published: May 26, 2016

Where we stand now:

- **Financial conditions—the state of financial variables such as interest rates, equity prices, and credit spreads—have eased in much of the world since Q1,** as markets stabilized from the sharp sell-off in risk assets in early 2016.
  - In the US, the easing through mid-year was considerable; even after the recent sharp rise in bond yields and the resumption of dollar strength, our US Financial Conditions Index (FCI) remains roughly 100bp easier than its tightest level in January.
  - Other developed markets have experienced significant easing as well, driven largely by currency moves—specifically, sterling depreciation following the UK's referendum on EU membership in June and sharp yen depreciation against the dollar since the US election.
  - In emerging markets (EM), financial conditions remain easy by historical standards.
- **Financial conditions have in turn become a boost to growth rather than a drag**, in line with our expectations. Indeed, we think the improvement in recent sequential growth indicators—both global GDP and our Current Activity Indicator (CAI)—reflects in large part the improved FCI impulse. In developed economies, the impulse has turned from very negative (-1.5pp) in 1H16 to slightly positive today. In EM, the impulse has stayed positive and is currently contributing roughly 1pp to growth. This positive impulse is a key reason for our improved outlook for global growth in 2017.
- **In the absence of sharp risk-off moves in global markets, the Fed's focus has shifted from financial conditions and international developments back to US inflation and unemployment.** In its December post-meeting statement, the FOMC indicated that its 25bp rate hike was justified by "realized and expected labor market conditions and inflation."

What to look for in 2017 (and beyond):

- **Further support to global growth from the FCI impulse—provided financial conditions remain around current levels.** (Recall that the FCI impulse depends primarily on the year-on-year change in financial conditions rather than the current level of the FCI.)
- **How central banks outside the US insulate themselves from rising US rates and the resulting tightening in financial conditions.** We expect continued easy policy from both the ECB and the BOJ (for more, see pg. 22).
- **Risks from rising yields, a stronger dollar, and a potential shift in risk sentiment.**
  - While we expect bond yields to rise more gradually from here (reaching 2.75% by end-2017), we are forecasting a roughly 7% appreciation of the trade-weighted dollar over the same period. Aside from tightening US financial conditions, a stronger dollar poses noteworthy risks to EMs: EMs with fixed exchange rates will find themselves effectively importing tighter financial conditions from the US, while those with flexible exchange rates could struggle with the rising value of their dollar-denominated debt.
  - Financial conditions could also tighten if the recent rally in US equities—driven by optimism about growth and policy under the incoming Trump administration—fades mid-year as we expect.
- **China's influence on global financial conditions.** As we have highlighted, prior "China risk" episodes tightened US financial conditions enough to shift the Fed in a more dovish direction. As the dollar appreciates, China will have to fix $/CNY higher to keep the trade-weighted CNY stable, which in the past caused capital flows to pick up amid global risk-off sentiment. Our base case is for the forthcoming dollar appreciation to be orderly, but an escalation of China fears and a spillover into risk sentiment are key risks to that view (see also pg. 6).

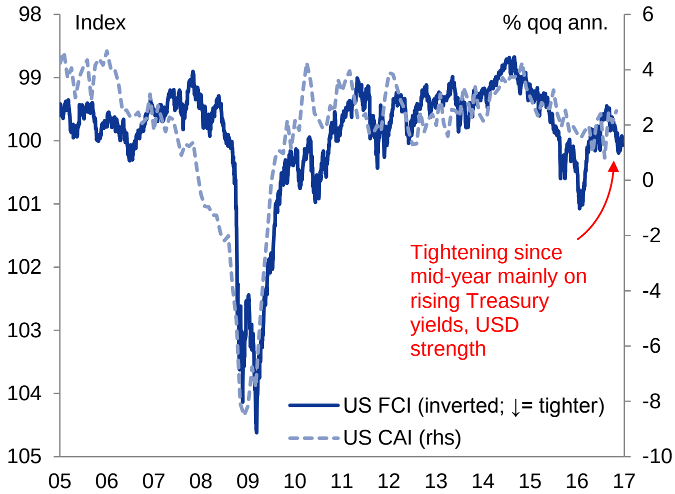
Thanks to: Nicholas Fawcett, Jan Hatzius, Karen Reichgott, and Jari Stehn.
For more on these views, see Global Economics Analyst, "A Catalyst for Tighter Fed Policy" (16 November 2016).

Update: FCIs easier, but tightening now

Earlier versions of these charts appeared on pg. 14 of Top of Mind Issue #46: Factoring in Financial Conditions. Special thanks to the Economics and EM Macro analysts.

United States

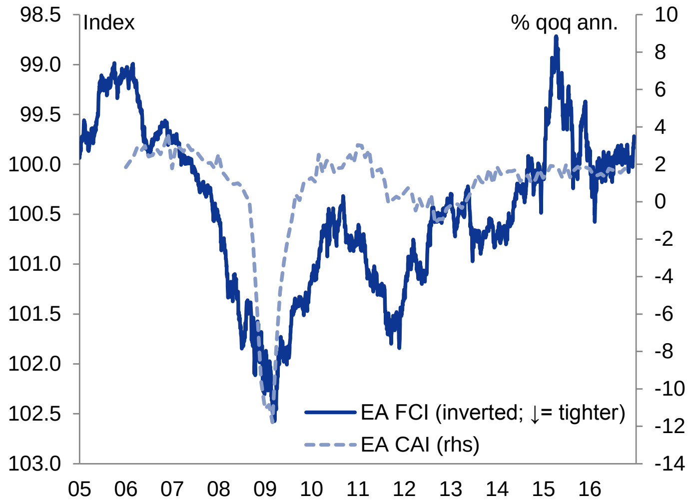
Financial Conditions Index (inverted); Current Activity Indicator, % (rhs)



Source: Goldman Sachs Global Investment Research.

Euro area

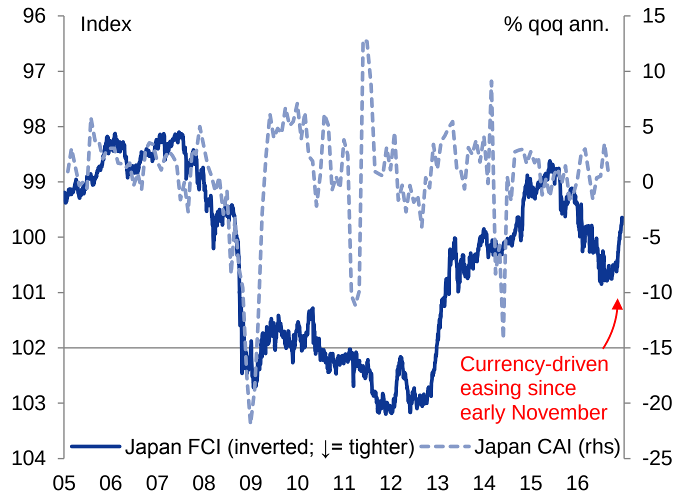
Financial Conditions Index (inverted); Current Activity Indicator, % (rhs)



Source: Goldman Sachs Global Investment Research.

Japan

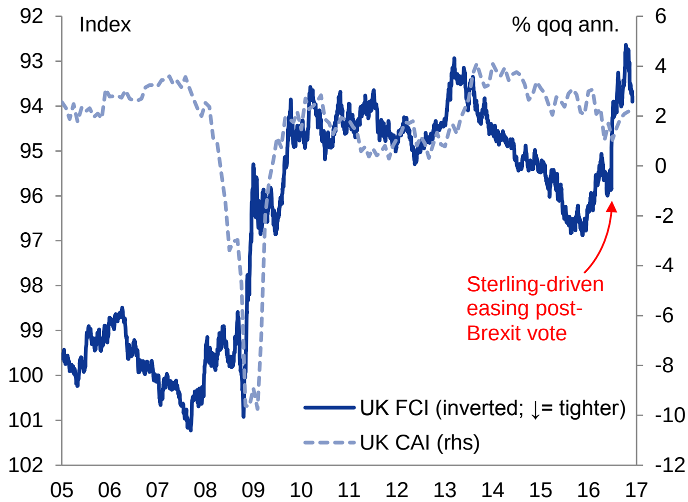
Financial Conditions Index (inverted); Current Activity Indicator, % (rhs)



Source: Goldman Sachs Global Investment Research.

United Kingdom

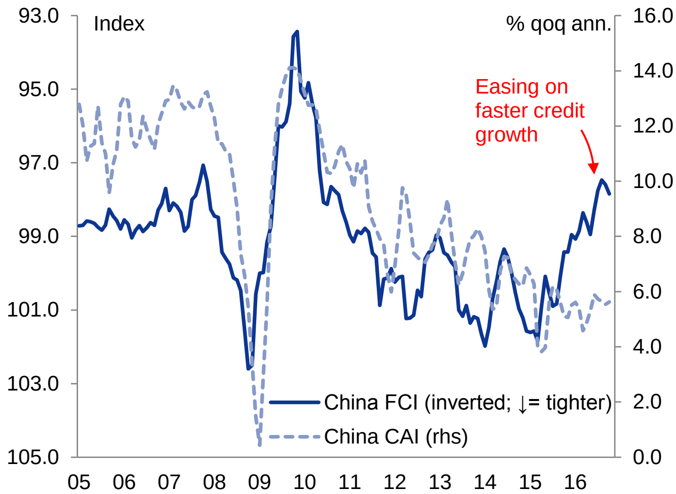
Financial Conditions Index (inverted); Current Activity Indicator, % (rhs)



Source: Goldman Sachs Global Investment Research.

China

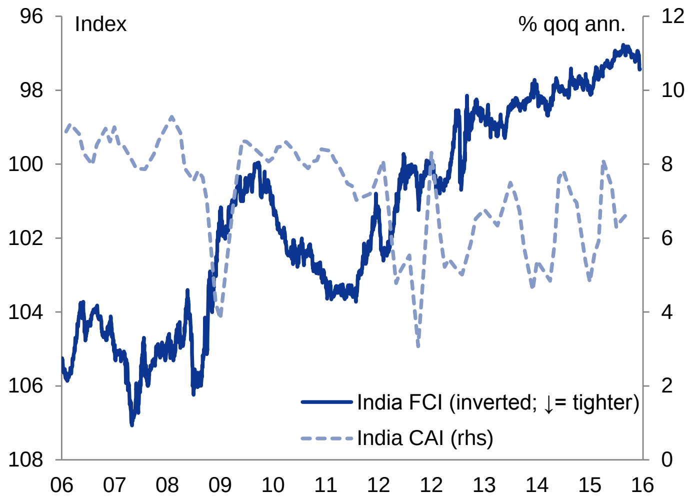
Financial Conditions Index (inverted); Current Activity Indicator, % (rhs)



Source: Goldman Sachs Global Investment Research.

India

Financial Conditions Index (inverted); Current Activity Indicator, % (rhs)



Source: Goldman Sachs Global Investment Research.

Political Uncertainty

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> "Since no party, country or leader has discovered the policy path to achieve economic growth while mitigating the ills that go along with it, I think political uncertainty and instability will continue to grow."
>
> **–David Brady, Professor of Political Science, Stanford University**
>
> Published: June 23, 2016

Where we stand now:

- **Political uncertainty reached new highs with the UK's vote to leave the EU and the election of Donald Trump.** The UK Economic Policy Uncertainty (EPU) Index, a news-based measure, spiked to a record 1,142 in July, more than 8.5x the average since the creation of the index (1997) through 2015. (Our own measure of uncertainty also spiked, but to lower levels.) US EPU rose sharply in November to 255, the highest level on record outside of September 11^{th} and the 2011 debt ceiling crisis.
- **Uncertainty has weighed less than expected on UK activity.** The UK economy has proved remarkably resilient, with any weakening related to the referendum confined to narrow areas of the economy (and offset by momentum in other sectors, notably consumer-facing ones). We had lowered our 2016 UK growth forecast to 1.5% after the vote but now expect growth of 2.1%. In the US, significant uncertainty over the president-elect's future policies and governing style has failed to weigh on market sentiment, as risk assets have rallied on the expectation of greater fiscal stimulus and tax reform.
- **Spikes in equity volatility around political events have been fairly short-lived.** After the UK referendum, the VIX closed at 25.8, in the 84^{th} percentile since 1990, but by mid-July it had stabilized in the 12-13 range. The VIX reached 22.5 prior to the US election—about five points higher than the typical level around past presidential elections—but has since receded to 11.7.
- **There has been no shortage of political risks elsewhere, particularly in Europe.**
    - Established parties failed to establish a parliamentary majority in Spanish national elections in June. Center-right PP was ultimately able to form a minority government, keeping Prime Minister Mariano Rajoy in office, but its coalition with the liberal Ciudadanos party holds only 169 of 350 seats. Spain's larger political risk, Catalonia, remains unresolved.
    - French center-right primaries resulted in a win for former Prime Minister François Fillon against expectations and polling predictions. Fillon advocates strict controls on immigration and heightened national security, which should help erode support for the Eurosceptic Front National. On the left side of the political spectrum, President François Hollande has chosen not to seek reelection, while Manuel Valls has resigned as Prime Minister to run. The left-wing parties appear increasingly divided, raising the odds that the Front National reaches the second round in next year's elections.
    - In Germany, despite reduced popularity, Angela Merkel has confirmed her intention to seek a fourth term as Chancellor. The right-wing populist Alternative fur Deutschland (AfD) has made a strong showing in recent German regional elections.
    - In Italy, voters rejected constitutional reforms in a referendum on December 4, prompting Matteo Renzi to resign as Prime Minister (former Foreign Minister Paolo Gentiloni has since been appointed in Renzi's place). The "no" camp achieved a larger-than-expected majority, particularly in regions where the anti-establishment 5 Star Movement had previously gained ground. However, the high turnout suggests that the share of the Italian electorate that supports Renzi remains high, increasing the chances of elections in 2017.

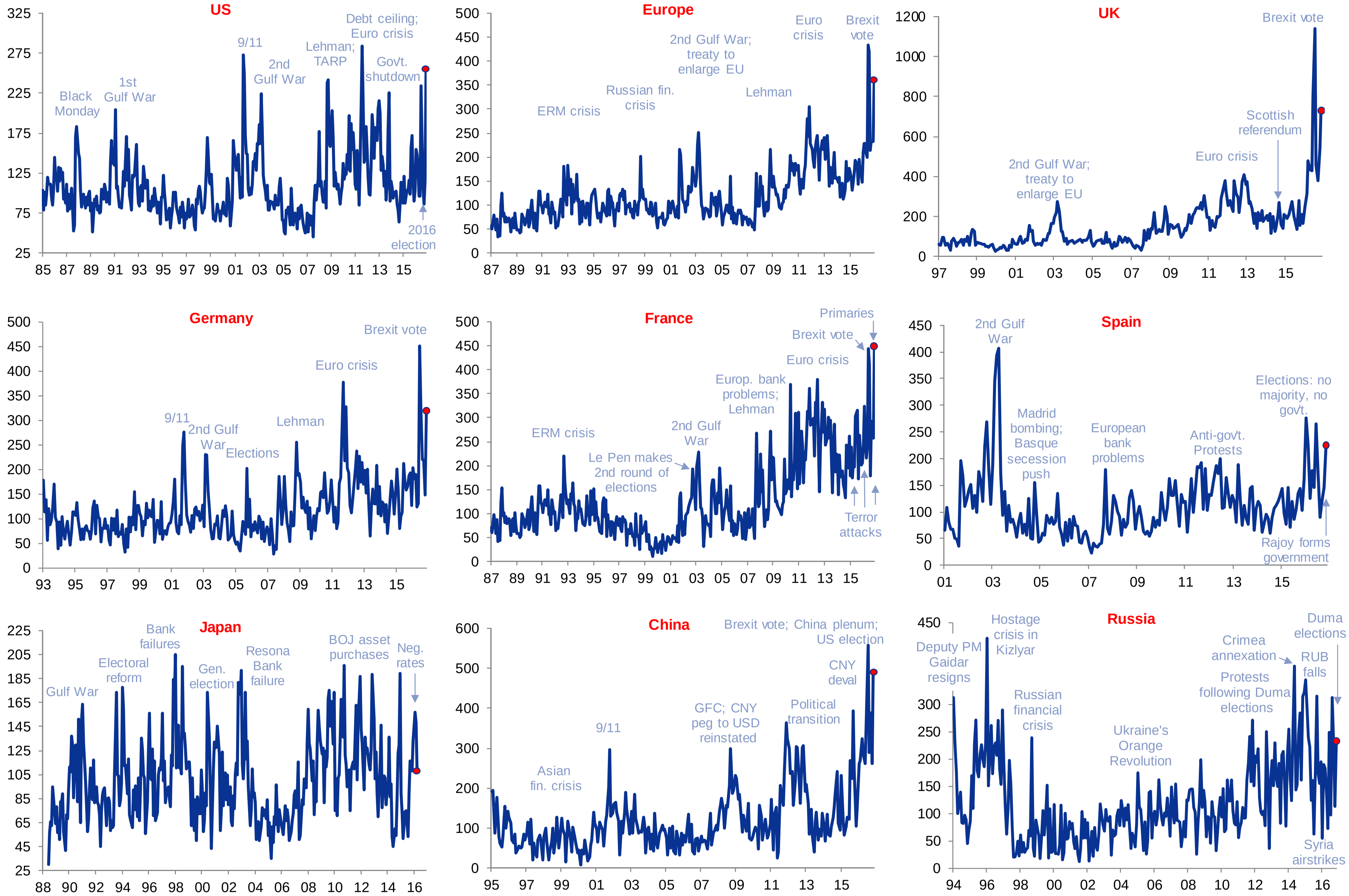
What to look for in 2017 (and beyond):

- **Heightened political risk during a busy European election season.** Elections set for 2017 include the general election in the Netherlands (March 15), the presidential election in France (second round on May 7), and the federal election in Germany (September)—all countries where right-wing populist political movements have recently gained in popularity.
    - In France, we expect François Fillon to face off and defeat Front National leader Marine le Pen in the second round.
    - We think the German elections will result in a repeat of the "grand coalition" among mainstream parties, given that other parties do not consider AfD an acceptable partner.
    - In Italy, we expect the government to focus on domestic issues including the approval of a new electoral law and the banking system recapitalization in 1H17. As such, we expect elections no sooner than June; when they do take place, we expect to see Renzi compete against the 5 Star Movement.
- **Continued policy uncertainty around the world.** Market participants will seek clarity on Brexit negotiations as well as the new US administration's policies (see pgs. 18 and 24). China will undergo a leadership transition next year, with a majority of the Politburo and Standing Committee expected to step down. And, amid ongoing tensions between Spain's national government and Catalonia, the region has promised to hold an independence referendum in September.

Thanks to: Andrew Benito, Alain Durré, Francesco Garzarelli, and Krag Gregory.

Update: EPU indices up; more ahead?

These indices measure **economic policy uncertainty**. Developed by Scott R. Baker (Northwestern University), Nick Bloom (Stanford University) and Steven J. Davis (University of Chicago), they are based on the frequency of terms related to economic and policy uncertainty appearing in newspapers.



Earlier versions of these charts appeared on pg. 9 of Top of Mind Issue #47: Political Uncertainty.
Source: Economic Policy Uncertainty (www.policyuncertainty.com), Haver Analytics. Note that the US index shown is news-based only, in contrast to the "headline" Economic Policy Uncertainty index, which incorporates disagreement over economic forecasts and tax code expiration data in addition to the news-based component.

Breaking Down "Brexit Means Brexit"

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> "The withdrawal treaty will likely be in force before any agreement on the future relationship between the EU and UK… [If no other action is taken], the UK would be subject only to WTO rules, which will imply complex negotiations with the 162 other WTO members."

– Jean-Claude Piris, Former Director General, EU Council Legal Services

Published: July 28, 2016

Where we stand now:

- **The start of UK-EU negotiations remains on hold pending UK Prime Minister Theresa May's activation of Article 50**, which she has said she will do before the end of March 2017. The UK Supreme Court is currently determining whether May needs parliamentary approval (i.e., via primary legislation) to proceed. Parliament recently voted in favor of triggering Article 50, but the decision was on a non-binding motion (whereas the Supreme Court ruling may require a piece of primary legislation). European leaders have confirmed that no negotiations will be held until the article is triggered.
- **UK and EU priorities for Brexit remain at odds, leading market participants to acknowledge the risk of a "hard Brexit."** In May's speech at the Conservative Party conference in October, she emphasized (1) controlling immigration and (2) excluding the UK from the jurisdiction of the European Court of Justice. In our view, these priorities are incompatible with single market membership. Indeed, Michel Barnier, the EU Commission's chief Brexit negotiator, recently reiterated the EU's pledge to the "four freedoms"—free movement of goods, persons, capital, and services—of the single market.
- **Against expectations, growth in the UK has remained remarkably steady at around 2.0% yoy.** Activity has weakened in some relatively narrow areas of the economy, like commercial real estate and construction, but this has been offset by other sectors, particularly consumer-facing ones that have benefitted from the easing in financial conditions.
- **The BOE has faced a challenging tradeoff between supporting growth and containing inflation.** The bank eased policy in August with a 25bp rate cut, a reactivation of QE, and a term funding program for banks. By November, however, the BOE had dropped its easing bias out of caution about an inflation overshoot. CPI inflation has so far averaged 1.0% yoy in Q4.
- **Even after recent support to the trade-weighted sterling, the currency remains 10% weaker than before the referendum.** This depreciation has reflected—in our view—expected deterioration in the UK's access to foreign export markets, as well as the effects of uncertainty on investment spending. Sterling remains sensitive to Brexit-related headlines.
- **The impact of the referendum has not yet stymied the performance of UK equities.** In fact, the FTSE 100 has been the best-performing European index year-to-date in local currency, and has performed in line with Euro STOXX 50 in common currency. Much of this is due to the FTSE 100's large share of companies with international sales exposure, which have benefitted from sterling's fall. As expected, our basket of UK domestic stocks (GSSTUKDE) has underperformed sharply.

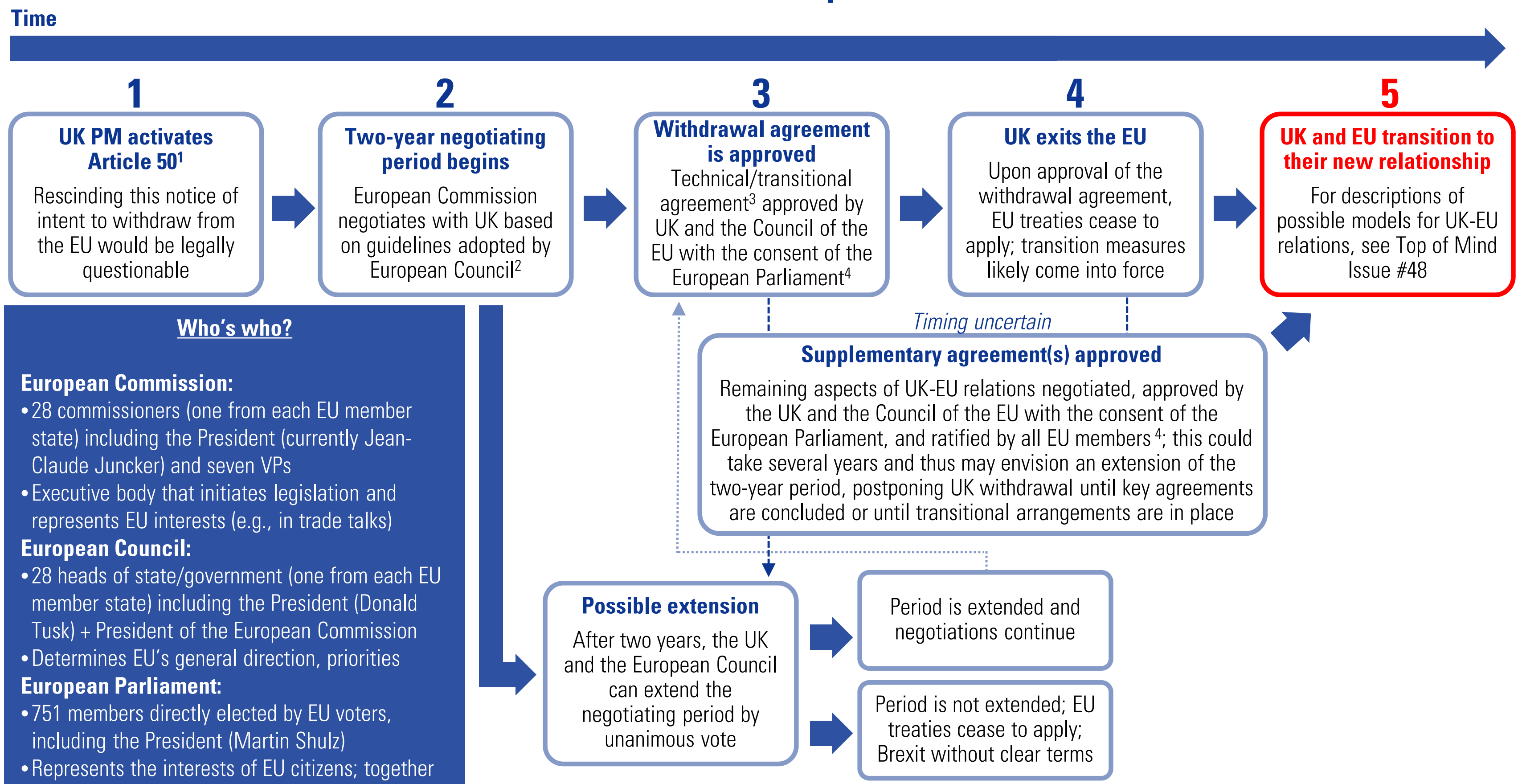
What to look for in 2017 (and beyond):

- **An official start to negotiations, though uncertainty on timing and tone remains high.** Our base case is for May to activate Article 50 by the end of 1Q17. Legal and political uncertainties, however, skew the risks toward a later date. For example, if the Supreme Court rules that Parliament must approve Article 50's activation, May could call a spring election in order to solidify her mandate, likely delaying the activation until June or July. Ultimately, we expect the negotiations to result in a UK-EU FTA that applies to goods but not services, and a loss of the UK's rights to financial passporting.
- **A moderation of UK growth to 1.4% in 2017 and 2018** owing to the effect of uncertainty on business investment and a deterioration in the UK's terms of trade, which will erode consumers' real incomes through rising import prices and higher consumer price inflation. (We forecast CPI inflation averaging 1.7% yoy for 2017 and 2.9% for 2018.) All told, we expect the level of UK GDP to be around 2.2% lower in three years' time than it would have been without Brexit.
- **Complementary support from UK monetary and fiscal policy**, as BOE QE enables a slower fiscal adjustment than otherwise. We expect the BOE to resist upward pressure on bond yields by adding to its stock of asset purchases by £50bn (most likely later in 2017 rather than as an uninterrupted extension of the current QE program, which expires in February). Given slower growth and looser fiscal policy, we forecast the UK's current account and fiscal deficits to narrow gradually, from around 5% of GDP in 2016 to around 4% in 2018 for the current account and from 3.9% to 3.0% for the fiscal deficit.
- **Further sterling depreciation.** We maintain that sterling is not yet "cheap" and will likely fall further on the political uncertainty tied to the Brexit process. We forecast GBP/$ at 1.20, 1.18, and 1.14 in 3, 6, and 12 months, respectively.
- **Continued pressure on UK domestic-facing stocks, as a weaker currency and higher import prices harm their margins.**

Thanks to: Silvia Ardagna, Sharon Bell, Andrew Benito, Robin Brooks, and Michael Cahill.

Update: Still haven't pressed "go"

The Brexit process



Who's who?

European Commission:
- 28 commissioners (one from each EU member state) including the President (currently Jean-Claude Juncker) and seven VPs
- Executive body that initiates legislation and represents EU interests (e.g., in trade talks)

European Council:
- 28 heads of state/government (one from each EU member state) including the President (Donald Tusk) + President of the European Commission
- Determines EU's general direction, priorities

European Parliament:
- 751 members directly elected by EU voters, including the President (Martin Shulz)
- Represents the interests of EU citizens; together with the EU Council, adopts EU laws

Council of the EU (sometimes referred to as the Council of Ministers, the EU Council, or simply the Council):
- Ministers of member states under a presidency that rotates among EU member states every six months (currently Slovakia); participating ministers depend on the subject of meetings
- Represents the interests of national governments; coordinates policies and, together with the European Parliament, adopts EU laws

[1] Opinions have varied as to whether the UK Parliament's involvement or approval of this notice is required. This is currently under review by the UK Supreme Court.

[2] These guidelines will be adopted unanimously, but without the UK. The UK will not be able to participate in discussions concerning its withdrawal within the European Council or the Council of the EU (though it will participate in negotiations over its future with the EU).

[3] Article 50 does not comment on the scope of the withdrawal agreement, but briefings on the topic (including those cited below) suggest that a withdrawal agreement would likely be limited in scope and supplemented by other, more detailed agreements.

[4] As shown here, required approvals depend on the scope of the agreement. An agreement that addresses only the competences of the EU, and not of its member states, requires approval from EU institutions: (1) an enhanced qualifying majority of the Council of the EU, or 72% (i.e., 20 of the 27 member states) representing at least 65% of the total population of the member states, and (2) the consent of the European Parliament by simple majority. (Note that in a February 2016 report, the UK government suggested that a more detailed withdrawal agreement might require unanimous agreement by Council of the EU.) In contrast, an agreement that addresses matters related to the competence of *both* the EU and its member states, known as a "mixed agreement," must be ratified by both EU institutions and by the member states themselves. However, even an agreement needing only the approval of EU institutions may ultimately involve EU members ratifying some changes to EU treaties, if only for procedural reasons (e.g., to change the list of countries that are subject to the treaties).

An earlier version of this graphic appeared on pg. 6 of Top of Mind Issue #48: Breaking Down "Brexit Means Brexit."
Source: Europa.eu; HM Government, "The process for withdrawing from the European Union" (February 2016) and Vaughne Miller and Arabella Lang, "Brexit: how does the Article 50 process work?" (June 2016), both of which contain public sector information licensed under the Open Government Licence v3.0.; Jean-Claude Piris and the Centre for European Reform, "If the UK votes to leave: The seven alternatives to EU membership" (January 2016).

Trade Trends

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"In the absence of other levers to pull, what is the best way to mitigate [the risk of recession]? The answer is continuing to expand trade, which will raise incomes by increasing countries' specialization, making new technologies and products available globally, and so on."

– Lord William Hague, Former UK Foreign Secretary
Published: September 29, 2016

Where we stand now:

- **The election of Donald Trump has amplified concerns about a rollback of free trade, particularly given US presidential discretion over trade policy.** As president, Trump will have the authority to withdraw from bilateral and multilateral trade agreements, and to raise tariffs without congressional approval. In past statements, Trump has called for imposing tariffs on imports from Mexico and China of 35% and 45%, respectively. The Trump administration will likely face pressure to move policy in this direction, though the exact measures it will take remain uncertain.
  - News reports have indicated that Trump intends to grant his nominee for Secretary of Commerce, Wilbur Ross, greater responsibility for trade policy (which is normally handled by the US trade representative or USTR). Ross expressed support for the Trans-Pacific Partnership (TPP) in 2015 but has since criticized the deal. Trump has yet to appoint the head of USTR.
- **More broadly, progress on several free trade agreements has been difficult, and the TPP looks all but dead.**
  - Japan's parliament approved the TPP in November, but the deal cannot come into force without US participation. Leaders in Congress confirmed after the US election that they would not consider it during the lame-duck session, a period previously viewed as the TPP's last chance for approval for the foreseeable future. Given the limited and gradual boost to US and Japanese growth from TPP, we do not expect shelving the deal to have a major impact on the outlook for either economy.
  - The EU and Canada signed the Comprehensive Economic and Trade Agreement (CETA) in October, though not without significant obstacles; after seven years of talks, CETA nearly failed due to opposition from the parliament of Belgium's Wallonia region, and parts of it still need approval before entering into force. The deal removes nearly all import duties on bi-lateral trade, grants EU firms access to Canadian investment markets, and allows EU bidding on Canadian public contracts.
  - The US and EU concluded a 15th round of talks on the Trans-Atlantic Trade and Investment Partnership (TTIP) in October; progress has been slow-going, to say the least.
- **Beyond politically-motivated trade trends, recent industrial transport indicators suggest an acceleration of growth in container grade (i.e., trade in manufactured goods).** For example, recent sea- and air-freight data are showing positive volume growth and momentum. China-outbound container load factors in November were the highest since 2Q10/1Q12 and air cargo is growing in the high single digits in the EU/US/Asia.
- **However, we maintain that structural headwinds are likely to continue to hold back the growth in global trade more broadly (though we do not find much evidence for the argument of "peak trade").**

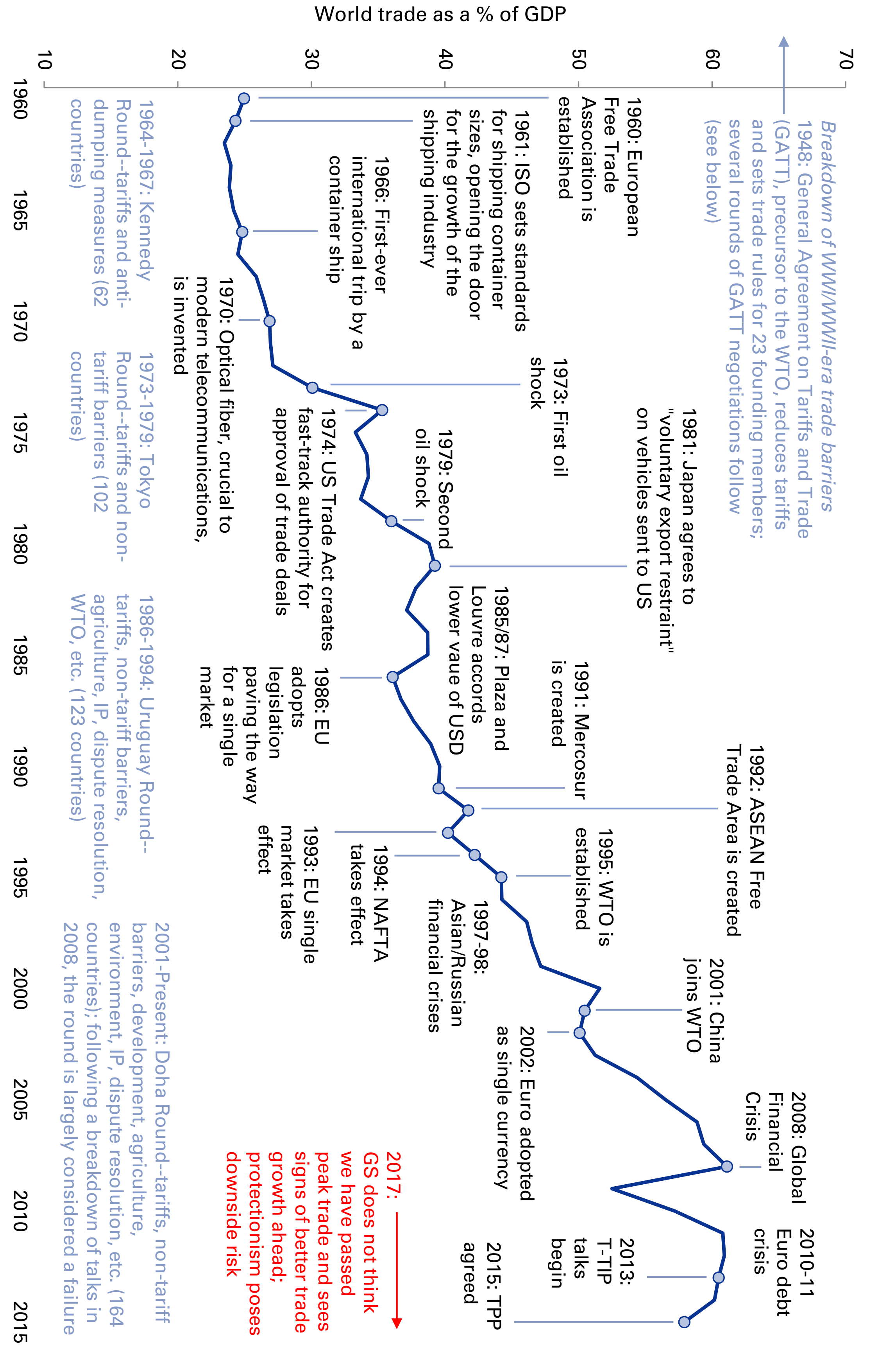
What to look for in 2017 (and beyond):

- **Concrete steps on trade by the incoming US administration.** We think any tariff increases are unlikely to be applied across the board, as goods trade flows differ significantly by country and product.
- **The effects of US tax policy on importers, exporters, and trade flows.** The House Republicans' tax proposal includes a destination-basis cash flow tax, which would reduce the tax rate for net exporters and increase it for net importers. In theory, this would make US imports less competitive (reducing demand for imports) and US exports more competitive (increasing demand for exports). Dollar appreciation would likely provide only a partial offset to this effect, leading to higher net US exports (among other consequences). We think Congress is more likely to ultimately move away from the proposal.
- **Pursuit of bilateral and regional trade agreements, particularly as an alternative to the TPP.** In particular, the Regional Comprehensive Economic Partnership (RCEP) being promoted in Asia by China looks set to gain momentum. In contrast, the TPP will likely remain shelved, while the busy **European election** calendar makes much progress on the TTIP unlikely.
- **China's push for market-economy status under the WTO**, which would limit other countries' use of tariffs in anti-dumping cases against China. The US and EU have resisted the change to China's status.
- **Signs of improvement in global trade—with upside in services trade and a continued recovery in container trade—although the potential for increased trade barriers poses downside risks to these views.**

Thanks to: Patrick Creuset, Goohoon Kwon, Adrian Paul, Alec Phillips, David Mericle, Daan Struyven, Ian Tomb, Kamakshya Trivedi.

Update: Potential for trade acceleration

Looking back on global trade growth



An earlier version of this chart appeared on pg. 6 of Top of Mind Issue #49: Trade Trends.

Source: World Bank, OECD, WTO, WorldShipping.org, various news sources, Goldman Sachs Global Investment Research.

Central Bank Choices and Challenges

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"My sense is that the BOJ would like to taper but is cautious out of concern about a negative market reaction and potential further appreciation of the yen against the dollar."

– Sayuri Shirai, Former Policy Board Member, Bank of Japan

Published: October 6, 2016

Where we stand now:

- **Central banks in the major developed economies have continued to shift the parameters of their easing programs, apparently in an effort to address both sustainability issues and concerns about some costs associated with their policies (e.g., the impact on the financial sector).**
  - As noted on pg. 10, on December 8 the ECB announced an extension of its Asset Purchase Programme (APP) and a reduction in its pace of purchases, thereby increasing the program's sustainability/flexibility. It also announced that from January 2017, the shortest residual maturity of bonds eligible for purchase will be lowered to one year, relative to two years previously. Also, Euro area members' national central banks will be allowed to purchase bonds yielding below the deposit rate (currently -40bp) if they deem it appropriate. We expect these changes to encourage steepening of the EUR yield curve.
  - In some ways, the ECB's moves echoed the BOJ's shift earlier this fall to QQE plus Yield Curve Control in an effort to prolong its program and reduce the negative impacts of a flattened yield curve on the banking system. The BOJ has since managed to keep 10-year yields around its 0% target, but had to intervene in the market in mid-November to maintain the steepness in the curve it desires (via offering unlimited purchases of 2 and 5-year bonds at fixed rates) amid the sharp global bond sell-off in the wake of the US election.
- **The outright or implied reduction in asset purchases, increased flexibility regarding QE programs, and global bond sell-off have all but eliminated concerns about scarcity of German bunds (for now), and reduced them for JGBs.** On our estimates, the combined impact of the ECB's aforementioned policy changes will allow the German Bundesbank to continue purchasing German government securities at least until the end of 2018. For JGBs, the story has not changed as much, but the shift to targeting 10-year yields has afforded the BOJ more flexibility to respond to market conditions and redistribute purchases accordingly. The increase in bond yields has also helped lessen concerns about JGB scarcity, but could of course reverse.
- **The increase in bond yields has begun to lessen concerns about pressure on bank margins and, in turn, lending incentives, from depressed long-dated rates and flatter curves.** Although higher yields are exactly the reverse of what central bank policies were trying to achieve, as long as they are driven by more optimistic views on growth, this is generally viewed as a positive development. Indeed, the outlook for banks has grown substantially more optimistic if stock prices are any indication; the S&P 500 financial sector index is up 26% since June 30.
- **The increase in bond yields has also reduced the other major concern about central banks' easing programs: the asset-liability mismatch for long-duration investors.** For example, the increase in German yields since the July trough has reduced pension deficits in the Europe STOXX 600 by an estimated $US215 bn.

What to look for in 2017 (and beyond):

- **A continuation of ECB asset purchases through 2017 followed by a gradual taper.** To the degree that German bund scarcity becomes an issue, we see a soft move away from capital-key-weighted purchases to allow for a smooth implementation of the purchase program.
- **Potential difficulty for the BOJ in sustaining the 0% target on 10-yr bond yields**, especially if 10-year US Treasury yields rise above 3% (our forecast is 2.75%). Look for (1) the BOJ to try to stick with the target in 2017, allowing deviation of more than 10bp (the market's current view) from the target and adjusting asset purchase operations as needed; and (2) broader questions to arise on whether longer-dated yields can and should be controlled.
- **Ongoing concerns about asset-liability mismatch, though these should diminish as bonds yields rise.**
- **A continuation of cautious optimism on banks given the run-up in rates and steepening yield curve.**

Thanks to: Naohiko Baba, Sharon Bell, Francesco Garzarelli, Rohan Khanna, Lasse Holboell Nielsen, Huw Pill, and Katsunori Tanaka.

Update: More divergence

Fed	ECB	BOJ	BOE
Main policy rate(s)			
Federal funds target rate: 0.50%-0.75% Last changed: December 2016 (+25bp)	Main refinancing operations rate: 0.00% Last changed: March 2016 (-5bp) Deposit facility rate: -0.40% Last changed: March 2016 (-10bp)	Policy deposit rate: -0.10% First introduced: January 2016 (In April 2013, the BOJ switched from targeting the overnight call rate to targeting the monetary base; as of September 2016, it is also targeting 0% for 10-year JGB yields)	Bank rate: 0.25% Last changed: August 2016 (-25bp)
Cuts to main policy rate in most recent cutting cycle			
9 cuts from Sep. 2007 to Dec. 2008, totaling 5.125pp (to the target range midpoint)	8 cuts from Nov. 2011 to March 2016, totaling 1.50pp	The BOJ's last cutting cycle prior to changing its policy framework to target the monetary base saw the overnight call rate target cut three times from Oct. 2008 to Oct. 2010, totaling 45bp (to the target range midpoint)	Prior to the most recent cut in August 2016, the BOE cut 9 times from Dec. 2007 to March 2009, totaling 5.25pp
History of negative interest rates			
N/A	Introduced a negative deposit facility rate in June 2014 (-0.10%), which was subsequently cut by a further 10bp each in September 2014, December 2015, and March 2016.	Introduced a negative rate on a share of excess reserves in January 2016 (-0.10%).	N/A
History of asset purchases & credit easing			
Launched QE1 in December 2008 and followed with QE2 (November 2010), Operation Twist (September 2011/June 2012), and QE3 (September/December 2012).	Launched its first Covered Bond Purchase Program (CBPP1) in July 2009, followed by the Securities Markets Program in May 2010 and CBPP2 in November 2011. Current asset purchase programs are CBPP3 (launched in October 2014), an asset-backed securities purchase program (launched in November 2014), a public sector purchase program (launched in March 2015), and a corporate bond purchase program (announced in March 2016). Has conducted long-term refinancing operations (LTROs) with progressively longer maturities since 2008; in June 2014, announced targeted longer-term refinancing operations (TLTROs) for banks maturing in 2018. In March 2016, announced a new series of TLTROs with a four-year maturity.	Was the first central bank to use QE, in 2001-2006. Started an asset-purchase program in October 2010, which it expanded throughout 2011 and 2012. Launched Quantitative and Qualitative Easing (QQE) in April 2013 with a target of increasing the monetary base by about ¥60-70tn per year (in place of an interest rate target). Expanded QQE in October 2014 with a target of increasing the monetary base by ¥80tn per year. Has offered loan support to select groups of financial institutions, with loan support programs implemented in June 2010, June 2011, and December 2012; these have since been extended and expanded. Announced a 0% target for 10-year yields in September 2016, while maintaining ¥80tn/year expansion.	Began an asset purchase program in March 2009 and launched additional rounds in October 2011, February 2012 and July 2012. Announced a Funding for Lending Scheme for banks with HM Treasury in July 2012; this was extended in November 2015 for another two years and re-focused toward lending to small- and medium-sized enterprises. Announced a new round of asset purchases in August 2016 following the EU referendum, along with a Term Funding Scheme offering cheaper funding for banks while incentivizing pass-through to retail lending rates.
Use of forward guidance			
Adopted qualitative forward guidance in December 2008 and calendar-based forward guidance in 2011. Began threshold-based guidance in December 2012 but removed the threshold in March 2014 in favor of more flexible qualitative guidance.	Introduced open-ended forward guidance in 2013.	Strengthened forward guidance in September 2016 by committing to expand the monetary base until inflation exceeds 2%.	Introduced threshold-based forward guidance in August 2013. Has since backed away from a quantitative threshold but continues to provide broad guidance on the likely timeframe for policy changes.
Balance sheet as a share of GDP			
24% in 3Q16	32% in 3Q16	85% in 3Q16	23% in 3Q16
Pace & type of current asset purchases			
Reinvestment of maturing agency securities, mortgage-backed securities, and Treasuries	€80bn/month, to become €60bn from April 2017 Government bonds, covered bonds, asset-backed securities, select investment-grade corporate bonds	¥80tn/year Government bonds, commercial paper, corporate bonds, ETFs, J-REITs	£60bn in Gilts over six months + up to £10bn in corporate bonds over 18 months, beginning in August 2016
Outlook			
We see a cumulative 85% chance that the Fed hikes the fed funds target by June 2017: 35% for the March meeting, 10% for the May meeting, and 40% for the June meeting. We continue to expect three rate hikes in 2017.	We continue to expect the ECB's Asset Purchase Programme to continue through 2018 (at a progressively reduced pace from the €60bn/month that will be in place from April to December 2017). We do not expect the first rate hike until end-2019.	We expect the BOJ to make an effort to maintain its 0% 10-year JGB yield target during 2017. We think the BOJ is unlikely to cut short-term rates barring sharp yen appreciation or other extraordinary circumstances.	We expect the BOE to make an additional £50bn in asset purchases by the end of 2017, though the announcement of these purchases may come after the current asset purchase program ends in February.

An earlier version of this table appeared on pg. 10 of Top of Mind Issue #50: Central Bank Choices and Challenges.

Source: Central banks, Haver Analytics, Goldman Sachs Global Investment Research.

US Presidential Prospects

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"If elected, [Donald Trump] almost certainly could not govern, because he will say, 'Do this!' and Capitol Hill will say, 'Why?'"

–Jonathan Rauch, Senior Fellow, Brookings Institution

Published: October 18, 2016

Where we stand now:

- **In his own words, election forecaster (and interviewee in our piece) Larry Sabato saw his "crystal ball shattered": Republicans swept the presidency and Congress.** Despite national polls and betting markets favoring Hillary Clinton heading into Election Day, Donald Trump secured 306 electoral votes to Clinton's 232. At the same time, Clinton won the popular vote, 48.3% to Trump's 46.2%. Republicans held majorities of 52-48 in the Senate and 241-194 in the House.
- **Exit polls confirmed the importance of demographics to the election outcome.** As expected, non-white voters voted overwhelmingly for Clinton, while Trump carried the non-college-educated white vote by a margin of 66% to 29%. Far more surprising, however, was that a majority of college-educated whites also voted for Trump—48% to Clinton's 45%—despite pre-election polling averages indicating an 8pp lead with this demographic in Clinton's favor.
- **As expected, the focus has swung sharply to Trump's cabinet appointments.** You don't need us to list them all here, but many of the key appointments come from the business world (think Steven Mnuchin for Treasury Secretary, Wilbur Ross for Commerce Secretary, and Gary Cohn for Director of the National Economic Council, not to mention Rex Tillerson for Secretary of State).
- **Policy priorities have also become a key focus.** Top on the list seem to be healthcare, taxes, and infrastructure, although trade policy could also see some changes.
  - Reform of the Affordable Care Act (ACA) looks more likely than a repeal. Reform might include a continuation of tax-credit-based subsidies to purchase insurance in the individual market and a continuation of increased Medicaid expenditures.
  - Tax reform could include changes in the treatment of capital investment and the deductibility of corporate interest expense, taxation of foreign income, and statutory tax rates.
  - An infrastructure spending program could be financed as part of tax reform, or by new financing schemes involving tax credits, tax-preferred debt, loan guarantees, or other mechanisms to incentivize public-private partnerships.
  - Trade policy could potentially involve more protectionist measures, though any tariff increases are unlikely to be applied across-the-board, and would likely target "usual suspect" sectors or countries/products with the largest trade imbalances.
- **So far, US risky assets like what they see.** An initial sharp sell-off in risk markets on election night lasted a nano-second, as investors quickly re-focused on the growth prospects under a Trump administration. The S&P 500 is up about 6% since just prior to the election, and cyclicals have strongly outperformed defensive/bond-proxy stocks. Rates have sold-off, meanwhile, as investors have digested the prospect of higher inflation as a result of a likely fiscal expansion as well as potential trade tariff increases. Ten-year Treasury yields stand today at 2.5% versus 1.8% just prior to the election, while the US dollar has reached the highest levels (on a trade-weighted basis versus G10 currencies) in nearly 14 years.
- **EM assets took a hit** amid the appreciation of the US dollar and rise in core bond yields. EM investors are now closely watching whether stronger US growth and inflation bring about more Fed tightening and the degree to which protectionist policies are implemented by the new administration.

What to look for in 2017 (and beyond):

- **Policy clarifications, announcements, and implementation.** We expect the first 100 days to be focused on confirmation of presidential nominees, repeal/reform of the ACA, and fiscal policy (tax and infrastructure).
- **Some tailwinds to growth and inflation in 2017, but more in 2018** as the lagged effects of eventual tax and spending legislation take hold. However, trade restrictions could provide an offset to this boost. We expect US growth of 2.2% in 2017 and 2018, and US core PCE of 2.0% and 2.1% in 4Q17 and 4Q18, respectively.
- **Whether recent market optimism will wane.** We expect optimism around Trump will push the S&P to 2400 through 1Q17 before settling to 2300 by year-end as investors recalibrate policy outlooks.
- **Continuation of the US dollar "reset"** as divergence in activity and inflation reinforced by the election drives rate differentials in favor of the dollar. We forecast the USD TWI to appreciate 7% versus G10 currencies in the next 12 months.
- **EM assets continuing to recover.** The risk of protectionism is most acute for EM Asia and Mexico, but look for opportunities to position in the high-yielding commodity countries.

Thanks to: Silvia Ardagna, Robin Brooks, Michael Cahill, David Kostin, Alec Phillips, Zach Pandl and Kamakshya Trivedi.

Update: An unexpected market catalyst

Admittedly, this did not appear anywhere in Top of Mind Issue #51: US Presidential Prospects—but it only seemed appropriate!
Note: Photo by Michael Vadon.

OPEC and Oil Opportunities

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"OPEC is going to announce a substantial cut and follow through with it, which will likely push the price of oil… into the $60s/bbl if not the $70s/bbl next year… new people in the oil market just don't understand how powerful the Saudis are."

–David D'Alessandro, Founder and CIO, CMDTY Capital Management, LP

Published: November 22, 2016

Where we stand now:

- **OPEC delivered a bullish announcement on November 30** that included OPEC and non-OPEC cuts**.**
- **OPEC agreed to cut 1.2 mmb/d from October levels to 32.7 mmb/d for six months starting in January.** The deal achieved a broad consensus with exemptions for Libya, Nigeria, and Indonesia, a reported modest growth allowance for Iran, and a 4.6% cut across other producers. Saudi Arabia said it would step up even further than its agreed cut if necessary. (This is in line with our view that it is in Saudi Arabia's interest to cut production in order to manage the near-term inventory surplus, but not to try to increase prices, which would likely prove futile in the New Oil Order; more on this below...)
- **Non-OPEC producers announced on December 11 an agreement to reduce their 1H17 output by c.560 mb/d,** slightly smaller than the 600 mb/d cut announced on November 30. Although Russia is expected to contribute 300 mb/d of this cut, details suggest Russia's share will be closer to 200 mb/d, implying that the agreement will only reduce non-OPEC production in 1H17 by c. 460 mb/d, (and technically 100 mb/d less than that because some of these "cuts" are natural decline rates).
- **Oil prices have surged.** Brent crude oil prices currently stand at about $55/bbl, nearly 18% above their level of roughly $46/bbl shortly before OPEC's November 30 announcement.
- **We maintain that a potential ramp up in Libyan production and a stronger dollar will likely limit further near-term price upside**. There will be little evidence of production cuts until mid-to-late January, which we believe will be the next catalyst for another upside move in prices, to a peak of $59.00/bbl for Brent crude oil, and 57.50/bbl for WTI crude oil.
- **Further, shale production already seems to be responding to higher prices.** At the current US horizontal oil rig count, US shale production is already on track to sequentially grow from 1Q17 onward. New rig activity continues to rise, with a total of 194 oil rigs added since late May and 12 horizontal oil rigs added in the week ended December 16 alone.
- **"Shale scale winners" in the US Exploration & Production (E&P) space still look well positioned.** Our updated productivity analysis for FY 2015 data and wells drilled in 1Q16 shows productivity gains are trending at or above our 3%-10% range in the Permian Basin (TX/NM), Bakken (ND), and DJ Basin (CO) and modestly below expectations in the Eagle Ford (TX). We continue to believe shale productivity gains allow for substantial US production growth at oil prices of $50-$60/bbl and that E&P companies reaping these production gains are not being sufficiently rewarded.

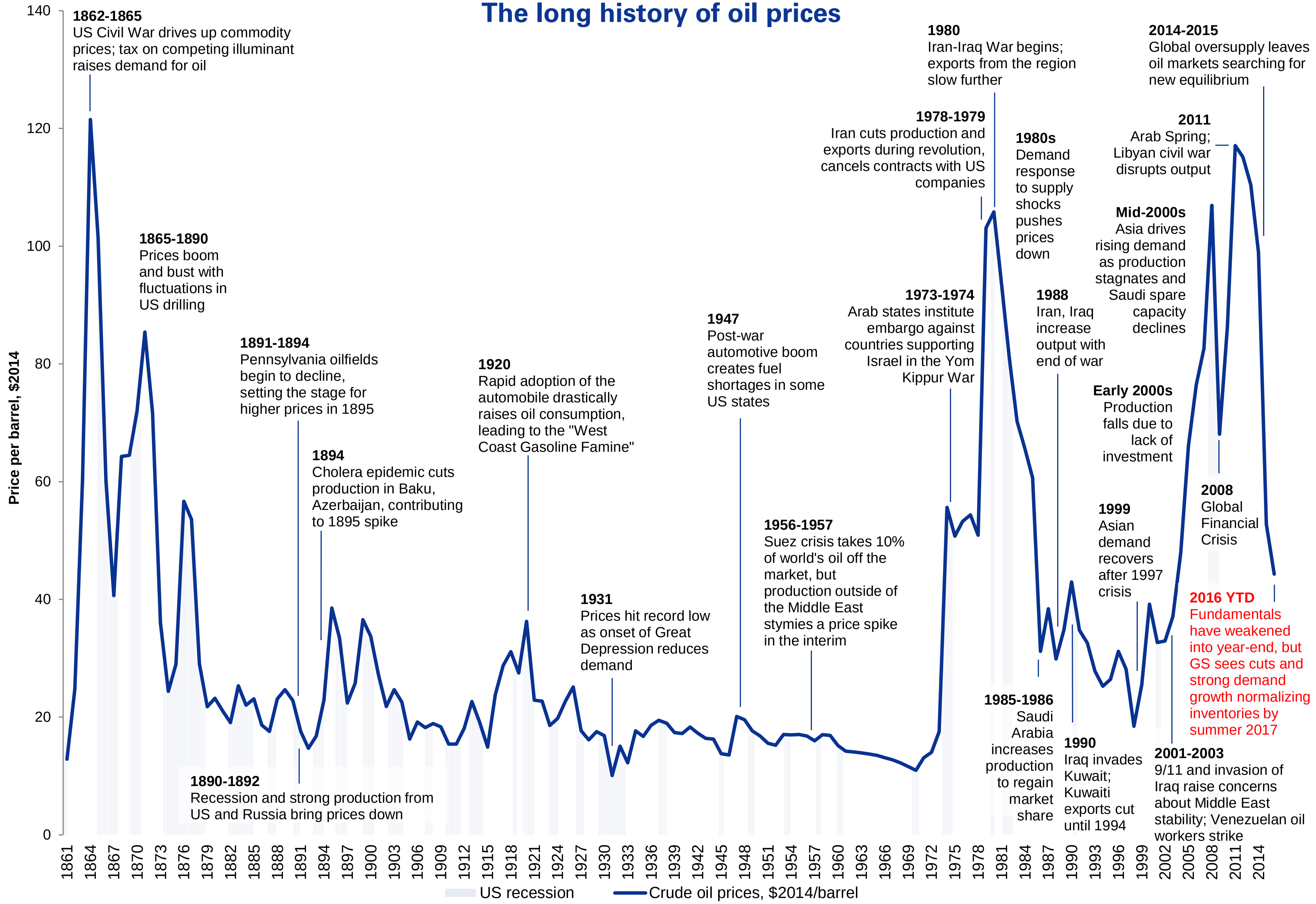
What to look for in 2017 (and beyond):

- **Brent crude oil prices peaking at $59.00/bbl in 1H17 as cuts are implemented, pushing the market into deficit in 1Q17, which should shift the market into backwardation by the summer.** Given that the expected backwardation should boost commodity index returns, we have shifted to an overweight commodities allocation for 3 and 12 months.
  - **Key: OPEC compliance to cuts and whether non-OPEC delivers on its contribution.** We expect 84% compliance to the 1.6 mb/d country level announced cuts (which are lower than the 1.8 mb/d headline cuts) from October 2016 IEA crude production levels given that compliance to cuts outside of Gulf Cooperation Council (GCC) producers (Saudi, Kuwait, UAE, Qatar, Bahrain and Oman) has historically been poor. We expect Russia will freeze production at current levels. Greater-than-expected compliance to the announced cuts, or more Saudi cuts than announced, pose upside risk to our forecast (full compliance = $6/bbl upside to our forecast).
- **Limited oil price upside beyond the high-$50/bbl range, as prices in this range lead to increased production from US shale and other lower-cost producers, and as legacy projects continue to ramp up.**
  - **Key: Shale production growth in 2017.** We expect US shale production to decline by 80 kb/d in 2017 (but increase 100 kb/d if we assume the well backlog is gradually tapped). Should greater compliance to OPEC/non-OPEC result in the upside to oil prices described above, the higher prices would likely bring on more shale, presenting upside risk to our production forecast, which could offset the cuts. **In short, the New Oil Order lives**.
- **A continuation of lower correlation between oil prices, the US dollar and risky assets.** The breakdown of the dollar/oil correlation will remain important in breaking the vicious cycle between a stronger dollar, weaker commodity prices and pressure on EM.

Thanks to: Damien Courvalin, Christian Mueller-Glissmann, and Brian Singer.

Update: Limited upside from here

The long history of oil prices



An earlier version of this chart appeared on pg. 16 of Top of Mind Issue #52: OPEC and Oil Opportunities.
Note: 2016 price shown is YTD average as of Dec. 19, 2016.
Source for data: BP, NBER/Federal Reserve Bank of St. Louis, Haver Analytics.
Source for annotations: ©James Hamilton, "Historical Oil Shocks," University of California, San Diego, February 2011; various news sources; Goldman Sachs Global Investment Research.

The Return of Reflation

www.istockphoto.com.

"A lot of policy details need to be fleshed out under the new administration. But no matter what your expectations for medium-term core inflation were heading into the election, they have to be higher under a Trump administration."

–Mihir Worah, CIO for Real Return and Asset Allocation, PIMCO

Published: December 7, 2016

Where we stand now:

- **Since we just published on December 7, not much has changed!**
- **The FOMC raised the fed fund rates by 0.25% at its December meeting to a range of 0.50-0.75%**, acknowledging the rise in realized inflation and noting that inflation expectations in the bond market had increased "considerably."
- **US PPI inflation came in firmer than expected, but CPI core inflation the reverse.** We estimate that the CPI and PPI reports imply an increase of just +0.05% (mom) in core PCE inflation in November, to be reported later this week. The relatively moderate gain in core inflation may temper concerns that Fed policy has fallen behind the curve.
- **Bond yields have continued to edge higher**, with ten-year Treasury yields at 2.5%. Ten-year breakeven inflation stands at about 1.9%.

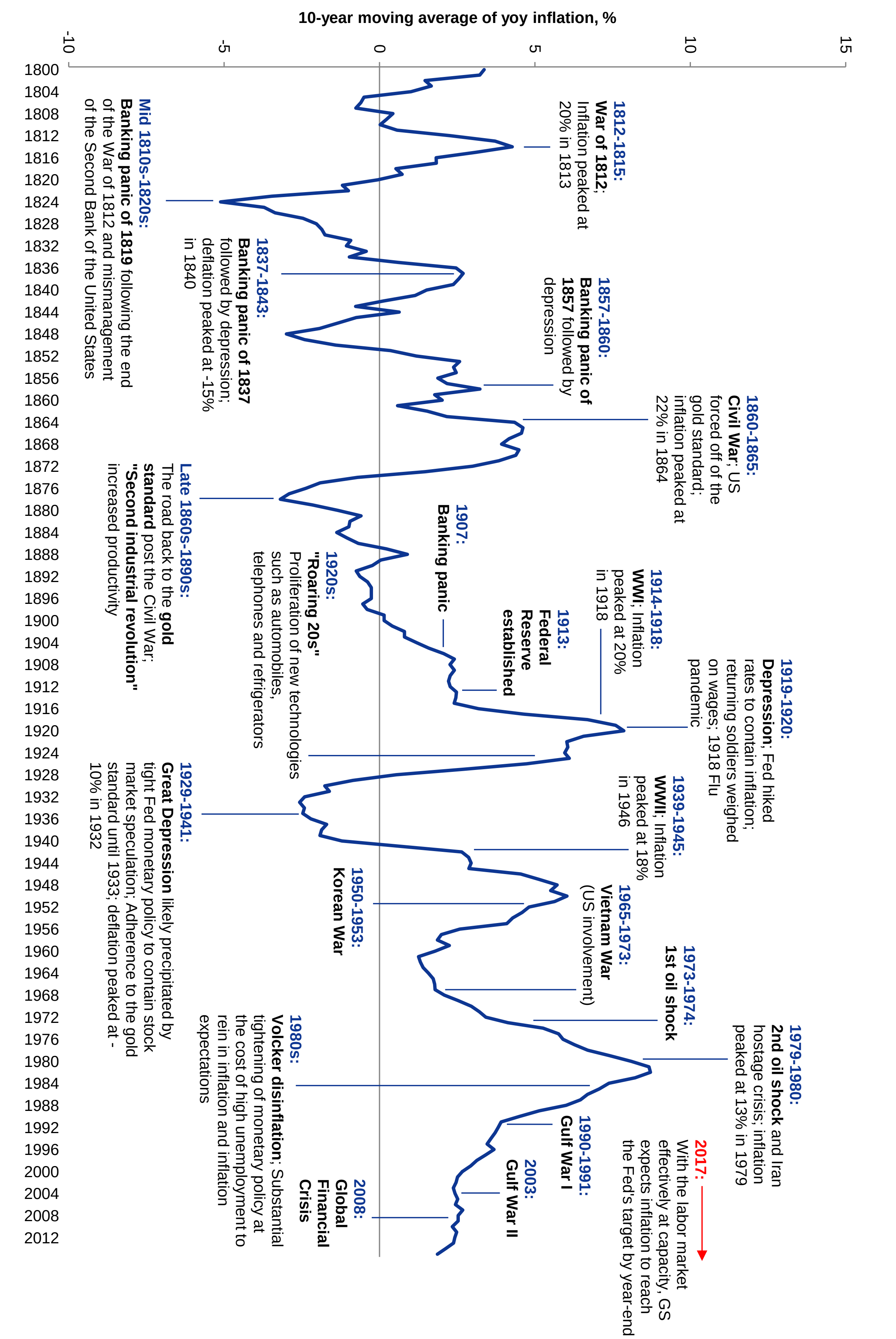
What to look for in 2017 (and beyond):

- **US inflation reaching the Fed's target.** We expect both core and headline PCE inflation to reach 2.0% by year-end 2017. Rising wages and healthcare costs are expected to lead the pick-up, while rent inflation could moderate. However, we expect Euro area inflation to remain muted, with core CPI inflation of 0.7% in 2017, and inflation remaining below the ECB's target at least through the end of our forecast period in 2020.
- **Three further rate hikes from the Fed in 2017** as inflation continues to rise in a tight labor market, putting the funds rate range at 1.25-1.50% by the end of the year. In light of the low level of the unemployment rate and with the prospect of fiscal easing, we expect the FOMC to see more balanced risks to the outlook compared to 2016.
- **Policies under the new administration that could affect inflation trends,** namely, the magnitude of fiscal expansion (we assume a fiscal package worth 1.0% of GDP) and any protectionist trade measures (we estimate a 10% increase in US tariffs on average would add 0.6pp to the level of core PCE).
- **Higher US Treasury yields and inflation breakevens.** We expect US 10-year yields to end 2017 at 2.75%, and we suggest long US and Europe inflation as a Top Trade for 2017.
- **Outperformance of cyclicals versus defensives (at least in the early part of the year).** More specifically, in Europe, we expect an outperformance of banks and underperformance of consumer staples. And in the US, we favor domestic-facing cyclicals, including financials and transportation (for investors concerned about rising inflation we also suggest they buy stocks with low labor costs (GSTHLLAB) and sell stocks with labor costs (GSTHHLAB). And if bond yields continue to rise alongside inflation expectations, weak balance sheet stocks (GSTHWBAL) may underperform strong balance sheet stocks (GSTHSBAL).
- **Weaker equity valuations on rising bond yields.** After years of exceptionally low interest rates pushing up equity valuations, these valuations are now vulnerable to rising yields. Although some rise in bond yields in conjunction with growth could prove positive for equity returns, there is a limit. We maintain that the tipping point when rising bond yields turn negative for stock returns may be when US 10-year yields surpass 2.75% or 10-year German Bund yields rise to 0.75-1.00%.The vulnerability of valuations is a key reason why we continue to expect "fat and flat" equity returns in Europe and see an expected rise of the S&P 500 (to 2400 through 1Q17 and down to 2300 by year-end) to be driven by higher earnings rather than multiple expansion.

Thanks to: Francesco Garzarelli, Jan Hatzius, David Kostin, Peter Oppenheimer, and Zach Pandl.

Update: Inflation to head higher still

The long history of US CPI inflation



An earlier version of this chart was meant to appear in Top of Mind Issue #53: The Return of Reflation, but never made it in!

Source: Global Financial Data, Inc., Bureau of Labor Statistics, Haver Analytics, various news sources, Goldman Sachs Global Investment Research.

Snapshot of our key forecasts

	GDP Growth (% yoy)				FX				Equity				Rates (% eop)				Revision Notes
	2016		2017		3-mth		12-mth		3-mth		12-mth		Policy*		10-yr		
	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	GS	Cons	2016	2017	2016	2017	
Global	3.0	2.9	3.6	3.2	-	-	-	-	-	-	-	-	-	-	-	-	
					EUR/$		**EUR/$**		**SP500**		**SP500**						
US	1.6	1.6	2.2	2.2	1.08	1.05	1.00	1.05	2400	2235	2300	2350	0.50 to 0.75	1.25 to 1.50	**2.40**	2.75	On December 15, we raised our 3-month forecast for 10-year US Treasury yields to 2.50% from 2.30%, reflecting the Fed's signal of three more rate hikes in 2017 and following the recent rise in yields to our measure of "fair value." This brings our end-2016 forecast to 2.40%. We have left our end-2017 forecast unchanged on the assumption that QE in Europe and Japan will continue to exert downward pressure on global yields.
					EUR/$		**EUR/$**		**Eurostoxx 50**		**Eurostoxx 50**						
EURO AREA	1.6	1.6	1.4	1.4	1.08	1.05	1.00	1.05	3150	3100	3250	3295	0.00	0.00	-	-	
					EUR/$		**EUR/$**		**DAX 30**		**DAX 30**						
GERMANY	1.7	1.8	1.4	1.4	1.08	1.05	1.00	1.05	-	-	-	-	-	-	0.30	0.80	
					$/JPY		**$/JPY**		**TOPIX**		**TOPIX**						
JAPAN	1.0	0.9	1.2	1.0	**118**	111	**125**	114	1550	-	1600	-	-0.10	-0.10	0.05	0.15	On December 14, we revised our 3/6/12-month $/JPY forecast to 118/120/125, respectively, from 108/110/115 previously, reflecting further divergence expected between the Fed and the BOJ.
					$/CNY⁺		**$/CNY⁺**		**MXCN**		**MXCN**						
CHINA	6.7	6.7	6.5	6.5	7.00	6.98	7.30	7.14	-	-	66	-	2.40	2.10	-	-	
					$/BRL		**$/BRL**		**BOVESPA**		**BOVESPA**						
BRAZIL	-3.4	-3.4	1.1	1.0	3.20	3.42	3.40	3.49	-	-	-	-	13.75	11.00	-	-	
Commodities	**Brent crude oil ($/bbl)**				**Copper ($/mt)**				**Gold ($/toz)**				**Corn (cent/bu)**				
	3-mth		**12-mth**		**3-mth**		**12-mth**		**3-mth**		**12-mth**		**3-mth**		**12-mth**		
	GS	**Cons**	**GS**	**Cons**	**GS**	**Cons**	**GS**	**Cons**	**GS**	**Cons**	**GS**	**Cons**	**GS**	**Cons**	**GS**	**Cons**	
	56.5	-	51.5	-	**5800**	-	**5600**	4840	1200	-	1250	-	350	-	335	-	On December 11, we upgraded our 3/6/12-month copper targets to $5,800/6,200/5,600/t, respectively, from $5,000/4,800/4,800/t previously, reflecting a surge in global industrial activity, particularly in China, as well as a more bullish supply-demand outlook.

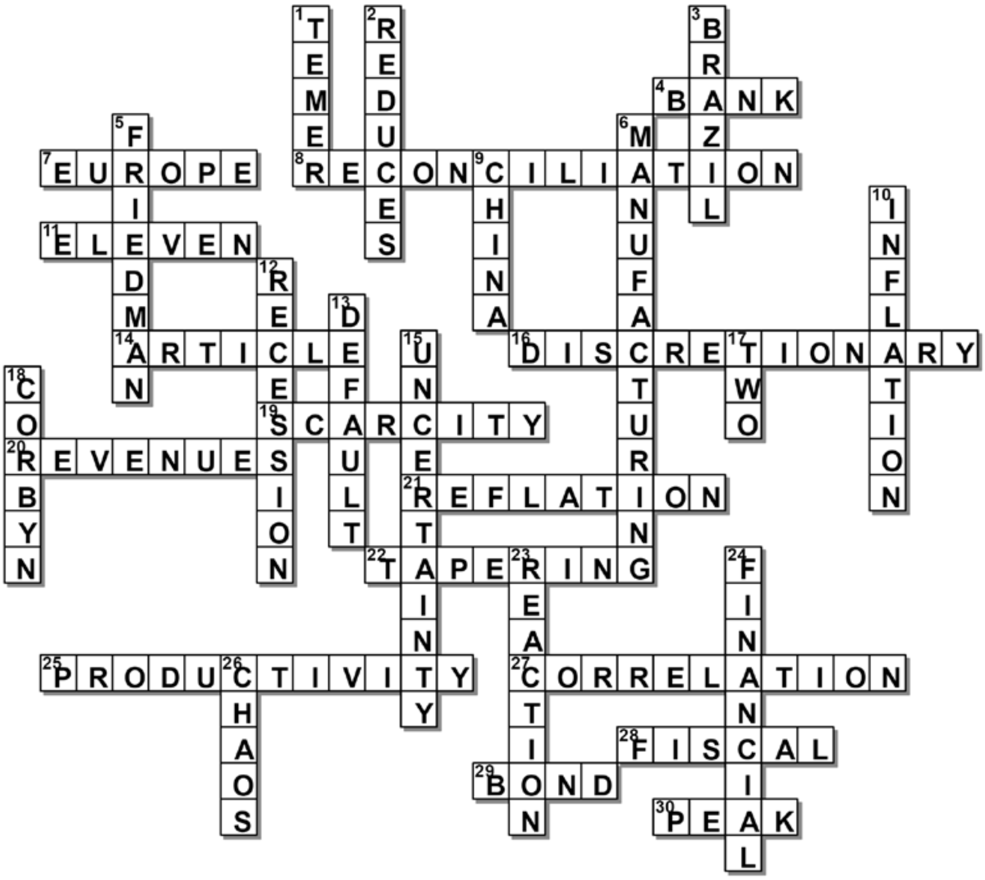
Note: Recent revisions marked in red; GDP consensus is Bloomberg; all other consensus is Reuters; commodity 12-mo consensus is Reuters for 2017 average.

⁺ CNY daily fix * Euro area rate is MRO rate. China rate is 7-day repo rate.

Source: Bloomberg, Thomson Reuters, Goldman Sachs Global Investment Research.

Puzzle solutions

2016 crossword (from pg. 4 of this report):



2015 word search (from pg. 5 of 2015 year-end Top of Mind):

P	E	A	Y	G	Y	C	E	B	U	Q	O	A	J	O	S	L	C
G	H	A	U	Q	W	B	S	X	Y	J	N	I	Z	W	Y	K	R
T	K	N	A	R	K	N	I	Q	E	N	L	T	L	U	Q	P	E
I	S	I	U	E	L	A	G	I	U	I	E	K	R	Q	T	I	D
X	G	H	V	K	L	B	S	Z	Q	C	I	S	T	A	L	S	I
E	A	C	S	W	R	N	Y	U	G	K	Q	F	A	B	D	U	T
R	D	A	D	J	N	O	I	T	A	L	F	N	I	H	Z	E	C
B	M	N	W	Y	E	D	N	N	V	P	I	V	B	Q	G	A	O
D	Q	I	P	S	I	Y	G	O	O	V	Z	N	H	V	M	Q	N
N	I	H	I	T	Q	G	J	F	I	Z	P	W	W	A	S	X	C
H	V	C	Y	P	B	J	K	Z	M	T	P	H	A	C	T	I	E
F	V	A	C	M	R	J	T	T	Q	A	C	W	A	N	T	O	R
P	D	N	H	R	A	Y	C	C	L	N	Q	E	H	U	S	A	N
J	Z	I	T	K	Z	R	M	I	S	U	X	V	L	C	S	B	S
J	G	H	D	K	I	O	F	F	O	I	T	S	H	E	X	J	W
Y	U	C	N	N	L	P	Z	B	Y	M	Y	I	L	Z	S	I	B
A	O	D	I	Y	C	I	L	O	P	L	A	C	S	I	F	U	P
N	R	T	V	Q	N	M	I	G	R	A	T	I	O	N	X	Z	T

Puzzles made at: http://www.SuperCrosswordCreator.com.

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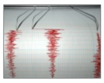
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Disclosure Appendix

Reg AC

We, Allison Nathan, Marina Grushin, Silvia Ardagna, Naohiko Baba, Andrew Benito, Robin Brooks, Michael Cahill, Damien Courvalin, Alain Durre, Nicholas Fawcett, Francesco Garzarelli, Jan Hatzius, Rohan Khanna, Goohoon Kwon, David Mericle, Lasse Holboell Nielsen, Zach Pandl, Adrian Paul, Alec Phillips, Huw Pill, Alberto Ramos, Karen Reichgott, Jari Stehn, Daan Struyven, Yu Song, MK Tang, Andrew Tilton, Ian Tomb, and Kamakshya Trivedi, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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