The European Credit Strategist

Failure is not an option

Credit Analysis

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Quantitative Failure: early warning signs?

Central bank dovishness has yet again been a boon for assets with yield, and corporate debt is currently basking in a backdrop of "excess" demand. But while bonds are bid, other cyclical assets across the market are conspicuously lagging, especially those that have done well in previous bouts of central bank largesse. Markets may well be chasing the QE trade ... but they aren't reflecting that it will be a great tailwind for the economy.

Pushing on a string

700+ rate cuts and $10tr.+ of asset purchases after the Global Financial Crisis (GFC), the efficacy of central bank dovishness is being challenged. Less policy ammunition, high global debt levels, the bank-sovereign nexus and poor demographics mean that central banks will have to try harder to create the same "bang for the buck" economically with their ideas, as in the past. And the jump in bank deposits across the Eurozone recently suggests a possible liquidity trap: is monetary dovishness now driving more (fearful) saving across the economy rather than unleashing "animal spirits"?

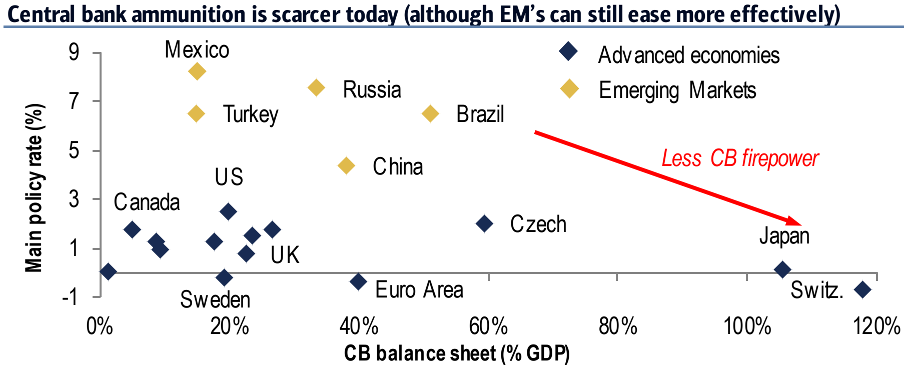
We (still) need to talk about debt

The risk when we reach the "Quantitative Failure" moment is that markets pivot back to worrying about debt levels and debt sustainability. On this front, the latest BIS data shows that the nascent trend of global debt reduction ended in Q4 last year. In fact, nominal debt levels rose across almost all parts of the market in '18. The irony with Quantitative Failure, though, is that it may require monetary authorities to unleash even more extreme forms of support (Japanese style QE, for instance) to supress debt costs.

The United States of Europe

One area where debt growth has been conspicuous lately is with Reverse Yankees. A strong US Dollar is motivating US issuers to "hedge" their European assets via issuing Euro debt. And we think the trend has a lot more to go. In fact, if this year's run-rate is anything to go by, then US issuers will be the largest share of the Euro IG market by the end of 2020. Thus, Fed Chairman Powell's words could end up being more instrumental to Euro credit than Lagarde's. Who's next? Table 1 highlights that the next Reverse Yankee issuer might strike in the tech, healthcare or capital goods sectors.

Central bank ammunition is scarcer today (although EM's can still ease more effectively)



Source: BofA Merrill Lynch Global Research, Bloomberg.

Refer to important disclosures on page 13 to 15.

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Failure is not an option

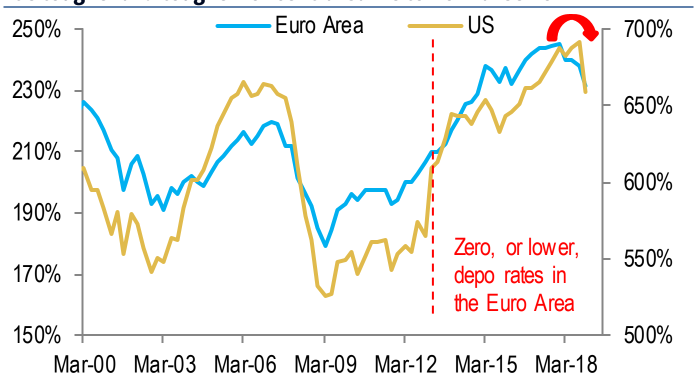
Almost eleven years ago, in the aftermath of an unprecedented freezing of the financial system, central banks embarked on an extraordinary journey of monetary support. 700+ rate cuts and $10tr. of asset purchases later, it was enough to stabilize the global economy and usher in the longest period of economic expansion for the US since WW2.

We can cut, but we can't hike

Fast forward to today, and central banks appear tantalizingly close to launching another round of monetary easing and engaging in a "race to the bottom" across global interest rates. Yet, this time, there is no economic paralysis – in fact, financial conditions globally remain in loose territory. Instead, it's been trade wars that have taken the shine off of world growth, leaving central banks having to contemplate the idea of "insurance cuts".

A decade of hubris has also encouraged consumers across the globe to buy more financial assets. Household net wealth, in both the US and Euro Area, has jumped since the financial crisis (Chart 1), with negative interest rates further encouraging this trend. Yet, this has left central banks less able to normalise policy relative to the past, as the Fed's epic pivot this year has shown. Perhaps more than ever before, economic expansions and financial cycles have become deeply intertwined, leaving central banks needing to constantly err on the side of easy money…

Chart 1: Household net financial wealth (as % disposable income) – why it's tougher and tougher for central banks to normalise now



Source: ECB, Fed. % disposable income. Euro Area (LHS).

Chart 2: A mammoth reach for yield (headline yields, %, not hedging cost adjusted)

Source: BofA Merrill Lynch Global Research

So will another round of central bank intervention be a game changer, or will it be a dud? While the return of dovish central banks has been a boon for assets with yield lately (witness Greece 10yr yields vs. 10yr Treasury yields), we find that not all parts of the market are responding enthusiastically. In fact, we think that some tell-tale "Quantitative Failure" signs are emerging – with cyclical stocks, for instance, significantly underperforming, relative to history. After many iterations of the same thing, are markets now questioning the efficacy of monetary policy?

Neither Quantitative Success, nor Quantitative Failure – a fine line for credit

While "Quantitative Success" was not great for global credit markets last year (credit spreads widened as central banks tried to normalise), neither do we think "Quantitative Failure" will be taken well. If markets start to question the efficacy of monetary policy – and the ability of central banks to generate inflation – then the risk is that worries over debt sustainability could return. And as we show later, global debt levels have started to creep higher again: global deleveraging has been thwarted by a return of policy uncertainty.

The bottom line is that while conditions (read: technicals) remain close to ideal for corporate bonds at present and beta compression – AT1s, corp hybrids, long-duration will do well, we think – it remains a narrow pathway for credit to tread going forward.

The United States of Europe

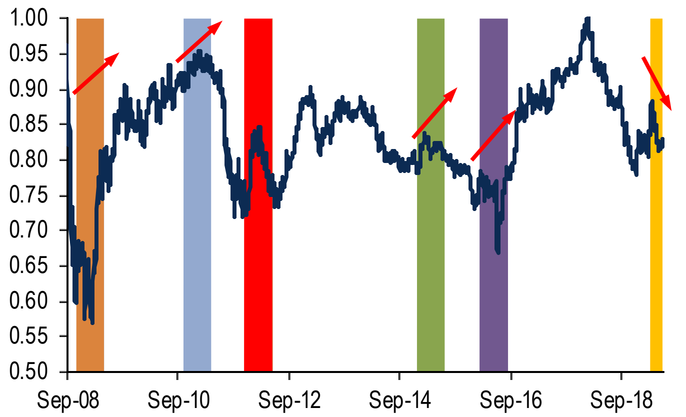
Speaking of debt growth, one consequence of easy ECB policy is that US corporates will continue to flock to Euro credit for issuance, mostly for Net Investment Hedging purposes. And the Medtronic 0% Euro-denominated issuance recently will undoubtedly raise a number of eyebrows across corporate America. We still see plenty of US corporates that have European revenues but no € debt outstanding. Hence, watch out for more Reverse Yankee supply from the **tech**, **healthcare** and **capital goods** sectors.

"Quantitative Failure": early warning signs?

Bonds have loved the sound of more central bank accommodation of late. Yet, other assets – especially those that have tended to do well in past QE-driven rallies – have been less thrilled. Markets seem to be giving a thumbs-up to the effect of central bank dovishness (a thirst for yield) but appear less convinced of the economic impact.

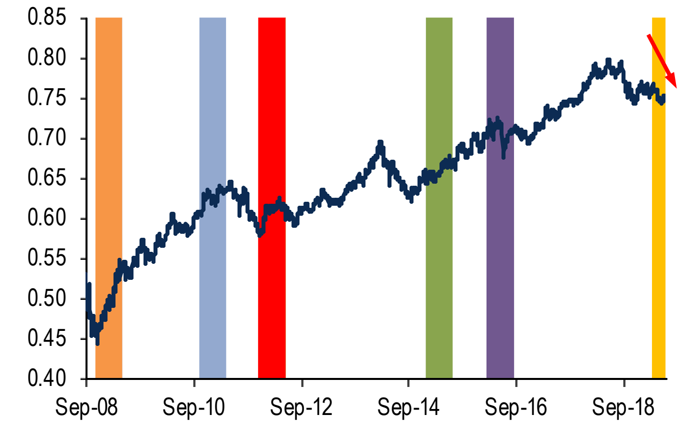
The charts below show four market pairs: (1) the price ratio of Stoxx 600 cyclicals to defensives; (2) the price ratio of Stoxx 200 small caps to large caps; (3) the ratio of global stock total returns to global bond total returns; and (4) the ratio of CCC/BBB total return indices. We highlight how they have performed during big policy developments: namely Fed QEs, ECB TLTROs, ECB negative rates, and ECB asset purchase programmes.

Chart 3: Stoxx 600 cyclicals/defensives price ratio, during policy interventions (orange = Fed QE1, blue = Fed QE2, red = ECB LTRO1, green = ECB QE, purple = ECB CSPP, yellow = ECB "WIT" 2.0)



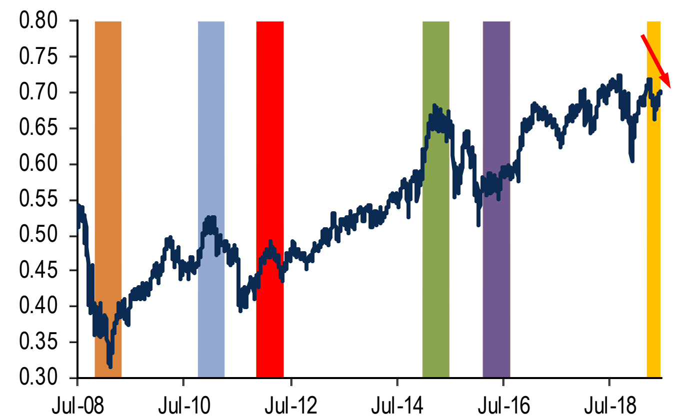
Source: BofA Merrill Lynch Global Research. WIT stands for "Whatever It Takes" referring to the April '19 ECB meeting

Chart 4: Stoxx 200 small caps/large caps price ratio, during policy interventions (orange = Fed QE1, blue = Fed QE2, red = ECB LTRO1, green = ECB QE, purple = ECB CSPP, yellow = ECB "WIT" 2.0)



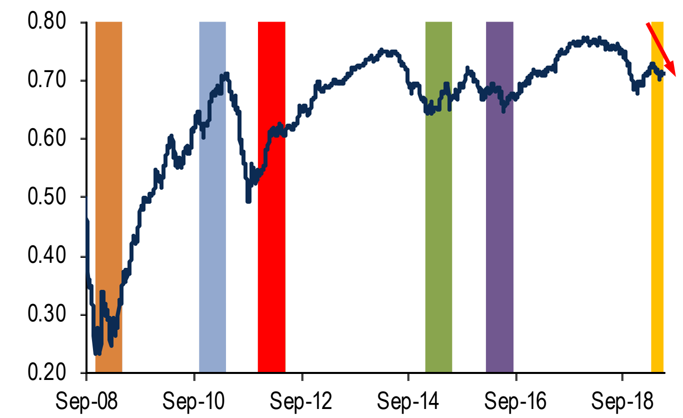
Source: BofA Merrill Lynch Global Research. WIT stands for "Whatever It Takes" referring to the April '19 ECB meeting

Chart 5: Global stocks/global bonds total return index ratio, during policy interventions (orange = Fed QE1, blue = Fed QE2, red = ECB LTRO1, green = ECB QE, purple = ECB CSPP, yellow = ECB "WIT" 2.0)



Source: BofA Merrill Lynch Global Research. WIT stands for "Whatever It Takes" referring to the April '19 ECB meeting

Chart 6: European CCCs/BBBs total return index ratio, during policy interventions (orange = Fed QE1, blue = Fed QE2, red = ECB LTRO1, green = ECB QE, purple = ECB CSPP, yellow = ECB "WIT" 2.0)



Source: BofA Merrill Lynch Global Research. WIT stands for "Whatever It Takes" referring to the April '19 ECB meeting

Monetary policy largesse used to mean big cyclical rallies, but now ...

As can be seen, in the past, monetary largesse would see a clear pro-beta performance across markets for the ensuing 6m. For instance, Stoxx 600 cyclical stocks outperformed defensive stocks by a whopping 22% when the Fed launched QE1, by 3% when the ECB announced the first round of TLROs in Europe, and by 2% when the ECB launched QE. Yet, since the April ECB meeting (Draghi's "whatever it takes 2.0" moment), cyclical stocks in Europe have underperformed defensives by around 2%.

The same pattern holds for the other pairs: European small cap stocks outperformed large caps by 17% after the Fed's QE1 announcement, and by 4% after the ECB launched LTROs ... but since April this year they have underperformed large cap stocks by around 1%. And In Euro HY credit, CCCs are heading wider at present, while BBs are heading tighter.

Monetary policy: pushing on a string

And there are reasons to doubt what "more of the same" from central banks can achieve today, almost eleven years after the Global Financial Crisis. What are some of the limits to monetary policy this time around?

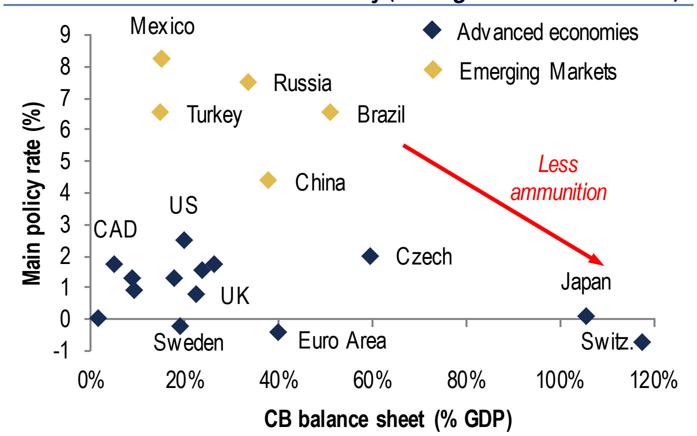
Depleted central bank ammunition

Perhaps the most obvious reason for why markets have been less enthusiastic about the latest iteration of central bank dovishness is that their ammunition is generally low. Chart 7 shows central banks' current policy rates versus their balance sheet size (as a proportion of domestic GDP). Those central banks towards the bottom right quadrant of the chart arguably have less ammunition left to boost the economy.

- As can be seen, EM Emerging Market) central banks, on balance, still have firepower remaining, with CB (central bank) balance sheets generally less than 50% of GDP (Brazil). Emerging Market central bank stimulus could thus been seen as more economically effective in the future.

- Yet, developed market central banks appear to have much less in the way of wiggle room. The BoJ and SNB, for instance, both have balance sheets in excess of their domestic GDP. And while the ECB balance sheet is only at ~40% of Eurozone GDP currently, interest rates are nonetheless at -40bp.

Chart 7: CB ammunition is scarcer today (although EM's still have room)



Source: BofA Merrill Lynch Global Research

Chart 8: China M2 growth (YoY %): barely moving this time around

Source: BofA Merrill Lynch Global Research

High debt levels: self-defeating central bank dovishness

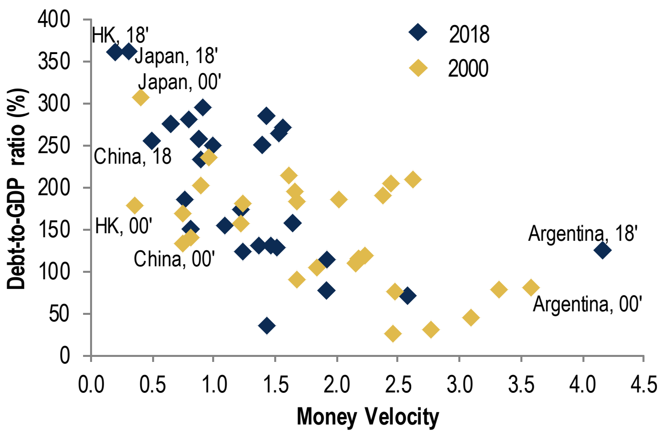
Loose monetary policy risks become self-defeating if they simply result in a greater proliferation of debt across the economy. As we show in the next section, global debt levels are creeping higher again, having risen by $2.2tr in the final quarter of last year. In particular, since the Global Financial Crisis, global debt levels have risen by a whopping $61tr. We showed here that each successive bout of central bank balance sheet expansion, since the Global Financial Crisis, has resulted in a smaller increase in the OECD (Organisation for Economic Co-operation and Development) leading indicator.

But as debt levels grow across the economy, the risk is that it encourages economic agents to focus on deleveraging, rather than taking out new (cheap) loans to fund spending. In other words, the transmission of monetary policy risks becomes less effective. Note in Chart 8, for instance, the modest rise in China M2 growth at present, especially compared to previous stimulus episodes.

As our Emerging Market strategists presented in a chart earlier in the year, economies with high debt/GDP also seem to have relatively low velocity of money, a potential sign that debt is becoming less productive for the economy (households have a greater preponderance to save/deleverage, etc.)

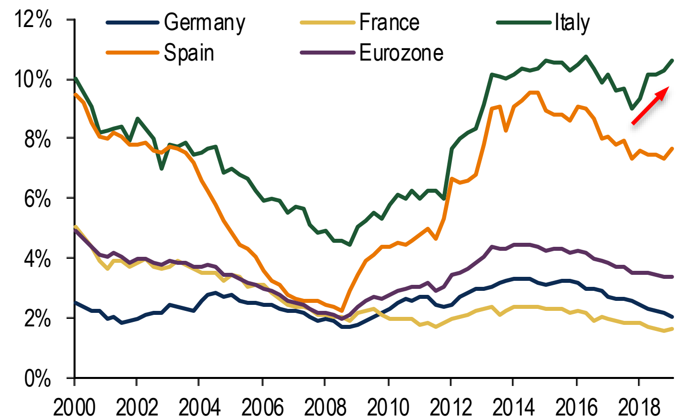
Chart 9 shows debt/GDP vs. money velocity for a range of countries. Higher debt/GDP economies indeed tend to be associated with lower money velocity. Moreover, the relationship seems to have strengthened today relative to 2000.

Chart 9: Debt vs. money velocity – is too much debt crimping economic vibrancy?



Source: BofA Merrill Lynch Global Research. See also: "The Inquirer, Is Global Monetary Reflation here?", 18th Feb 2019

Chart 10: Banks holdings of govt. debt (% assets) – some signs of banks buying government debt again?

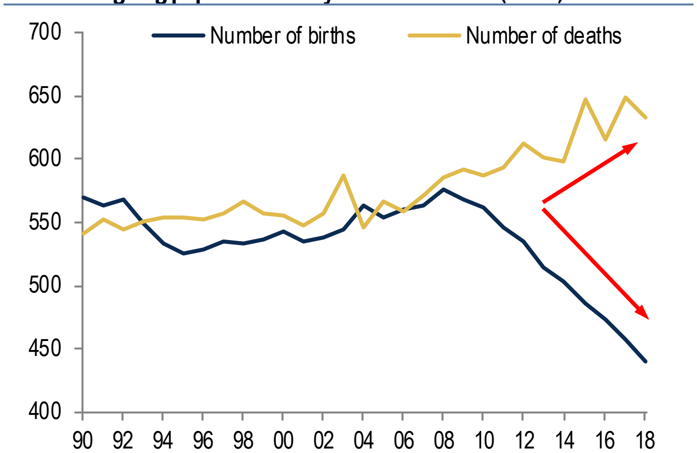


Source: BofA Merrill Lynch Global Research, ECB

The bank-sovereign nexus – back again?

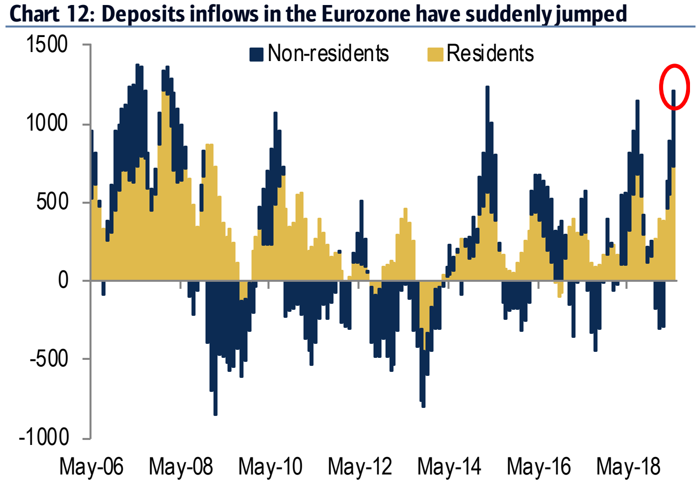
Allied with the above, the efficacy of central bank stimulus is limited if domestic banks choose to buy more government debt with cheap money (carry trades), rather than lend it to the real economy. Since the peak in 2014/'15, Euro Area banks have been reducing their holdings of government debt. Yet signs are emerging lately that their appetite for government debt is creeping back (despite bank regulators encouraging the opposite).

Chart 11: Ageing populations: Italy births vs. deaths ('000s)



Source: BofA Merrill Lynch Global Research, ISTAT, DataStream.

Chart 12: Deposits inflows in the Eurozone have suddenly jumped



Source: BofA Merrill Lynch Global Research, ECB . Eur mn. All sectors.

- As Chart 10 shows, Italian banks' holdings of government debt (as a % of total assets) have risen since the start of 2018. And in Q1 this year, both Spanish and French banks also reversed course, albeit modestly.

Ageing populations

As hard as central banks try, one theme that we think will be hard to counter is that of ageing demographics. We believe it is one secular theme keeping downwards pressure on global inflation rates. Note in Chart 11, for instance, that Italy has just posted its lowest birth rate last year (440k) since 1861 (when records began). Deaths outnumbered births by almost 200k.

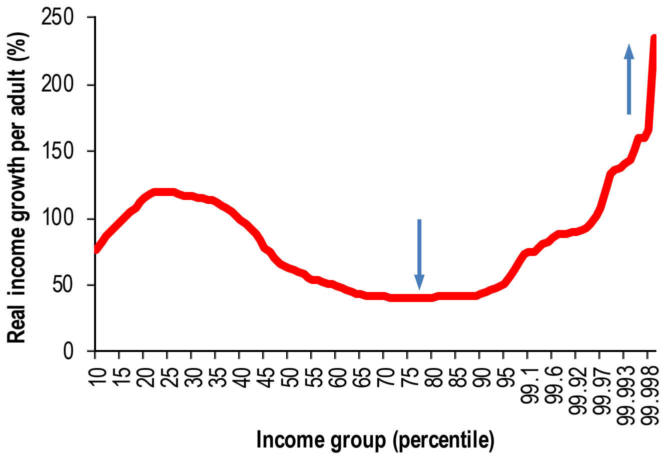
Moreover, worrying demographics are projected for Italy in 2050.

Liquidity traps and populism

Finally, a risk from lower yields and more negative rates is simply that of a "liquidity trap" – that consumers (and corporates) are motivated to save more, rather than spend, because future investment returns will be a lot lower. Thus, central banks' attempts to rekindle "animal spirits" can in fact achieve the opposite (we noted here how there were few signs of M&A in Europe, despite issuers being able to raise money at negative yields in high-grade).

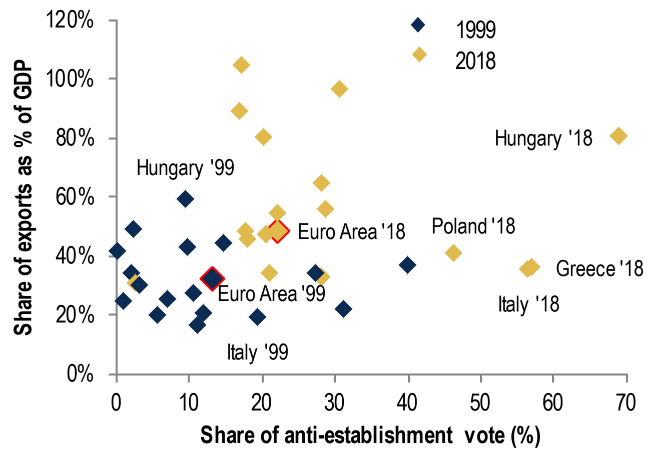
Chart 12 shows a potentially worrying development: that of large deposit inflows across the Eurozone at present. We wonder whether this is reflective of our liquidity trap argument (see more from our rates team on deposit trends here).

Chart 13: At the global level, inequality has risen sharply over the last 40yrs. The top 1% richest have had twice the income growth of the poorest 50%



Source: World Inequality Report 2018, BofA Merrill Lynch Global Research. Global population, 1980-2016.

Chart 14: Has globalisation stoked voter resentment and ultimately been a contributor to the populism story? Countries with a greater share of exports also seem to have greater populist tendencies.



Source: BofA Merrill Lynch Global Research, Timbro, DataStream

In the end, all of these challenges (debt, demographics, "digitization") mean that central banks will need to pull harder on the stimulus lever to achieve the same economic impact as in the past. But by inflating asset prices, the risk is that it further stokes the populism backdrop…

Chart 13 highlights the gap in income growth, since 1980, of the top 1% earners across the globe, relative to the bottom 50%.

We (still) need to talk about debt

Should we reach the point of "Quantitative Failure", then we think the risk is that markets pivot to worrying about debt levels again. After all, one way to keep debt levels in check is to inflate the problem away. More roadblocks to inflation mean less hope of curing the "debt supercycle" (since the Global Financial Crisis, global debt levels have risen by $61.4tr, with government debt rising by $25tr, contributing the bulk of the increase).

The end of the mini deleveraging

On this front, the latest BIS update on global debt levels shows that the notional outstanding of global debt rose in Q4 last year from $172.4tr to $174.6tr.

As Chart 14 points out, this seems to have ended a nascent deleveraging trend that had been underway for the first 3 quarters of 2018. In fact, global debt/GDP decreased from 244.6% to 231.6% between Q4 '17 and Q3 '18, with both advanced and emerging economies contributing to the deleveraging. Yet, it rose from 231.6% to 234% in the final quarter of 2018.

The slowdown in the global economy due to trade wars and rising policy uncertainty was sufficient enough to put an end to this promising global deleveraging trend. In other words, the global economy still remains sufficiently fragile – and in need of dovish central banks – that it has become hard to sustain debt deleveraging.

Movers and shakers in the "debt supercycle"

Who were the movers and shakers in terms of debt levels? Chart 15 shows the growth rate in nominal debt levels in 2018, by country and segment, and contrasts it with the growth rates of the previous decade. We find that:

- **China** remains the largest driver of global debt growth (+13% in 2018), almost in line with its post-GFC trend of 15.6% average annual growth rate. Across China, the growth in household debt last year (+19.2%) was the largest, and much more than the growth in non-financial corporate debt (+9.8%).

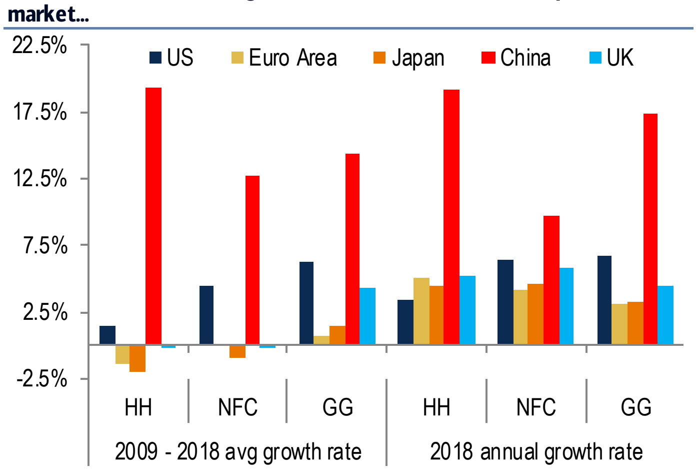
- Developed market **households** added debt noticeably in '18, with European and Japanese consumers' debt growth rising, relatively to the last decade.

- Global **corporate** debt growth accelerated in 2018 to 6.4%, up from 6.0% a year before. European corporates added relatively less debt last year (+4.2%). Conversely, UK corporate debt growth was higher (+5.8%), likely Brexit related.

- US tax cuts pushed **government** debt up 6.7% last year, outpacing Euro Area and Japan public sector debt growth at +3.2% and +3.3%, respectively.

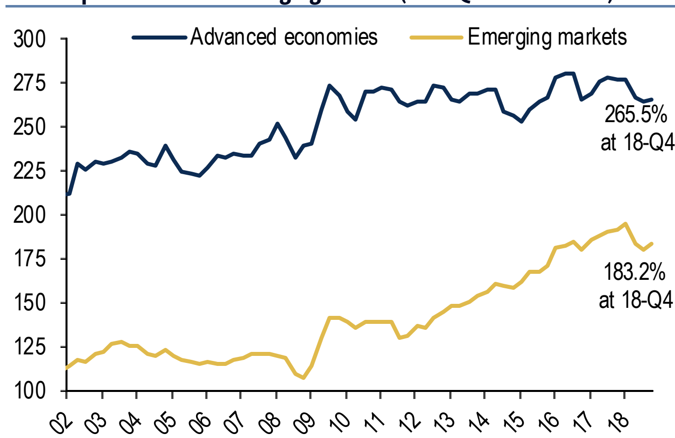
- More broadly, one thing that stands out from Chart 15 is that **all** segments – across **all** major countries – saw nominal debt levels go up last year. Again, this highlights the difficulty in combatting the debt supercycle when political uncertainty hinders the global economic backdrop.

Chart 15: US$ outstanding debt rose in 2018, across most parts of the market...



Source: BofA Merrill Lynch Global Research, BIS. Growth rate of nominal debt levels in US$ for households (HH), non-financial corporations (NFC) and general government (GG).

Chart 16: ...but at a slower pace than GDP growth as both DM and EM have experienced a deleveraging in 2018 (until Q4 '18 however)



Source: BofA Merrill Lynch Global Research, BIS

What about governments' assets?

One question that we frequently get when talking about global debt levels is that it is only half of the picture: a complete assessment of the global debt situation must take into account the asset side (net debt, therefore, rather than just gross debt levels).

On this front, the charts below show the IMF's latest update of net debt levels for governments. To arrive at these figures, the IMF have collected data on both government financial assets and non-financial assets, and added these to the mix:

- As Chart 18 shows, understandably, government net debt (as a % GDP) falls relative to gross debt (as a % GDP), when the asset side is included. On the whole, these

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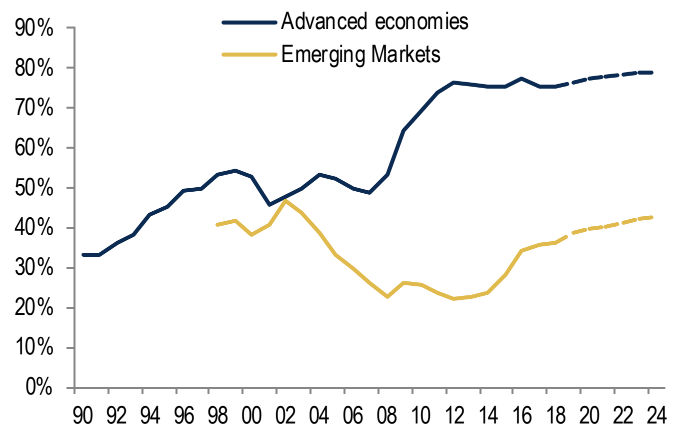
moves lower are marginal, we think, albeit they stand out for some countries such as Canada and Norway (sovereign wealth fund).

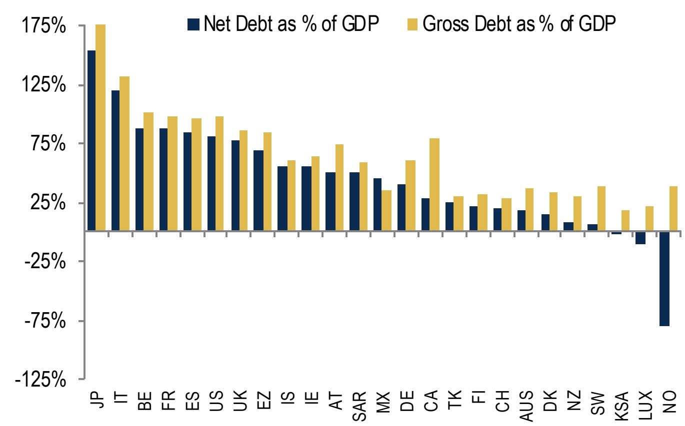
- The IMF's latest projections of sovereign net debt levels have them inching higher over the next 5yrs (Chart 17), albeit more for Emerging than Developed economies.

Chart 17: Sovereign net debt as % of GDP (Apr '19 projections)



Source: BofA Merrill Lynch Global Research, IMF. Using April '19 projections

Chart 18: Positive net wealth only marginally offsets European public sector's indebtedness (government net financial worth)

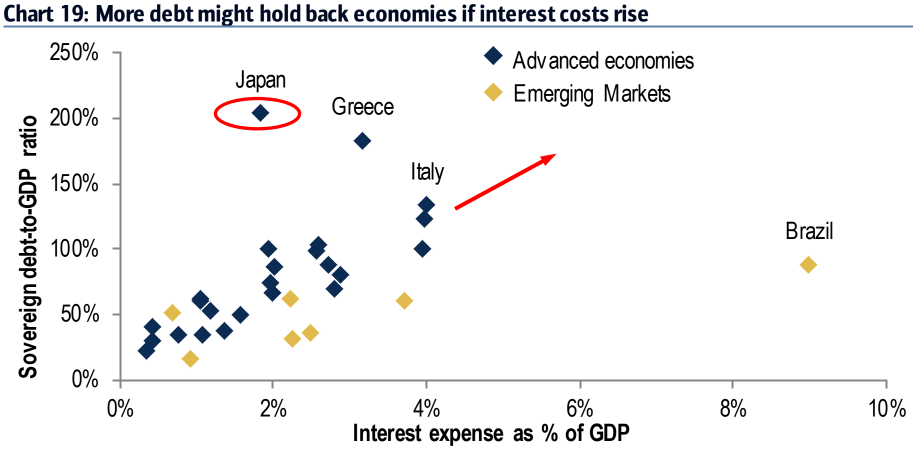


Source: BofA Merrill Lynch Global Research, IMF, BIS. Data as of year-end 2018. Net debt calculated as gross debt minus general government's net financial wealth.

And what if we reach "Quantitative Failure"?

Michael Hartnett's Fund Manager Survey shows Central Bank Impotence as the second biggest tail-risk for investors now. While we don't think we're there yet, as we highlighted above, there are growing signs that monetary stimulus isn't being viewed as effectively as before.

Chart 19: More debt might hold back economies if interest costs rise



Source: BofA Merrill Lynch Global Research, BIS, DataStream

If markets pivot to worrying about debt levels again, then this becomes an issue for governments. As Chart 19 shows, more levered sovereigns often have to cope with higher interest payments (as a % of GDP). Economies can be restrained by too much debt …

The alternative, although somewhat ironic, is that central banks may need to engage in even more extreme measures to counter the market's scepticism. Note in Chart 19 that despite Japan's high debt/GDP (>200% now), interest payments as a percentage of GDP are actually quite low. Why? Because the BoJ have engaged in a more aggressive form of QE, currently holding around half of Japanese government debt.

In other words, debt monetization becomes a more-contemplated form of support.

The United States of Europe

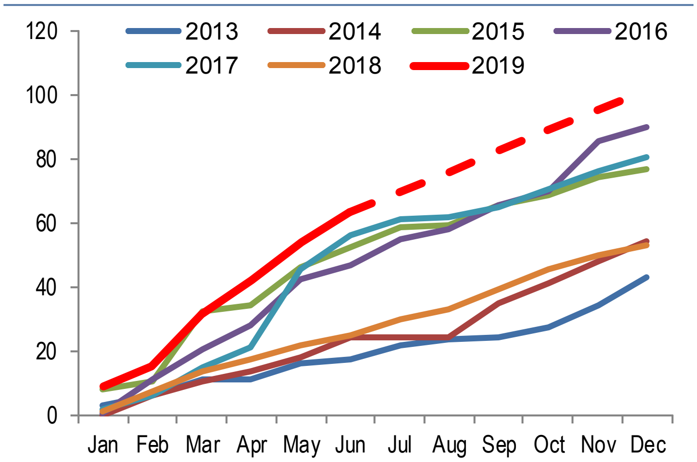
Talking about debt, and European credit, one area where bond market growth has been conspicuous this year is Reverse Yankee (RY) issuance (US companies issuing Euro bonds). Cumulative year-to-date RY supply stands at €60bn, a record run-rate (Chart 20). After a slow start, RY supply has been vibrant. Extrapolating, we think we could be on course to see just under €100bn of RY issuance by year-end, which would be a record year.

Powell > Lagarde?

One consequence of this is that it may not be too long before the largest part of the Euro IG market is not French names … but instead US issuers. Chart 21 extrapolates YTD issuance trends across countries within the Euro high-grade market. This suggests that by the end of 2020, US issuers will have surpassed French names, by market size, and will have taken the number one spot within the Euro IG market.

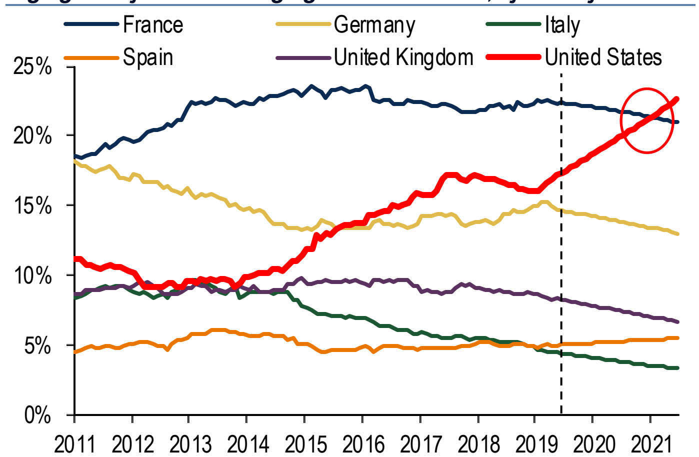
The irony, then, is that monetary policy decisions by the Fed might start to be more market moving for Euro credit than monetary policy decisions by the ECB.

Chart 20: RY supply may set a new record this year at around €100bn



Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC. Eur bn.

Chart 21: RY could overtake French issuers as the largest market in euro high-grade by 2020. Euro high-grade market share, by country.



Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC. Projections based on the compound monthly growth rate of supply observed in H1 '19.

Who's next?

While the rationale for each Reverse Yankee deal is different, we think a common theme for many of this year's new deals has been Net Investment Hedging.

Many US names have European assets and revenues from previous cross-border M&A. Given recent USD strength (some of it trade war driven), US companies will be looking for ways to hedge their European interests. Rather than expensive (and accounting inefficient) cross currency swaps, issuing a Euro bond is an attractive alternative (US firms will then have European assets and liabilities).

Which US names might need to issue in Euros next for this reason?

Table 1 below screens US issuers that have large European revenues, but much less in the way of Euro debt outstanding. We think these names may be candidates for future Reverse Yankee deals.

- Specifically, we highlight those names where the percentage of Euro debt (vs. USD debt) is much lower than their percentage of sales from Europe.
- As can be seen many names have almost no Euro debt outstanding, despite having 20%+ revenues in Europe (Note **Visa**, **Oracle**, **Celgene**, **Amazon** for instance).

- In the final column, we calculate hypothetically how much Euro debt these companies could issue if they wanted the percentage of their Euro-denominated liabilities to be roughly the same as the proportion of their European sales.

While this analysis is a simple first approximation of issuance needs (we don't take into account current Net Investment Hedge capacity of issuers, for instance), it does suggest that credit investors should be on the lookout for more Reverse Yankee supply from the **tech**, **healthcare** and **capital goods** sectors, for starters.

And there could be indigestion risk impacting other names in these sectors because of this trend.

Table 1: Top 30 potential Reverse Yankee future issuers. Tech, healthcare and capital goods companies with a sizable European exposure are likely to tap the euro bond market in coming quarters, we think.

Ticker	Description	Sector	€ Debt (Mn)	$ Debt (in € Mn)	€ Debt/$ Debt (%)	% Europe Sales	Estimate of € debt to issue (Mn)
ORCL	Oracle Corporation	Tech.	2,000	43,981	5%	29%	**10,755**
AAPL	Apple Inc.	Tech.	7,300	58,439	12%	24%	**6,725**
BK	The Bank of New York Mellon Corporation	Banking	0	18,843	0%	26%	**4,824**
CELG	Celgene Corporation	Healthcare	0	17,643	0%	27%	**4,781**
AMZN	Amazon.com Inc.	Retail	0	20,551	0%	21%	**4,316**
NEM	Newmont Goldcorp Corporation	Basic Industry	0	4,615	0%	86%	**3,966**
XOM	XTO Energy Inc.	Energy	0	12,357	0%	32%	**3,905**
GILD	Gilead Sciences Inc.	Healthcare	0	21,554	0%	18%	**3,867**
BMY	Bristol-Myers Squibb Company	Healthcare	1,150	19,193	6%	24%	**3,458**
CAT	Caterpillar International Finance Ltd	Cap. Goods	300	16,295	2%	23%	**3,432**
DE	John Deere Cash Management	Cap. Goods	1,150	17,198	7%	26%	**3,322**
CSCO	Cisco Systems Inc.	Tech.	0	12,888	0%	25%	**3,223**
V	Visa Inc	Tech.	0	14,888	0%	20%	**2,978**
PPL	PPL Electric Utilities Corporation	Utility	0	10,386	0%	28%	**2,916**
DIS	The Walt Disney Company	Media	0	22,688	0%	11%	**2,496**
PFE	Pfizer Inc.	Healthcare	1,750	25,346	7%	16%	**2,354**
EBAY	eBay Inc.	Tech.	0	5,422	0%	42%	**2,277**
STT	State Street Corporation	Banking	0	8,444	0%	26%	**2,170**
HPE	Hewlett Packard Enterprise Company	Tech.	0	8,508	0%	23%	**1,940**
SLB	Schlumberger Finance France SAS	Energy	600	10,797	6%	23%	**1,900**
INTC	Intel Corporation	Tech.	0	18,741	0%	10%	**1,874**
COP	ConocoPhillips Company	Energy	0	10,460	0%	18%	**1,862**
GS	Goldman Sachs Group Inc.	Banking	16,750	75,683	22%	24%	**1,778**
ABBV	AbbVie Inc.	Healthcare	2,200	26,148	8%	14%	**1,555**
MMC	Marsh & McLennan Companies Inc.	Insurance	1,100	8,577	13%	31%	**1,535**
BA	The Boeing Company	Cap. Goods	0	12,264	0%	12%	**1,504**
AON	Aon plc	Insurance	500	5,579	9%	35%	**1,431**
BSX	Boston Scientific Corporation	Healthcare	0	6,799	0%	21%	**1,428**
AXP	American Express Credit Corporation	Banking	1,000	22,812	4%	11%	**1,418**
UTX	United Technologies Corporation	Cap. Goods	3,450	24,265	14%	20%	**1,367**

Source: BofA Merrill Lynch Global Research estimates, ICE Data Indices, LLC. Debt figures as of July 2019. Estimate of European sales provided by US Equity & Quant Strategy as of full-year 2018.
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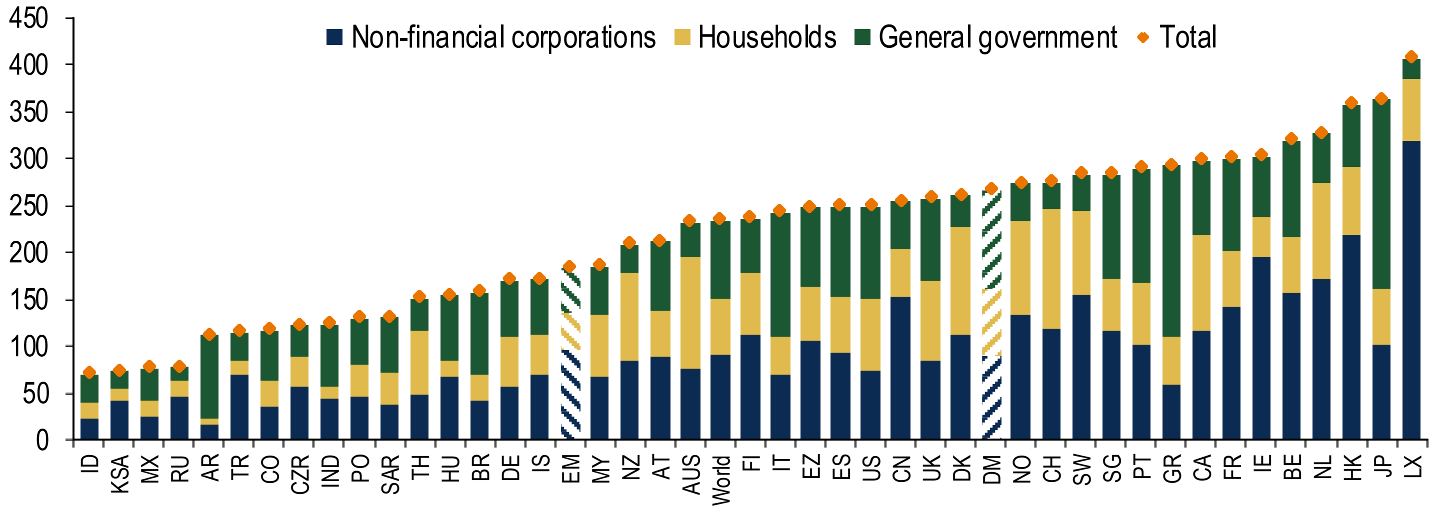
Appendix

Below we show the latest BIS update on global debt levels across economic agents.

Chart 22: The latest data on debt-to-GDP ratios across countries & sectors as of Q4 '18 (%)



Source: BofA Merrill Lynch Global Research, BIS

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