



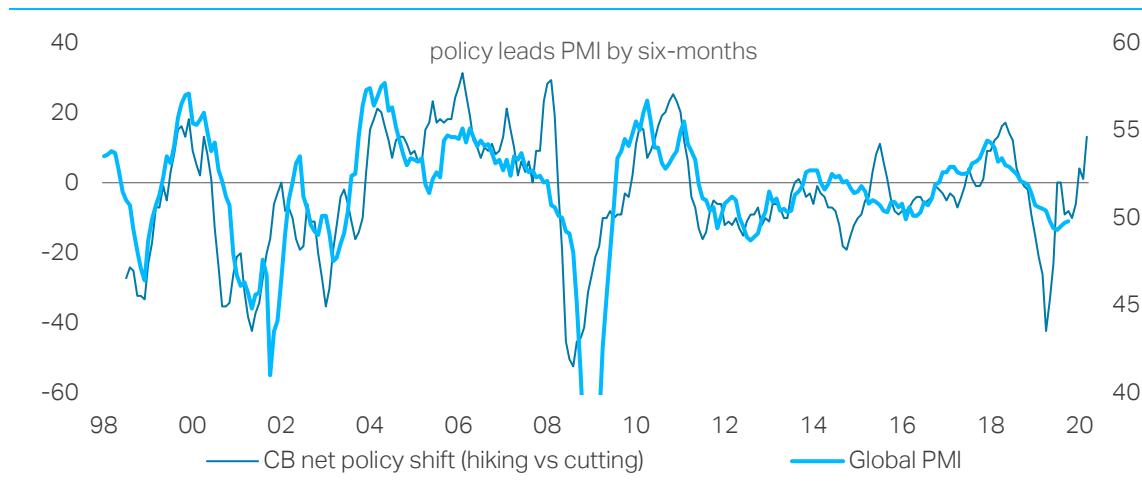
Macro Picture

# REFLATION RETURNS?

Dario Perkins

Investor sentiment has shifted in recent weeks, as near-term recession worries have eased. While macroeconomic data have stabilized, there is no compelling evidence of 'green shoots'. A formal ceasefire in the trade war could allow a gradual improvement in global demand in 2020, but the world lacks the catalysts for a more vigorous revival.

Chart 1: Have central banks done enough?



Source: BIS, Markit, TS Lombard, net policy shift is hiking % minus cutting %, based on 32 central banks (EM and DM)

## GREEN SHOOTS II

Investors are becoming more optimistic about the global macro outlook. The resilience of US data has helped, especially the robustness of the labour market. Yet looking across the world economy there is no compelling evidence of 'green shoots'. Specific drags on global growth have eased and the macro data have stabilized, but international demand remains tepid.

## DOLLAR TRAPPED

Several important forces are keeping global activity down, including trade uncertainty and continued policy restraint in China. The strong dollar is also a problem. Rather than narrowing the differential between US activity and the rest of the world, dollar strength actually reinforces this divergence, which means it feeds on itself, spreading deflationary pressures everywhere.

## SPEED LIMITS

Federal Reserve action should ease the immediate dollar shortage, but central banks are struggling to revive capital-market lending. While a trade deal should provide a boost to capex and global manufacturing, Chinese policymakers are not prepared to fuel another 2016-style credit splurge. The world economy lacks the catalysts for a powerful reflationary period.

## REFLATION RETURNS?

Investor sentiment has shifted in recent weeks. This was certainly the message from the latest BoAML survey – which showed portfolio managers, distinctly less negative about the global economy, suddenly piling into equities. The reflation theme has also appeared in our recent interaction with clients. Meanwhile, the S&P 500 has jumped to new record highs and bond markets have sold off, with the share of negative yielding-debt starting to look a little less scary. While policy easing from central banks has surely contributed to this reappraisal of the outlook, investors have also taken heart from the continued resilience of US macro data (especially the labour market). Yet, for investors hoping to see signs of genuine improvement in the global economy, the evidence so far is rather underwhelming. Leading indicators remain subdued, with no sign of a turn in the global capex or manufacturing cycles. At best, it seems several industry-specific drags on the global economy have eased, notably auto demand and overcapacity in the tech sector. But the main causes of the 2018-19 downturn remain in place. Trade uncertainty continues to discourage investment, while the authorities in China are no longer willing to provide the catalyst for global growth, resisting pressure for a 2016-style credit splurge.

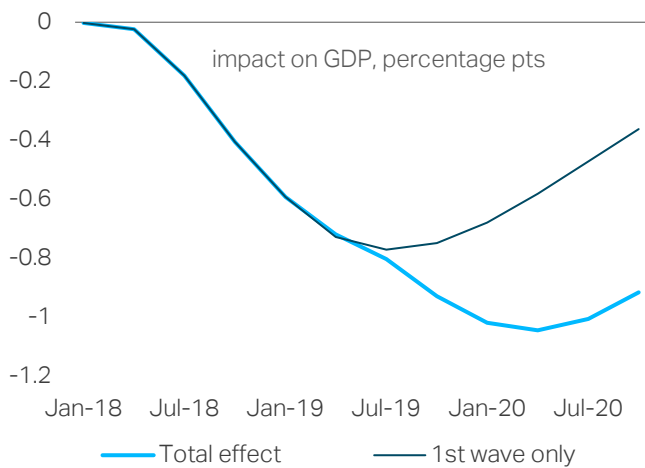
Sustained dollar strength is also a serious problem for the global economy. While standard economic theory suggests a rise in the exchange rate should help to narrow growth differentials between the United States and the rest of the world, this is not what we observe in reality. Since global trade is typically invoiced in USD and the majority of international lending is denominated in dollars, US currency strength damages the rest of the world even more than it hurts the United States, which means it feeds on itself, compounding existing growth differentials and spreading deflationary pressures around the world. A recent BIS study provides fresh evidence for the role of the dollar in the modern financial system, using firm-level data to show how USD appreciation forces banks to restrict cross-border lending and cut trade finance, particularly where long international supply chains are involved. Currently, of course, there is a debate about whether dollar strength reflects insufficient supply of US currency, particularly the Eurodollar ‘shortage’, or persistent interest-rate differentials. These are two sides of the same problem. While the Fed is taking action to improve the availability of dollars internationally, by injecting new reserves into the system, negative policy rates in Europe and Japan will ensure continued USD strength.

Looking into 2020, we are likely to see a modest and gradual improvement in the global economy. While a permanent solution to the trade war seems unreachable, the US and China should be able to cobble together a short-term ceasefire, which would be sufficient to restart the global capex cycle. Manufacturing activity would improve before the current weakness has spread to DM labour markets and consumer demand. Even a modest improvement in global demand would justify a further rally in risk assets and another selloff in bonds. Yet, it is difficult to imagine a really powerful revival in demand, sufficient to produce a genuinely reflationary episode. This is because there is currently no ‘balance sheet’ for such a recovery. Banks remain reluctant (or unable) to lend, there is no consensus for aggressive fiscal easing, and the monetary authorities are struggling to reignite the search for yields. The two most important catalysts for the post-2008 expansion – China and capital markets – are no longer playing this role. If these themes continue, the best we can hope for is another ‘mini-cycle’ in activity. This would extend what is already the longest (and weakest) expansion in modern history, but it would not be sufficient to break the New Mediocre or deliver a sustained rise in real interest rates.

# 1. GREEN SHOOTS II

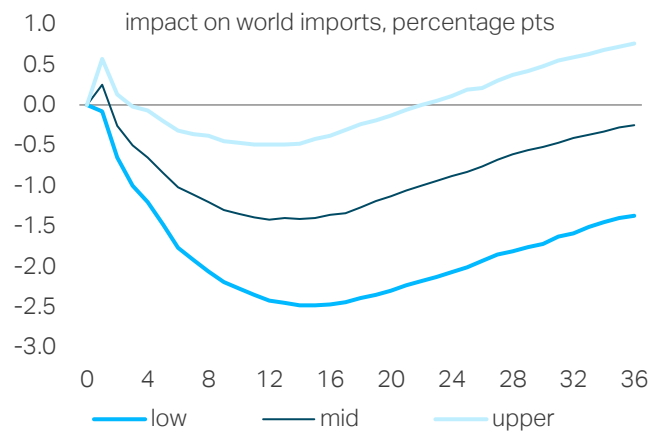
For the second time this year, searching for ‘green shoots’ has become a popular pastime in global markets. We last heard this narrative (appropriately enough) during the spring. After a plunge in leading indicators in late 2018/early 2019, some commentators thought they were seeing the early signs of a revival in the global economy. Manufacturing activity had stabilized, sentiment was recovering and there were even signs of improvement among the large exporters. Unfortunately, investors had failed to anticipate a further escalation in President Trump’s trade war with China, which happened during the summer. Uncertainty spiked, leading indicators resumed their slump and industrial activity deteriorated. Attention quickly switched from green shoots to monetary policy and whether the central banks would react forcefully enough to prevent the world economy sliding into a serious recession.

**Chart 2: Trade uncertainty and DM GDP**



Source: Federal Reserve [estimates](#)

**Chart 3: Uncertainty and world trade**



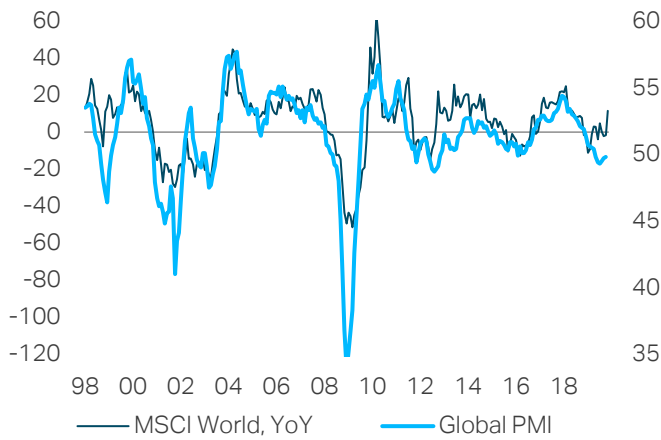
Source: Federal Reserve [estimates](#)

## Impact of the trade war

Given the timing of the trade-war escalation and the subsequent deterioration in macro data, there can be no doubt the US administration’s ratcheting up of the conflict played a crucial role in killing the green-shoots narrative. A [recent Fed study](#) confirms this casual empiricism, using sophisticated statistical techniques to investigate the impact of trade uncertainty on the global economy. As seems reasonable, the Fed’s analysis shows the main deflationary impact has come from capital spending, with uncertainty about future demand prompting many companies to postpone their capex decisions. As for the overall size of the hit, the study shows that the conflict has shaved around 0.8 percentage points from global GDP since the first half of 2018.

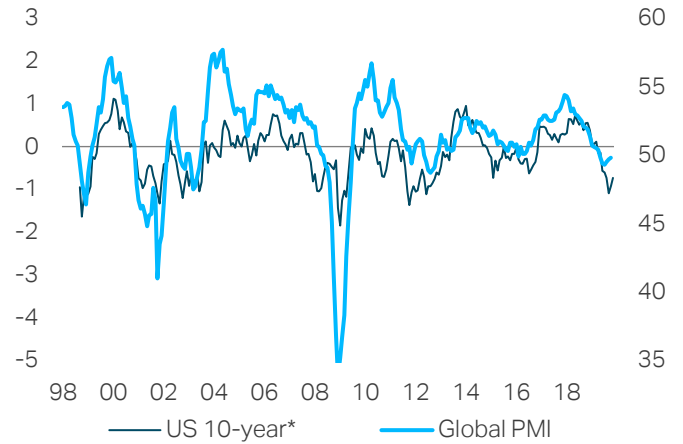
‘Had trade tensions not escalated again during the summer’, Fed officials pointed out, ‘this drag would have subsequently started to ease. But renewed uncertainty created additional knock-on effects that pushed down global GDP further in the second half of 2019’. Fed researchers also used their model to provide more detailed analysis of the trade war, including its impact on stock markets, industrial production, world trade, and the various regional dimensions to these effects. Again, the impact was substantial – trade uncertainty has reduced world imports by around two percentage points, lowered the S&P 500 by four percentage points and boosted the US dollar (which as we will show in Section 2 of this Macro Picture, brings its own set of problems).

**Chart 4: Equities ignored downturn**



Source: Bloomberg, Markit

**Chart 5: Bonds overshot?**

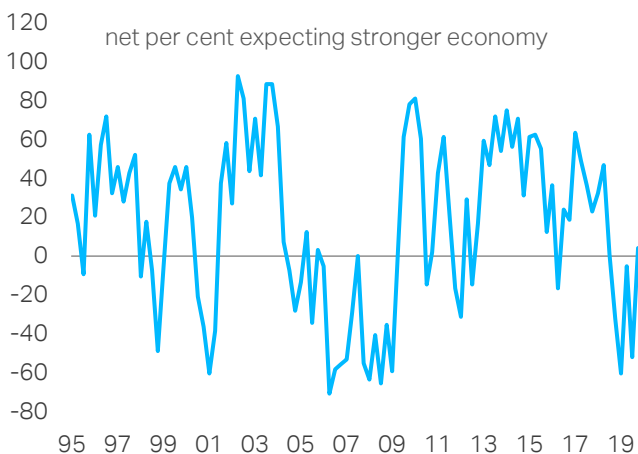


Source: Bloomberg, Markit, \*versus moving average

**Confidence returns?**

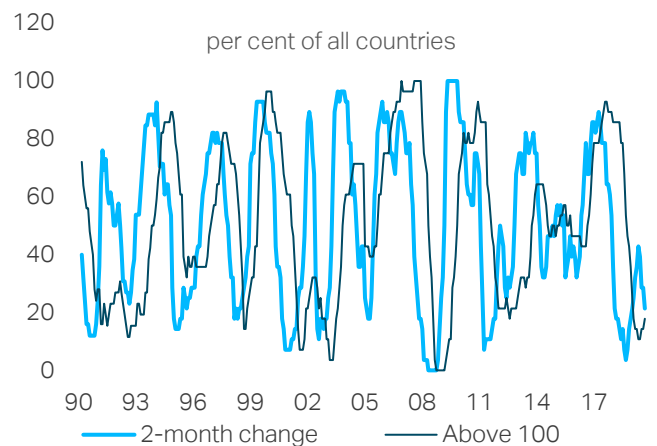
If the trade war was the main reason the green shoots narrative withered during the summer, then surely a near-term resolution in the conflict could provide a material boost to activity in 2020. We might even see pent-up demand in capital spending and industrial activity, especially if companies have been postponing capital decisions. Right now, this appears to be the consensus among most investors. Global stock markets have rallied in recent weeks, partly in response to speculation about a 'phase-one' deal. While nobody knows exactly what such a deal would involve, press reports suggest it could include a Chinese commitment to buy certain quantities of US agricultural goods, stable RMB policy, a compromise on tech IP rules and possibly even a reduction in US tariffs (certainly the avoidance of further tariff hikes).

**Chart 6: Investors turn bullish**



Source: BoAML survey via Twitter

**Chart 7: Stabilization in OECD LIIs**

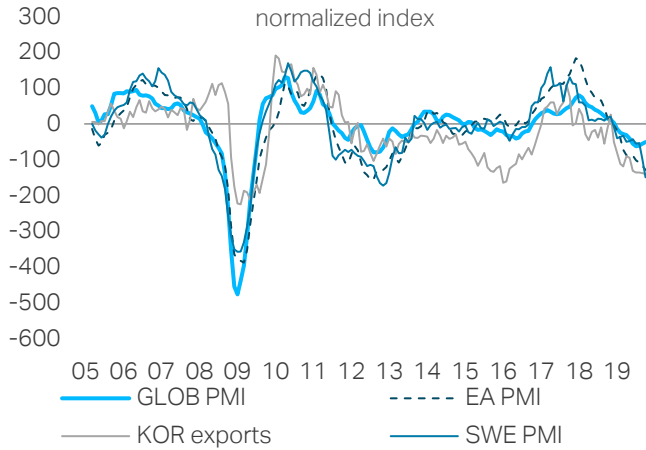


Source: OECD, TS Lombard

A phase-one deal (as the name suggests) would not provide a permanent resolution to the trade conflict, but it might deliver a period of calm for financial markets and large exporters. On the evidence of recent surveys, plus our own interaction with investors, markets are already braced for a more bullish macro environment in 2020. The [latest BoAML survey](#) of fund managers, for example, showed a major improvement in sentiment compared with previous months, including

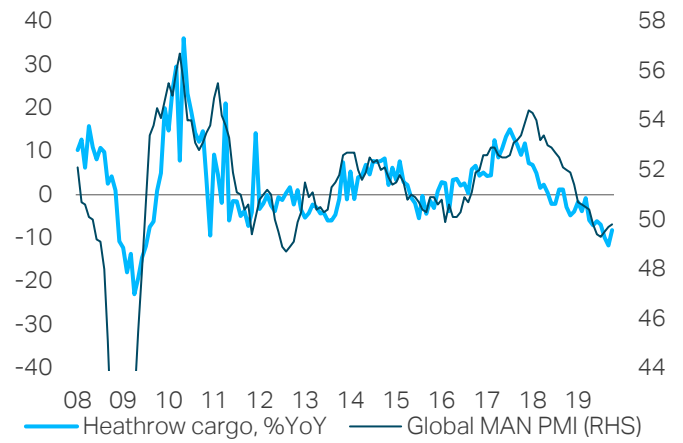
greater optimism about near-term economic prospects and large rotation from cash/bonds into equities. This matches what we have observed in market prices recently.

**Chart 8: Deterioration eases**



Source: Datastream

**Chart 9: But no signs of green shoots**

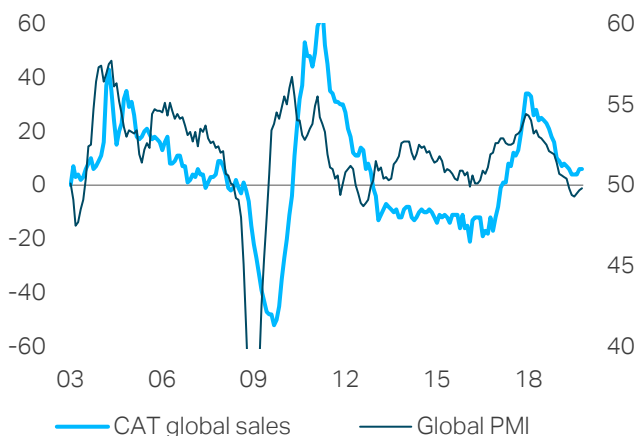


Source: Heathrow airport, TS Lombard

**Macro stabilization**

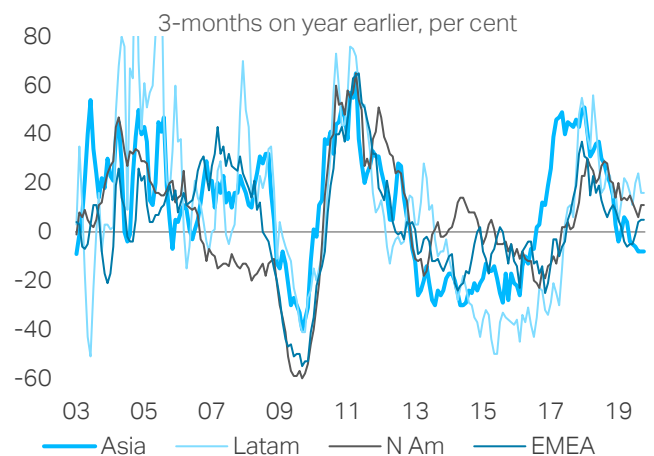
Not only are investors feeling more confident about the prospect of a US/China trade deal, but many are convinced the worst is over for the global economy. Recession talk has faded, especially compared to the situation a few months ago. The continued resilience of US data has been an important source of comfort for many investors. Though [tracking estimates for US GDP suggest the economy is broadly stagnating](#) in the final months of 2019, consumer demand and employment seem to be holding up rather well. The resilience of the labour market is particularly important, as we noted in a [previous macro picture](#). Companies have curbed their capital spending but there is no evidence they are trying to reduce the size of their workforce. If this continues, the US will surely avoid an outright recession.

**Chart 10: Caterpillar's global sales**



Source: Bloomberg

**Chart 11: Regional divergence in CAT sales**

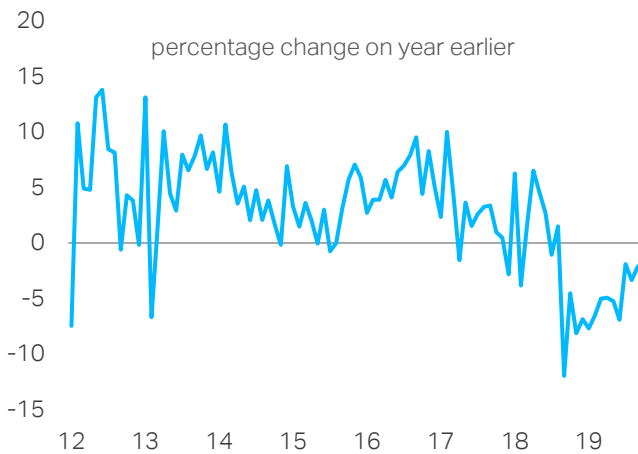


Source: Bloomberg

Outside the United States, we are also seeing some of the temporary forces that undermined world trade and global industrial demand starting to unwind. In particular:

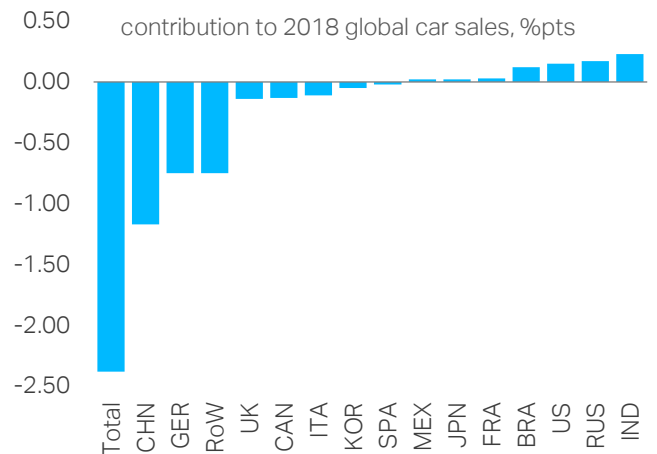
- (i) **The slump in the auto sector** – global auto production declined sharply from the second half of 2018. The IMF has identified two specific problems that undermined activity. First, the removal of tax breaks in China, which the Fund believes brought forward around 2-7 million units of sales from 2018-19 into 2016-17 (around 20 per cent of total production). Second, new carbon emission tests disrupted car production and trade in Europe. The large number of models requiring certification led to bottlenecks at testing agencies, and automakers had to adjust production schedules to avoid unwanted inventory accumulation. The IMF estimates that global auto production declined by around 2.5% in 2018, accounting for a hit of around 0.5 percentage points to world trade. As these temporary forces diminished, auto production has stabilized and the drag on the global economy has eased. But, as auto producers have been among the main beneficiaries of low interest rates since 2008, using favourable lending conditions and various leasing schemes to bring forward future demand, it seems unlikely we will see a powerful revival in 2020-21:

**Chart 12: Global auto sales slumped**



Source: TS Lombard based on Datastream

**Chart 13: China and Germany suffered most**



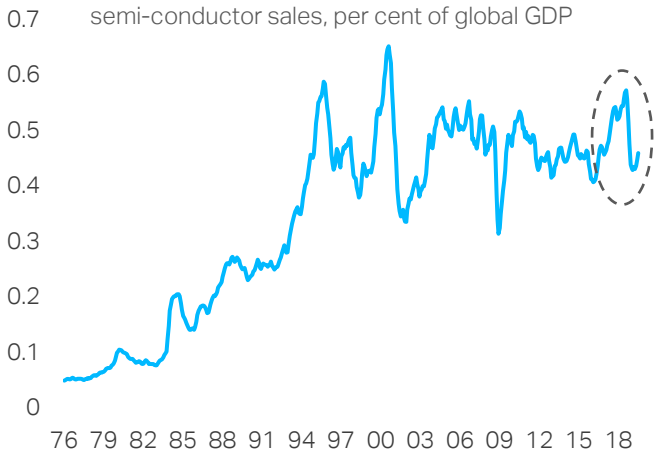
Source: IMF World Economic Outlook

- (ii) **A downturn in the tech cycle** – Global tech demand boomed between 2016 and 2018, partly reflecting rapid increases in demand for digital products (especially smartphones) but also a previous shortage of semiconductors. With hindsight, it is clear the sector eventually overshot, leading to a sharp correction in 2019. These sharp swings in demand hit some parts of the world particularly hard, especially those countries – like Korea, Taiwan and China – that are now part of the new ‘global tech cycle’. As we noted in previous reports, some parts of the world have become heavily integrated into modern supply chains, leading to sharp short-term swings in activity and obvious vulnerabilities from the potential saturation of the global smartphone market. As with auto demand, we are seeing tentative signs of improvement in this sector, but it is too early to forecast a forceful recovery.

Global macro indicators, which have stabilized in recent weeks, confirm that the outlook for the global economy is not as disastrous as some investors had feared. Charts 8-11 show some of our preferred gauges of international activity, including the Heathrow cargo index, Caterpillar’s international sales, global capital orders and the manufacturing PMIs. Looking across all these data, the story is one of stabilization rather than any compelling evidence for a recovery. While there are a few scattered signs of improvement, the broad narrative is that global demand has

stopped deteriorating. It is too soon to say a synchronized global recovery is taking place, but the mere reduction in near-term recession risk justifies the current improvement in risk appetite.

**Chart 14: Boom-bust in semiconductors**



Source: Datastream

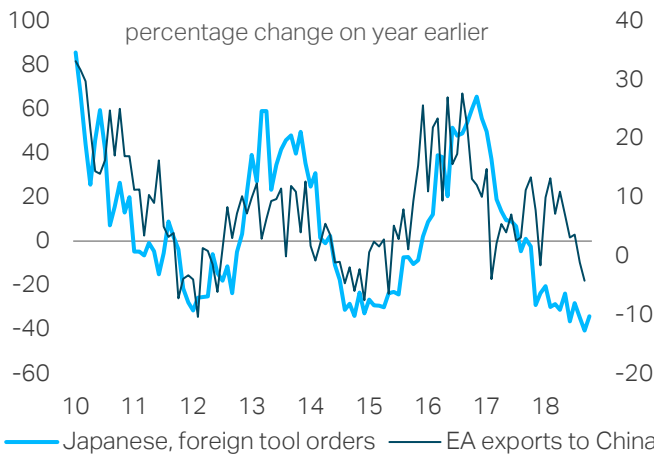
**Chart 15: Seasonal sales around lower trend**



Source: Datastream, \*spikes correlate with new iPhone releases

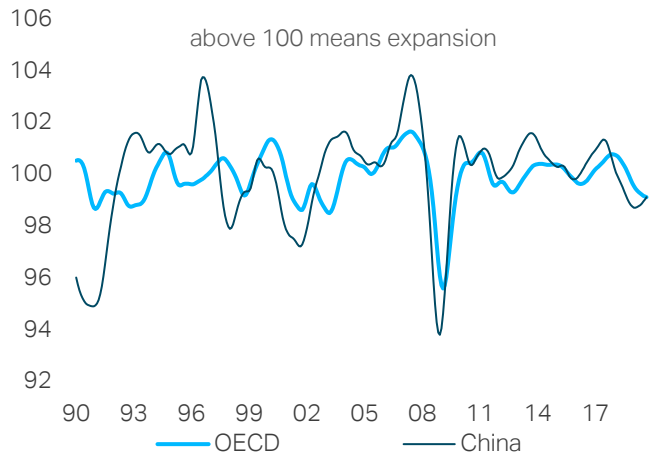
A US-China trade deal would certainly help the global economy in 2020, but it probably wouldn't be sufficient to generate a powerful cyclical revival (or a genuine 'reflation' narrative for markets). This is because there are at least two other deflationary forces keeping demand down – namely the persistent weakness of China and the continued strength of the US currency. The first of these problems is now widely recognized. China has been a critical source of global demand over the past decade. As the rest of the world has struggled with secular stagnation, only China has provided the 'balance sheet' to become a genuine growth-driver for the world economy.

**Chart 16: China leads the industrial cycle**



Source: National sources, Datastream

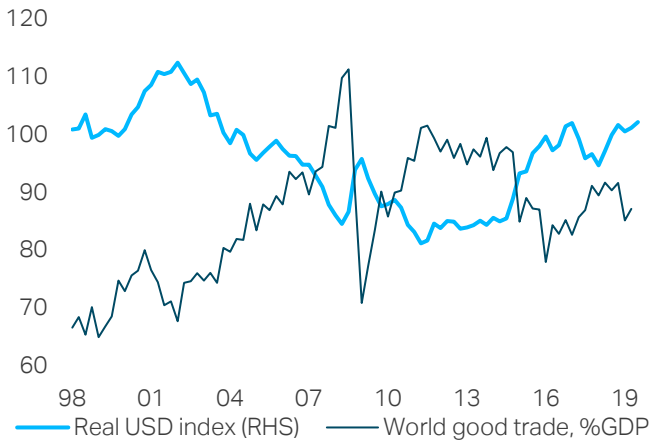
**Chart 17: China leads the OECD**



Source: OECD

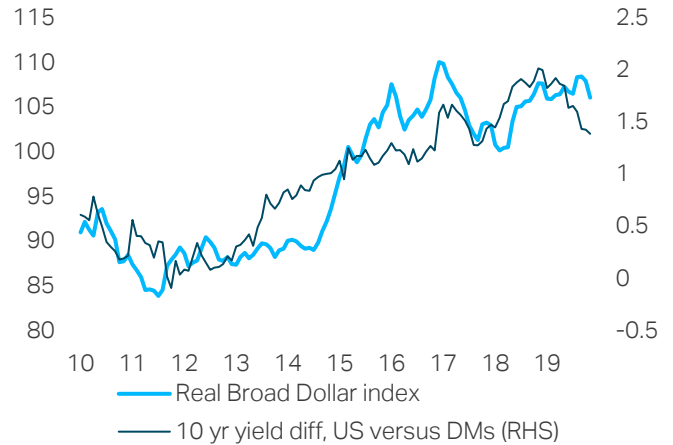
The Chinese authorities have added \$30 trillion in debt since 2008, sustaining a growth rate that would otherwise have been impossible. Yet, with the authorities no longer willing to play this role, resisting the temptation for another credit splurge in 2019, China's persistent weakness has become a genuine problem for global demand. In fact, the global industrial cycle would have deteriorated over the past 18 months, even without the trade war. These days the Chinese are more inclined to weaken their exchange rate rather than throw credit at the weak economy, which compounds the world's other major source of deflation – the strength of the US dollar.

**Chart 18: Strong dollar means weaker trade**



Source: OECD, Federal Reserve, TS Lombard

**Chart 19: Rate differentials and USD strength**



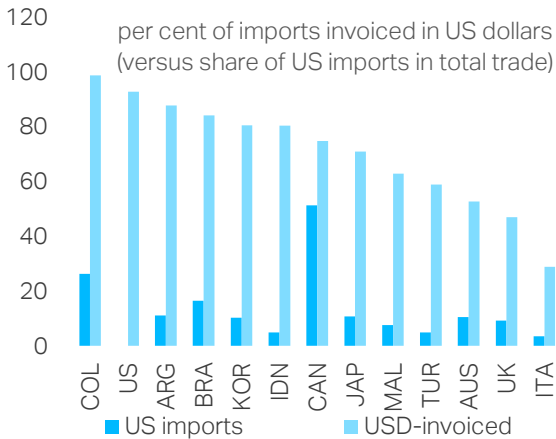
Source: Federal Reserve, Bloomberg, TS Lombard

## 2. DOLLAR TRAPPED

Textbook economic theory assumes exchange-rate swings are a stabilizing influence on the global economy. If, for example, US growth consistently outpaces activity in other parts of the world, the dollar should rise and this appreciation in the currency will simultaneously dampen US prospects and strengthen activity elsewhere, ‘rebalancing’ global demand. Unfortunately, this is not what we have observed in recent years. Instead, the persistently strong dollar seems to have damaged the rest of the world even more than it has harmed the United States, which means it has compounded existing growth differentials and become a source of generalized global deflation. Chart 18 shows a clear inverse relationship between the value of the dollar and world trade. Every time America’s exchange rate rises, world trade deteriorates (and vice versa).

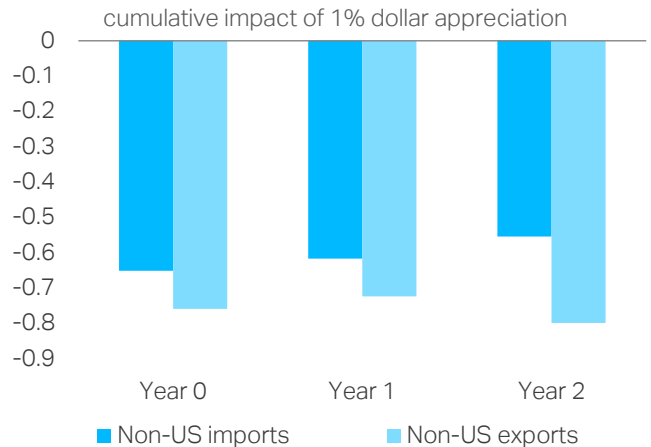
The inverse relationship between world trade and the strength of the dollar clearly works both ways. Not only is a rise in the US currency deflationary for global demand, but a deteriorating global environment encourages investors to seek safety in US securities, especially Treasuries (which will naturally bid up the value of the exchange rate). Recent research has analysed the deflationary consequences of the strong dollar in unprecedented detail, identifying the ‘special’ features of the US currency that ensure it behaves quite differently from standard trade theory. Two features stand out: (i) much of the world invoices its trade in USD, even where there is no US citizen involved in the transaction, and (ii) there is now an unprecedented amount of dollar-denominated debt in the global financial system, with USD liabilities rising rapidly since 2008.

Chart 20: Global USD invoicing



Source: [Boz, Gopinath and Plagborg-Moller](#).

Chart 21: Dollar strength hurts world trade



Source: [Boz, Gopinath and Plagborg-Moller](#).

### Dollar invoicing

Economists traditionally assumed, when currencies move, exporters keep their domestic prices unchanged and allow their export prices to swing. Their goods become cheaper (or more expensive) overseas and consumers responds accordingly – the influential Mundell-Fleming model. But the latest research suggests this is not how exchange rates work. As Chart 20 shows, most international trade takes place in a handful of (‘dominant’) currencies, particularly the US dollar. This gives America’s exchange rate a special role in world trade. For example, [Boz et al](#) found that a 1% appreciation in the USD reduces trade volumes between countries in the rest of the world by around 0.6-0.8 percentage points. So dollar strength hurts most parts of the world, even countries experiencing a real depreciation versus the United States.

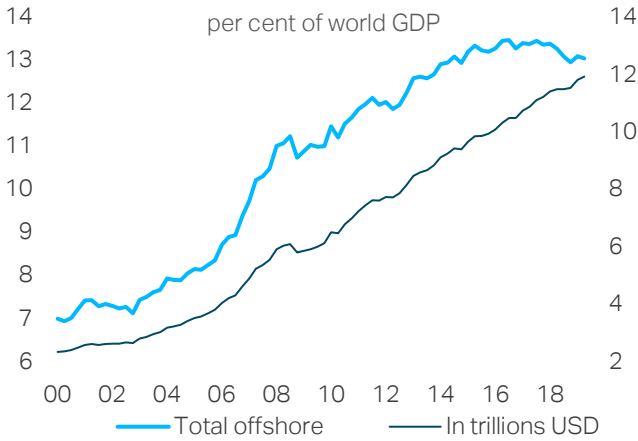
### Dollar borrowing

Not only is international trade invoiced in USD, but the dollar is also the main funding currency, with USD-denominated debt surging over the past decade (Chart 22). Avdiev, Bruno, Koch and Shin found that dollar strength is strongly associated with falling cross-border bank lending (Chart 24) and lower real investment rates, particularly among the emerging economies. An appreciation in the dollar damages borrowers’ balance sheets, reducing both the global demand and supply of dollar credit. They show that these effects can more than offset the traditional positive impact that was supposed to come from an improvement in net trade (i.e. a depreciation in the domestic currency versus the dollar). Recent Bank of England analysis quantified the effect, finding that a 10% appreciation in the USD cuts EM GDP by around 1.5 percentage points.

A [follow-up BIS study](#) looked at the role of dollar-denominated debt in more detail, by analysing comprehensive firm-level data. The BIS researchers not only confirmed that credit supply responds to fluctuations in the USD, but they also showed that banks with a heavy reliance on wholesale funding will reduce the supply of credit by more than banks with low wholesale exposures – even when lending to the same businesses. This means two exporters selling into the same foreign market could face different borrowing conditions depending on how the lender banks fund themselves. Crucially, the firms that experience a tightening in credit will also suffer a larger hit to the export volumes, especially where they have longer production chains. This suggests a large part of the dollar’s deflationary impact on the global economy comes from ‘trade financing’. In today’s globalized economy, businesses need dollar funding to finance their

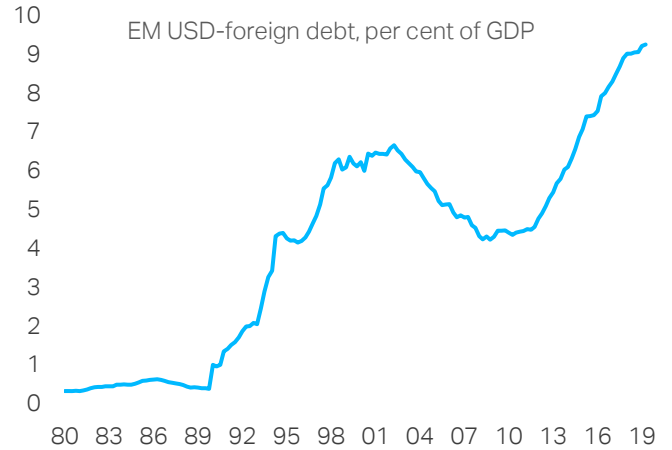
international value chains, especially working capital and trade receivables. When the dollar appreciates, lending conditions become tighter, value chains contract and world trade declines.

**Chart 22: Dollar denominated (non-bank) debt**



Source: BIS, TS Lombard, OECD

**Chart 23: EM re-embrace 'original sin'**

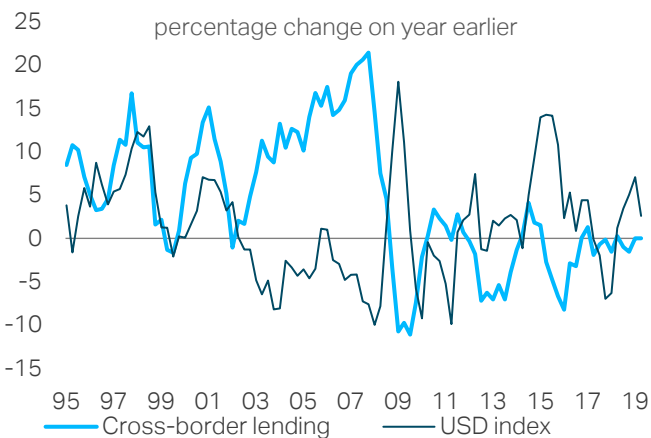


Source: BIS, TS Lombard

**Conditions for a weaker USD**

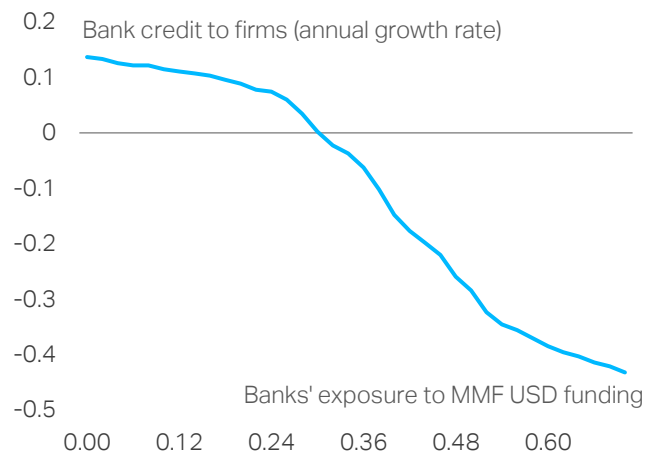
The strong dollar is a problem for the global economy, especially as it seems to feed on itself, spreading secular stagnation around the world and creating a strongly deflationary environment. How can we break out of this trap? Some commentators focus on the supply of dollars, arguing the US authorities must do more to boost the liquidity of global markets. This is the 'dollar shortage', the idea the world is suffering from insufficient USD funding. There has certainly been evidence of a dollar shortage among international banks over the past decade, mainly reflecting new regulations. European banks, in particular, have not been willing to expand their balance sheets as readily as they did before the subprime crisis. Chart 28 shows a proxy for the Eurodollar market, which has been in a persistent state of decay since 2008. This structural dollar shortage also manifests itself in periodic market strains, especially around quarter- and year-end, when even those banks with ample dollar liquidity must scale-down their activities and shrink their cross-border lending in an effort to meet new regulatory requirements.

**Chart 24: USD value and cross-border lending**



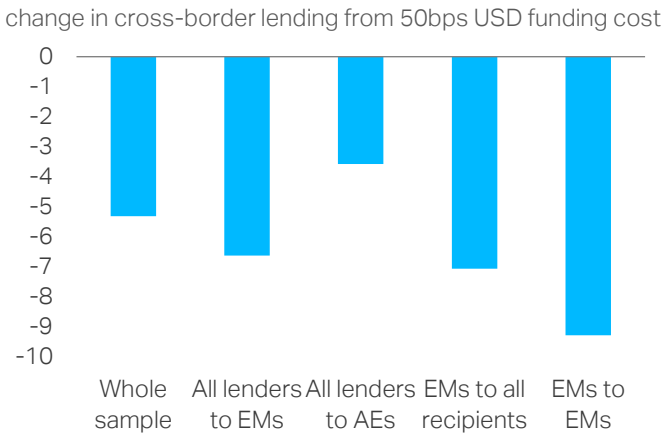
Source: BIS, Federal Reserve, TS Lombard

**Chart 25: Dollar strength restricts bank credit**



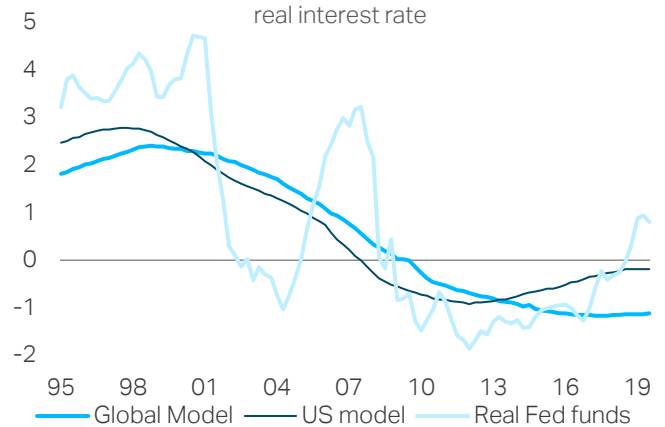
Source: [Bruno and Shin \(2019\)](#)

**Chart 26: Impact of dollar funding shock**



Source: IMF Global Financial Stability Report (Oct 2019)

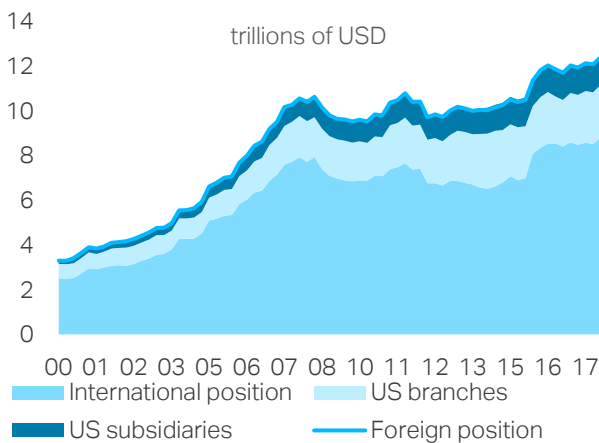
**Chart 27: Globalizing US equilibrium rate**



Source: Federal Reserve study (Kiley, 2019)

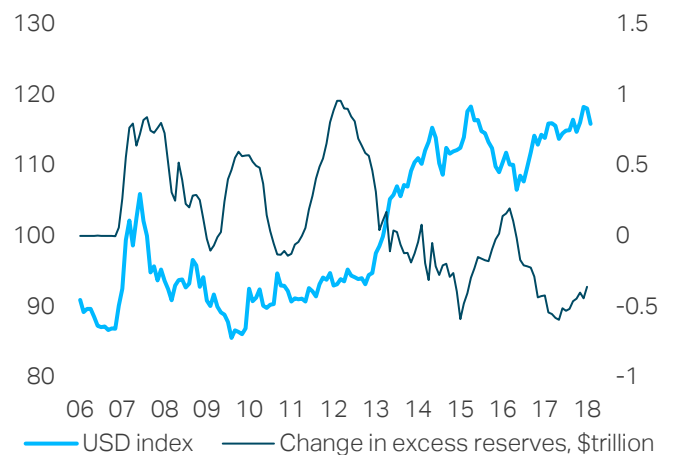
As global banks have curbed their dollar activity, US excess reserves have increasingly become an important source of dollar liquidity. Large US banks such as JP Morgan have been providing this liquidity to the Eurodollar market (via FX swaps). So the Fed's attempt to reduce the size of its balance sheet, using QT to drain reserves, compounded the structural shortage of dollars on international markets. Fortunately, officials at the Federal Reserve seem to have realized that QT was an error and have recently announced a new programme of asset purchases, which will reverse QT by mid-2020 (Chart 31). While this scheme is not intended to reduce the value of the dollar – instead it is designed to ensure US banks have sufficient reserves to meet domestic regulatory requirements without causing tensions in overnight lending or repo rates within the United States – some are hoping that dollar weakness could become an important side-effect.

**Chart 28: Non-US bank's dollar claims**



Source: IMF Global Financial Stability Report (Oct 2019)

**Chart 29: US reserves a source of USD funds?**



Source: FRED, TS Lombard

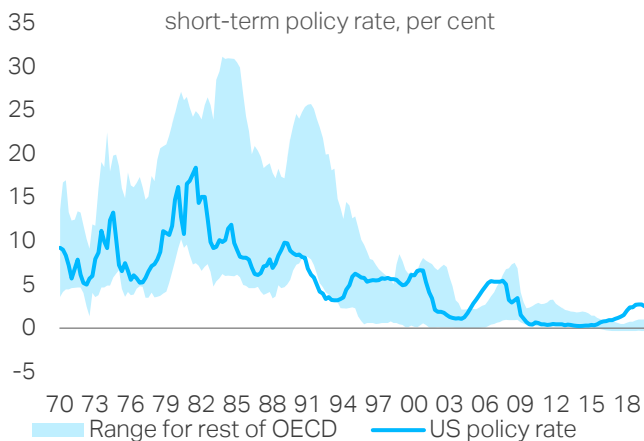
The Fed's recent decision to reverse QT is certainly helpful as we approach year-end, particularly as some commentators were worried that banks' efforts to 'window dress' their balance sheets might force them to dump risk assets and reduce cross-border lending, leading to another dollar squeeze and a period of 'risk off' in global markets. But it is not clear the Fed's actions will be sufficient to materially lower the dollar's exchange rate. The authorities can certainly add fresh reserves to the system, which will ease the dollar shortage at the margin, but as long as we have very low/negative interest rates in Europe and Japan, there will still be a

strong international bid for US assets. Put another way, it is hard to see the world breaking out of the current strong-dollar equilibrium until there is sustained upward pressure on interest rates outside the US. [Fed staff have now acknowledged this problem](#), admitting that weakness in the rest of the world has lowered equilibrium US interest rates, perhaps even to sub-zero levels.

### 3. SPEED LIMITS

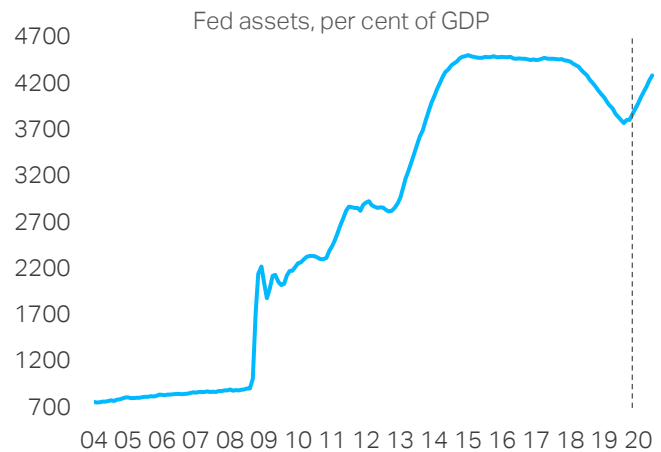
While anxiety about a US recession has eased over the past couple of months and global macro data have stabilized, there is no convincing evidence – yet – of green shoots. A ceasefire in the trade war between the US and China might help, especially if there is pent-up demand for capital equipment, but two additional deflationary forces will continue to hold back the global industrial cycle, namely relatively tight policy in China and the continued strength of the US dollar. This means, even if global activity improves in 2020, we are unlikely to see a strong synchronized global recovery – there will be no repeat of the 2017 ‘reflation’ narrative. The underlying problem, unfortunately, is that the world seems to lack the ‘balance sheet’ needed to deliver anything beyond tepid global growth and a continuation of the New Mediocre.

Chart 30: Interest-rate divergence



Source: OECD, TS Lombard

Chart 31: Unwinding QT by summer 2020

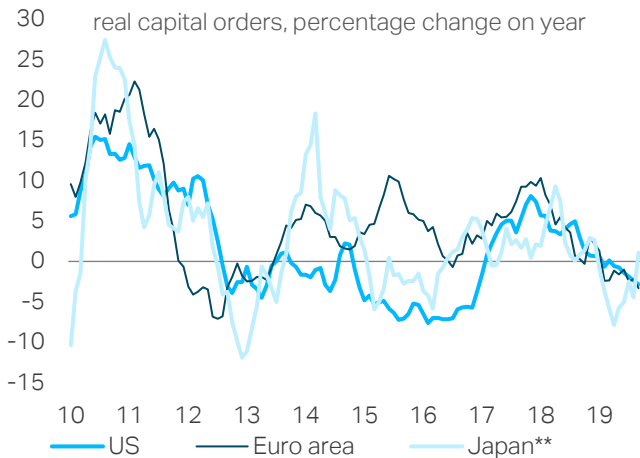


Source: Federal Reserve, TS Lombard

#### The post-subprime expansion

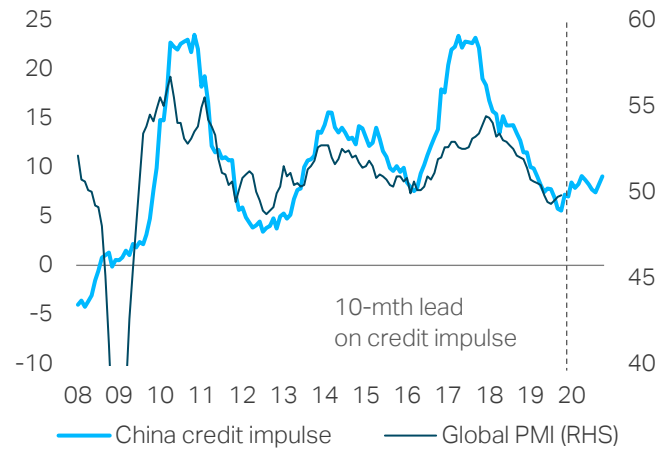
It is not always helpful to look at aggregate levels of global debt, particularly when much of the commentary includes references to ‘record borrowing’ and the dangers of another 2008-style financial crisis. Yet, there is still something revealing about the nature of the borrowing that has taken place over the past decade. Chart 35 breaks down global debt into its main components. China, of course, is a big part of the story – accounting for roughly half of all the borrowing that has taken place since 2008. DM governments have also made a significant contribution. This was frontloaded and largely a response to the 2008-09 recession. But the private sector’s role has been more muted, particularly among developed countries. Banks have actually reduced their lending to the real economy since 2008, which means non-banks (capital markets) have had to take up the slack. This is the famous ‘search for yield’, or ‘[buyside bubble](#)’ as we have called it. Banks have been unable to lend but an overwhelming appetite for yield among investors, especially the asset-management industry, has ensured that many corporations still had easy access to funding. Corporate debt has surged over the past decade, even as many households – without access to capital markets – have been forced to cut their borrowing.

**Chart 32: Mini capex cycles since 2010**



Source: Natioanl sources, TS Lombard, \*\*machine tool orders

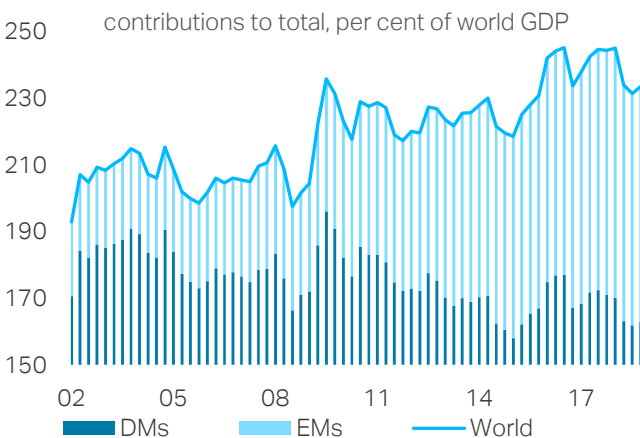
**Chart 33: Modest Chinese boost for 2020**



Source: TS Lombard, Markit, TS Lombard projection for credit impulse

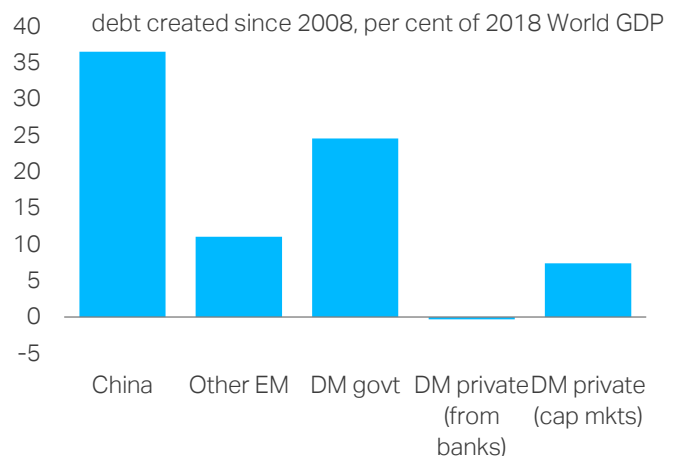
Another way to think about these trends is that most of the 'balance sheet' for the post-2008 expansion has come from three sources: China, DM fiscal policy and global capital markets. But there are now questions about whether any of these sectors can continue to fund the global expansion going forwards. China certainly isn't willing to play this role anymore, preferring to embrace slower growth and blame President Trump for the fallout. Chinese authorities are anxious not to follow Japan's path into debt-deflation, so will offer only muted stimulus from here. DM fiscal policy could certainly do more, but there is no sign this will happen before the next global recession. The IMF's latest Fiscal Monitor, based on current budget plans, suggests only modest policy easing – insufficient to move the dial on global growth. So barring a sudden and unexpected revival in global productivity, that only leaves one possibility – capital markets.

**Chart 34: Global debt**



Source: BIS, TS Lombard

**Chart 35: The post 2008 expansion**



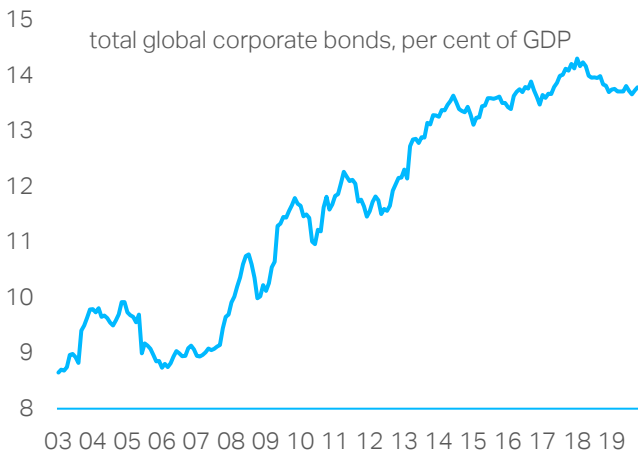
Source: BIS, TS Lombard estimates

**Reflating the Buy-side Bubble**

In the absence of Chinese stimulus or radical fiscal action, the onus once again falls on central banks to try to revive the global economy and extend the current expansion. The monetary

authorities have certainly been successful in restoring confidence to global markets in 2019 and, at the start of the year, breaking what was becoming a dangerous feedback loop between plunging asset prices and deteriorating economic conditions. But there is nothing to suggest this policy action will be sufficient to boost capital-market lending and reflate the buy-side bubble. Crucially, corporate debt issuance remains subdued (Chart 37). This means, rather unsatisfactorily, that it will probably require a more aggressive period of risk taking in financial markets, perhaps even a ‘melt-up’ in asset prices, to really kick-start global growth. While the BoAML survey offers the first hints at such a shift in investor psychology, it remains to be seen whether this will materialize – and whether it is actually in anyone’s longer-term interests.

**Chart 36: Corporate borrowing**



Source: Bloomberg, TS Lombard

**Chart 37: Can central banks reflate the boom?**



Source: Bloomberg, TS Lombard

**Bottom line**

Sentiment in financial markets is shifting, with speculation about ‘green shoots’ taking over from near-term recession fears. Global economic activity seems to have stabilized, thanks in part to the unwinding of temporary factors that undermined growth in 2018-19 (e.g. autos, tech). But there is no compelling evidence to suggest a powerful revival. Tight policy in China and the continued strength of the US dollar remain important constraints on global growth. More generally, it is not clear where the balance sheet will come from to provide a more powerful burst of reflation in 2020 and beyond – especially if global productivity remains sluggish. China is no longer willing to use domestic credit to boost global demand and DM governments are only willing to loosen fiscal policy modestly (until the next recession). This suggests it might take another central-bank induced burst of capital lending, or even a “melt-up” to revive the world.

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