

**Global Financial Trends**

# WORRY WARTS MUST WAIT

**Shweta Singh / Dario Perkins / Davide Oneglia**

- **Here we outline our new global monthly macro product**
- **The aim is to identify systematically risks, opportunities and turning points**
- **We analyse the world's flows, balance sheets and imbalances**
- **Global liquidity is even more abundant than it may seem**
- **Financing conditions will remain highly supportive**
- **This is even as central banks normalise policy**
- **Fed QT could tighten offshore dollar funding, but there are mitigating factors**
- **The biggest short-term danger may be an upside bubble**

**Investors are uneasy**

Ultra-easy monetary policies in developed economies have led to bloated central bank balance sheets and have suppressed volatility and interest rates, causing an asset price surge. Global debt levels have continued to rise. It is no surprise investors are worried about a potential reversal. Indeed, as global growth stays buoyant, other DM central banks will follow the Fed in winding down their uber-accommodative policy settings. Meanwhile, Fed officials are now starting to shrink their balance sheet.

**But still keen to get exposure**

Most of our clients are looking for things that could go wrong. We constantly hear concerns about asset valuations and downside risks that might bring an end to the current economic expansion and financial cycle. And yet, investors are also worried about missing out on further gains. The BoAML fund manager [survey](#) shows that risk-taking hit an all-time high and cash levels fell to the lowest level since 2013 in November. This is even as an historically large proportion of investors surveyed believe that equities are overvalued.

This is the first edition of our new global macroeconomic product, Global Financial Trends (GFT), which we have designed to address some of these issues on a regular basis. By analysing financial flows and balance sheets, and looking for macroeconomic 'imbalances' – both region/economy-specific and international – we intend to identify potential systemic risks and turning points in the global economy. We have also compiled a comprehensive database, including more than 5000 economic and financial series. Each instalment of GFT will present the highlights from this database in chart form.

# The key message

In this edition, we focus on global financing conditions and emphasise the following:

- **International financing conditions are easier than what is indicated by the conventional banking-focussed money and credit numbers**
- **Global liquidity will remain abundant at least over the next twelve months even as central banks normalise policy**
- **Fed QT and relatively stringent banking and money market reforms could tighten offshore dollar funding.**
- **But there are mitigating factors including an increased availability of safe collateral**
- **Ultra-easy funding terms against a backdrop of maturing economic and financial cycles, rising leverage and deteriorating credit quality risk blowing bubbles**
- **The distribution of risk is greatly skewed towards the non-bank sectors.**

In forthcoming editions, we will investigate where the key vulnerabilities lie, what would pop the bubble, and how severe the impact could be.

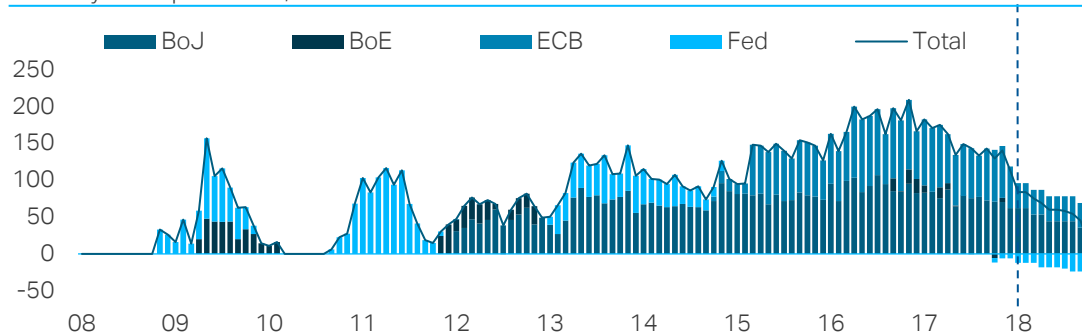
## Central bank balance sheets will shrink

The cumulative monthly asset purchases of developed market central banks (the Fed, the ECB, the BoJ and the BoE) peaked in 2016. Based on our estimates, net central bank buying will cease by early next year. The Fed is ahead of other central banks in normalising policy. Interest rate hikes in the US have been accompanied by quantitative tightening. The central bank plans to reduce the size of its balance sheet from \$4.5 trillion (23% of GDP) currently to around \$3 trillion (14% of GDP) in less than five years. We also expect the central bank to raise the policy rate by 75bps by September this year, raising the FFTR by a cumulative 200bps since December 2015. These are slightly more aggressive forecasts than the consensus, which is catching up with our bullish views.

The Bank of Japan's yield curve targeting has helped the central bank reduce its asset purchases without explicitly acknowledging it. The net increase in BoJ's holdings of government paper over three months has reduced from 21% of GDP in mid-2016 to 6% late last year. The European Central Bank is on a similar, albeit a more transparent path. The ECB has reduced monthly asset purchases from EUR 60 billion to EUR 30 billion, beginning January 2018 for at least nine months. The size of monthly asset purchases peaked at EUR 80 billion in March 2017 and we forecast no additional net purchases beyond September 2018.

## Diminishing central bank net asset purchases

Monthly asset purchases, USD billions



Source: BoJ, BoE, Fed, ECB, Datastream, TS Lombard estimates

# Financing conditions to stay easy for longer

Still, we expect global financing conditions to remain easy this year. This may seem counter-intuitive. But global liquidity - ease of financing in global financial markets - whilst closely influenced by the size of central banks' bond purchases, the level of policy rates and market expectations of these, is not just about these forces.

It depends on many factors, including the supply and demand for bank credit. The ability of banks to extend loans influences credit supply while the capacity and need of borrowers to take on loans guides credit demand. The balance sheets of lenders and borrowers and expectations of their income streams and debt-servicing ability play a crucial role in the flow of bank credit.

## Improved bank balance sheets

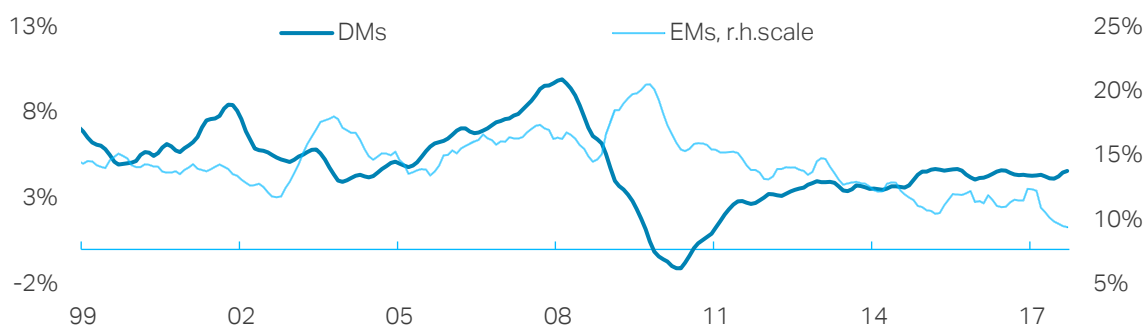
After the Global Financial Crisis (GFC), the banking sector underwent a deep and protracted deleveraging process. Stricter regulations and low interest rates (negative rates of interest in some cases) posed further challenges to bank credit. But since then, banks have made good progress in cleaning up their balance sheets and have increased their reliance on relatively stable sources of funding. While the deleveraging process has been slower and more protracted for EA banks, there has been a substantial improvement nonetheless. Decent economic activity should also help. Barring a few notable exceptions, the leverage of DM households and non-financial corporates has declined since the crisis and income is perking up. This should support credit demand.

We have constructed aggregate broad money and credit growth indicators to monitor these liquidity trends. World broad money growth is stable, averaging 7-8% since 2013 and consistent with trend-like global GDP. But there is an important divergence between EMs (where money supply has been weakening) and DMs (where broad money growth has been on an upward trend since the start of the decade).

Bank credit growth is gradually picking up in the euro area and in Japan. But loan growth in the US has slowed sharply, partly a lagged response to the 2015 slowdown. But most bank lending surveys show banks expect credit demand and supply will improve. Meanwhile, bank loan growth in emerging markets has slowed markedly over the last five years. A generally weaker pace of economic growth in EMs and a deterioration in EM bank balance sheets since the crisis are largely responsible for the deceleration in loan growth. More recently however, credit growth has stabilised in EMs and strengthened in China.

## Monetary conditions: improving in DMs but lacklustre in EMs

Broad money growth, %y/y 3MMA



Source: Datastream, national sources, TS Lombard

## A greater role for capital markets

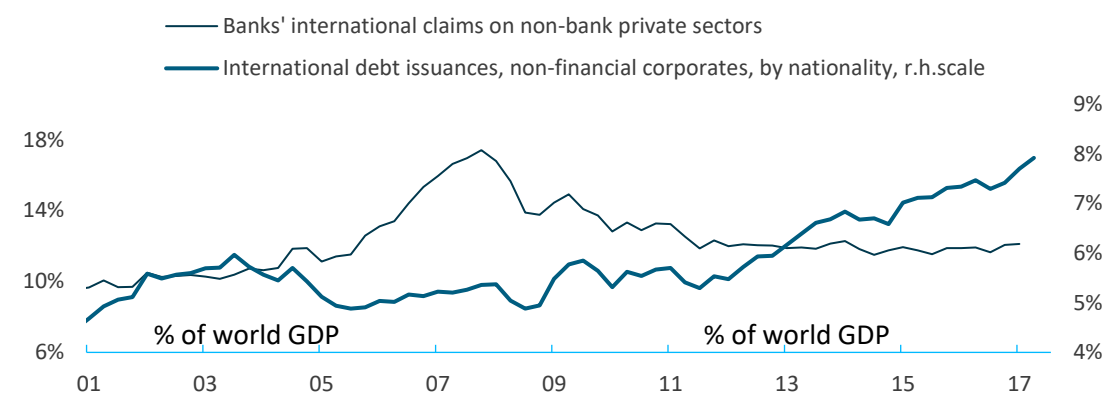
Crucially, traditional measures of liquidity such as broad money and credit growth focus largely on the banking sector and as such do not fully capture global financing conditions. This has especially been the case since the global financial crisis. Banks are still the dominant source of funding, but the role of the debt capital market has surged since the crisis. The search for yield and deleveraging in the banking sector has invigorated debt markets across developed and emerging economies. Net issuance by non-financial corporates are breaching historical highs, including in the euro area. So while bank credit is expanding at a slower pace than desirable, a booming debt market testifies to the generosity of financing conditions.

## Super-charged international debt funding

The cross-border component of credit is often small relative to total lending, but it is one of the most powerful indicators of global financing conditions. It constitutes the marginal source of funding and can amplify domestic trends. It could also signal significant turning points and the build-up of vulnerabilities. For instance, banks' international claims on the private sector surged dramatically in the run up to the GFC, from US\$5.4 trillion in 2005 to US\$10.5 trillion within three years. This was the sharpest pace of increase since data became available in 1984.

International bank lending has pulled back since the GFC in spite of a strong pick up in lending by emerging market banks. Euro area lenders account for almost all the recent decline in banks' foreign claims, reflecting the consolidation of EA banks following the euro area crisis. But as we pointed out earlier, European banks have strengthened their balance sheets since then, putting them in a better position to extend credit. Separately, international banking flows have become [less sensitive](#) to global risk since the GFC, largely because better-capitalised banks have

## International debt issuances surge



Source: Datastream, BIS, TS Lombard

increased their share of the market, which could potentially lead to more stable bank lending.

Importantly, international debt issues by non-financial corporates has jumped from US\$ 3.3 trillion (5.4% of world GDP) in mid-2008 to US\$ 6.0 trillion (7.7% of GDP) in 2017Q2. This is the largest increase since the data became available in 1960s. On one hand the surge in debt issuances signals the buoyancy of global financing conditions in spite of relatively muted credit growth. But on the other hand, the surge points to the build-up of potential vulnerabilities and that the pressure points this time around could lie outside the banking sector.

## Rising role of dollar as the funding currency

The denomination of global financing flows provides valuable insights into future liquidity trends. One of the key reasons we are positive on global financing conditions is our forecast that the

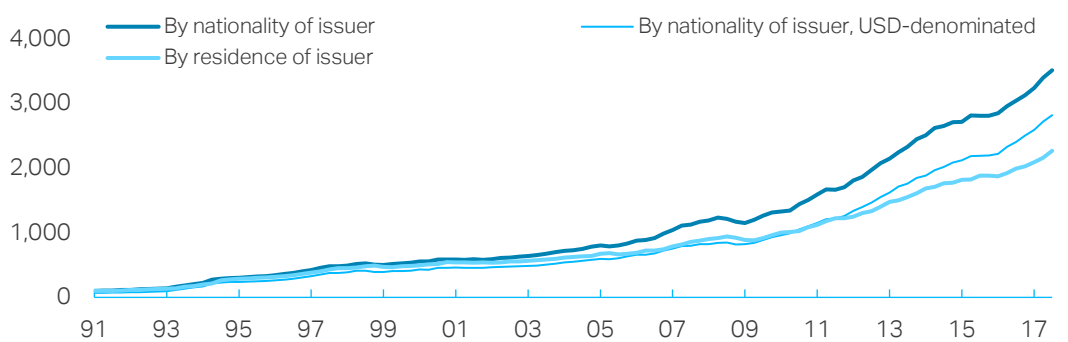
dollar will be 'well-behaved'. But before we explore why the upside for the dollar will be limited, we highlight why the currency plays such a pivotal role in global financing.

The use of the dollar as a funding currency has surged since the GFC. Offshore US dollar credit to non-banks has increased by almost 200% since 2008 to \$10.7 trillion, led by a 265% increase in emerging market (EM) debt issues. Historically low interest rates after the crisis drove the search for yield. Investors piled into dollar-denominated assets as long-term yields for such securities have been higher than for assets of similar maturities in Japan, the euro area or Switzerland ([see link](#)).

Fed QE invigorated emerging market carry trades. EM non-financial corporations deployed their offshore subsidiaries to borrow internationally while circumventing domestic restrictions on foreign borrowing. The difference between EM firms' international debt issues when measured by the nationality of the borrowers and when measured by their residency has surged to unprecedented levels following the GFC. The yawning gap underscores the rampant EM carry-trades which traditional residency-based measures fail to capture adequately. A substantially large part of these debt issues (just over 80%) is denominated in USD.

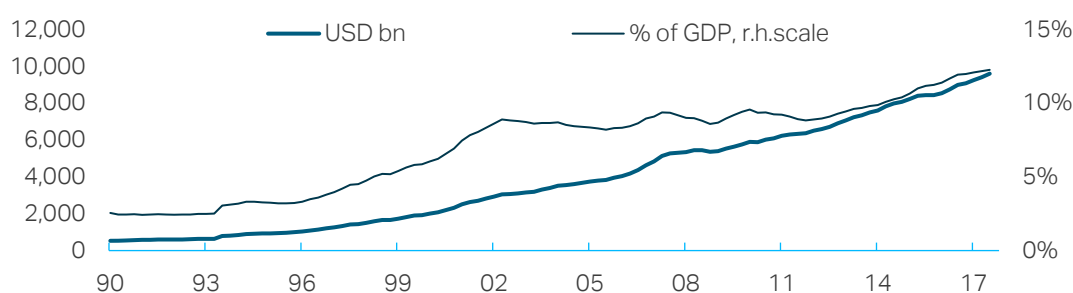
### Carry-trade EMs

International debt issuances by developing economies (USD bn)



### The dollar plays a bigger role in international capital markets

USD-denominated intl debt, by nationality, all sectors, DM+EMs



Source: Datastream, BIS, TS Lombard

As a result, cross-border lending is increasingly tied to the USD exchange rate. The BIS argues that the dollar has replaced the VIX index as a barometer of the banking [sector's appetite for leverage](#). The dollar's role as a proxy for the shadow price of bank leverage is also partially responsible for the deviations in the covered interest parity (CIP). The CIP principle broke down during the crisis and CIP gaps have persisted since then, becoming larger over the last three years. A stronger dollar is often associated with bigger deviations from CIP and contractions of cross-border bank lending in dollars ([see link](#)). We discuss this in greater detail in the following section.

## Don't fear the dollar

An appreciating dollar could tighten global liquidity conditions, particularly for those emerging market borrowers where carry-trade reversal risks are large. But the dollar's ascent has been modest so far in spite of widening policy divergence due to a synchronised global recovery. This has helped keep global financing conditions relatively easy in spite of the Fed's tightening cycle. We expect the dollar strength to be limited this year, especially against the euro.

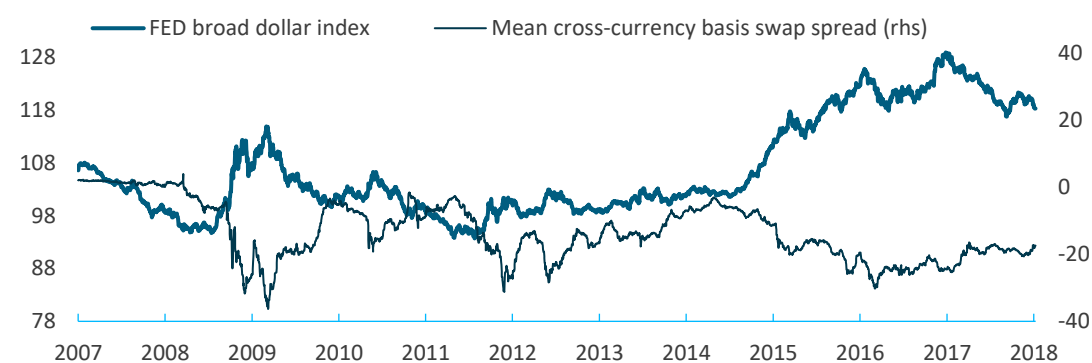
The EUR should bounce higher this year. In contrast to the dollar which is expensive, the euro is undervalued based on trade-weighted exchange rates deflated by unit labour costs. The euro area current account surplus is near historical highs and a large proportion of ECB QE-driven portfolio outflows are unhedged. Rebalancing by reserve managers should also bolster the euro.

A further compression of the US yield spread and/or higher relative USD swap rates could squeeze the relative yield advantage for EA investors even more. Euro area residents have been among the biggest buyers of US debt securities. Unless the Fed engineers a steeper curve, perhaps through more aggressive QT, there could be a repatriation of EA debt portfolio outflows, causing the euro to leap (and the US curve to steepen). With the ECB controlling the front end of the curve and EUR hedging costs relatively low, at least for now, foreigners could find EA securities more attractive. A healthy euro area recovery could attract larger equity inflows. But the euro's role in global financing has diminished over the years, posing less of a balance sheet constraint on overall liquidity (in comparison to a strengthening dollar).

## Mind the basis gap

There are clearly risks to our sanguine view about global liquidity. One of the more pervasive worries is that Fed QT would hurt the supply of dollar funding in offshore markets. Banking and money market reforms have made the provision of Eurodollars increasingly reliant on banks' excess reserves (versus interbank deposits). As the Fed gets more aggressive with its QT programme this year, replacing excess reserves with Treasury Bills, the risk is that the cost of Eurodollar funding could surge. In more extreme cases where credit has been extended to borrowers with poor creditworthiness, this could lead to asset fire sales. Liquidity risks could morph into solvency pressures.

### Eurodollar risks likely to be contained



The breakdown of the covered interest parity (CIP) principle since 2014 reflects some of the constraints in offshore dollar funding. Specifically, the USD cross-currency basis (CCB) has turned negative and widened since 2014, meaning that borrowing dollars through the FX swap market is becoming increasingly more expensive than direct funding in the dollar cash market.

There is a risk Fed QT could magnify the US\$ basis. But before we look into the potential impact of QT on the \$-basis or Eurodollar funding, we highlight why the basis has been widening in the first place.

### Why has the basis widened?

A combination of increased demand for US dollars and a more prominent role of the dollar as a global funding currency since the GFC partially explain the opening up of the US\$ basis. Other prominent reasons are regulations-induced tightening of liquidity in the FX swaps market and a reduced supply of USD by real money investors.

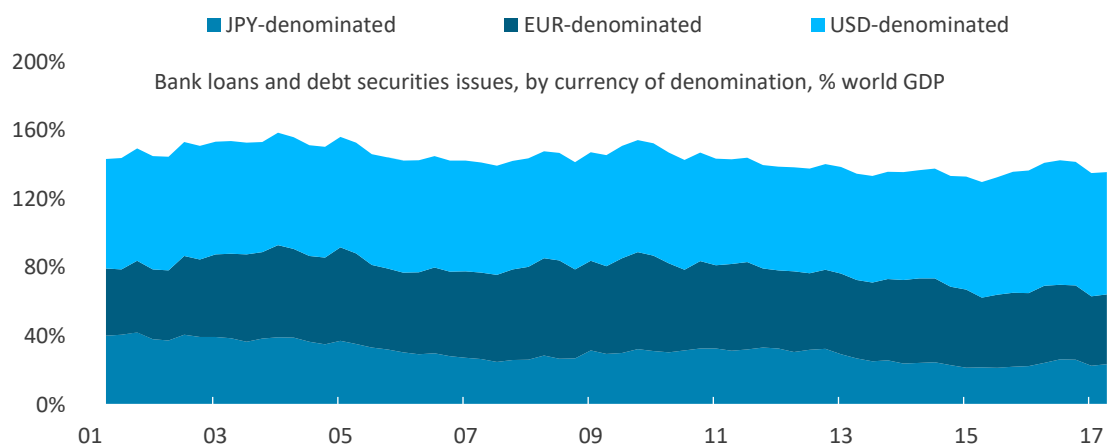
#### 1. Divergent monetary policies drive demand for US\$-assets

The demand for U.S. dollars has increased due to the divergence in monetary policy between the U.S. and other advanced countries. Low interest rates globally have increased yield-seeking behaviour with non-US investors raising their investments in more attractive US\$-denominated assets. The share of these investments that is hedged for FX risk or funded via FX swaps exerts a widening pressure on the basis. Similarly, some corporate issuers, U.S. corporations in particular, have increased the issuance of EUR-denominated bonds due to lower corporate credit spreads in the euro area and have swapped these EUR proceeds into USD, causing the basis to increase.

#### 2. A stronger dollar constrains bank balance sheets

The broadening of the dollar basis has coincided with a strengthening US\$. This could imply that a stronger dollar constrains the ability of banks to engage in market-making activities. Specifically, as the BIS highlights, when the dollar appreciates, the balance sheets of those who have borrowed in USDs deteriorate and their credit worthiness [unsurprisingly](#) declines. The US dollar is widely used in international trade and finance. It is the currency of choice for cross-border bank lending and international debt issuance, particularly for emerging market firms. The dollar plays a key role in the invoicing of trade receipts and denomination of debt. Most commodities are also priced in US dollars. The role of the dollar as a funding currency has surged further since the GFC. Thus a strong dollar hurts a bank's balance sheet and constrains its capacity to provide hedging services

### Dollar as a key global funding currency



Source: Datastream, BIS, TS Lombard

#### 3. Regulations tighten market liquidity in FX swaps

Meanwhile, market liquidity in FX swaps market has deteriorated due to reforms which have forced prime money market funds to cut their assets and have reduced global banks' appetite for market-making and arbitrage, putting further pressure on the basis. Money market reforms



that came into effect in October 2016 require prime MMFs – those that invest in public and private sector obligations – to adopt a floating net asset value. In the face of these new regulations, these funds reduced their assets, hurting a major source of short-term dollar funding for non-US banks in particular. As a result, the provision of USD has become increasingly dependent on the FX swap facilities of US banks which in turn depend on the banks' arbitrage-trading activities.

But the money market reforms together with the stricter Basel III regulations have significantly curtailed the ability of banks to engage in such market-making activities. As banks have played a key role in providing USD supply through their market-making/arbitrage-trading activities, the market liquidity in FX swaps has deteriorated. For instance, the MMF rules have 'pushed' assets from prime MMFs into government MMFs – those that invest only in public securities or repos – which have not been affected by these reforms. These regulations have restricted the ability of banks to raise wholesale funding by tightening the liquidity of private 'safe' assets and forcing investors to rely increasingly on public safe assets.

Additionally, Basel III regulations have increased the cost of banks' balance sheet expansion, especially for offshore funding. One of the key reforms is the Liquidity Coverage Ratio, or LCR, which was introduced with the objective of improving the liquidity risk profile of banks. The LCR ensures that banks have an adequate stock of unencumbered high-quality liquid assets (HQLA) that can be converted easily and immediately in private markets into cash to meet their liquidity needs for a 30 calendar day liquidity stress scenario. Before the LCR was introduced, US banks were required to hold reserves only against demand deposits issued in the US (onshore overnight liabilities), while now HQLA need to cover any short-term liability incurred by banks globally.

Moreover, by focusing on assets that are typically of the highest quality and the most liquid, the LCR has pushed banks to hold their liquidity buffers outside the banking system and in sovereigns and at the Fed. At least 60% of HQLA should include cash, central bank reserves, and certain marketable securities backed by sovereigns and central banks, among others. As a result banks' reserves at the Fed – and not interbank deposits – play a key role in providing offshore dollar liquidity.

#### 4. Reduced US\$ supply from real money investors

Real money investors such as foreign reserve managers and sovereign wealth funds in emerging countries might have reduced the supply of U.S. dollars in the FX swap market. [Fumihiko Arai at the Bank of Japan](#) points out that emerging currency depreciations have increased reserve managers' preference for liquid USD-denominated assets over supplying dollars through long-term FX swaps due to an increase in the perceived need to intervene in the FX market to defend their currencies. A decline in commodity prices has further reduced their funds for investments and increased their USD liquidity preference to meet fiscal targets.

The attractiveness of US\$-denominated assets could recede especially as the ECB winds down its QE programme and hedging costs stay high. Reduced appreciation pressure on the dollar will likely contain the balance sheet constraints on banks in supplying FX swaps. The bulk of the decline of the global commodity price and EM FX depreciations is also likely behind us. All these suggest reduced pressure on the US\$ cross-currency basis. But what about the impact of Fed QT on offshore dollar funding against the backdrop of tighter bank and money market regulations? Some fear that Fed QT will drain reserves by replacing them with Treasury Bills. But the supply of offshore dollars has become increasingly reliant on these reserves. When faced with diminished reserves, banks will have to turn to the more expensive repo transactions to raise funding. Fed QT could thus strain Eurodollar funding.



# Eurodollar risks should be contained

We are mindful of these risks that could amplify the stress in offshore dollar supply. There could be [rollover risks](#) especially during times of risk aversion as 'sizeable part of banks' US dollar funding rely on short-term instruments such as FX swaps. We will be watching the dollar basis – the key indicator of the stress in global dollar funding costs. But there are a few offsetting factors that should douse these fears.

## 1. Fed QT will release 'good' collateral

Treasury bills issued to finance the Fed's run off of Treasury securities would drain reserves from the system. But Fed QT will also release 'good' collateral which has so far been locked away at the Fed. The shortage of safe assets has led to a rise in reverse repos (RRPs) at the Fed as MMFs seek alternatives to UST. The MMF RRP activity has soared from around 15% of assets in 2010 to nearly 35%, thereby draining liquidity. With the Fed now at the centre of financial plumbing, the role of markets has diminished and monetary policy transmission has weakened.

But QT will increase the availability of safe collateral, especially for non-banks, which will increase their re-use. As Manmohan Singh at the IMF highlights, good collateral, when pledged, is constantly reused in a process that is similar to money creation that takes place when banks accept deposits and make loans. That is why good collateral and excess reserves are very different in their implications for market functioning.

## 2. Who buys the collateral matters

Non-US banks could take on a large proportion of Treasury Bills. This is because US commercial banks are constrained by low growth loan demand, higher capital/liquidity requirements, and shrinking balance sheets. Accordingly, they are unlikely to step in and aggressively use new-found Treasury holdings in lieu of reserve deposits to underwrite liquidity to global markets and money funds. Regulatory constraints on non-US banks are less stringent and they could step in more aggressively. If MMFs outbid US banks and take down the lion's share of Treasury bills, RRP activity would probably drop, likely leading to a smaller decline in excess reserves than one would otherwise expect.

## 3. Borrowers switching to alternative sources of funding

Borrowers who have been funded through prime MMFs have sought funding through other vehicles and markets. For instance, Canadian banks have increased their net issuance of long-term international debt securities by more than US\$20 billion since the beginning of 2016. That said, smaller businesses and households don't have easy access to international capital markets. And the wider Libor-OIS spread did hurt those who borrowed at rates tied to Libor.

BIS [highlights](#) that a substantial part of banks' short-term funding is collateralised, often with high-quality assets due to stricter regulations. This should help them access funding from alternative sources. There could still be a liquidity squeeze for lower-quality collateral.

## 4. Central bank swap lines provide a backstop

During the GFC, major central banks established swap lines among themselves and with the Fed to supply and distribute US dollar liquidity. Some of these arrangements are still in place. Policymakers could increase the role of such liquidity lines in addressing short-term US\$-liquidity pressures by reducing the stigma attached to the use of such facilities. However, there are limitations to the extent the swap lines can be used as a regular policy tool due to the [moral hazard](#) and risk management concerns associated with its deployment.

## 5. A still large balance sheet at the Fed

Even as the Fed winds down its balance sheet, it will continue to hold assets to a much greater extent than before the crisis. Specifically, the central bank wishes to reduce its assets from \$4.5trn currently (23% of GDP) to around \$3trn (14% of GDP) in 4-5 years. Still, the size of the balance sheet will be far above 6.5% of GDP, the percentage generally prevailing pre-recession. This is due to a permanent upward shift in the Fed's liabilities, including an increase in the US Treasury's deposits and the Fed's RRP's. My colleague Steve Blitz [argues](#) that reduced foreign savings and the need for capital investment in the US would mean that the Fed will be 'called upon at some point in the near future' to keep a tab on the real interest rate and consequently, the dollar. Hence, the balance sheet of the Fed may not shrink by much.

## 6. Less pressure on borrowers' balance sheet constrains from US\$ strength

A 'well-behaved' US dollar will cushion global financing conditions by easing the pressure on banks and borrowers (as discussed in the previous section).

## 7. Liquidity risks less likely to morph into solvency concerns

And last, the recent widening of Libor-OIS spreads is largely due to changes in regulation rather than a deterioration of bank creditworthiness as was the case during the Global Financial Crisis and the European sovereign debt crisis. Thus, the recent periods of widening Libor-OIS spreads have so far had limited spill over effects on broader financial markets. Of course, the key question here is to what extent the liquidity constraints imposed by the regulatory changes would create solvency problems for financial institutions.

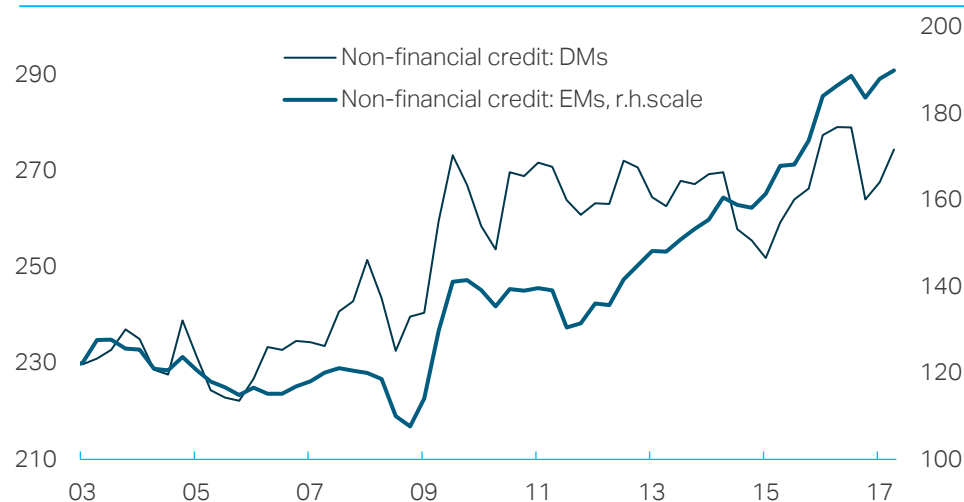
Japanese banks in particular have taken on large US\$ exposure and have contributed to the debt surge in China. Anecdotal evidence suggests that a large share of lending has been to borrowers with poor credit quality. But we think a systemic crisis is unlikely in China and that there are currently no Minsky Moment triggers. The various mitigating factors we highlighted above alleviate the risk that a potential tightening in US\$-offshore liquidity will lead to a solvency crisis. Nevertheless, we will be monitoring these developments closely.

*Please see overleaf for our chart pack which highlights some of the key indicators of global financing conditions.*

## EASY GLOBAL FINANCING CONDITIONS

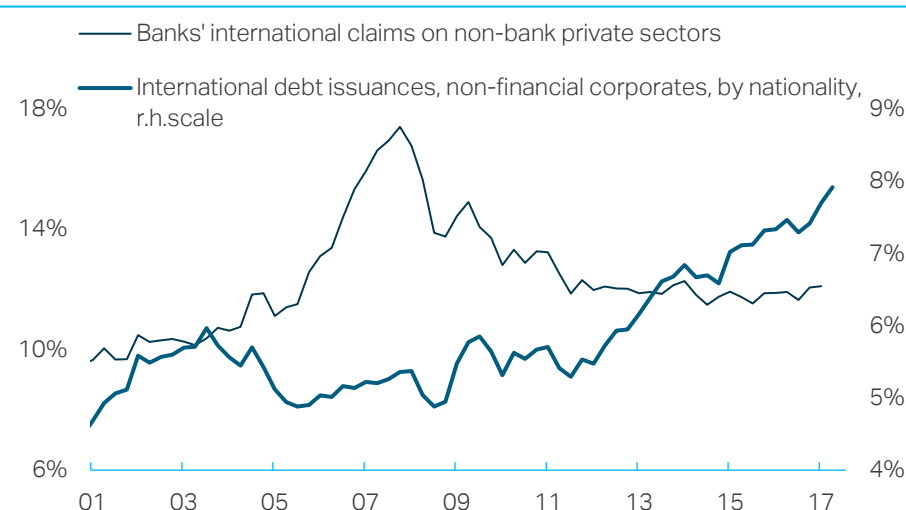
### Global credit strengthens

%GDP



### International debt issuances surge

% world GDP

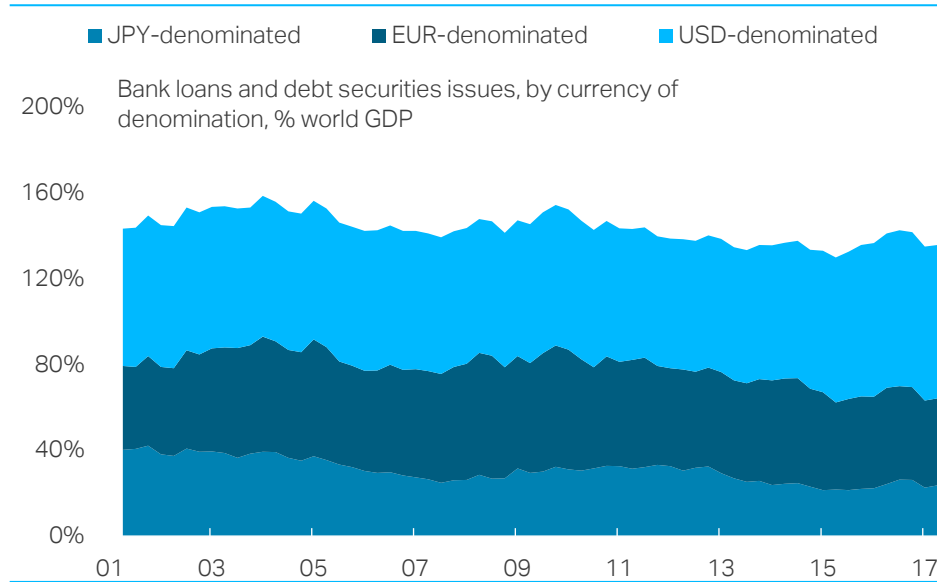


Global financing conditions are easier than what is indicated by the conventional banking-focussed money and credit numbers. Banking sector is becoming more growth-friendly and capital markets look robust. We expect global financing conditions to remain easy this year even as developed market central banks step away from their ultra-loose policy settings.

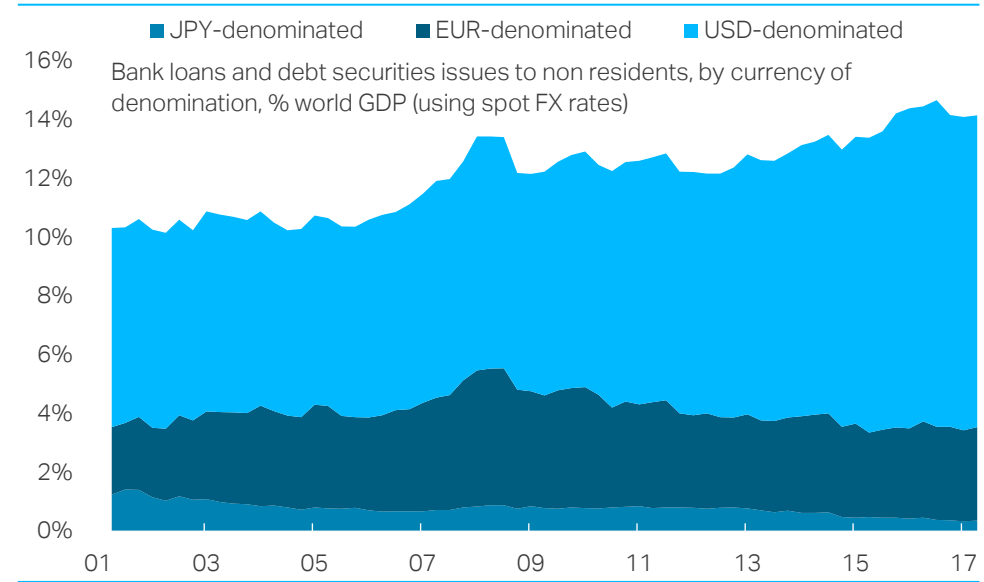
Source: Datastream, BIS, TS Lombard

## RISING ROLE OF THE USD IN GLOBAL FINANCING

### Dollar as a key global funding currency



### ...especially in international capital flows

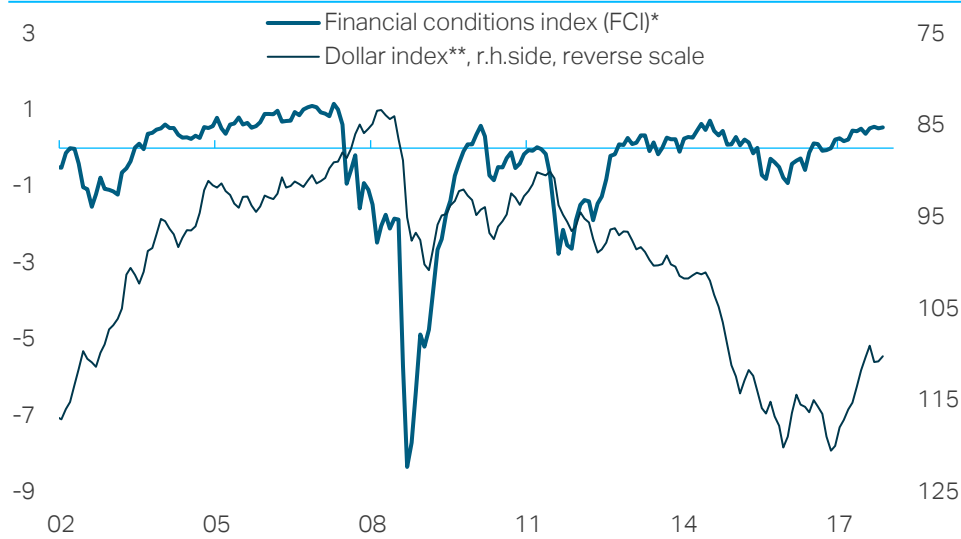


The use of US\$ as a funding currency has surged since the global financial crisis. Offshore US dollar credit to non-banks has increased by just below 200% since 2008 to \$10.7 trillion. Cross-border lending is increasingly tied to USD exchange rate.

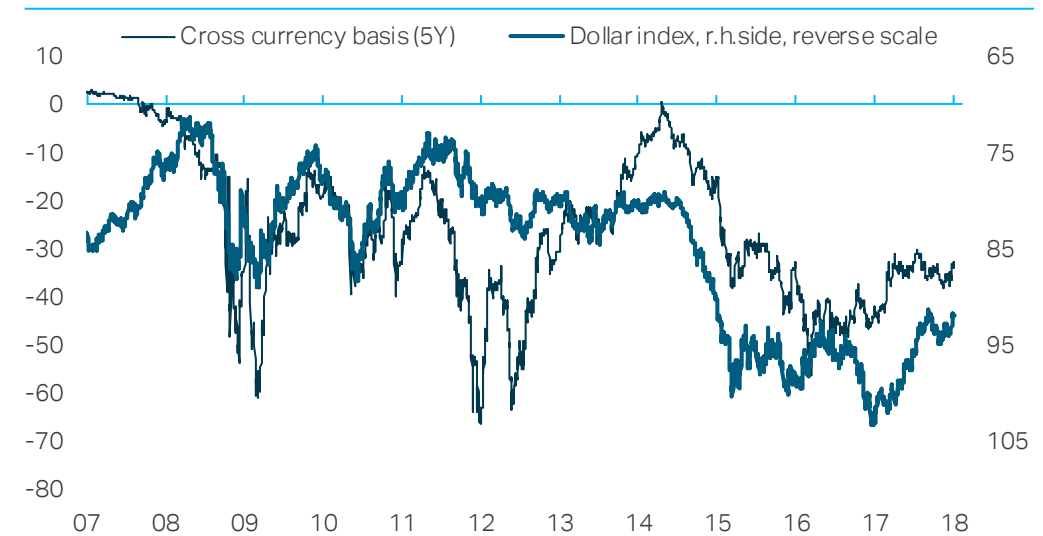
Source: Datastream, BIS, TS Lombard

## DOLLAR DEPRECIATION = RISK ON

Global financing index



Cross currency basis and DXY

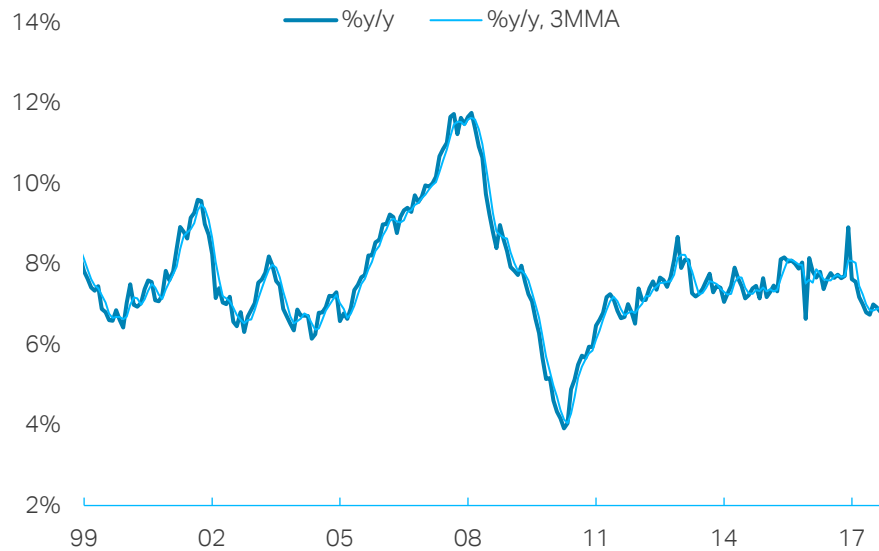


Recent dollar weakness is contributing to an easing of global financial conditions, even as the Fed is in a tightening mode. The synchronised nature of the global recovery is keeping USD in check, aiding global financing conditions.

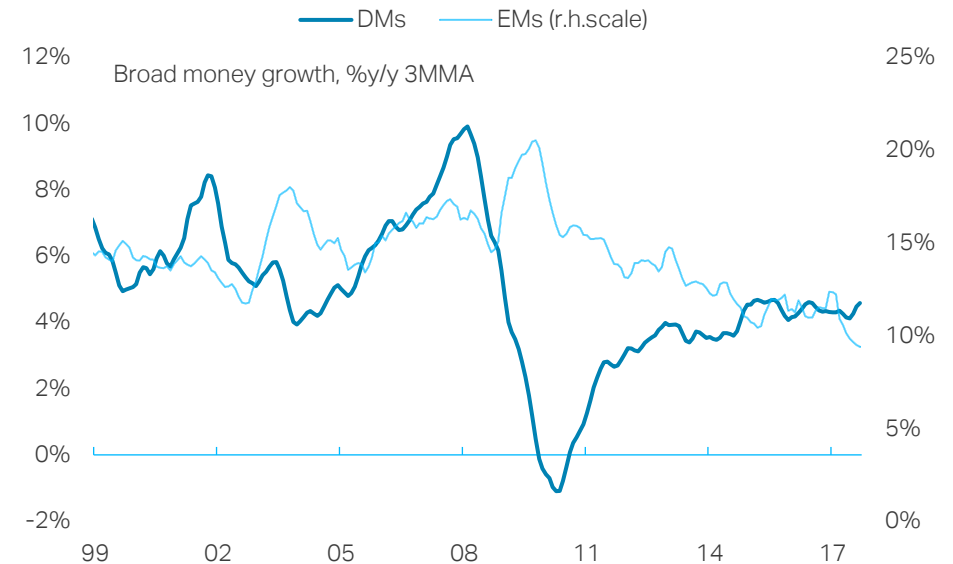
Source: Bloomberg, TS Lombard. \*Average of Bloomberg FCI for US, EA, UK and AXJ. \*\*Bloomberg Dollar index, deviations from 7-year moving average.

## MONEY SUPPLY SUPPORTS TREND GROWTH

### Stable world broad money growth



### Improving DMs but lucklustre EMs



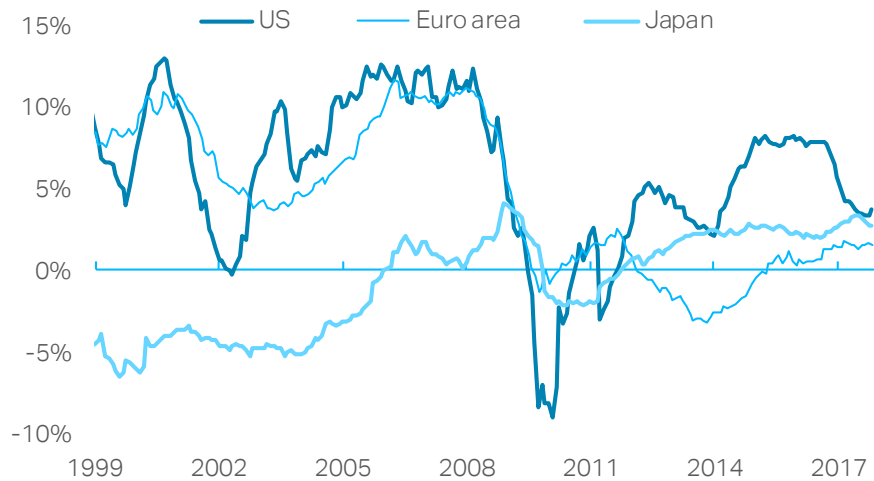
World broad money growth is stable, averaging 7-8% since 2013 and consistent with trend-like global GDP. But important divergence between EMs (deteriorating) and DMs (improving).

Source: Datastream, national sources, TS Lombard

## BANK CREDIT RECOVERS GRADUALLY

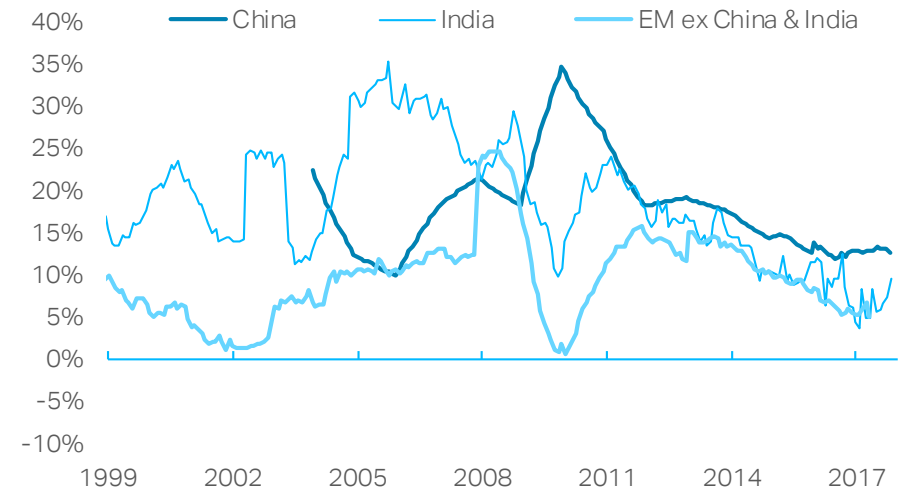
### Bank credit to private sector

y/y%



### Credit growth worldwide

y/y%



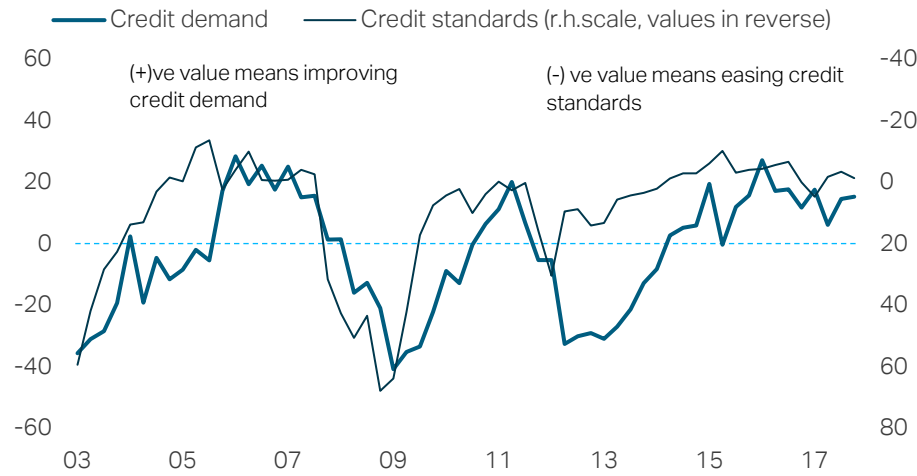
Bank credit growth is gradually picking up in the euro area and in Japan, helped by ultra-easy monetary policy and improved balance sheets. Loan growth in the US has slowed sharply, partly a lagged response to the growth slowdown in 2015. But most bank lending surveys show banks expect credit demand and supply will improve.

Source: Datastream, national sources, TS Lombard

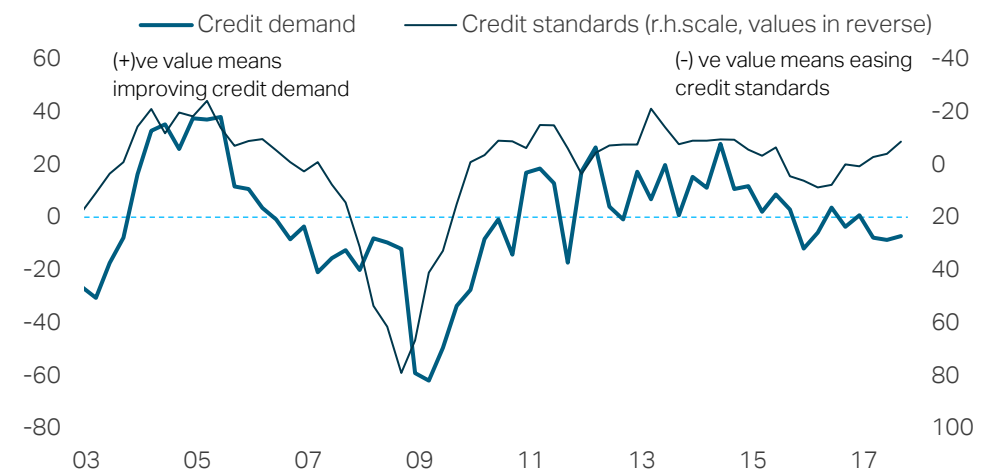


## IMPROVING DEMAND AND SUPPLY FOR BANK CREDIT

**EA bank lending survey**



**US loan officers survey**

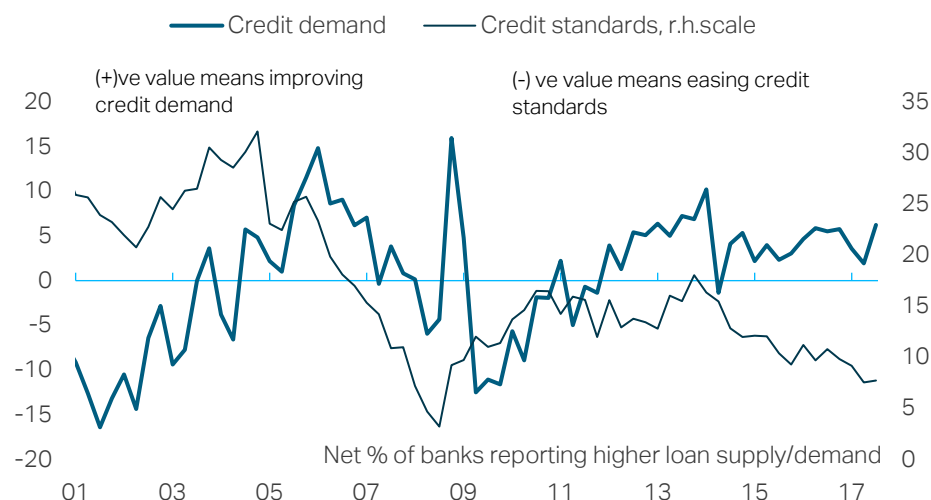


An improvement in both loan demand and supply has driven a revival in the euro-area credit cycle. The strengthening has been broad-based, across consumer and business sectors. In the US, banks report a net weakening in credit demand, but a net easing in credit supply.

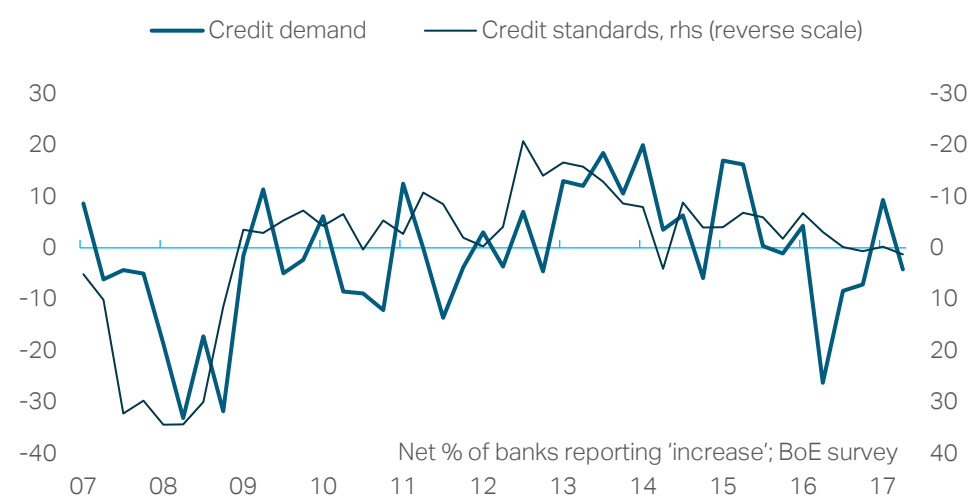
Source: Datastream, EBC, Federal Reserve, TS Lombard

## IMPROVING DEMAND AND SUPPLY FOR BANK CREDIT

### BoJ loan officer survey



### BoE lending survey

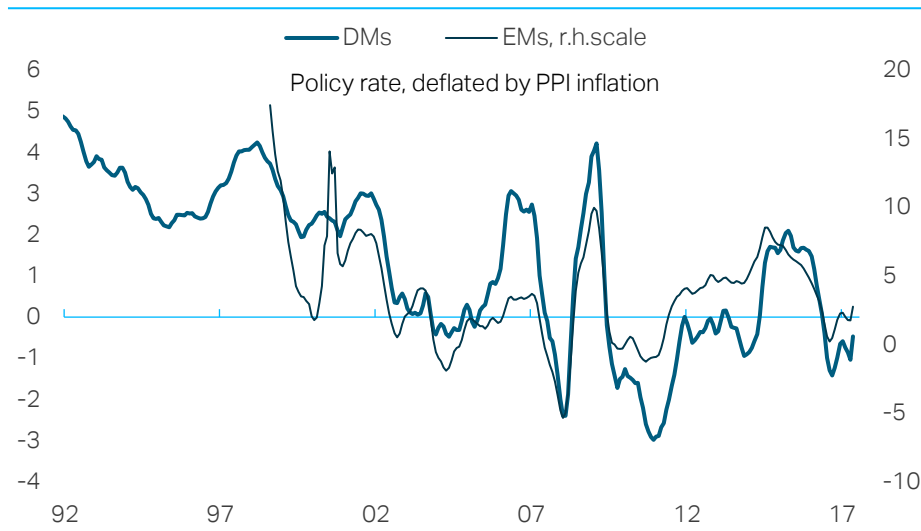


Japanese banks continue to see a net improvement in credit demand and supply, but at a slower pace. Demand for credit could be subdued because of low potential output growth and relatively few investment opportunities. Less easy credit standards are partly a response to the NIRP. Yet, it is encouraging that demand for credit from small businesses is improving and lending standards to smaller firms are doing relatively better.

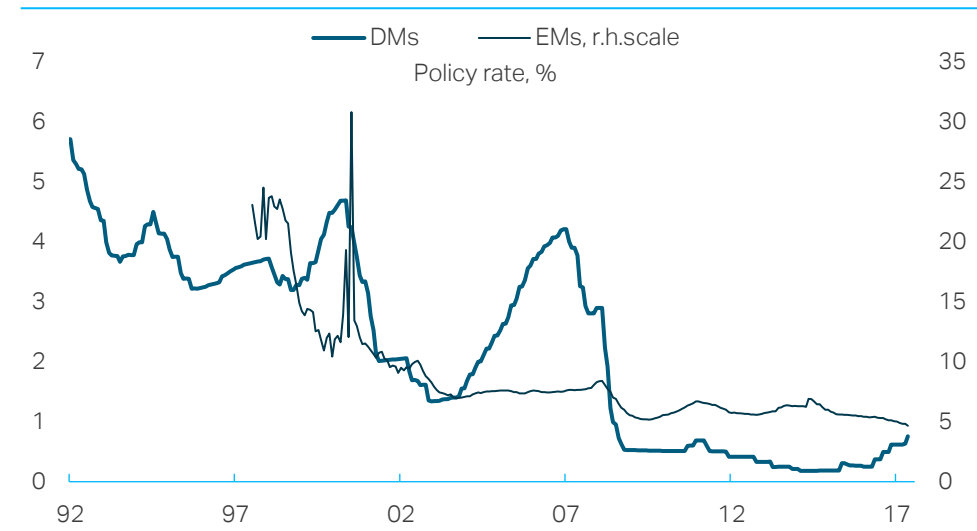
Source: Datastream, BoJ, BoE, TS Lombard

## STILL NEGATIVE REAL POLICY RATE IN DMS

Real rates



Nominal rates



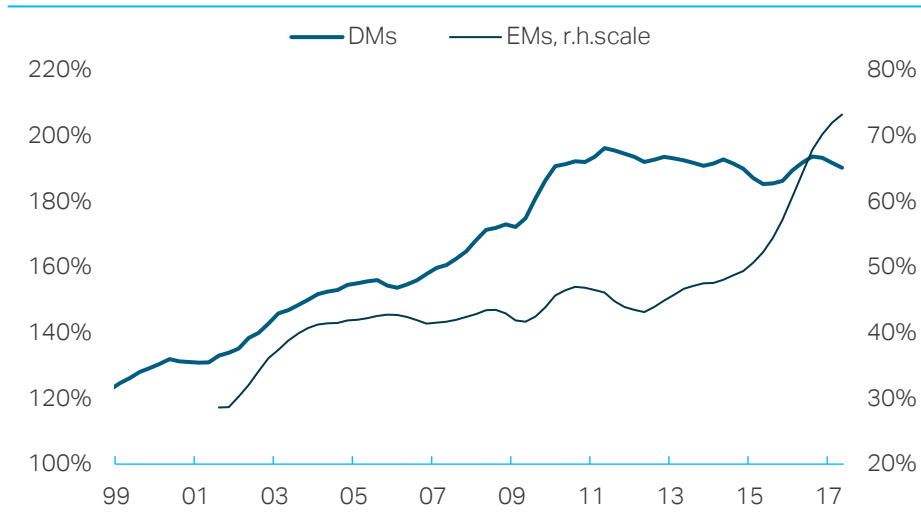
Excess global savings are keeping real interest rates down everywhere. DM policy rates remain negative in real terms. Rate hikes in emerging markets following the 2013 taper tantrums have been unwound. On an aggregate basis, EMs have the lowest nominal policy interest rate since the 1990s.

Source: Bloomberg, TS Lombard

## CAPITAL MARKETS PLAY A BIGGER ROLE

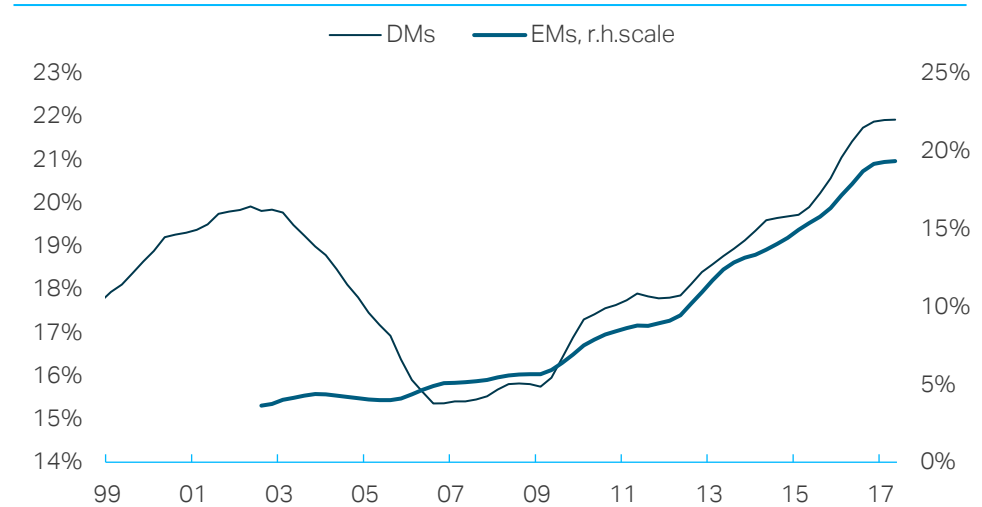
### Increasing role of capital markets

Outstanding debt securities, resident issuers, all sectors (%GDP, 4q avg)



### Businesses relying more on capital markets

Outstanding debt securities, resident issuers, NFCs (%GDP, 4q avg)

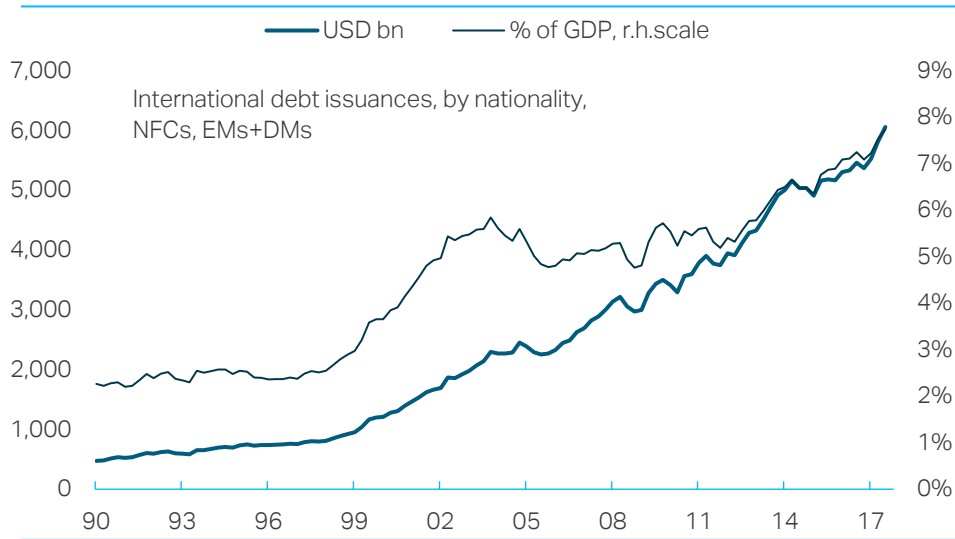


Broad money trends and banking sector indicators are underestimating how easy liquidity conditions are. Businesses in Japan are cash-rich and those in euro area are enjoying larger profits, reducing the need to access external sources of financing. Historically cheap bond financing costs have invigorated capital markets.

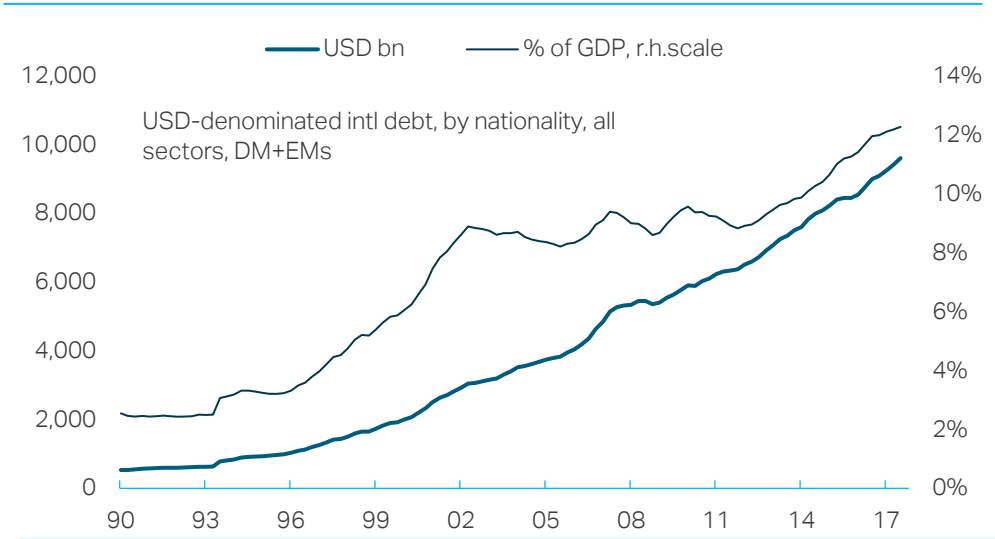
Source: Datastream, BIS, TS Lombard

## BUOYANT INTERNATIONAL CAPITAL MARKETS

### Increased role of int'l capital markets



### USD more important in int'l capital markets

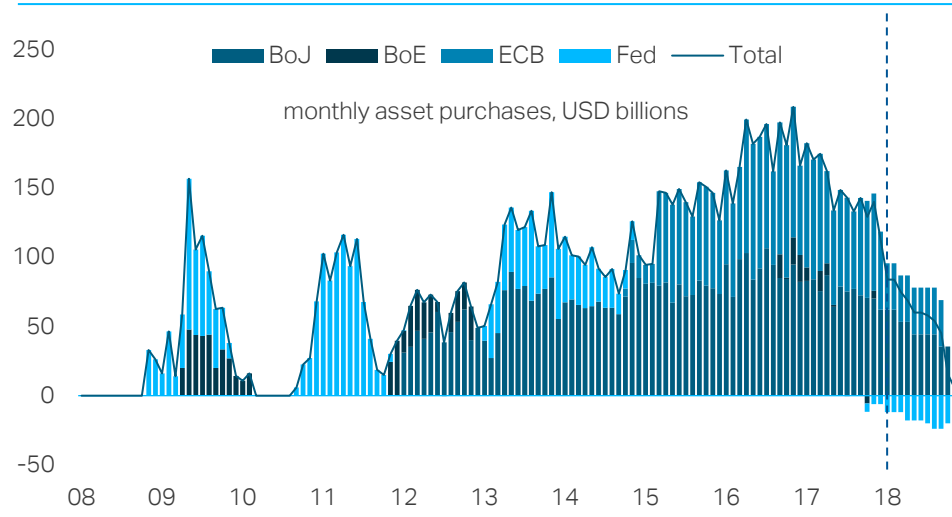


EM and DM businesses have been relying increasingly on international capital markets to raise funding since the global financial crisis. The share of international debt issued by non-financial corporates in GDP has surged to the highest since data available (1980). The same is true for the ratio of US\$-denominated international issues.

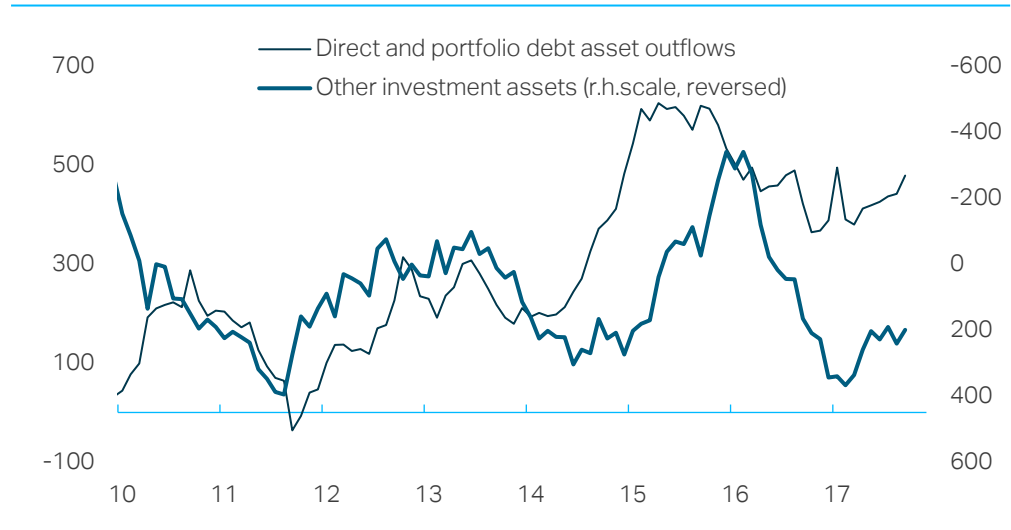
Source: Datastream, BIS, TS Lombard

## LIQUIDITY – EASY FOR LONGER?

### Diminishing central bank net asset purchases



### Unhedged EA positions

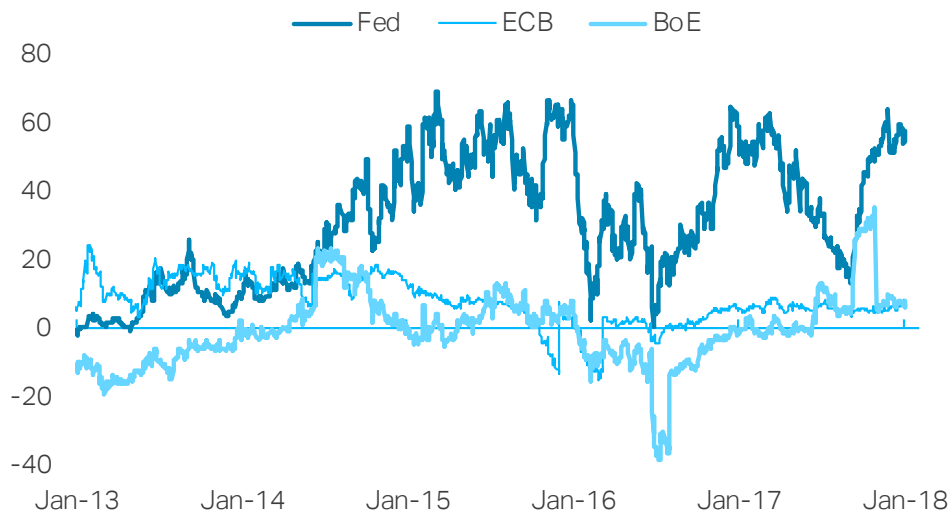


With decent global growth in most developed economies, DM monetary policy looks excessively stimulative. The cumulative monthly asset purchases of DM central banks (the Fed, the ECB, the BoJ and the BoE) peaked in 2016. Based on our estimates, net central bank buying could cease by early next year.

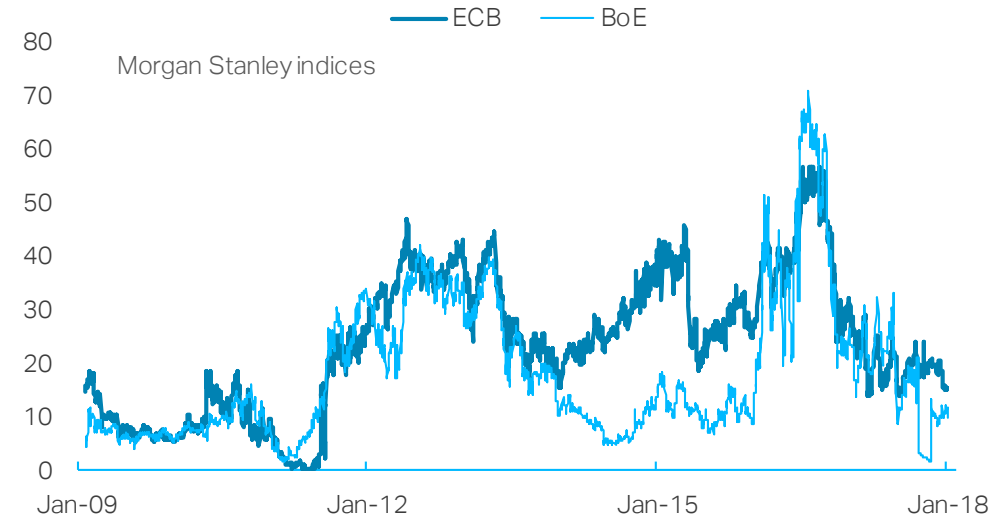
Source: Datastream, BoJ, BoE, ECB, Federal Reserve, TS Lombard

## COMPLACENT MARKETS BUT USD TO THE RESCUE?

Rate hike pricing for next 12 months, bps



Months to next hike



Markets could be underestimating central bank tightening. Still, we expect global financing conditions to remain easy. One of the key reasons is that we expect any appreciation pressure on the US\$ to be modest. The level and pace of gains in the currency are crucial for global funding conditions.

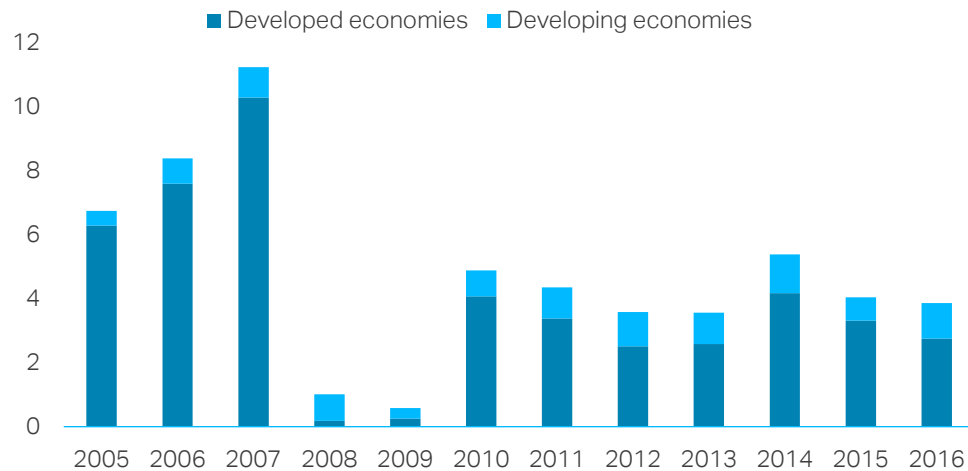
Source: Bloomberg, Morgan Stanley, TS Lombard



## GLOBAL CAPITAL FLOWS STABILISE

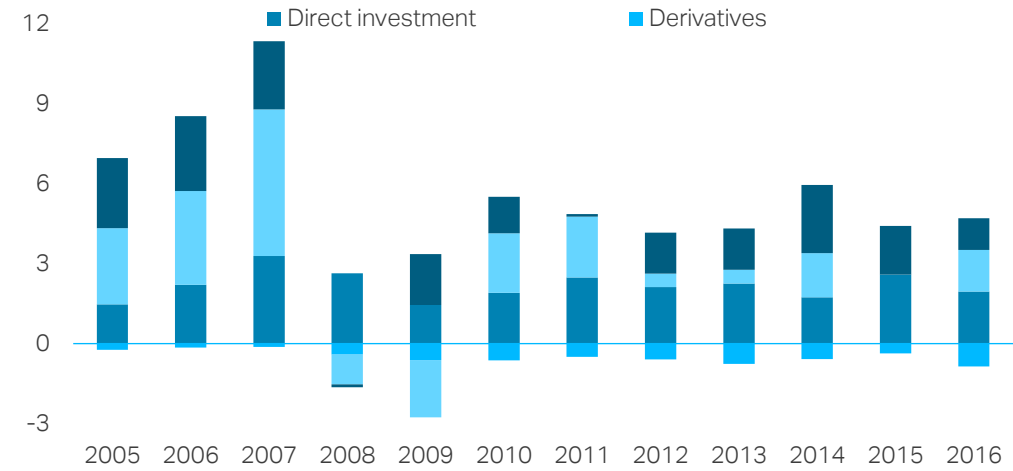
### Int'l capital flows crashed after GFC

Net acquisition of financial assets by non-residents (USD trn)



### 'Other investment' has been the key drag

Net acquisition of financial assets by non-residents (USD trn)

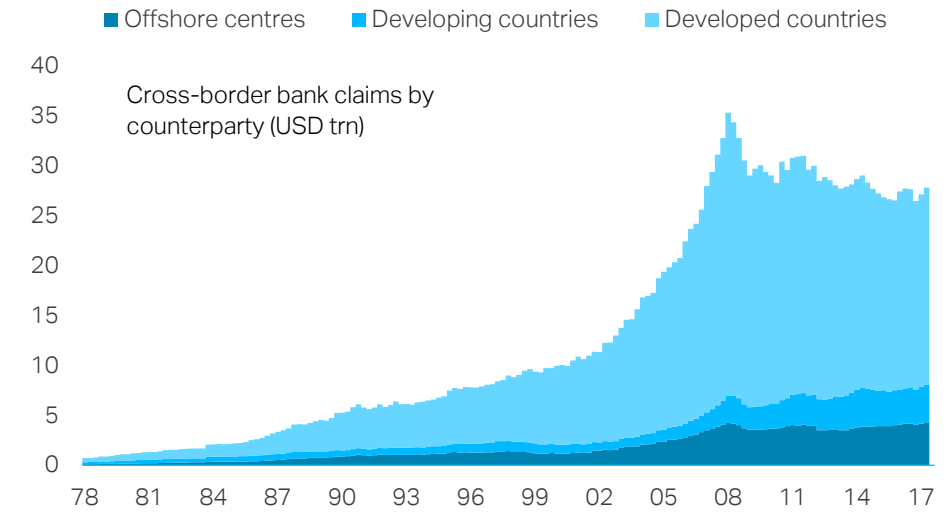


Cross-border capital flows play a key role in global liquidity conditions. The international component of credit is small relative to total credit, but it provides the marginal source of financing. It provides useful information about emerging trends in global funding and can help identify potential stress points. International capital flows plummeted after the GFC, but have stabilised since then, albeit at relatively modest levels.

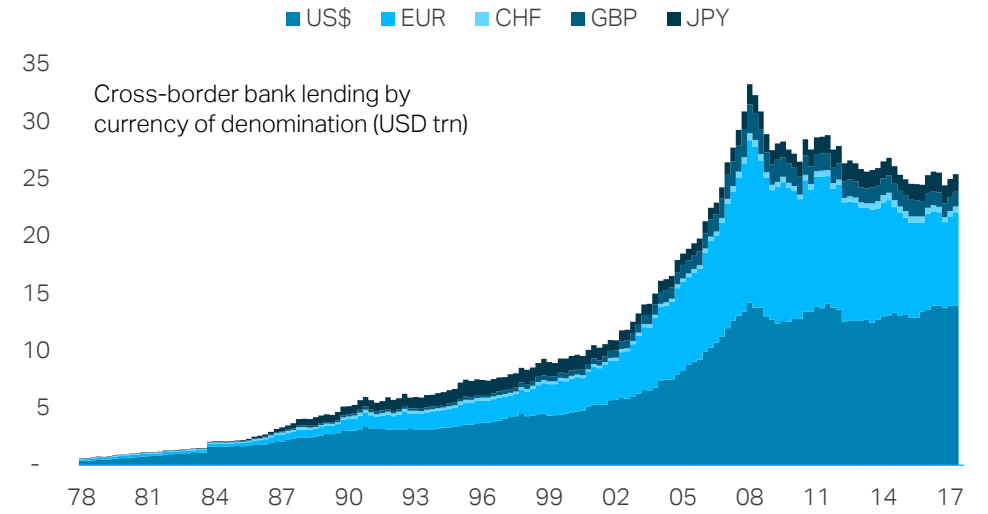
Source: IMF, TS Lombard

## BANK CREDIT NO LONGER A BIG DRAG ON CROSS-BORDER FLOWS

### Cross-border bank claims declined after GFC...



### ....led by a fall in EUR-denominated credit



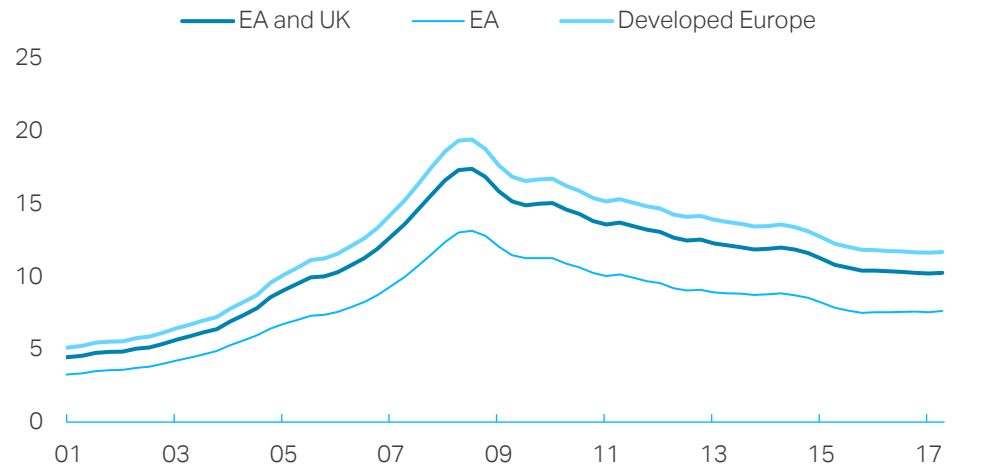
The banking sector, which has had an increasing home bias, has been the key drag on global flows. EA lenders account for almost all the decline in banks' foreign claims. This reflects the consolidation of EA banks following the euro area crisis. But the worst maybe behind us.

Source: Datastream, BIS, TS Lombard

## BANKS' FOREIGN CLAIMS SHOULD RECOVER

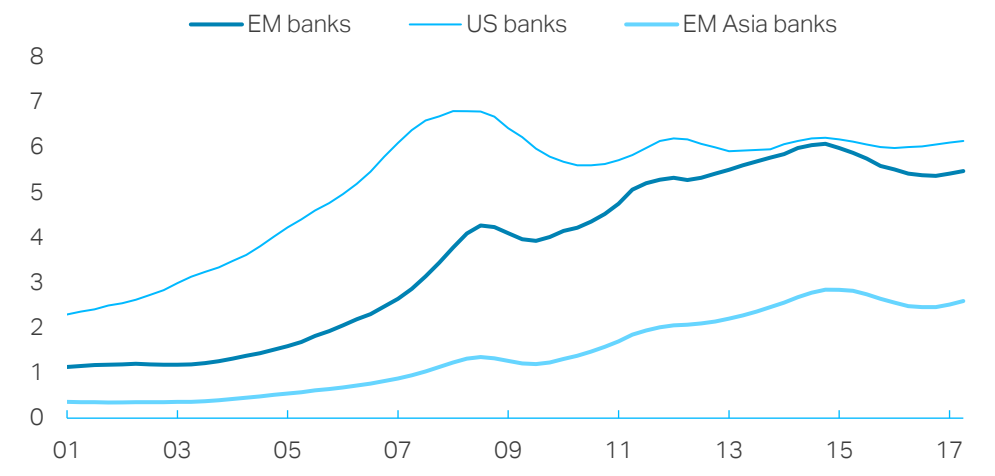
### EA banks' deleverage hits cross-border credit flows

Banks foreign claims and net risk transfers. Immediate risk basis (USD trn)



### But the worst may be behind us

Banks foreign claims and net risk transfers. Immediate risk basis (USD trn)

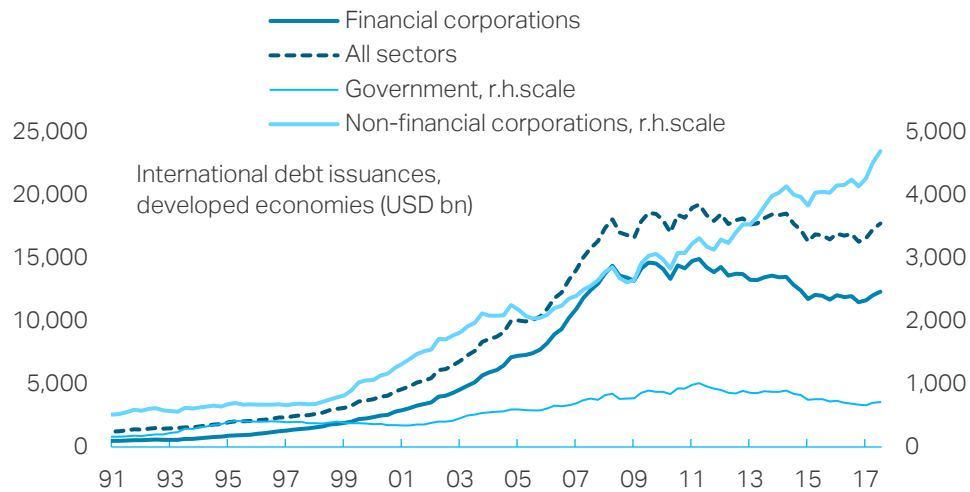


EA lenders have made good progress since the GFC in cleaning up their balance sheets and are better-placed to extend credit. International banking flows have also become less sensitive to global risk since the crisis, thanks to better capitalized banks and more stable bank lending.

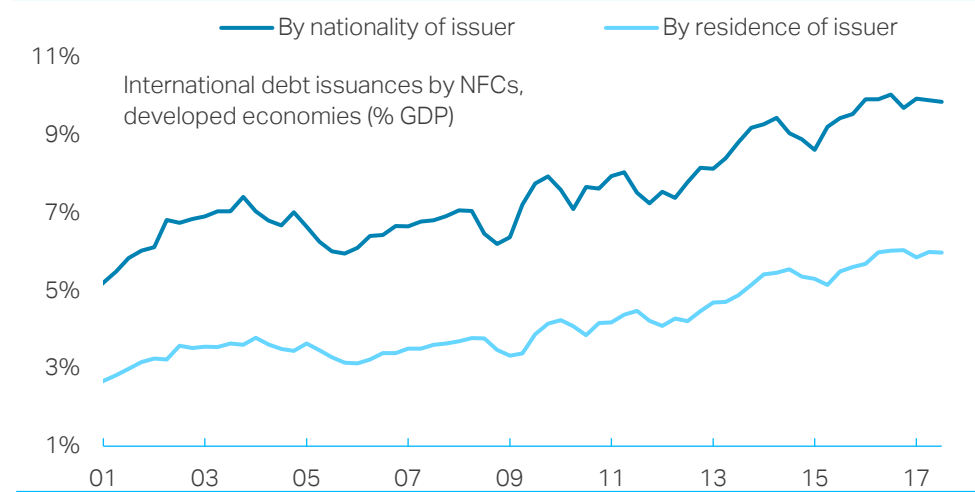
Source: Datastream, BIS, TS Lombard

## SUPER-CHARGED INTERNATIONAL DEBT FUNDING

### Deleveraging by financials held back DM debt issuances, but...



### ...NFCs' reliance on capital markets surged after the GFC



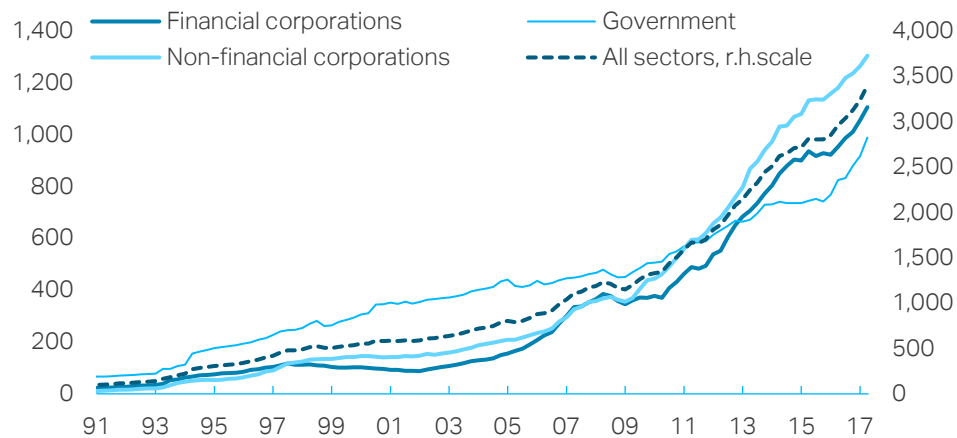
While international bank credit flows have struggled since the crisis, capital markets have been buoyant. Deleveraging by financials pulled back overall international debt issuances in DMs after the GFC. But non-financial corporations (NFCs) have been turning increasingly to bond financing as the cost of borrowing has plummeted to historical lows.

Source: Datastream, BIS, TS Lombard

## NEW HIGHS FOR EM EXTERNAL DEBT ISSUES

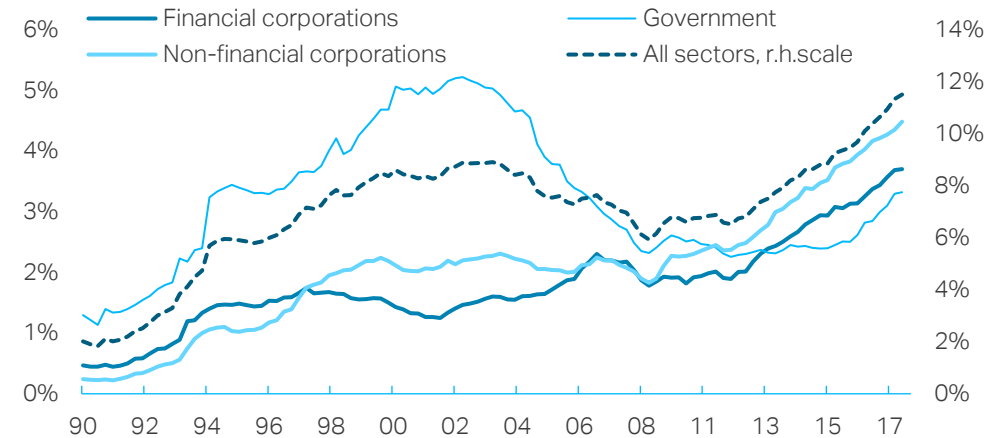
### Increasing reliance on capital markets by all sectors in EMs

International debt issuances, by nationality, developing economies (USD bn)



### Int'l debt issuance by EM private sector reaching new highs

International debt issuances, by nationality, developing economies (% GDP)



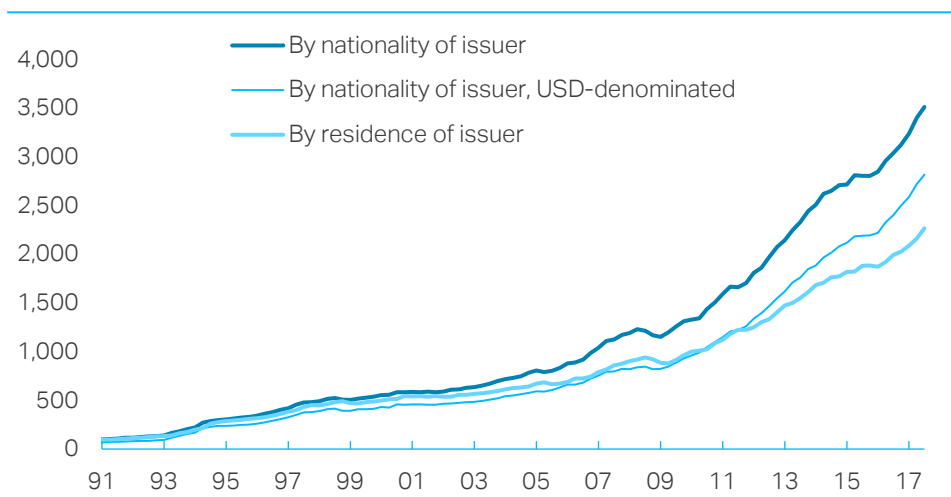
Emerging markets have also increased their reliance on international capital markets, including EM financials. The share of overall foreign issuances in GDP exceeds the highs of 1990s.

Source: Datastream, BIS, TS Lombard

## EM CORPORATES AND CARRY-TRADE

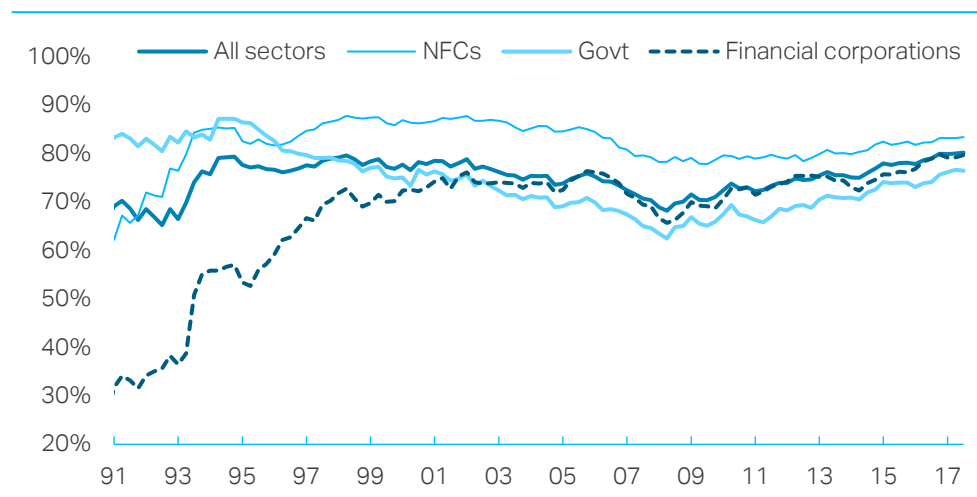
### Carry-trade EMs

International debt issuances by developing economies (USD bn)



### Increased role of USD as funding currency

% share of US\$-denominated debt in international debt issuances, DMs



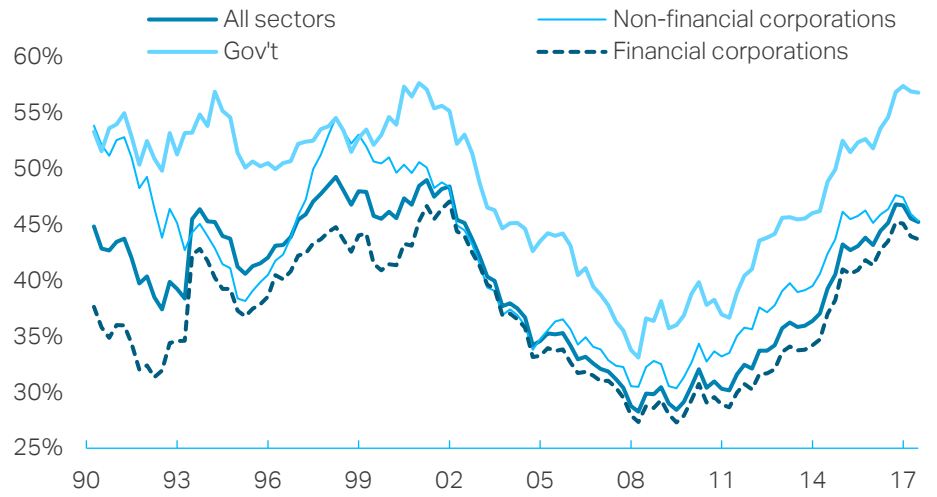
Emerging market borrowers have also been engaging in carry-trade through their offshore entities. The increasing divergence between international debt issuances when measured by nationality (includes issues by offshore offices of the borrower) and by residence of the borrower highlights this trend. A substantially large proportion of international borrowing is denominated in US\$ with the share reaching close to 1990 highs, reinforcing the rising role of the dollar in the EM financial conditions.

Source: Datastream, BIS, TS Lombard

## INTERNATIONAL CAPITAL MARKETS: EUR VS USD

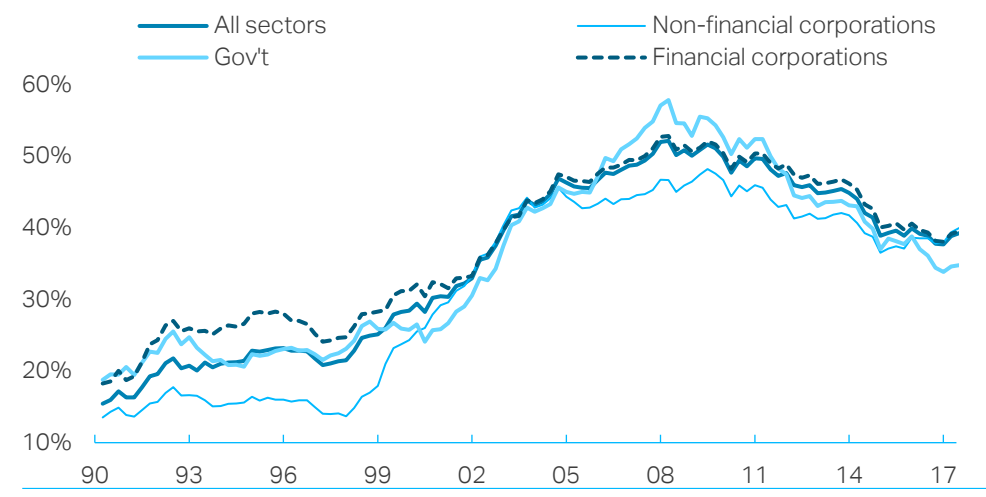
### Well-behaved USD a respite... and

% share of USD-denominated debt in international issuances



### ...int'l funding less vulnerable to EUR strength

% share of EUR-denominated debt in international issuances



USD-denominated funding has gained prominence in both developed and emerging markets across all sectors since the GFC. On the other hand, EUR has been losing its sheen.

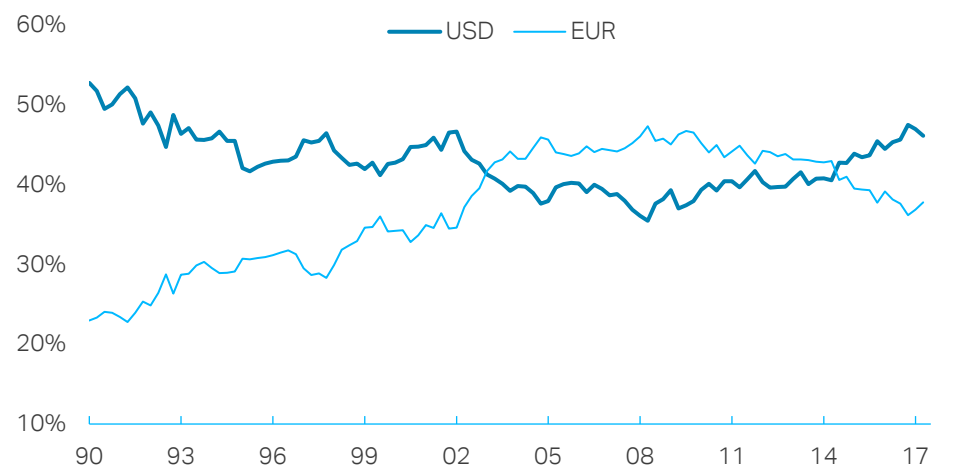
Source: Datastream, BIS, TS Lombard



## CROSS-BORDER BANK CREDIT FLOWS: EUR VS USD

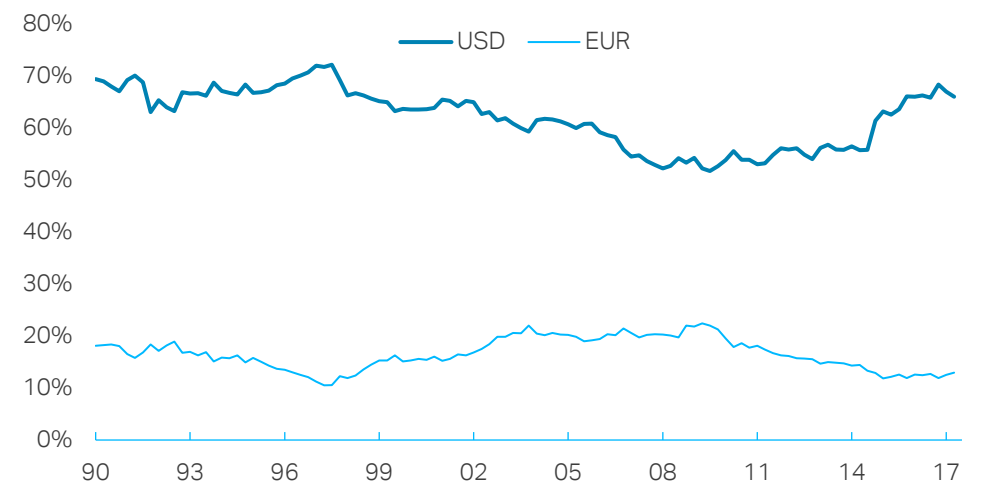
### EUR-denominated cross-border bank liabilities receding in DMs...

% share in DMs' cross-border bank liabilities, by currency of denomination



### ...and in EMs from already low levels

% share in EMs' cross-border bank liabilities, by currency of denomination

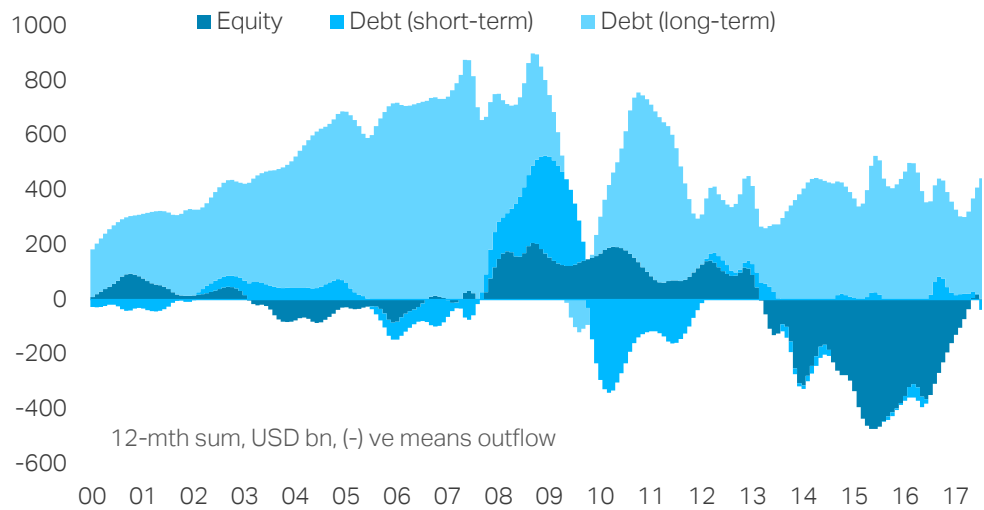


The dominant role of the dollar, especially in EMs is also evident in cross-border bank credit flows. The share of USD-denominated international credit liabilities has been increasing while that of EUR-denominated liabilities has been declining for DMs and EMs.

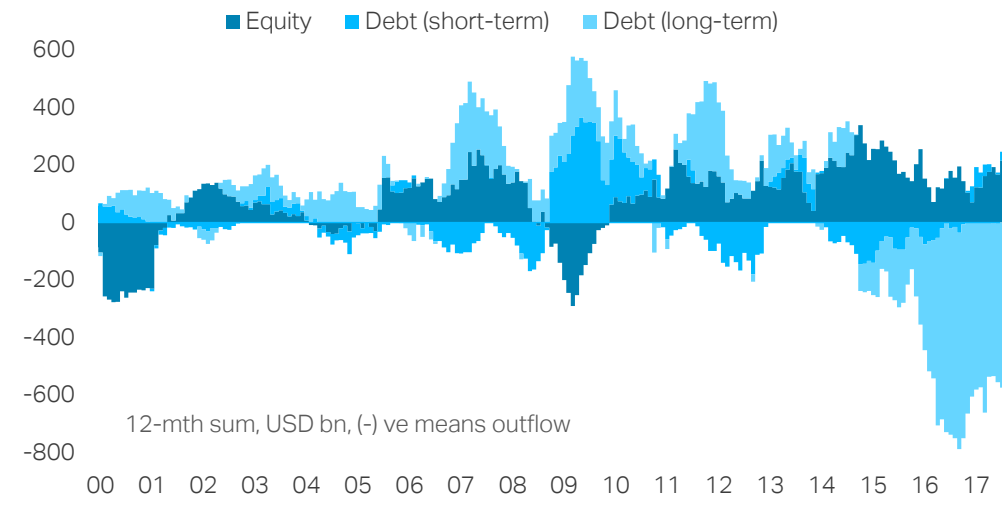
Source: BIS, TS Lombard

## CAPITAL FLOWS AND QE-EFFECT

### US net portfolio flows



### Euro area net portfolio flows



Developed market monetary policy has greatly influenced cross-border capital flows and financing. As these measures unwind, global financing conditions could tighten. But the impact will differ and depend of the extent of distortions created by such policies. While ECB QE has created a much larger disconnect of the euro from fundamentals, it is a potentially strong dollar (and the pace of gains) that could pose a greater threat to global liquidity.

Source: Datastream, ECB, Federal Reserve, TS Lombard

**RISKS**

- The biggest short term danger may be an upside bubble, but there are many downside risks as well -
- The offshore dollar supply risks could return with renewed USD appreciation
- Japanese banks look particularly exposed
- USD appreciation could reverse the EM carry-trade
- ECB QE tapering could cause major reversals in portfolio flows, pushing yields & the euro higher
- China's credit bubble reaching historically dangerous levels

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