



Global Financial Trends | In Charts

# GLOBAL LIQUIDITY HEATMAP

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- We create a global liquidity heat map, with a focus on the Eurodollar market
- Five reasons why the much-feared year-end liquidity squeeze is less likely this year.
- There are many risks to the financial cycle and many amplifiers, but the headwinds have certainly eased - for now

Summary	Equities	Income	Invoice	Asset	Macro
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## Global liquidity/Eurodollar heat map

What are we monitoring		Mar-17	Dec-17	Dec-18	Sep-19*	Now
Fed policy	Fed funds target range, upper limit (%)	0.75	1.25	2.50	2.25	1.75
	The size of the Fed's balance sheet (\$trn)	4.5	4.4	4.1	3.8	4.1
	Repurchase operations (\$bn)	NA	NA	19	18	213
	T-Bill purchases	NA	NA	NA	NA	125
	Bank reserves at the Fed (\$trn)	2.3	2.3	1.8	1.4	1.7
	Foreign reverse repos at the Fed (\$bn)	244	231	244	294	266
	Treasury general account (TGA) balance (\$bn)	148	179	332	303	304
Money market strains	Unsecured money market <sup>1</sup> (bps)	-9	-9	0.0	20	0.0
	Secured money market <sup>2</sup> (bps)	NA	NA	7	300	-20
Hedging costs	Dollar cross-currency basis: 3 months (bps)	-17	-33	-12	-6	-8
	Dollar LIBOR-OIS spread (bps)	24	21	37	32	34
	Eurodollar cost <sup>3</sup> (bps)	132	195	285	223	197
	Slope of the US yield curve <sup>4</sup> (bps)	163	111	25	-49	32
	Slope of the US funding curve <sup>5</sup> (bps)	35	43	8	-63	10
Foreign players	Hedging costs <sup>6</sup> (bps)	41	54	48	38	42
	Relative hedged returns on dollar-denominated assets <sup>7</sup> (bps)	97	-6	-43	-68	-43
	Trade-related uncertainty, index	152	182	682	1947	583
Dollar	Trade-weighted dollar <sup>8</sup> , index	124	118	123	125	122
Global money supply	Global broad money supply, % annual change	7.2%	6.4%	5.1%	6.2%	6.4%

See footnotes on the next slide



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<sup>1</sup> the gap between the upper band of the fed funds target range and the interest rate on excess reserves

<sup>2</sup> the gap between the upper band of the fed funds target range and the overnight secured funding rate

<sup>3</sup> includes 3-month dollar CCB, dollar LIBOR-OIS spread and dollar swap rate

<sup>4</sup> Yield on 10-year UST less yield on 3-month T-Bills

<sup>5</sup> Yield on 2-yr USTs less effective fed funds rate

<sup>6</sup> includes 3-month dollar CCB and 3-month dollar LIBOR-OIS spread

<sup>7</sup> Hedged US yield pick-up for a Japanese investor

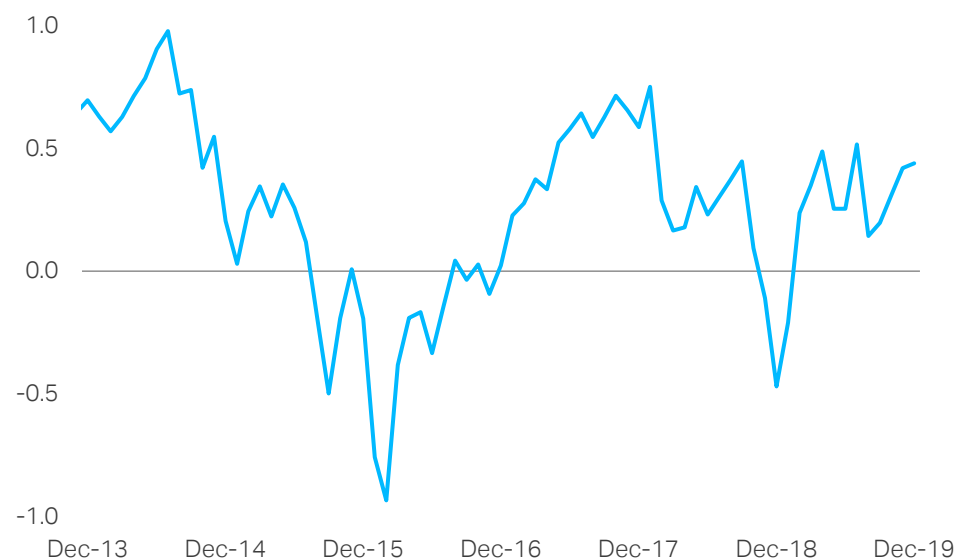
<sup>8</sup> JP Morgan index

\*Mid-Sept, coinciding with money market strains

## Financial conditions have eased globally

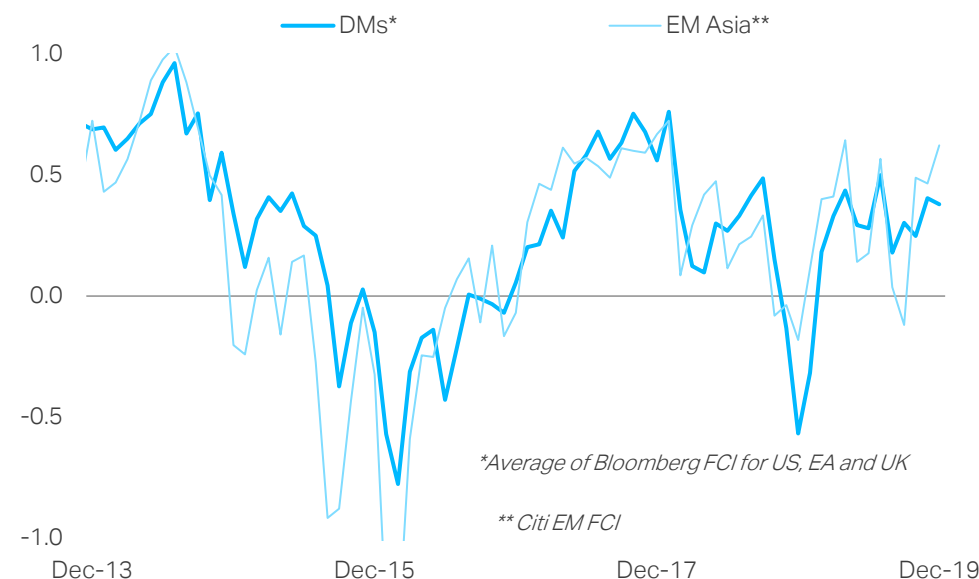
### Easing financial conditions globally

Average of Bloomberg Financial Conditions Indices (FCI) for US, EA, UK and Citi EM Asia FCI



### Improvement in both developed and emerging markets

Financial Conditions Indices (FCI)



\*Average of Bloomberg FCI for US, EA and UK

\*\* Citi EM FCI

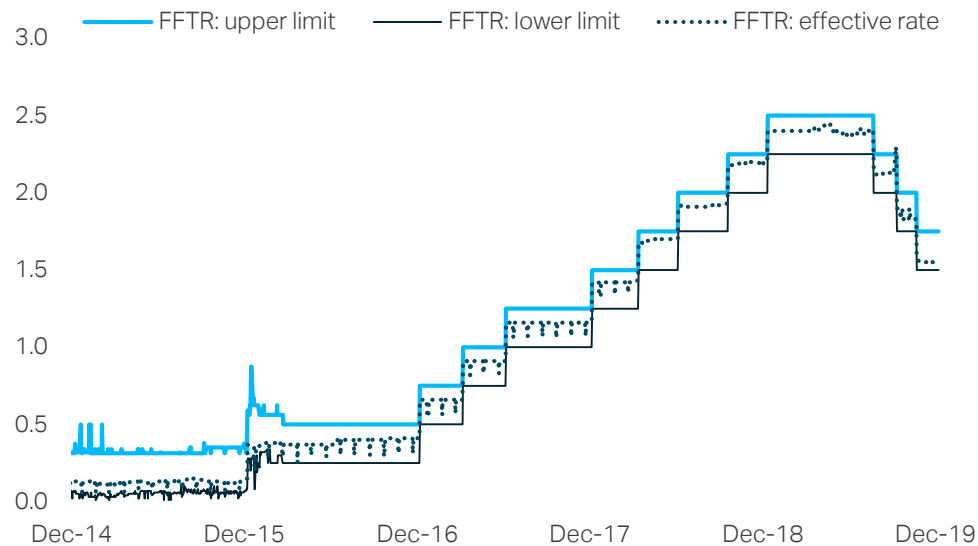
Global liquidity has improved recently and the pick-up is broadly based. Financial conditions indices in both developed and emerging markets have bounced back following a weak August (caused by fears of an escalation in the US-China trade war) and September (caused by severe frictions in the US money market).

But investors remain wary of conditions tightening again, especially as we approach the end of the quarter and of the year, when banks hold back from expanding their balance sheets in order to beef up their regulatory ratios. Global liquidity did tighten quite severely last December. More recently, overnight repo rates surged in mid-September to levels not seen since the Global Financial Crisis. Could we see a repeat in the next two weeks? More importantly, how disruptive could a cash crunch be?

## Fed is the key

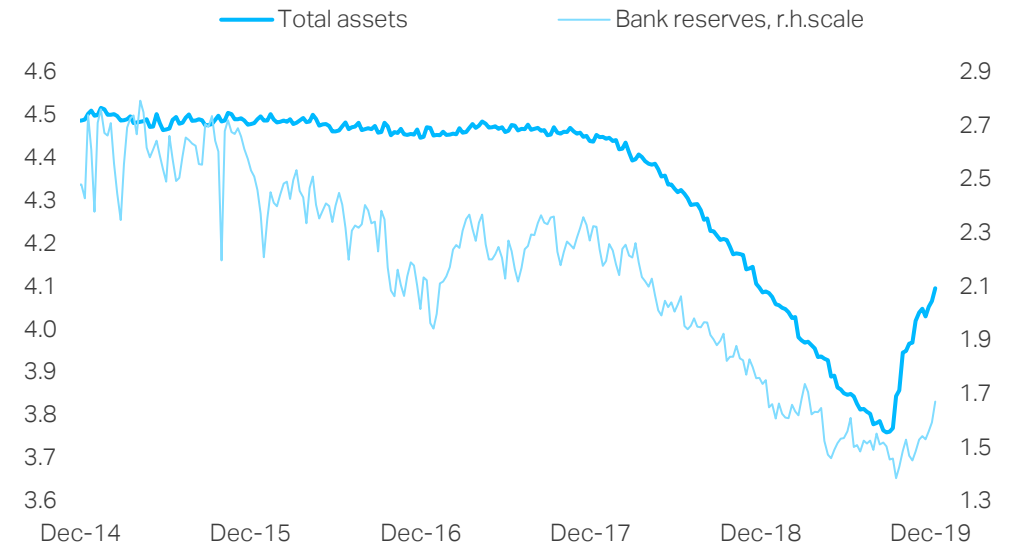
### Fed rate cuts

Fed Funds Target Rate (FFTR), %



### The Fed's balance sheet is expanding again

Fed's balance sheet, trillions of dollars



We think underlying liquidity drivers have changed rapidly over the last 12 months with the Fed taking centre stage. After a cumulative 225 bps of rate increases since 2015, including 100bps in 2018, the US central bank swiftly reversed course this year and slashed the fed funds rate by 75 bps during July-October.

In the wake of the September money market squeeze, the central bank has announced a raft of overnight and term repo operations, including large-scale repos that span the year-end. It has also started buying T-Bills. At the initial rate of \$60bn a month, its purchases would likely total \$480bn over the eight months beginning on October 15.

Despite the repos and the asset purchases, some analysts reckon the year-end squeeze could be so severe that [the Fed will be forced to buy coupons](#). Such assertions miss the key message: **the September blow-out marked a critical turning point because it effectively prompted the Fed to introduce a backstop to keep short-term interest rates in line with its target**. This was evident [earlier in the week](#) when the overnight repo rate stayed within the Fed's target even as large corporate tax payments and the settlement of treasury bond issues were due, causing many to fear a re-run of the September squeeze.

## Yield curve is positive

### The US funding curve

Yield on 2-yr USTs less effective fed funds rate



Crucially, the Fed's rate cuts have restored some steepness to the funding curve (chart above). When the funding curve was inverted it was less profitable for banks to lend. As a result, henceforth we should expect to see some improvement in credit supply, with ripple effects likely to be felt outside the US as well.

### The yield curve

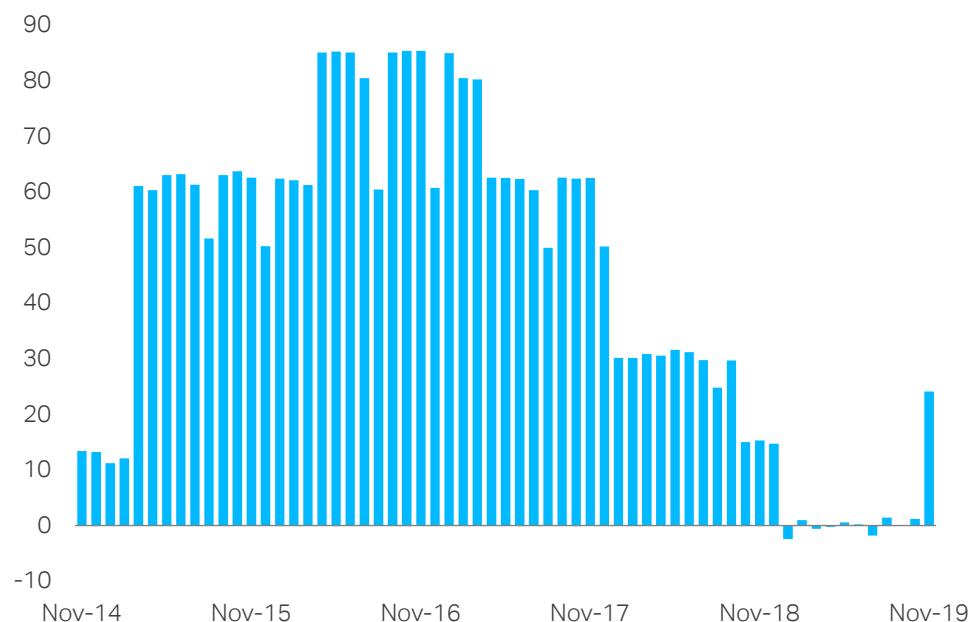


Meanwhile, the Fed's purchase of short-duration assets has kept the front end of the curve well bid. Coinciding with growing expectations of a truce in the US-China trade war – confirmed with the interim deal announced late last week – and with a bottoming out of world trade, this has pushed long-end yields higher and thus **steepened the yield curve** (chart above). The slope of the curve has significant implications for offshore dollar liquidity, as discussed in detail in the [previous GFT](#).

## Other central banks are also in easing mode

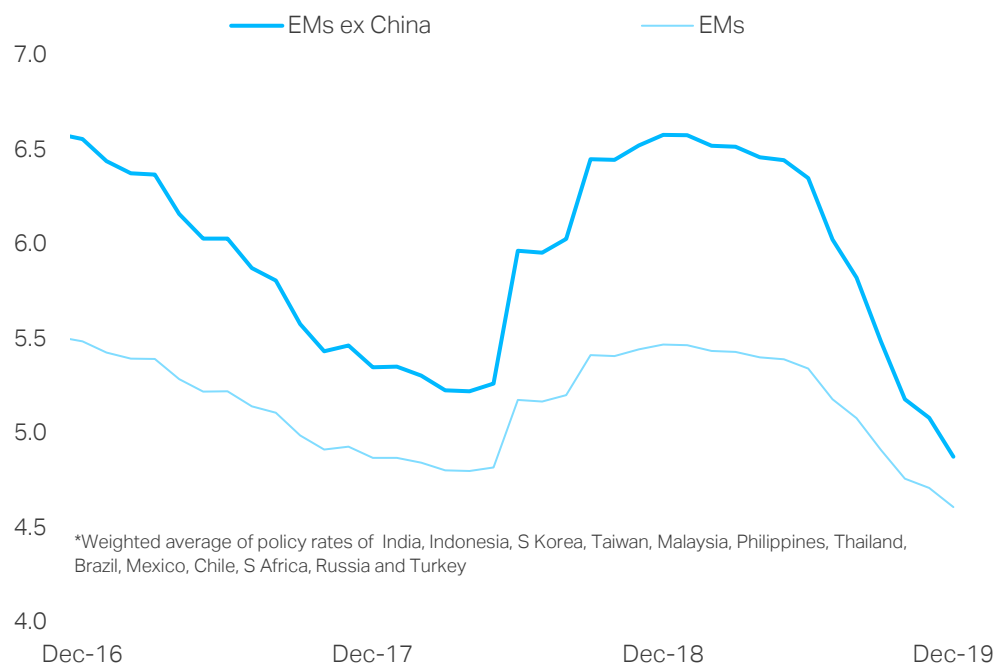
### ECB's restarts asset purchases

ECB's monthly asset purchases, EUR billion



### Emerging markets ease policy

EM policy rate\*, %



\*Weighted average of policy rates of India, Indonesia, S Korea, Taiwan, Malaysia, Philippines, Thailand, Brazil, Mexico, Chile, S Africa, Russia and Turkey

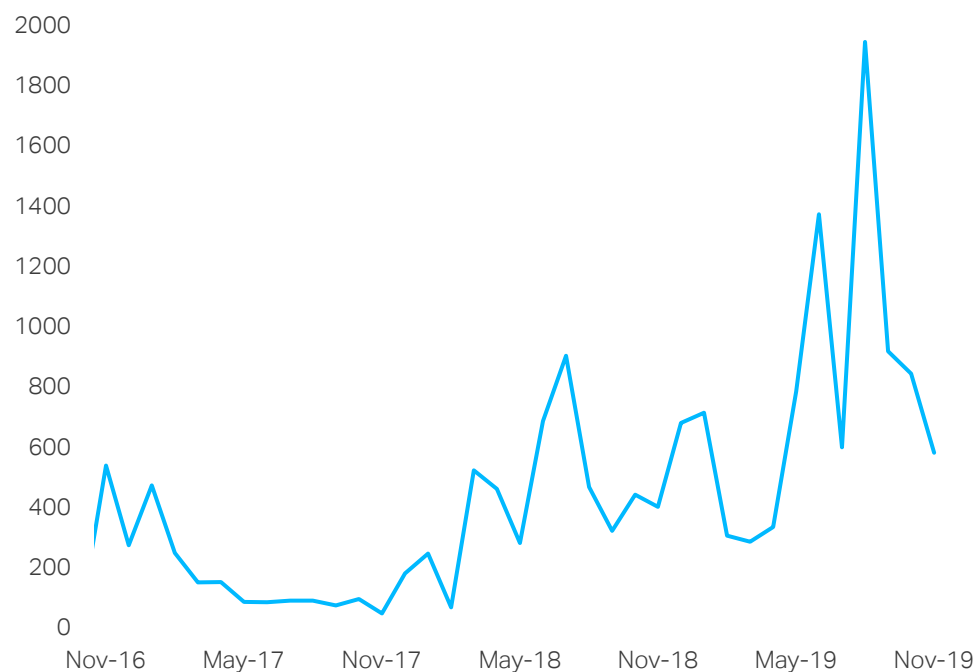
While the Fed is clearly leading the charge as the world's lender of first resort, other central banks are also in accommodation mode. The ECB announced a substantial package of easing measures in September, including pushing interest rates deeper into the negative and resuming asset purchases (see chart above).

Emerging market central banks have also been cutting their interest rates aggressively (see chart above). Turkey, with 1,200 bps of rate cuts last year, exaggerates the fall in the aggregate EM policy rate index. Setting aside Turkey, the EM weighted average policy rate index fell by 50bps, led by rate cuts in Brazil (200bps) and Russia (150bps).

## Reduced trade war worries

### Trade-related uncertainty eases rapidly

US economic policy uncertainty index - trade policy



### FX war worries recede (for now)



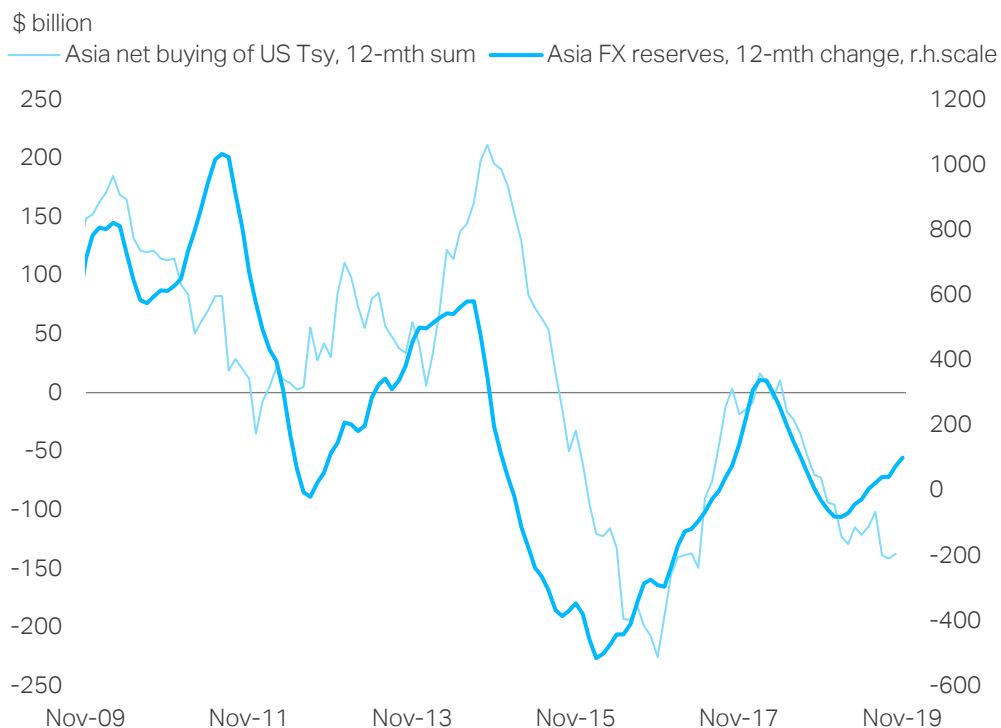
A significant change over the last 12 months, indeed since the autumn, has been on the trade war front. A trade truce between the US and China has seemed increasingly likely since October (see chart above). With the two parties agreeing on a 'phase one' deal last week, global risk sentiment should remain well supported – at least for now.

Global trade and liquidity conditions are more closely linked than meets the eye because of the growing role of the dollar as a funding currency. A strong dollar tightens global financing conditions. **The dollar has taken a breather since the September highs, supporting global liquidity.** Since then worries about an FX war have abated and the yuan has gained against the dollar, allaying concerns that other EMs would be forced into competitive devaluations.



## Foreign buyers may return to buy dollar assets

### Improving EM FX reserves and better-hedged dollar returns may boost EM demand for USTs



### Foreign reverse repos may fall as a result

Fed liabilities, reverse repo of foreign official and international accounts, weekly, \$ bn

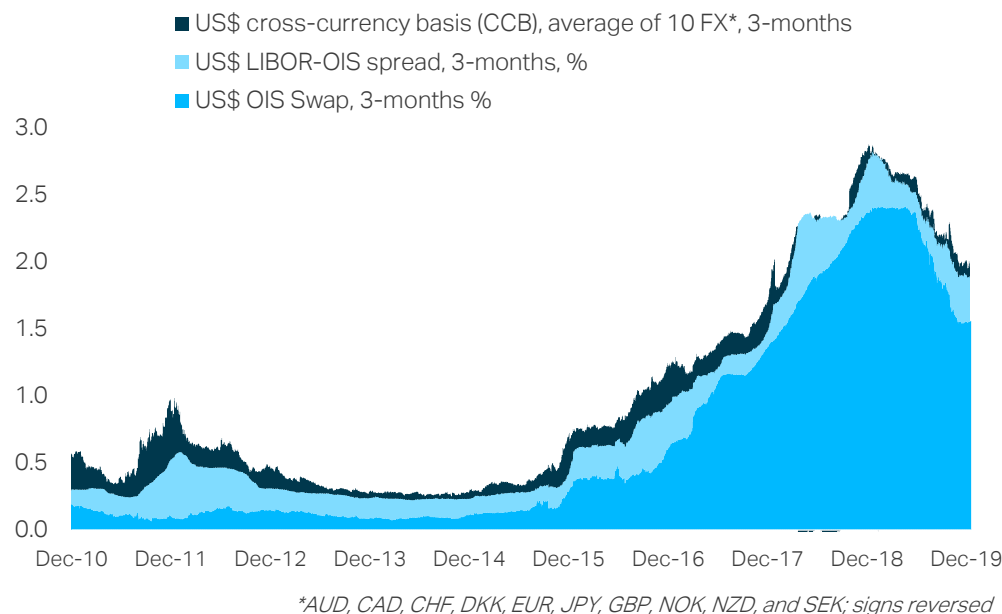


With receding trade war worries, EM FX reserves should stabilise. A steeper yield curve could make dollar-denominated assets more attractive to foreign investors. Keener overseas buying interest would take some of the load off primary dealers, who are obligated to clear the supply of USTs at auctions even as their balance sheets come under pressure at quarter- and year-end.

More attractive returns on dollar assets and less of a need for liquidity (due to diminishing trade war worries) would encourage foreign central banks to park fewer dollars in reverse repos at the Fed. Other things being constant, an increase in foreign reverse repos squeezes out bank reserves. A scarcity of bank reserves was the main catalyst of the strains in the repo market in September.

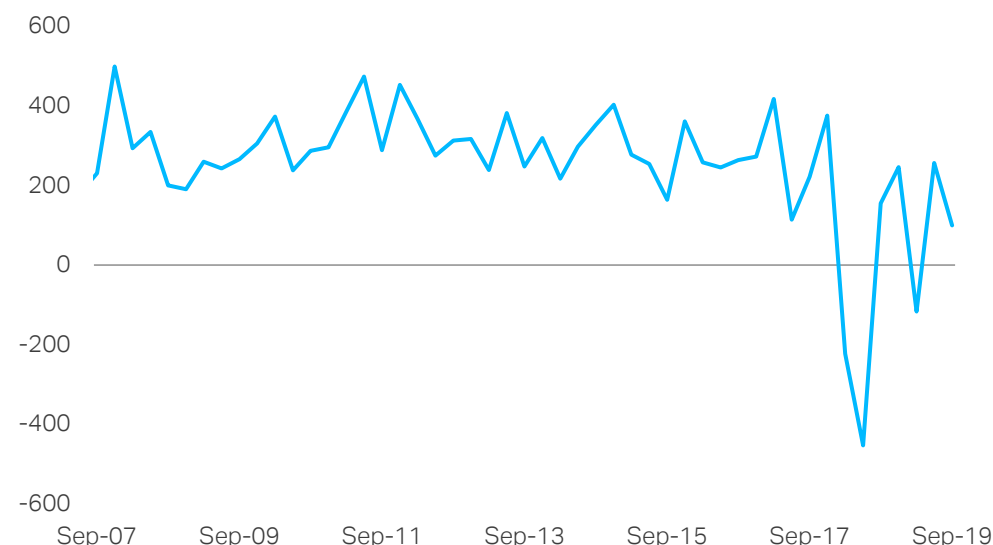
## Eurodollar costs have eased as a result

### US\$ funding costs (using 3-months CCB)



### Repatriation flows surged on Trump's 2017 tax reforms, but have eased since then

US non-fin corps' net FDI, \$bn, saar, values in reverse scale



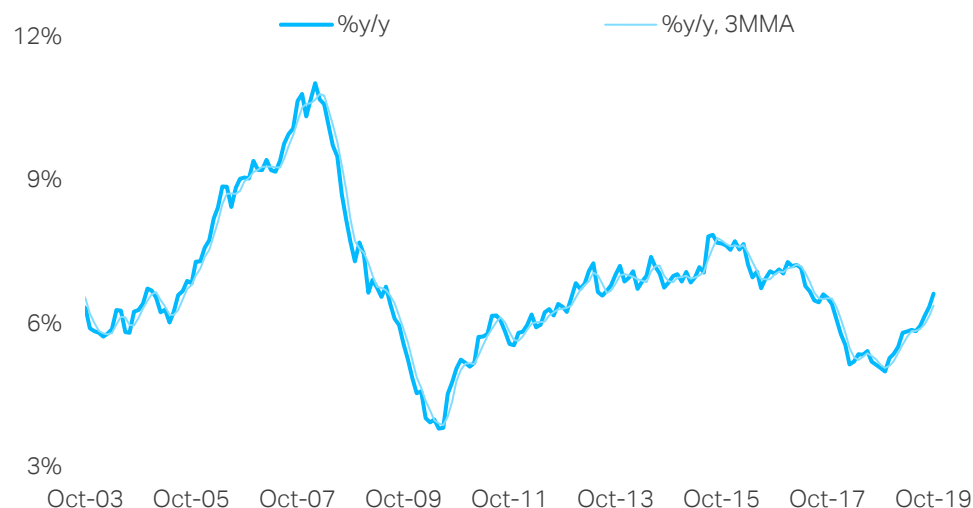
Consequently, Eurodollar costs have been edging lower (see chart above). While the year-end may put fresh upward pressure on hedging costs through a widening of the dollar cross-currency basis and/or the dollar LIBOR-OIS spread, we expect any increase to be better managed than last December. **A weaker dollar should mitigate some of the pressure on the supply on FX swaps from US banks. Besides, non-US banks are relying more on money markets to raise dollar funding since the [BEAT reform](#) was introduced in 2017.**

Separately, **repatriation flows have eased since Trump's 2017 tax reforms and should alleviate some of the pressure on the dollar LIBOR-OIS spread** (see chart above). Specifically, the tax changes encouraged US firms to repatriate profits made overseas. Some of this money had been invested in non-US bank commercial paper, so bringing it back home pushed up the cost of funding for non-US banks. Consequently, the dollar LIBOR-OIS spread has swung sharply since end-2017, especially at quarter-ends.

## Money supply rising

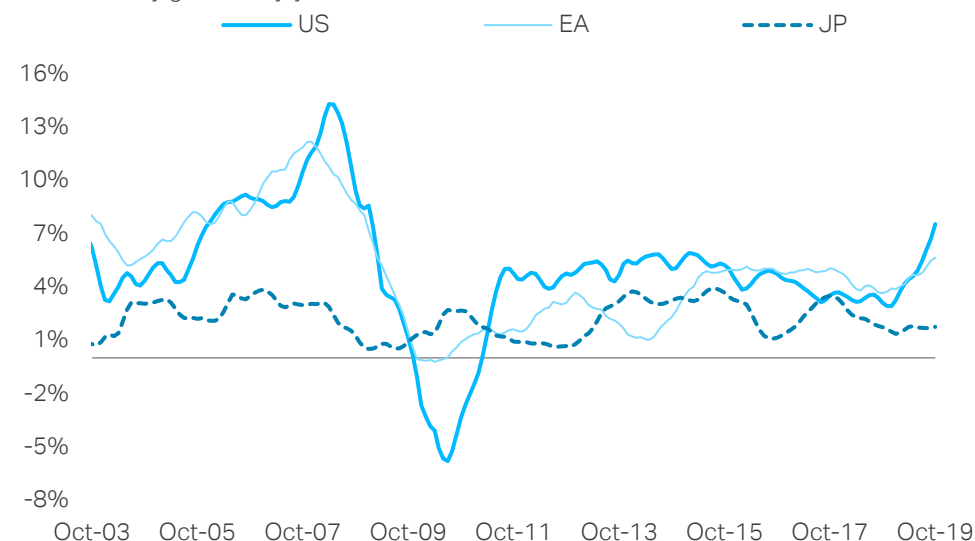
### Global broad money supply growth accelerates

World broad money supply



### Strength in developed markets, especially the US

Broad money growth, %y/y, 3MMA



Global money supply trends are also improving, led by the US. We closely monitor money supply growth, among other indicators, as a pointer to watersheds in the economic cycle. The annual rate of change in our own measure of global broad money supply reached a trough at the end of last year. World broad money growth has been on the rise since then, suggesting that an inflection in economic growth may be close, assuming a four-quarter lag.

Caution is warranted in drawing conclusions from headline money supply figures. For instance, the US and the euro area have led the bounce in global money supply while money growth in emerging markets has stabilised at low levels. This bifurcation points to muted optimism about the prospects for brisk, sustained global economic growth.

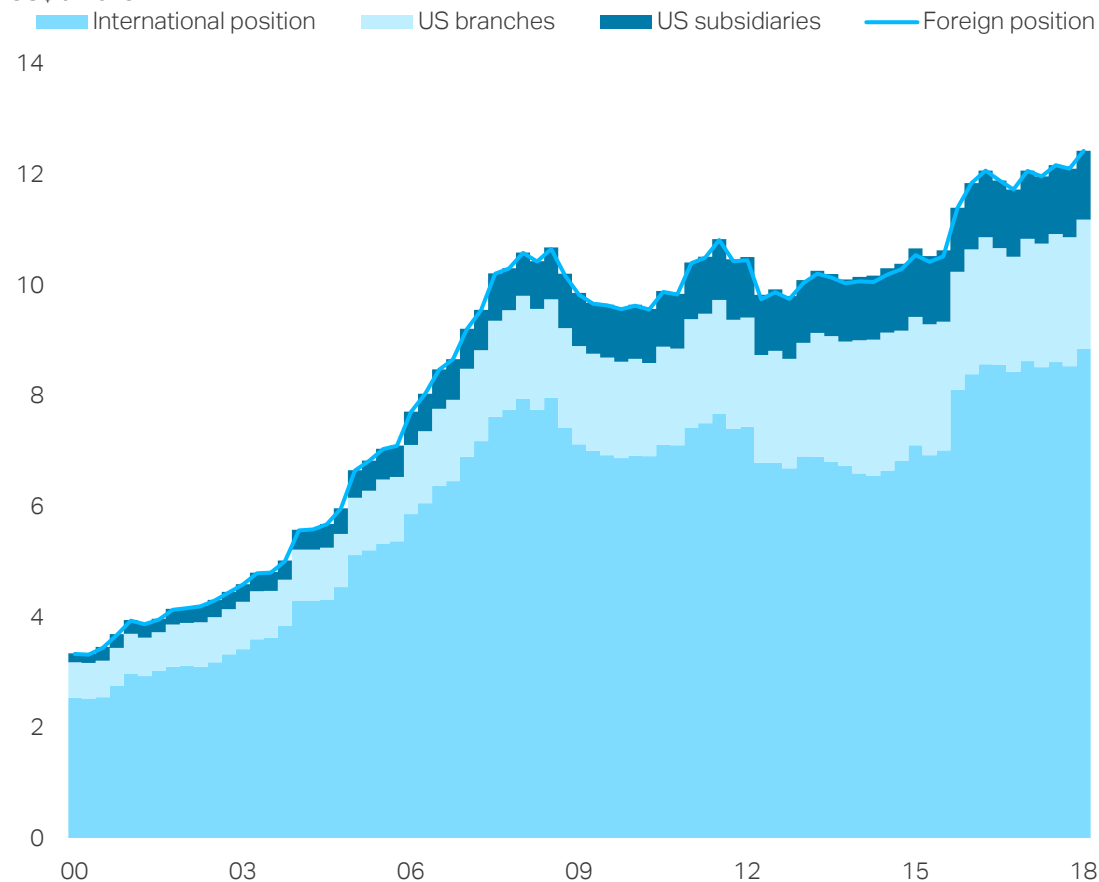
In a detailed analysis of the rapid acceleration in EA money supply [earlier this year](#), we concluded that it was more due to an increase in the precautionary demand for money than to a further easing of credit conditions. In other words, firms were stocking up on cash because they feared credit would become tight and/or they saw limited avenues for profitable investment.

[But the pick-up in US money supply gives more ground for optimism](#) and suggests the economy is nearing a turning point. The expansion in broad money is being led by growth in the supply of money that more than meets a seeming increase in the demand for holding cash for speculative purposes. A positive funding curve and an increase in bank reserves should help boost credit supply, especially at a time when loan demand is decent and likely to gather momentum.

## Risks

### Growing dollar activity of non-US banks

US\$ trillions



To be sure, there are many risks to the financial cycle and many ways those risks could be amplified.

For instance, the trade-weighted dollar, though on the defensive recently, is close to the highest level since data became available (1973). The phase one US-China deal will likely hold until the US presidential election in November, but our policy analyst Eleanor Olcott expects underlying tensions to re-emerge after that.

Re-escalation of the US-China trade war would have serious implications for global risk sentiment, demand and financing conditions.

The main conduit would be a strong dollar. A surge in the role of dollar as a global funding currency, especially in emerging markets, would harm the balance sheets of dollar borrowers. The weak international dollar position of non-US banks – the main suppliers of dollars offshore – would amplify the damage as they were forced to deleverage.

At the same time, **the feedback loop whereby the dampening effect of a strong dollar on global demand leads to weaker US domestic demand and corporate earnings has become firmly entrenched**. Just as the pressure on emerging markets from a strong dollar has intensified, the share of EMs in US exports and the Fed's trade-weighted dollar index has increased.

But these headwinds have certainly eased – at least for now.

Happy holidays!

## Authors



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