

Previous Weeks

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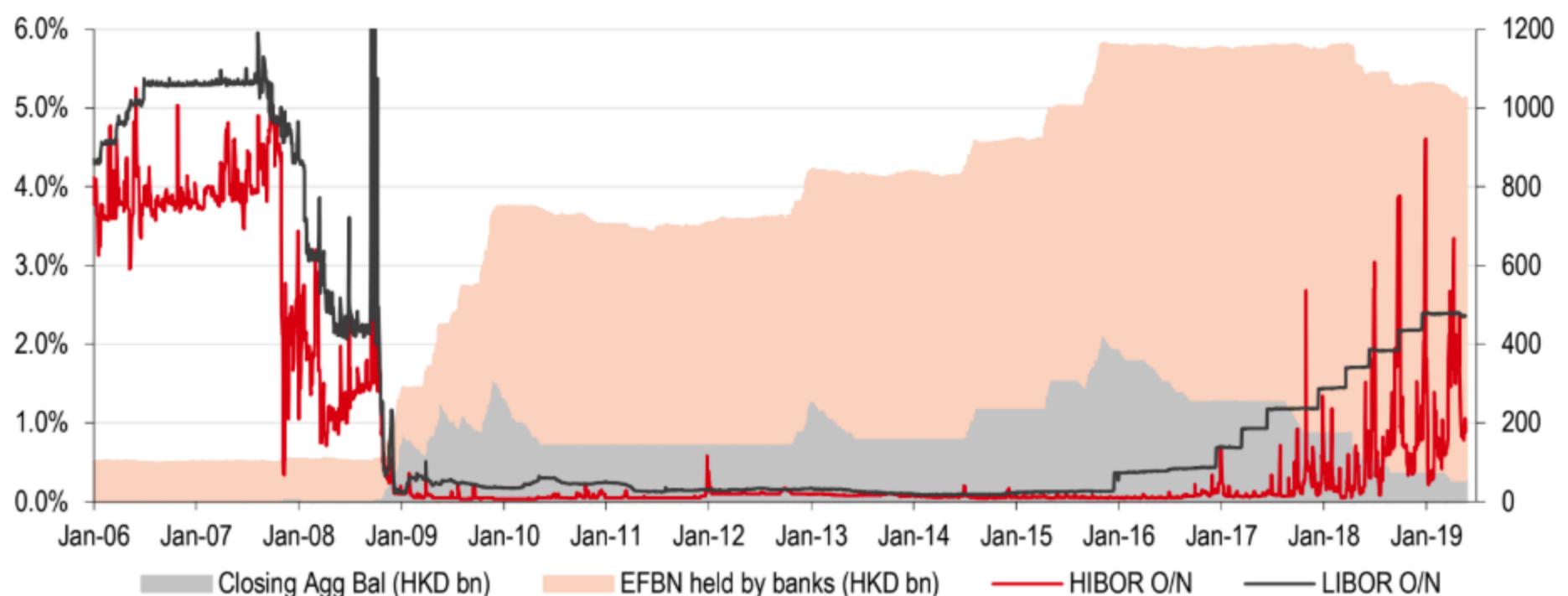
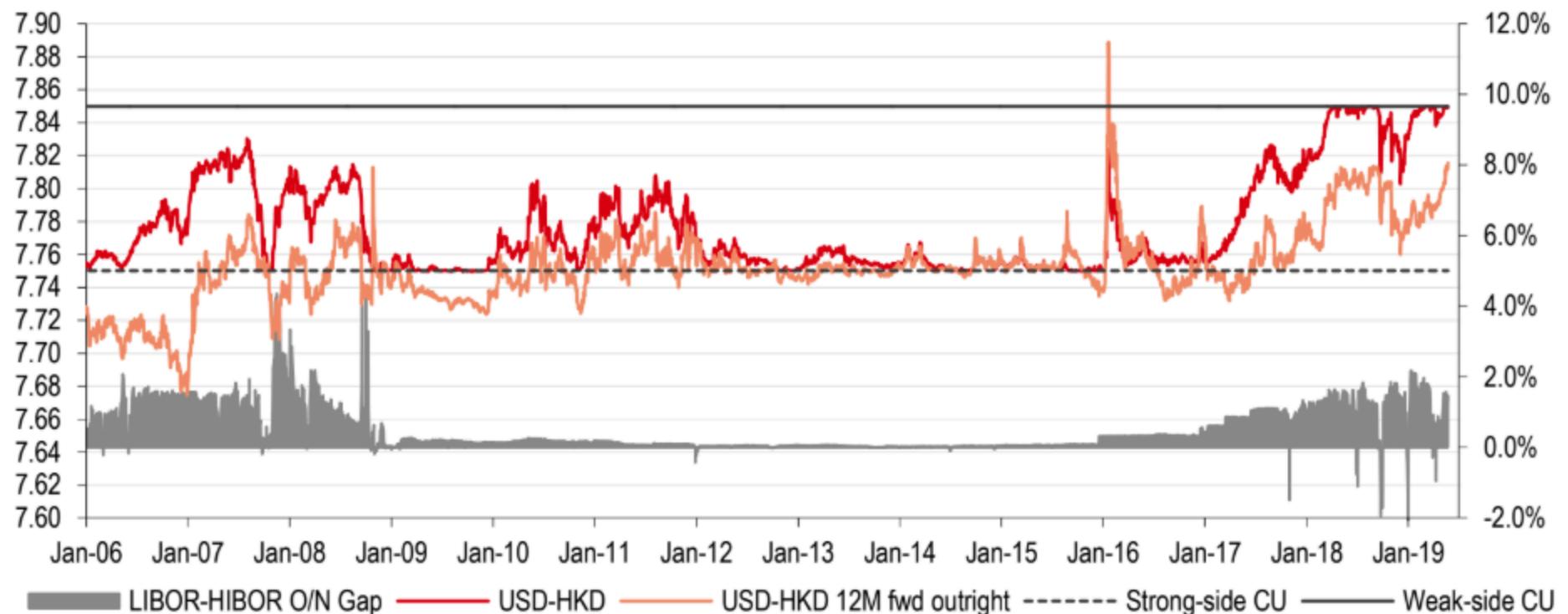
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*"I will not exchange a Field Marshal for a lieutenant."*

## 11. USD-HKD and the LIBOR-HIBOR gap during the last Fed easing cycle in 2007-2009



Source: Bloomberg, CEIC, HSBC

Essentially the cretin Kyle Bass's claims come down to Basel III's LCR and HQLA requirements, which I'll give him credit for at least being less stupid with this one, but it still has several major problems. LCR, NSFR, SLR and the rest of the post-08 Reg Alphabet Soup are extremely important, and something I've been obsessed about in USD markets for years since it's precisely those things that dictate where Tri-Party, FICC Repo, SOFR, LIBOR, Xccy/FXOIS or any other STIR rate trades, the banks are the shot callers in those markets, so whatever dictates their balance sheet capacity, dictates where those rates go. Funds are piss-ant there, JPM could steamroll Bridgewater, Rokos, BlueCrest, Element, BH, ExodusPoint, Citadel or anybody else stupid enough to lean against the wind there, and they could do it without breaking a sweat.

Right now in the US, it's highly idiosyncratic, some banks are full of Reserves, others are low, some banks choose this position and have more alternative Level 1 HQLA like UST, others are involuntarily low. The best US Rates guys around like Pozsar, Abate, Cabana, Kang, and others have been debating where the terminal level of Reserves is, even the Fed doesn't know exactly, so for Bass to think he could just do some quick back-of-the-envelope calculations to try and figure out where HK banks stand, when a market 100x as studied and surveilled, like the US, is still baffling to Strats and Central Bankers alike, is as insane as a pre-Med student skimming a few surgery books, grabbing a machete, then walking into an operating room....

<https://www.yumpu.com/en/document/view/62668808/trouble-in-hong-kong-part-deux-may-20-2019>

The latest Currency Board sub-account of the Exchange Fund for end-March 2019 indicates that there are HKD1.82trn of backing assets (USD cash and investments in highly liquid USD-denominated securities) for the HKD1.64trn of monetary base, representing a **Backing Ratio of 110.7%, which is more than the 100% required for Currency Board systems.**

But some investors claim that some of the backing assets cannot be considered "usable" FX reserves, since a large part of the monetary base that these back – outstanding Exchange Fund Bills and Notes (EFBN) – cannot be reduced significantly on account of banks' liquidity coverage ratio (LCR) requirements. We disagree with this statement in two ways:

1. First, **there is no "minimum" level of EFBN that banks have to hold for LCR requirements.** If banks stop bidding for EFBN, the released funds would simply replenish their clearing balances at the HKMA (collectively called the Aggregate Balance). So there would be no overall decline in the level of banks' liquid assets, merely a change in composition.
2. Second, we point out that, if EFBN funds are not released to replenish the Aggregate Balance when there are capital outflows, then interest rates will surely rise, reversing the outflows, and so it would be less necessary for the HKMA to draw on its FX reserves, rendering the discussion about "usable" reserves less relevant. The automatic interest rate adjustment mechanism is the crux to how a Currency Board system works.

Staying with the topic on "usable" FX reserves, we also note that the Hong Kong authorities have gone above and beyond what is required of a Currency Board, since the Exchange Fund has an additional HKD1.78trn worth of other foreign assets in its investment portfolio as of end-March 2019 (Chart 1). This is achieved with the help of fiscal prudence – the government usually runs budget surpluses – and the HKMA's investment returns over the years.

### **How much of Hong Kong's FX Reserves are actually useable? – Constraints on the Liability Side**

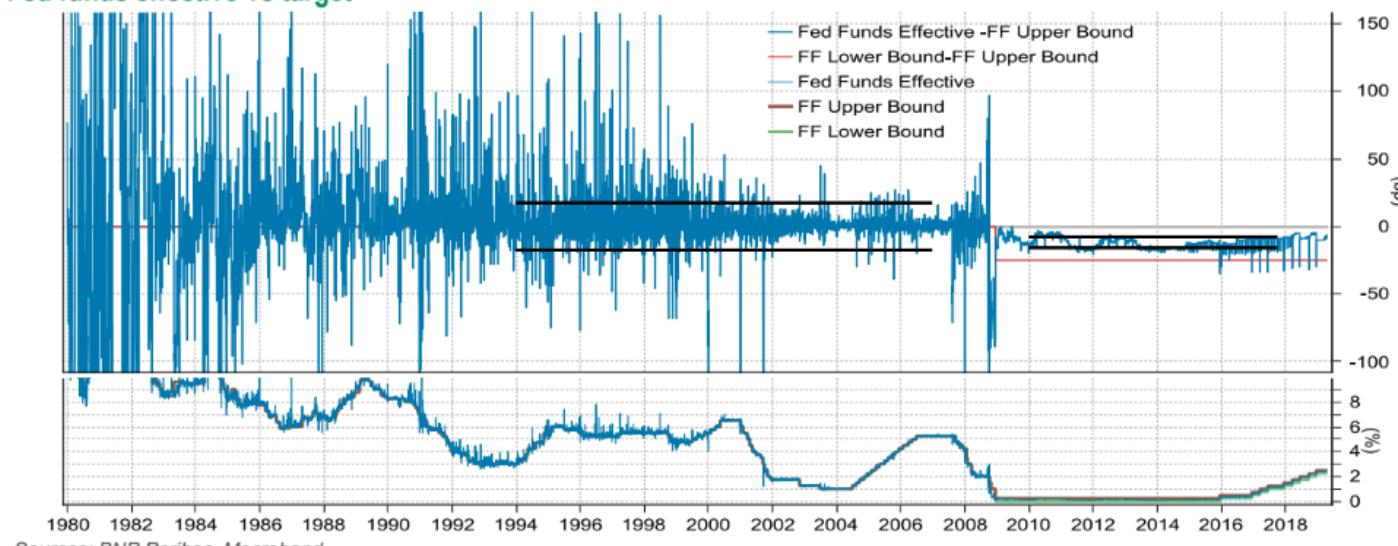
This issue is analogous to the current debate surrounding the size of the United States Federal Reserve's balance sheet. The extraordinary measures taken since the financial crisis led to the Fed's balance sheet expanding to a peak size of \$4.7 trillion USD. Beginning in the fall of 2017, the Fed began to reduce the total size of the balance sheet which now stands at \$3.9 trillion USD and is forecast to shrink to approximately \$3.5 trillion USD. Since 2018, a debate has ensued as to how much the Fed's balance sheet could actually be run off. Between the USD currency-in-circulation and the Basel 3 Liquidity Coverage Ratios (LCRs) that US banks are required to satisfy, the Fed cannot possibly reduce its balance sheet anywhere close to zero. Our own estimate is that the Fed couldn't go much below \$3.5 trillion USD without causing severe interest rate volatility as banks would start to bid for fed funds in ways the Fed would have trouble smoothing out with open market operations. The ensuing economic consequences would be disastrous to a highly levered economy.

Therefore, if you can't reduce your liabilities, you can't reduce your assets by definition. The Fed originally said their balance sheet was going to shrink to around \$2.5 trillion but they are giving up at \$3.5 trillion. It turns out that banks needed more reserves than they realized, and they only learned this through bank surveys. But they also have started to have issues with controlling short term rates (which is why they keep cutting interest on excess reserves (IOER) because the fed funds rate isn't acting as they thought it should).

**APPARENTLY WE HAD NEARLY 40 YEARS OF "DISASTROUS" "ECONOMIC CONSEQUENCES" FROM THIS.....**

## Historically the Fed has had less control of money-market rates

Fed funds effective vs target



- Fed funds effective traded in a much wider range before the financial crisis than after it:
  - 1994-2006: 1SD range = 35bp, mean spread vs fed funds target = 0bp (first official targeting of fed funds was in 1994)
  - 2010-09/2017: 1SD range = 8bp, mean spread vs fed funds upper bound = -12bp
- Can/will the Fed tolerate (a return to) higher fed funds volatility?
- It will likely be difficult to manage overnight rates in the future, given: the greatly increased size of reserves (though normalization reduced their abundance); the diversity of bank business models; and the complexity of regulation. Also, recall that managing overnight rates was never straightforward:
  - "...the pre-crisis monetary policy framework was successful in meeting its monetary objectives, the associated operational procedures were complex and opaque. The operational framework relied on a discretionary and interventionist approach (Logan 2017) based on daily management of the supply of reserves that required detailed market intelligence and expert judgment (Bernanke 2005). The Desk had to provide daily forecasts of reserve demand and supply over multiple days, and to conduct repurchase ("repo") or reverse repo operations almost daily. Reserve demand was difficult to forecast daily, and even predictable changes required OMOs on most days (Logan 2017). Forecasting the autonomous factors that caused daily variations in the supply of reserves was also challenging...." [https://www.newyorkfed.org/medialibrary/media/research/epr/2018/epr\\_2018\\_pre-crisis-framework\\_sarkar.pdf](https://www.newyorkfed.org/medialibrary/media/research/epr/2018/epr_2018_pre-crisis-framework_sarkar.pdf)

This is the kind of arcane, esoteric stuff I would never fault anyone for not knowing.... unless of course it serves as one of the main pillars of a thesis they're promoting globally by every means at their disposal, yelling fire in a crowded theater....

The problems with Bass's claims are that the HKMA makes exceptions for certain banks and their LCR's, and when it comes to HK, the only banks that really matter are the 3 designated by the HKMA for FX intervention. But more importantly, Regs, just like any law, civil or criminal, anywhere in the world, only matter to the extent that they CAN and WILL be enforced.... Suppose some HK banks held 0 HQLA in "violation" of Basel III.... What's gonna happen? They going to get tried in The Hague????

It's not in the HKMA's interest, and especially not in their Patron's interest (the PBOC), to punish their own banks. And we know from recent events, that Beijing, in addition to already having been an implicit backer of HKD if necessary, is tightening their grip on HK in general, so much for the "50 year" agreement with the UK in 97 upon transfer.... But there's an even more important issue than that. One thing that is disturbing to me about him and his rationales is that he makes political arguments at times (especially with CNH). I have a general rule: anytime I hear anyone make a case for any kind of investment in any asset that is less than 100% based on financial/quantitative logic, I know not to touch them with a fucking barge pole. ( Now I distinguish that from Political Risk, if you know an event is going to happen, political or otherwise, and you don't Front-run it, you're a fool. ) But with him, he makes politically qualitative arguments based on ideology and what he thinks ought to be.... as if he's Peter Pan.... it's cringe-worthy. He says things like " China is a totalitarian police state"....

And? His point? Suharto, Pinochet, Park Chung-hee, Francisco Franco, Chiang Kai-Chek, or Sisi in Egypt today, are just a small sample of ruthless tyrants that have presided over massive growth. I'm not excusing or condoning their crimes, merely pointing out that an investment premise based on the nature of a state's political regime is both logically fallacious and demonstrably false per countless historical examples.

Even worse is his infantile belief in the rectifying powers of markets, and "fundamental values." His main beef, as he's made clear many times, is that FX Pegs, Boards etc are artificial constructs that violate market values and are unsustainable....

No shit.... I agree, but what's his point????? How many things have we seen throughout the annals of market history that violate "fundamental values" for countless reasons and stay as such for a VERY LONG TIME.... Do I have to do something like resort to cliches here???? ( KEYNES....MARKETS.....IRRATIONALITY.....SOLVENCY....) I won't waste time pointing out the countless historical examples, I'll actually take a more recent, subtle one.

Tesla, no I'm not going to even get into their financials for 2 reasons: 1, because I'm a Rates & FX Quant, not a janitor who reads company balance sheets, and 2, because it's irrelevant. It pains me to even invoke their name simply because anything related to them, and how they're discussed in the media or on social media, by supporters and detractors alike, is such a toxic combination of low-grade fluff, emotion, and caricature it makes the Kardashians and WWE look like Dostoevsky....

Having said that, recently a video was posted on Twitter showing 2 Retail traders talking about Tesla and their position, and making extremely naive, stupid comments, to which every "Pro" then naturally mocked and ridiculed them relentlessly....Until someone brought up a key point that the "Pros" were missing : The fact that those 2 Retail traders are both imbeciles as well as exact representations of most Tesla holders/cult members, is irrelevant.

When trading anything, your ideal counterparty is one who faces tight constraints, and/or gets a gun put to the back of their heads Luca Brasi-style, forced to unwind (like JPM did w CDX after Boaz and everybody else pilled in). Enthusiastic/Cult-like Low-Information, Unlevered Counterparties CAN SET PRICES FOR A LONG TIME.....

The point here is obvious and hardly needed to be made, “fundamental values” mean nothing when the PRICE MAKER, is unflinching, be they a Central Bank, or a bunch of guys living in their Mom’s basements watching SpaceX launches....If they don’t move, neither does the price.

Yet with his characteristic, infantile, Peter Pan imagination, Bass thinks the market Gods will come to rectify this injustice of HKD valuation (like they did with CNH 😂), righting all wrongs in this world, then tucking him in at night. I’m sure John Meriwether wished the same, but he at least accepted the fact that it wasn’t gonna happen. In 98, not only did the HKMA disembowel Soros, THEY EVEN BOUGHT EQUITIES<sup>1</sup> JUST TO MAKE AN EXAMPLE OUT OF HIM. If you’re going to be emotional, and make non-economic trades based on political/ideological reasons, keep in mind that your counterparty here does the same, yet they have a much larger arsenal and will scorch the Earth in front of them just to prove a point, like Beijing already does, placing 1 Million+ Muslims in Concentration Camps just to prevent a few dozen deaths a year from terrorist attacks, or an example from another era and place, namely what Stalin did when dynamiting the Dnieper Hydroelectric Station during the 2nd World War:

“The Russians have proved now by their destruction of the great dam at Dniepropetrovsk that they mean truly to scorch the earth before Hitler even if it means the destruction of their most precious possessions ... Dnieprostroy was an object almost of worship to the Soviet people. Its destruction demonstrates a will to resist which surpasses anything we had imagined. I know what that dam meant to the Bolsheviks ... It was the largest, most spectacular, and most popular of all the immense projects of the First Five-Year Plan ... The Dnieper Dam when it was built was the biggest on earth and so it occupied a place in the imagination and affection of the Soviet people difficult for us to realize ... Stalin's order to destroy it meant more to the Russians emotionally than it would mean to us for [Roosevelt](#) to order the destruction of the [Panama Canal](#).”

After Stalingrad, the Nazis offered to do a Prisoner Exchange, their Field Marshal Paulus for Yakov Dzhugashvili (his son), Stalin's response:

***“I will not exchange a Field Marshal for a lieutenant.”***

Bass needs to get disemboweled in the market to realize that it's not his friend, an arbiter of justice, or anything of the sort, and that he faces a counterparty willing to move the Earth just to harm their enemy and save face.

His “thesis”

<https://www.yumpu.com/en/document/view/62668808/trouble-in-hong-kong-part-deux-may-20-2019>

## Confirmation that Kyle Bass is an imbecile

<sup>1</sup> <https://www.scmp.com/news/china/economy/article/1906325/how-beijing-and-hong-kong-sent-billionaire-george-soros-packing>

## **Q2: At what fixed rate(s) is the HKD linked to the USD?**

Since October 1983, the Linked Rate of the currency board system has been set at **HKD7.80 to one USD**. When banks issue [withdraw] HKD notes, they submit [receive] an equivalent amount of USD at the Linked Rate of HKD7.80 to one USD to [from] the HKMA in exchange for **Certificates of Indebtedness**.

After May 2005, the LERS has been refined into an exchange rate target zone regime, from a single fixed rate regime. In addition to the Linked Rate of HKD7.80 to one USD which applies to Certificates of Indebtedness, there are two other important USD-HKD exchange rate levels which form a **Convertibility Zone of HKD7.75-7.85/USD that apply to the Aggregate Balance**.

The HKMA has a standing commitment to buy any amount of USD that licensed banks in Hong Kong wish to sell to it, by crediting their clearing accounts with HKD (hence increasing the Aggregate Balance) at the rate of HKD7.75 to one USD. This is known as the **strong-side Convertibility Undertaking**. Symmetrically, it also has a commitment to sell any amount of USD to banks, by debiting their HKD clearing accounts (hence decreasing the Aggregate Balance) at the rate of HKD7.85 to one USD. This is known as the **weak-side Convertibility Undertaking**.

**The triggering of either Convertibility Undertaking is passive, that is, initiated by banks.** Even if USD-HKD is trading at 7.75 or 7.85, the Convertibility Undertaking may not necessarily be triggered as banks may be buying and selling HKD at those levels among themselves.

The HKMA can conduct foreign exchange intervention within the Convertibility Zone, but such actions have been very rare. The HKMA said it last did so in mid-2005, to smooth out interest rate volatility induced by an IPO. The HKMA believes that discretionary actions undermine the credibility of the LERS.

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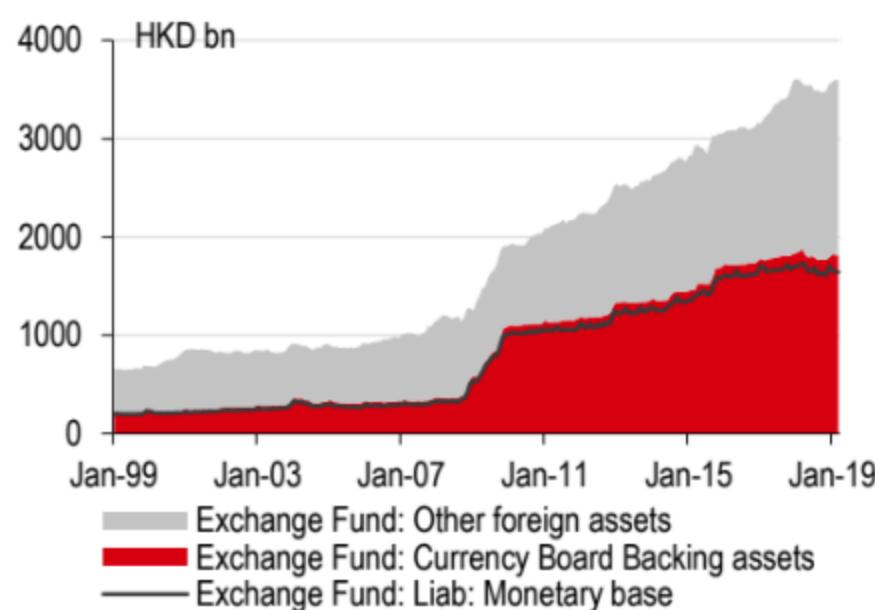
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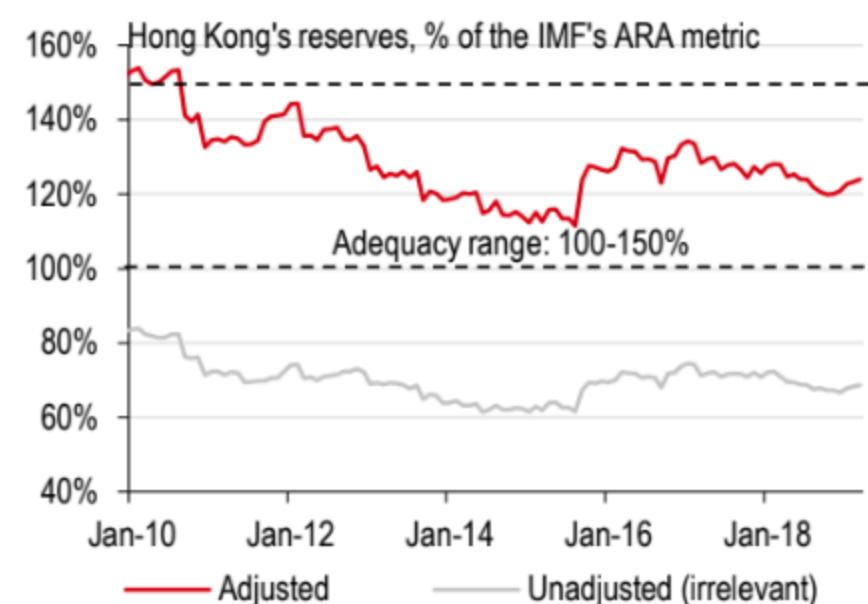
Staying with the topic on “usable” FX reserves, we also note that the Hong Kong authorities have gone above and beyond what is required of a Currency Board, since the Exchange Fund has an additional HKD1.78trn worth of other foreign assets in its investment portfolio as of end-March 2019 (Chart 1). This is achieved with the help of fiscal prudence – the government usually runs budget surpluses – and the HKMA’s investment returns over the years.

We estimate that Hong Kong's foreign reserves are now 125% of the adjusted IMF's ARA metric for fixed exchange rate regimes (Chart 2), not so different from Singapore's 140%, and within the 100-150% adequacy range suggested by the IMF.

**1. Foreign assets in the Exchange Fund are 220% of the monetary base, exceeding the 100% required of a currency board**

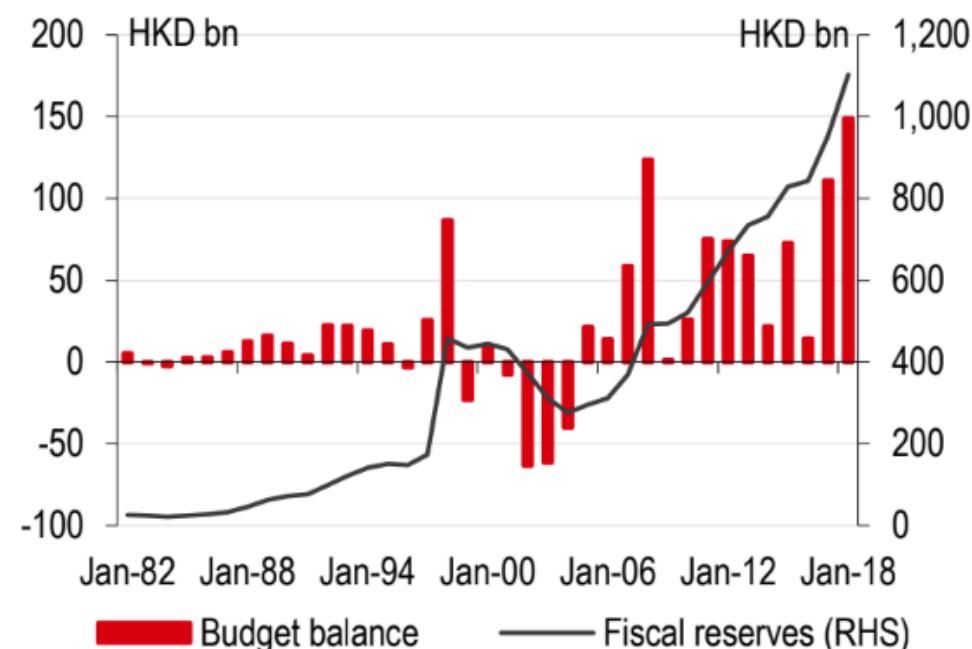


**2. Hong Kong has sufficient FX reserves, even by the IMF's (adjusted) ARA metric which is not actually relevant**

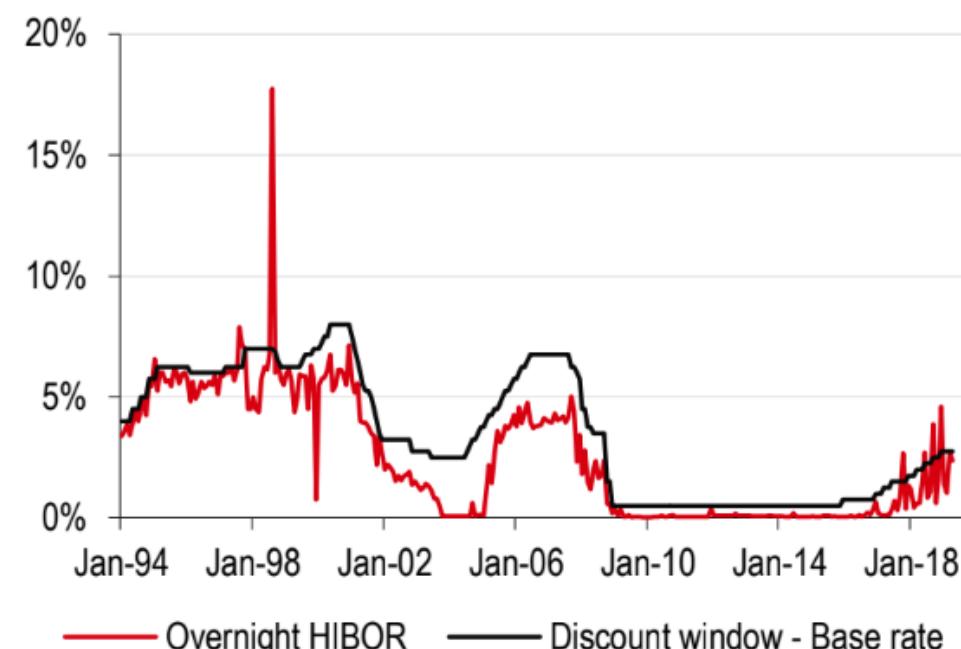


In any case, Hong Kong interest rates are unlikely to rise to the extraordinary levels seen in the late 1990s (Chart 6), given the refinements to the **liquidity support facilities that the HKMA provide to banks**. The Discount Window allows banks to borrow HKD on an overnight basis at rates that are not that much higher than HIBOR, and during the 2008 global financial crisis, the HKMA even temporarily adjusted the discount rate formula to more effectively cap interbank borrowing rates.

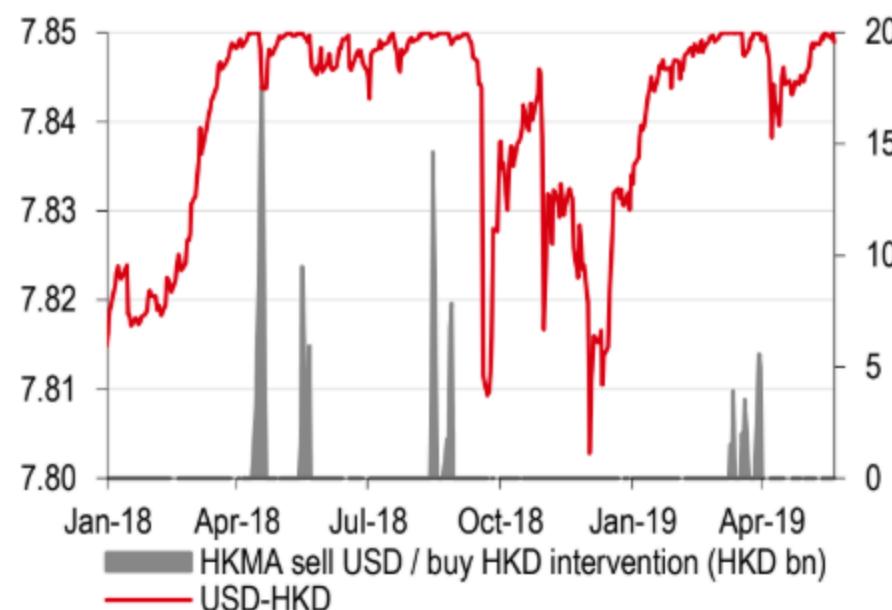
**5. The government has ample fiscal reserves to provide economic assistance**



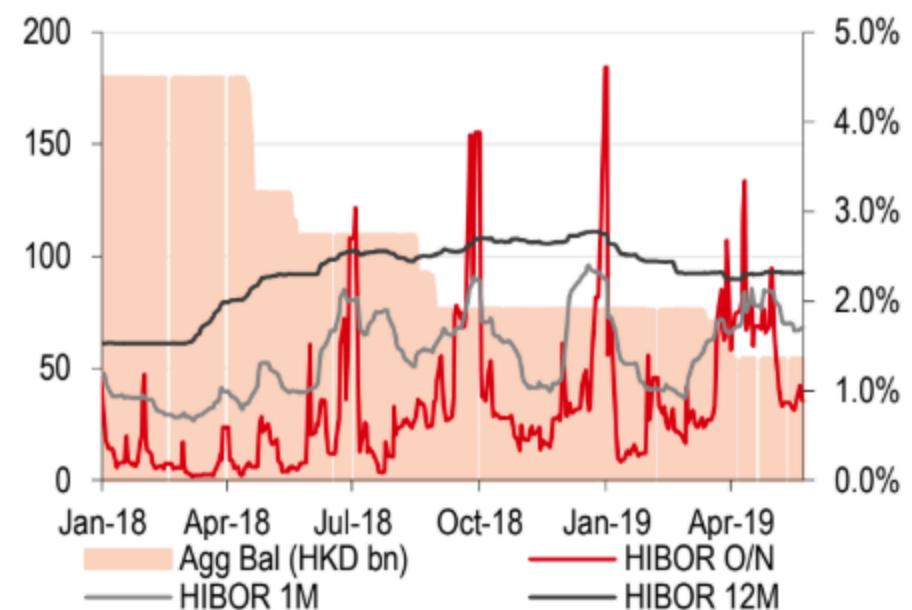
**6. The HKMA provides repo facilities to banks in the event of a liquidity crunch**



## 7. The HKMA has sold USD16bn of FX assets since 13 April 2018 ...



## 8. ... and the Aggregate Balance has thus fallen by HKD126bn

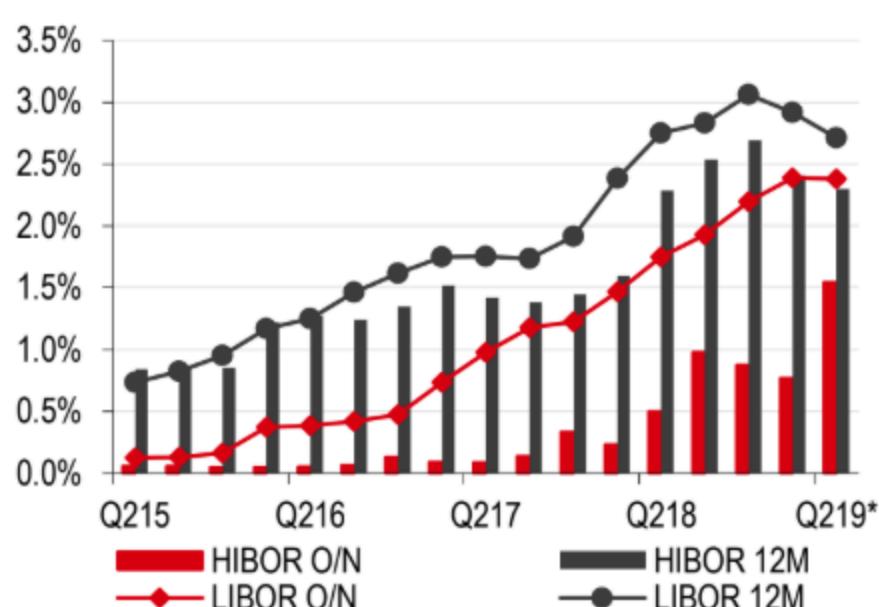


**Nevertheless, HIBOR remains lower than LIBOR across the curve** (see Chart 9 again). This suggest that there is still ample liquidity in the Hong Kong interbank system. Aside from the HKD54bn of Aggregate Balance, banks also own around HKD970bn of EFBN that they could use to obtain intra-day or overnight liquidity from the HKMA, thereby adding to the Aggregate Balance in the process (Chart 10). Indeed, we note that prior to 2008, the Hong Kong interbank system was functioning with an end-of-day Aggregate Balance that was as low as HKD1.3bn and with just HKD100bn of EFBN.

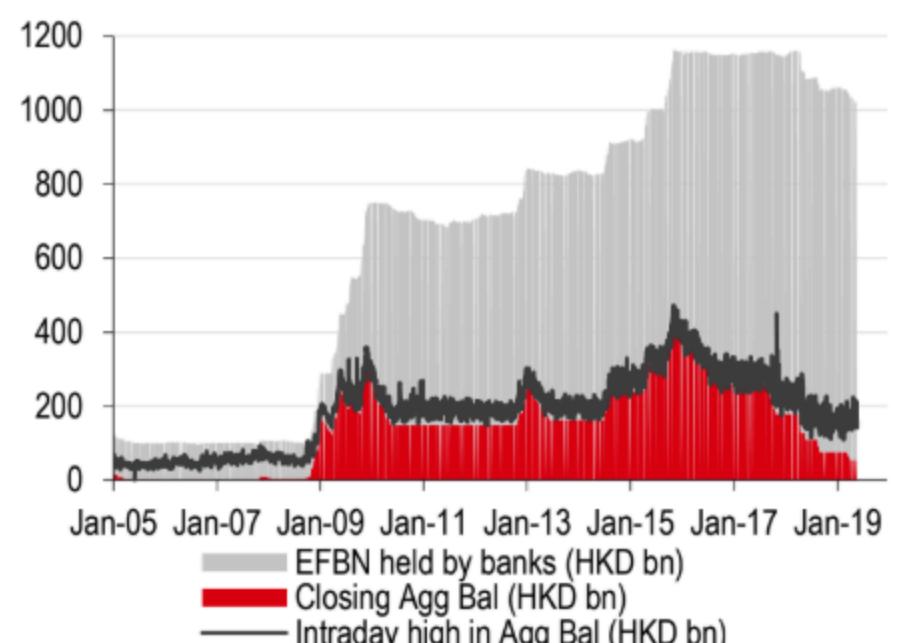
## 2. Volatility around 7.80

But this is not the only the path for USD-HKD in the near-term. Recently, market expectations for the **US Fed to cut interest rates** before the end of the year have risen. This suggests a scenario whereby HIBOR may soon converge with a falling LIBOR even without further declines in the Aggregate Balance. With that source of upward pressure on USD-HKD alleviated, we believe the exchange rate could fluctuate around the middle of the band (7.80) instead.

## 9. HIBOR has risen, but remains below LIBOR

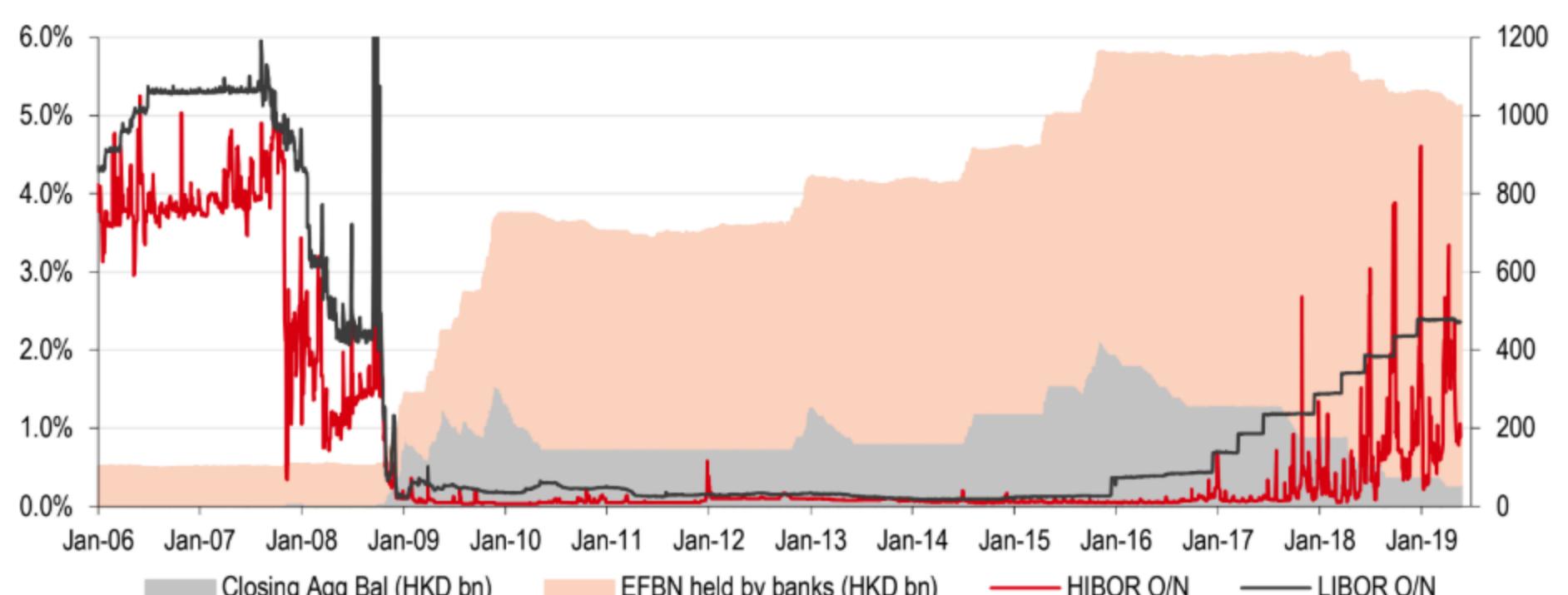
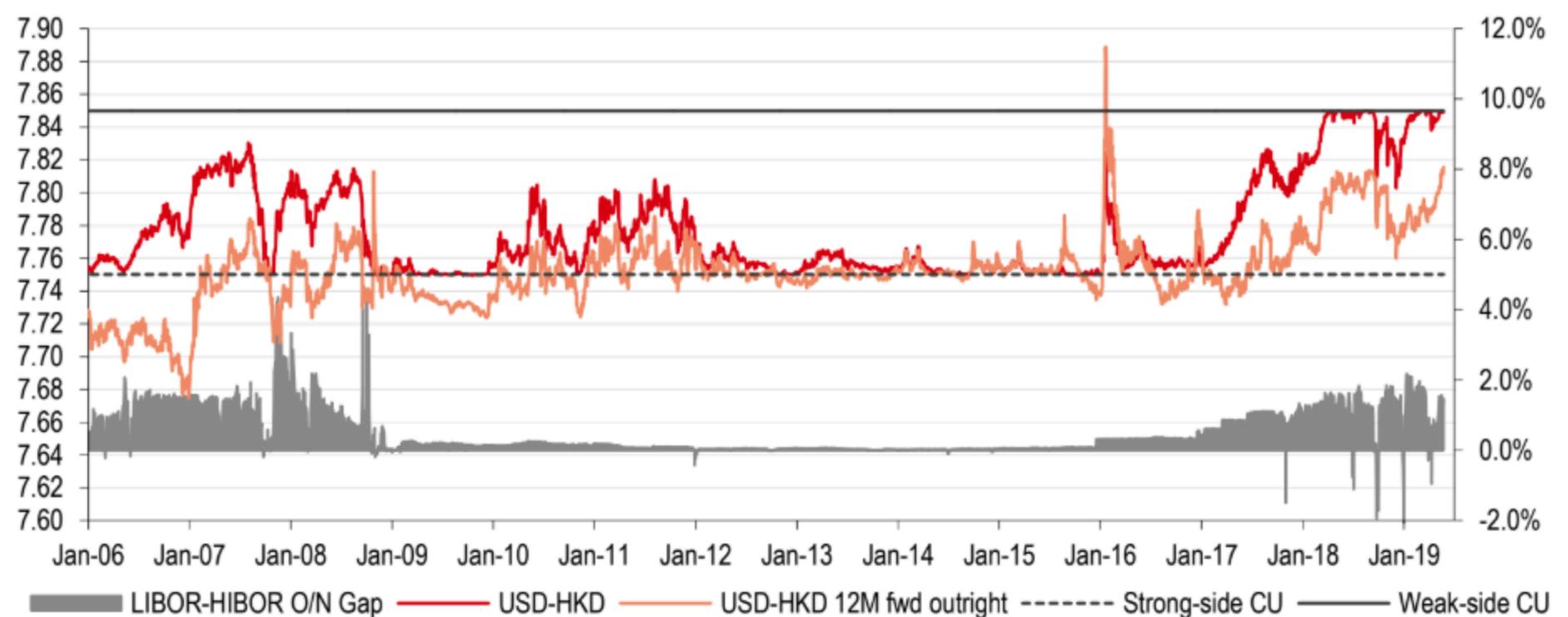


## 10. The monetary base (which also includes EFBN) is still too large



And if the RMB weakens materially because of a significant escalation in US-China trade tensions, the HKD REER could rise further and sentiment on the Hong Kong economy would likely also be negatively affected. **Significant RMB weakness, or the expectations thereof, could also put upward pressure on USD-HKD forward points**, similar to the episode in early January 2016 when the 12m forward outright level broke above 7.85 (Chart 15).

## 11. USD-HKD and the LIBOR-HIBOR gap during the last Fed easing cycle in 2007-2009



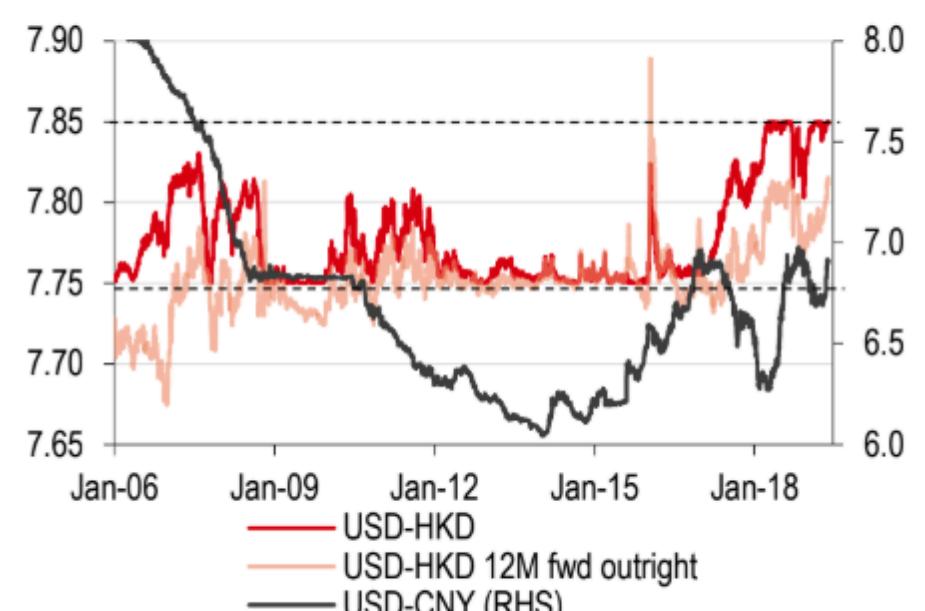
Source: Bloomberg, CEIC, HSBC

## 14. The HKD REER is not overvalued now, but neither is it undervalued like in 2007



Source: BIS, HSBC

## 15. If the RMB weakens significantly, the HKD's risk premium would likely rise



Source: Bloomberg, HSBC

# Nationalistic Folly vs Sober Analysis

1983 CIA Study

"Report on a Study of Intelligence Judgments. Preceding Significant Historical Failures: The Hazards of Single-Outcome Forecasting."

Highting 1 success among many blunders and how Nationalism poisons debate.

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Approved For Release 2006/01/30 : CIA-RDP86B00269R001100100010-7

The Director of Central Intelligence  
Washington, D.C. 20505

National Intelligence Council

NIC-5640-83  
4 August 1983

NOTE FOR: Senior Review Panel

iX1

FROM: [redacted]

SUBJECT: Possible Nominees for Warning Case Studies

1. The following represent -- in no particular order of priority -- certain cases of various types where intelligence performed variously. Some of these might or might not be of interest to your inquiry.

iX1

a. 1973, The oil embargo. Intelligence Performance (IP): not so hot. The SSCI published a thoughtful post-mortem on this one (1976?).

b. 1964, China's entry into the nuclear weapons ranks. IP: pretty good. Performance was also fairly good, years later, re anticipating the Indian detonation -- [redacted]

c. 1950, The Chinese attack in North Korea. IP: poor. Some junior analysts in the then DDCI had it right, but no one was listening. This caused Truman and DCI Beedle Smith to establish the O/NE and the NIEs.

d. 1978-1979, The fall of the Shah. IP: poor. The SSCI did a thorough all-source staff study of this. It was not published, but probably would be available.

e. 1968, anticipating the Tet Offensive. IP: opinions vary. A number of PMs have probably been done, though I'm not familiar with them.

f. Over the years, anticipating specific Soviet strategic weapons systems. IP: pretty good.

g. Over the years, anticipating the extent and the goals of Soviet strategic weapons programs. IP: after initially overestimating, seriously underestimated for many years. A huge question, and one much massaged.

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Library

**CIA Analysis of the 1967 Arab-Israeli War**

**Getting It Right**

David S. Robarge

"... one of those rare instances when unpoliticized intelligence had . . . immediate impact on US foreign policy."

With all the attention paid of late to intelligence failures, it is easy to forget that sometimes the intelligence process has worked almost perfectly. On those occasions, most of the right information was collected in a timely fashion, analyzed with appropriate methodologies, and punctually disseminated in finished form to policymakers who were willing to read and heed it. Throughout those situations, the intelligence bureaucracies were responsive and cooperative, and the Director of Central Intelligence had access and influence downtown. One such example that can be publicly acknowledged arose in 1967 in a familiar flash point area—the Middle East—and put Director of Central Intelligence (DCI) Richard Helms in the position of making or breaking his, and the CIA's, reputation with one of the most difficult and demanding presidents the United States has ever had—Lyndon Johnson.

In his memoir, Helms wrote that

*Russell Jack Smith, former director for intelligence [analysis at the CIA], has described my working relationship with President Johnson as "golden"—in the sense that it was close to the maximum that any DCI might hope to achieve. However comforting, this assessment is too generous. It was not my relationship with LBJ that mattered, it was his perception of the value of the data and the assessments the Agency was providing him that carried the day.<sup>[1]</sup>*

Certainly the key intelligence achievement that "carried the day" for Helms and the CIA under Johnson was the Agency's strikingly accurate analysis about the Arab-Israeli war of June 1967. It was one of those rare instances when unpoliticized intelligence had a specific, clear-cut, and immediate impact on US foreign policy. The CIA was right about the timing, duration, and outcome of the war; the judgments quickly reached US leaders in an immediately usable form; and the Agency did not temper its analysis when faced with policymaker resistance. The whole 1967 war intelligence scenario demonstrated that well-substantiated findings advocated by a respected DCI with access to the White House could win out over political pressures and policymakers' predilections.

Despite a number of blunders, there was one particular, outstanding success, namely the Six Day War. Prior, In 1956, Israel duplicitously colluded<sup>234</sup> with Britain and France to attack Egypt, this fact is incontrovertible and supported by unimpeachable sources, all cited below including Israel's own Defense Archives. This was of course, after the even more deplorable "Lavon Affair."<sup>567</sup> The international outrage was so severe after invasion, that Eisenhower himself threatened financial warfare against Britain and Sanctions against Israel. In 1967, the CIA made an assessment of the military situation, they naturally concluded that Israel's military was vastly superior to Egypt's and that the situation was asymmetric, characterizations of 1967 being a potential war of annihilation for Israel are demonstrably farcical, again from both the CIA and Israel's own (internal) conclusions. Interestingly, while the U.S. reaction in 67 was the opposite of 56 (not surprising as Washington's main problem in the area at the time was Arab Nationalism which the 67 War ended), France's reaction was too the complete opposite. De Gaulle imposed an Arms Embargo<sup>89</sup> on Israel.

They even mocked Israel's histrionic suggestions "**We do not believe that the Israeli appreciation . . . was a serious estimate of the sort they would submit to their own high officials.**" "**It is probably a gambit intended to influence the US to . . . provide military supplies**" See the report drafted by them on the link to the report, LBJ even said

**"All of our intelligence people are unanimous that if the UAR attacks, you will whip hell out of them."**

People can argue till their blue in the face about other aspects of Israeli conflicts, and their corresponding justifications, but generally, when a state is truly acting in self-defense, they don't clandestinely collude with other powers, including the world's foremost colonial powers, to start an armed conflict, nor do they publicly lie about it later as Israel did in 67 claiming that Nasser attacked first. Israel threw his military around like a ragdoll.... The notion that they were any sort of existential threat was laughable, I wouldn't even be sure if many of Nasser's troops knew which end of a rifle to hold....Nor the Syrian or Jordanian armies either.... Not to mention the fact that Israel had acquired Nuclear Weapons by this point<sup>1011</sup>, through their development program which had started years earlier with the help of none other than Edward Teller himself...

Suppose for a moment Israel didn't have the massive conventional military superiority, Nukes alone negate so much as the notion that they were threatened with annihilation in 67, lest the leaders in Damascus, Cairo, or Amman desperately wanted to be sent back to the 5th century B.C.....

(also keep in mind that Nasser was a secular despot, who routinely shot and tortured Muslim Brotherhood members, and Hafez Assad was a Ba'athist, ergo one can't claim this was some kind of suicidal Jihad against Israel, wishing to be Nuked. Nasser even mocked those who suggested mandatory Hijabs....

<https://www.youtube.com/watch?v=ZIqdrFeFBk>

The problem with this issue, and many like it, is Nationalism, and how it poisons discourse. Everyone knows the word "Fascist" has long been evacuated of all meaning, it's merely a catch-all pejorative, and was even in 1946 when Orwell made the same observation. However, there are 2 aspects of Fascism about which no one disagrees, and which are necessary conditions for its existence: authoritarian rule, and nationalism.

Nationalism has always been not only sociopathic but crude, the ethnic and/or religious variation is hardly any worse. And dispense with infantile parsings like that which Macron did recently on "Patriotism" vs Nationalism, they're both equally sordid and base, representing emotion over thought, entwining the state

<sup>2</sup> [https://en.wikipedia.org/wiki/Protocol\\_of\\_S%C3%A8vres](https://en.wikipedia.org/wiki/Protocol_of_S%C3%A8vres)

<sup>3</sup> <http://users.ox.ac.uk/~ssfc0005/The%20Protocol%20of%20Sèvres%201916%20Anatomy%20of%20a%20War%20Plot.html>

<sup>4</sup> <http://www.archives.mod.gov.il/sites/English/Exhibitions/Pages/Operation-Kadesh.aspx>

<sup>5</sup> [https://en.wikipedia.org/wiki/Lavon\\_Affair](https://en.wikipedia.org/wiki/Lavon_Affair)

<sup>6</sup> <https://www.haaretz.com/israel-news/israel-reveals-controversial-lavon-affair-correspondence-62-years-later-1.5401166>

<sup>7</sup> [https://cisac.fsi.stanford.edu/publications/the\\_lavon\\_affair\\_how\\_a\\_falseflag\\_operation\\_led\\_to\\_war\\_and\\_the\\_israeli\\_bomb](https://cisac.fsi.stanford.edu/publications/the_lavon_affair_how_a_falseflag_operation_led_to_war_and_the_israeli_bomb)

<sup>8</sup> <https://www.nytimes.com/1964/03/29/archives/account-of-lavon-affair-controversial-issue-in-israeli-politics.html?mtrref=www.google.com&gwh=C8D8096ABAA52675FDBE754BC898386E&gwt=pay>

<sup>9</sup> <https://www.jpost.com/Opinion/Editors-notes-De-Gaulle-and-Israels-technological-revolution-494578>

<sup>10</sup> <https://www.haaretz.com/israel-news/.premium.MAGAZINE-israel-deceived-the-world-in-67-and-paid-the-price-in-73-1.5479696>

<sup>11</sup> <https://www.wilsoncenter.org/publication/israels-quest-for-yellowcake-the-secret-argentina-israel-connection-1963-1966>

<sup>12</sup> [https://en.wikipedia.org/wiki/Nuclear\\_weapons\\_and\\_Israel](https://en.wikipedia.org/wiki/Nuclear_weapons_and_Israel)

with the populace in anthropomorphic ways, hence when one condemns the crimes states commit, one is so too condemned as "Anti-American", in an earlier era: "Anti-Soviet", or in an ethnonationalist state (Israel): "anti-Semitic", all heresies against State Piety...thus indemnifying, in the minds of the populace, the altar of the state, and anything it does, all the while encouraging crimes of aggression in the name of "country."

Never forget that Nationalism itself was born in REACTION to the Enlightenment, in the 19th century, retrograde thinkers (Romanticists) preferring the status quo ante and worse, rolling back the advance of reason and intellect while encouraging all which is base passion, emotional, Medieval and superstitious... What's needed today is a 2nd Enlightenment, to finally discard into the historical Ash Heap, those reactionaries that evangelized the worst of human impulses over the sophisticated.

Like Religion, Nationalism births "Creation Myths" of Immaculate Conception, "Purity of Arms" like stories of Israel's founding which leave out the Irgun, the Lehi/Stern Gang, their many massacres, or the fact that Albert Einstein himself, among many other signatories, condemned them in an open letter in 1948 as Fascist. Keep in mind these were not mere fringe groups, they had 2 men who later became PRIME MINISTERS, Menachem Begin (Irgun) and Yitzhak Shamir (Lehi).... Doesn't get any more mainstream than that, and neither one of them repudiated so much as 1 single action or belief of either group. The Lehi/Stern Gang, even tried to assassinate Truman and Churchill (see next page). Also the Irgun as the standard bearer of the Revisionist/Jabotinsky camp, was the paramilitary wing of Herut, the party that later became, wait for it.... Likud.

<https://www.haaretz.com/jewish/premium-1948-n-y-times-letter-by-einstein-slams-begin-1.5340057>

for his party in the coming Israeli elections, and to cement political ties with conservative Zionist elements in the United States. Several Americans of national repute have lent their names to welcome his visit. It is inconceivable that those who oppose fascism throughout the world, if correctly informed as to Mr. Begin's political

### New Palestine Party

#### Visit of Menachem Begin and Aims of Political Movement Discussed

To the Editors of THE NEW YORK TIMES:

Among the most disturbing political phenomena of our time is the emergence in the newly created state of Israel of the "Freedom Party" (Tnuat HaHerut), a political party closely akin in its organization, methods, political philosophy and social appeal to the Nazi and Fascist parties. It was formed out of the membership and following of the former Irgun Zvai Leumi, a terrorist, right-wing, chauvinist organization in Palestine.

The current visit of Menachem Begin, leader of this party, to the United States is obviously calculated to give the impression of American support for his party in the coming Israeli elections, and to cement political ties with conservative Zionist elements in the United States. Several Americans of national repute have lent their names to welcome his visit. It is inconceivable that those who oppose fascism throughout the world, if correctly informed as to Mr. Begin's political record and perspectives, could add their names and support to the movement he represents.

Before irreparable damage is done by way of financial contributions, public manifestations in Begin's behalf, and the creation in Palestine of the impression that a large segment of America supports Fascist elements in Israel, the American public must be informed as to the record and objectives of Mr. Begin and his movement.

The public avowals of Begin's party are no guide whatever to its actual character. Today they speak of freedom, democracy and anti-imperialism, whereas until recently they openly preached the doctrine of the Fascist state. It is in its actions that the terrorist party betrays its real character; from its past actions we can judge what it may be expected to do in the future.

#### Attack on Arab Village

A shocking example was their behavior in the Arab village of Deir Yassin. This village, off the main roads and surrounded by Jewish lands, had taken no part in the war, and had even fought off Arab bands who wanted to use the village as their base. On April 9 (THE NEW YORK TIMES), terrorist bands attacked this peaceful village, which was not a military objective in the fighting, killed most of its inhabitants—240 men, women and children—and kept a few of them alive to parade as captives through the streets of Jerusalem. Most of the Jewish community was horrified at the deed, and the Jewish Agency sent a telegram of apology to King Abdullah of Trans-Jordan. But the terrorists, far from being ashamed of their act, were proud of this massacre, publicized it widely, and invited all the foreign correspondents present in the country to view the heaped corpses and the general havoc at Deir Yassin.

The Deir Yassin incident exemplifies the character and actions of the Freedom Party.

Within the Jewish community they have preached an admixture of ultra-nationalism, religious mysticism, and racial superiority. Like other Fascist parties they have been used to break strikes, and have themselves pressed for the destruction of free trade unions. In their stead they have proposed corporate unions on the Italian Fascist model.

During the last years of sporadic anti-British violence, the IZL and Stern groups inaugurated a reign of terror in the Palestine Jewish community. Teachers were beaten up for speaking against them, adults were shot for not letting their children join them. By gangster methods, beatings, window-smashing, and wide-spread robberies, the terrorists intimidated the population and exacted a heavy tribute.

The people of the Freedom Party have had no part in the constructive achievements in Palestine. They have reclaimed no land, built no settlements, and only detracted from the Jewish defense activity. Their much-publicized immigration endeavors were minute, and devoted mainly to bringing in Fascist compatriots.

#### Discrepancies Seen

The discrepancies between the bold claims now being made by Begin and his party, and their record of past performance in Palestine bear the imprint of no ordinary political party. This is the unmistakable stamp of a Fascist party for whom terrorism (against Jews, Arabs, and British alike), and misrepresentation are means, and a "Leader State" is the goal.

In the light of the foregoing considerations, it is imperative that the truth about Mr. Begin and his movement be made known in this country. It is all the more tragic that the top leadership of American Zionism has refused to campaign against Begin's efforts, or even to expose to its own constituents the dangers to Israel from support to Begin.

The undersigned therefore take this means of publicly presenting a few salient facts concerning Begin and his party; and of urging all concerned not to support this latest manifestation of fascism.

ISIDORE ABRAMOWITZ, HANNAH ARENDT, ABRAHAM BRICK, RABBI JESSURUN CARDOZO, ALBERT EINSTEIN, HERMAN EISEN, M. D., HAYIM FINEMAN, M. GALLEN, M. D., H. H. HARRIS, ZELIG S. HARRIS, SIDNEY HOOK, FRED KARUSH, BRURIA KAUFMAN, IRMA L. LINDHEIM, NACHMAN MAJSEL, SEYMOUR MELMAN, MYER D. MENDELSON, M. D., HARRY M. ORLINSKY, SAMUEL PITICK, FRITZ ROHRICH, LOUIS P. ROCKER, RUTH SAGER, ITZHAK SANKOWSKY, I. J. SCHOENBERG, SAMUEL SHUMAN, M. ZINGER, IRMA WOLPE, STEFAN WOLPE.

New York, Dec. 2, 1948.

<https://www.jpost.com/Opinion/For-Zions-Sake-Embracing-Jabotinsky-and-Begin-but-with-a-condition-379798>

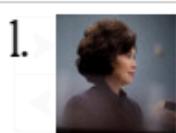
<https://www.bh.org.il/blog-items/ben-gurions-battle-bringing-jabotinskys-bones-israel/>

[https://www.jstor.org/stable/41262424?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/41262424?seq=1#page_scan_tab_contents)

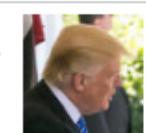
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HOME SEARCH

The New York Times



1. A 'Bridge' to China, and Her Family's Business, in the Trump Cabinet



2. The Most Powerful Arab Ruler Isn't M.B.S. It's M.B.Z.



3. Plenty of Fantasy in HBO's 'Chernobyl,' but the Truth Is Real



4. The Fox News Primary? How Trump's Favorite Network Became a...

TRENDING

## Letter-Bombs Mailed to Truman in 1947

By ERIC PACE DEC. 2, 1972

### About the Archive

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"The so-called Stern gang" of Zionist terrorists tried to assassinate President Truman by letter-bomb in 1947, according to a new biography written by Mr. Truman's daughter.

Mrs. Margaret Truman Daniel writes that "a number of cream-colored envelopes, about eight by six inches, arrived in the White House, addressed to the President and various members of the staff." They were found to contain "powdered gelignite, a pencil battery and a detonator rigged to explode the gelignite when the envelope was opened."

<https://www.nytimes.com/1972/12/02/archives/letterbombs-mailed-to-truman-in-1947-truman-was-sent-bombs-book.html>



The wrecked wing at the King David hotel where the British government chief secretary's office was located, immediately after the explosion, Jerusalem, July 22, 1946. Credit: AP

# Coat Bomb and Explosive Prosthesis: British Intel Files Reveal How the Zionist Stern Gang Terrorized London

MI5's dossiers on the group released this week cast the Cold War's early years in a stark new light: Terrorism, not the Soviet Union, was the main threat

By Calder Walton Dec 02, 2017

<https://www.haaretz.com/israel-news/.premium.MAGAZINE-british-intel-files-reveal-how-the-zionist-stern-gang-terrorized-london-1.5627474>

The Stern Gang's attempted bombing of the Colonial Office in London has been previously revealed. But the files released this week are the first public records from British intelligence's secret archives to show how the Stern Gang operators were tracked down. They also reveal significant new facts about the plot and aspects of it that apparently MI5 did not detect.

In June 1947, two months after the attempted bombing of the Colonial Office, a Stern Gang cell operating in Italy posted 21 letter bombs to senior British politicians and cabinet members including Prime Minister Clement Attlee, Foreign Secretary Ernest Bevin and Chancellor of the Exchequer Stafford, Cripps as well as Winston Churchill. Most of the letter bombs were intercepted, but some reached their intended recipients and failed to go off.

The Conservative Party's Anthony Eden carried a letter bomb disguised in a book around with him for a whole day, until he was warned of the plot and checked inside his briefcase, where it was. British explosive experts reported that all the letter bombs were potentially lethal. One Stern Gang member involved in the plot later claimed that he had "invented the book bomb."

### French-Belgian border check

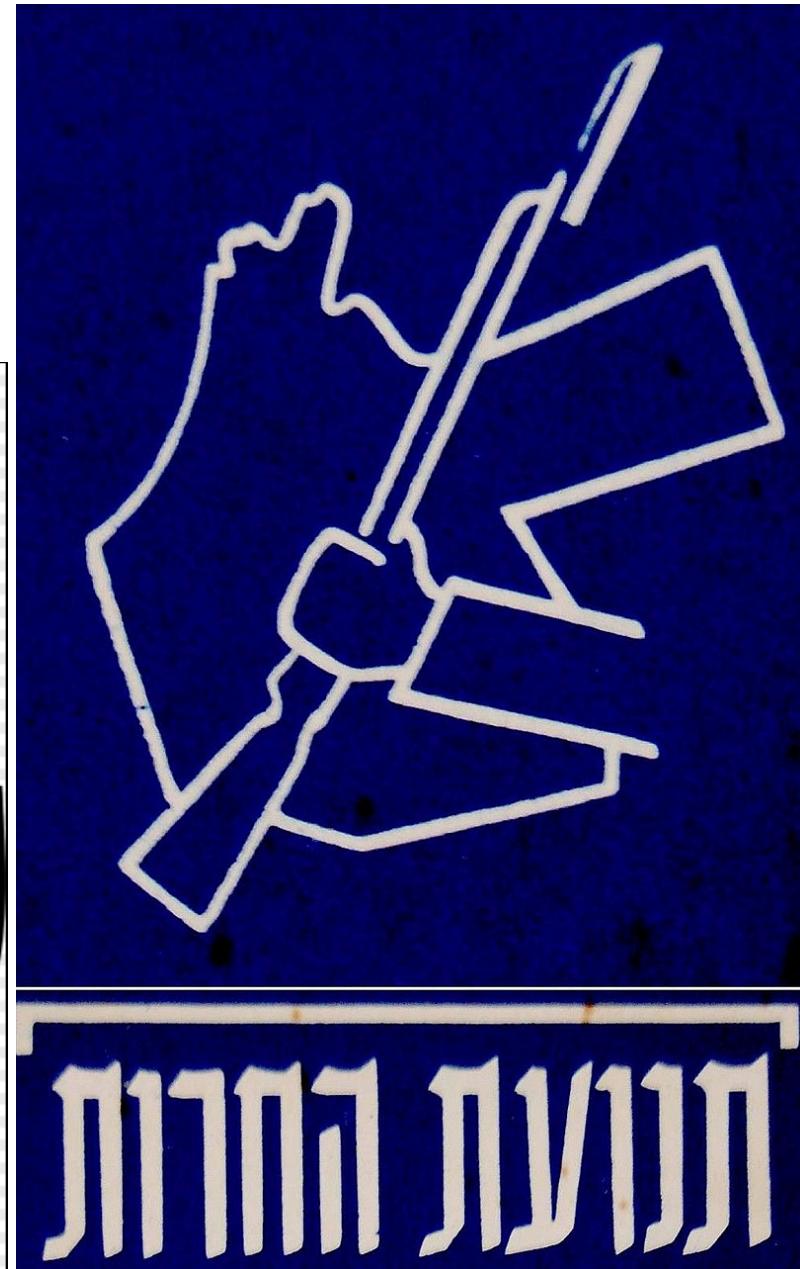
In the wake of the Colonial Office and letter bombs, borders and ports in Britain were placed on high alert to look for suspicious people potentially planning further attacks, and MI5 placed known extremist Jewish and Zionist groups in Britain under intense surveillance. But as one MI5 officer wrote in an internal memo, "these terrorists are hard nuts to crack."

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They not only claimed the West Bank but also Jordan, even making this explicit on their emblems, Irgun and Herut, respectively (notice the "East Bank of the Jordan River<sup>1213</sup>", to the right of the rifles also known as Jordan.....)

<sup>12</sup> [https://en.wikipedia.org/wiki/The\\_East\\_Bank\\_of\\_the\\_Jordan](https://en.wikipedia.org/wiki/The_East_Bank_of_the_Jordan)

<sup>13</sup> [https://www.washingtonpost.com/archive/opinions/1980/11/16/the-mentor-who-shaped-begins-thinking-jabotinsky/ceac5816-9feb-4766-93bb-c8ac65c80680/?utm\\_term=.5eeb530dbf31](https://www.washingtonpost.com/archive/opinions/1980/11/16/the-mentor-who-shaped-begins-thinking-jabotinsky/ceac5816-9feb-4766-93bb-c8ac65c80680/?utm_term=.5eeb530dbf31)



Summary

LBJ LIBRARY  
Mandatory Review  
Case # NLJ 04-53  
Document # 50a

Israel could almost certainly attain air supremacy over the Sinai Peninsula in less than 24 hours after taking the initiative or in two or three days if the UAR struck first. It would lose a third to half of its airforce. Armored striking forces could breach the UAR's double defense line in the Sinai in three to four days and drive the Egyptians west of the Suez Canal in **seven to nine days.** Israel could contain any attacks by Syria or Jordan during this period.

I. General Assessment

1. The Israel Defense Forces (IDF) are at a numerical disadvantage to the combined strength of its Arab neighbors in terms of aircraft, armor, artillery, naval vessels, and manpower. Nonetheless, the IDF maintain qualitative superiority over the Arab armed forces in almost all aspects of combat operations. The high quality of training and maintenance,

EO 12958 3.3(b)(1)>25Yrs

APPROVED FOR RELEASE  
DATE: APR 2004

EO 12958 3.3(b)(6)>25Yrs

(S)

~~TOP SECRET~~

Helms had the Office of National Estimates (ONE) prepare an appraisal of the Mossad assessment, which was ready in only five hours. ONE flatly stated: "We do not believe that the Israeli appreciation . . . was a serious estimate of the sort they would submit to their own high officials." Rather, "it is probably a gambit intended to influence the US to . . . provide military supplies . . . make more public commitments to Israel . . . approve Israeli military initiatives, and . . . put more pressure on [Egyptian President] Nasser." ONE further concluded—contrary to Tel Aviv's suspicions—that "the Soviet aim is still to avoid military involvement and to give the US a black eye among the Arabs by identifying it with Israel"; Moscow "probably could not openly help the Arabs because of lack of capability, and probably would not for fear of confrontation with the US." It was this latter ONE judgment that caused Dean Rusk to remark to Helms, "if this is a mistake, it's a beaut." The same judgment triggered an order from the president to Helms and Joint Chiefs of Staff Chairman Earle Wheeler to "scrub it down." Helms returned to CIA headquarters and told the Board of National Estimates to produce a coordinated assessment by the next day.<sup>[7]</sup>

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### Making the Right Call

That paper—issued the following afternoon with the title "Military Capabilities of Israel and the Arab States"—is the illustrious "special estimate" in which the CIA (in collaboration with the Defense Intelligence Agency) purportedly called the war right, from its outcome down to the day it would end. It actually was a memorandum, not a Special National Intelligence Estimate, and although drafts had said that the Israelis would need seven to nine days to reach the Suez Canal, that precision was sacrificed in the coordination process. Instead, the paper estimated that Israeli armored forces could breach Egypt's forward lines in the Sinai within "several" days. In another memorandum issued the same day, ONE doubted that Moscow had encouraged the Egyptian president's provocations and concluded that it would not intervene with its own forces to save the Arabs from defeat. As one senior Agency analyst who helped write these papers later remarked: "Rarely has the Intelligence Community spoken as clearly, as rapidly, and with such unanimity."<sup>[8]</sup>

Informed by these assessments, President Johnson declined to airlift special military supplies to Israel or even to publicly support it. He later recalled bluntly telling Israeli Foreign Minister Abba Eban, "All of our intelligence people are unanimous that if the UAR attacks, you will whip hell out of them."<sup>[9]</sup>

Having answered one crucial question of the president's—how would the war end?—Helms also was able to warn him when it was about to begin. According to several published accounts, Helms met on 1 June with a senior Israeli official who hinted that Israel could no longer avoid a decision. Its restraint thus far was due to American pressure, but, he said, the delay had cost Israel the advantage of surprise. Helms interpreted the remarks as suggesting that Israel would attack very soon. Moreover, according to Helms, the official stated clearly that although Israel expected US diplomatic backing and the delivery of weapons already agreed upon, it would request no additional support and did not expect any. The official abruptly left the United States on 2 June along with the Israeli ambassador. That morning, according to published accounts, Helms wrote an "Eyes Only" letter to President Johnson, forewarning that Israel probably would start a war within a few days.<sup>[10]</sup>

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### War!

Helms was awakened at 3:00 in the morning on 5 June by a call from the CIA Operations Center. The Foreign Broadcast Information Service had picked up reports that Israel had launched its attack. (OCI soon concluded that the Israelis— contrary to their claims—had fired first.) President Johnson was gratified that because of CIA analyses and Helms's tip, he could inform congressional leaders later in the day that he had been expecting Israel's move.<sup>[11]</sup>

During the brief war, Helms went to the White House every day but one, reporting to the NSC and the president's special committee of Middle East experts, using the outpouring of SITREPS from OCI (five a day), DI special memoranda, the *President's Daily Brief*, and other analytical products. "In the midst of one meeting," Helms recalled,

*LBJ suddenly fixed his attention on me in my usual seat at the end of the long table. "Dick," he snapped, "just how accurate is your intelligence on the progress of this war?" Without having a moment to consider the evidence, I shot from the hip, "It's accurate just as long as the Israelis are winning." It may have sounded as if I were smarting off, but it was the exact truth, and it silenced [those around] the table. Only an amused twitch of Dean Acheson's mustache suggested his having noted my reasoning.*

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Already in June 1956 discussions have begun between the heads of the Israeli and French defense systems, regarding cooperation in arms acquisition and intelligence. By that time it was clear that Nasser was supporting the rebellion in Algeria, thus undermining French colonial rule in North Africa, therefore the French regarded positively Israel's participation in an operation to overthrow his regime. These negotiations, resulting in a big arms deal between Israel and France, sow the seeds that would mature in discussions carried in September–October 1956 in both Israel and France, in which the tri-partite military operation against Egypt was formulated.

On October 22, 1956 Prime Minister David Ben-Gurion, Director General of the Ministry of Defense Shimon Peres and Chief of Staff Moshe Dayan secretly travelled from Israel to an isolated house in Sèvres to meet the French Minister of Defense Maurice Bourgès-Maunoury, Minister of Foreign Affairs Christian Pineau and Chief of Staff of the French Armed Forces General Maurice Challe, and British Foreign Secretary Selwyn Lloyd and his assistant Sir Patrick Dean. After 48 hours of negotiations and compromise, the seven-point agreement was signed on October 24, 1956 by Ben-Gurion, Pineau and Dean, The Sèvres Protocol. At the insistence of the Israeli diplomats, wanting to prevent being abandoned in the middle of the invasion, each group left Sèvres with a signed copy, written in French.

According to the Protocol "Israel would be invited to attack the Egyptian army in Sinai and pose a threat to the Suez Canal and this would provide Britain and France with the pretext to activate their military plans and occupy the Suez Canal Zone, ostensibly in order to separate the combatants and protect the canal. The real aim was, of course, to take control of the Canal Zone and to void its nationalization by Egypt. The protocol also included a commitment to defend Israel from Egyptian air attacks during the expected warfare."

In time the Protocol was called a "Collusion," which, when exposed forced the resignation of the British Foreign Secretary.

Israel prepared for the operation, spurred by Chief of Staff Moshe Dayan, who' already in November 1955 submitted a plan to occupy Sharm el-Sheikh and lift the Egyptian blockade. At that time, the plan was rejected by Ben Gurion.

SRP FILE

THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D.C. 20505

Senior Review Panel

NIC 9079-83/1  
16 December 1983

MEMORANDUM FOR: Director of Central Intelligence  
Deputy Director of Central Intelligence

SUBJECT: Report on a Study of Intelligence Judgments  
Preceding Significant Historical Failures:  
The Hazards of Single-Outcome Forecasting

1. Submitted herewith is the subject report, responding to  
your request.

2. In this report we have attempted to determine the  
causes, in instances when the Intelligence Community did not  
adequately anticipate significant events on the world scene, and  
to identify measures which might improve performance in the  
future.

3. In addition to yourselves, we have sent this report only  
to the Chairman, National Intelligence Council. Should you wish  
further distribution, we would be pleased to follow up as needed. 25X1



25X1

THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D.C. 20505

Senior Review Panel

29 September 1983

MEMORANDUM FOR: Director of Central Intelligence  
Deputy Director of Central Intelligence

SUBJECT: Status of Project to Examine the  
Estimative Record on Several Major Issues

1. Pursuant to your request to the Panel to examine the quality of estimative products on issues of great importance to the US over the past 20 years or so, we have sifted a considerable body of materials and identified ten major problems--the first four of which you suggested--which we think best conform to your intent. These are

- a. The Castro significance a year or so before he took power.
- b. The prospects of further Soviet intervention in Afghanistan after the first coup in the late 1970s.
- c. The likelihood of North Vietnamese intervention in South Vietnam.
- d. The likelihood of all-out Soviet support to Hanoi.
- e. The OPEC price rise in 1973.
- f. The fall of the Shah.
- g. Qadhafi and the Libyan revolution in 1969.
- h. The fall of Haile Selassie and the rise of Mengistu in 1974.
- i. The fall of Somoza and the nature of the Sandinistas.
- j. The Sino-Soviet split in 1950.

ALL PARAGRAPHS  
ARE SECRET

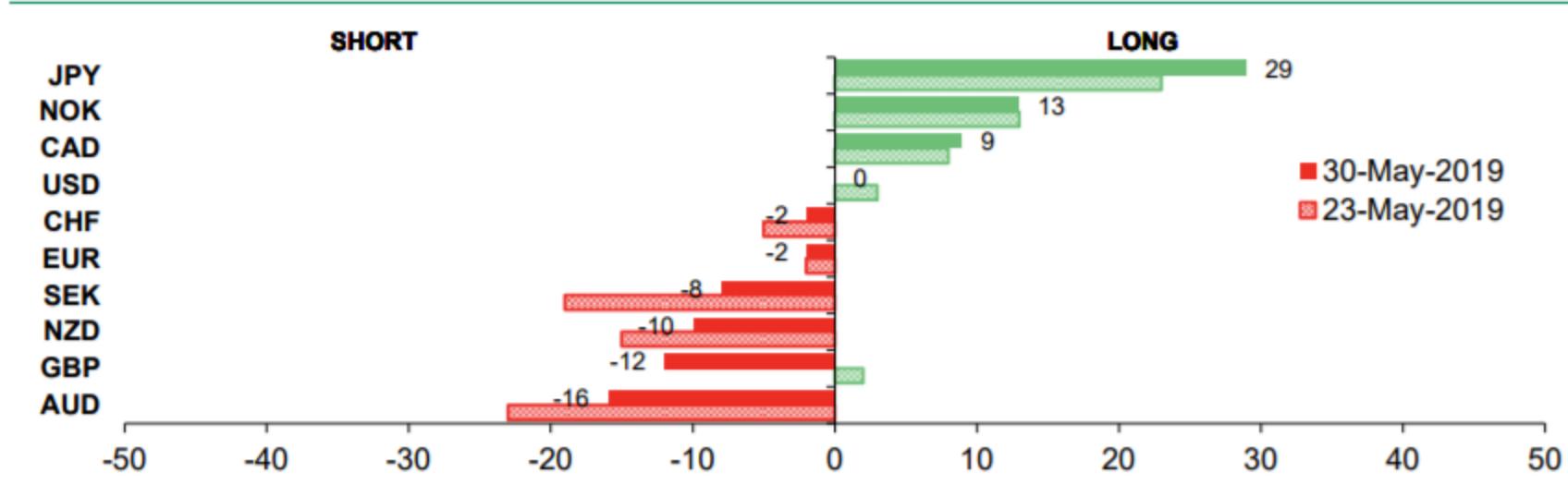
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REF ID: ADR

- The market builds JPY longs, with a score of +29 (scale -/+ 50), the longest score since 3 January 2019.
- USD positioning is neutral with a score of 0.
- The market reduces AUD shorts, currently with a score of -16, as a result of the FX Fund Position Tracker building long positions.
- FX investors add GBP shorts with a score of -12, driven by the Buy Sell Pressure component turning bearish on the GBP.
- SEK shorts reduce to a score of -8 as a result of the BNP Paribas Trending Indicator and the FX Fund Position Tracker components turning more positive on the SEK.

Fig. 1: BNP Paribas FX Positioning Analysis – overall positioning\*

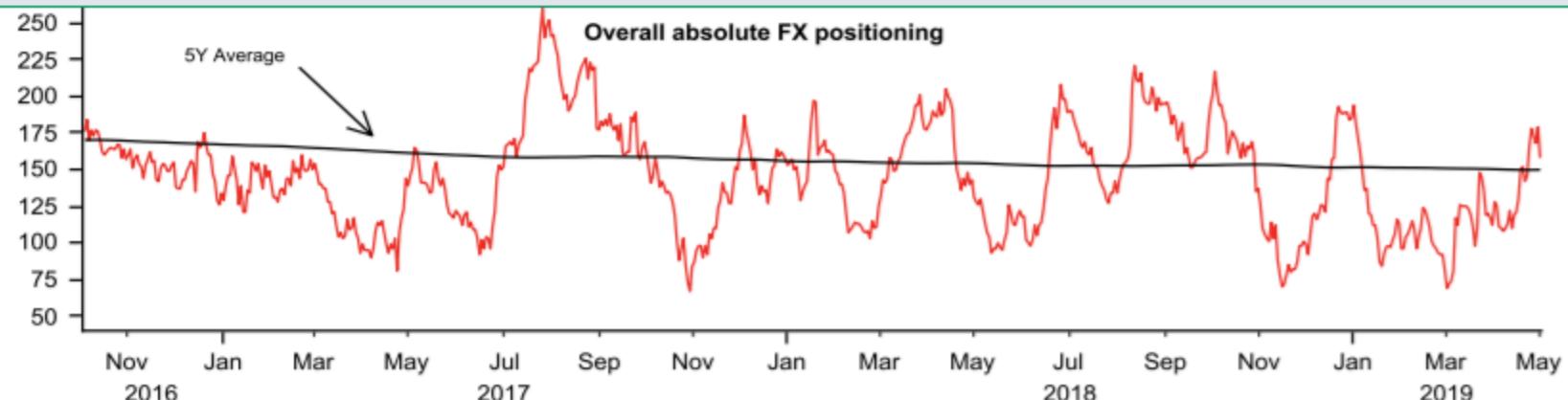
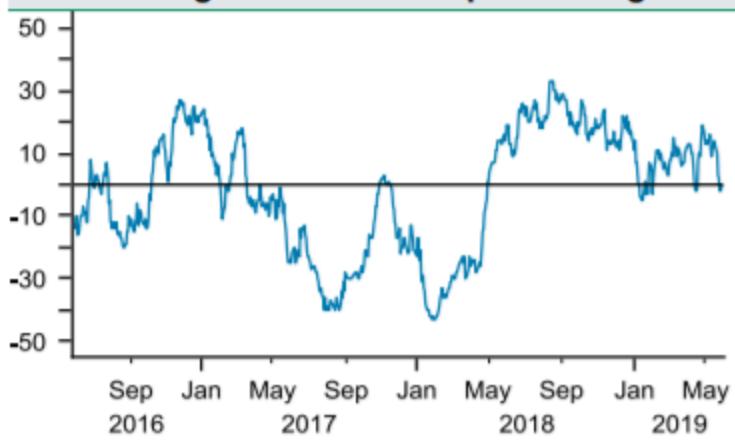
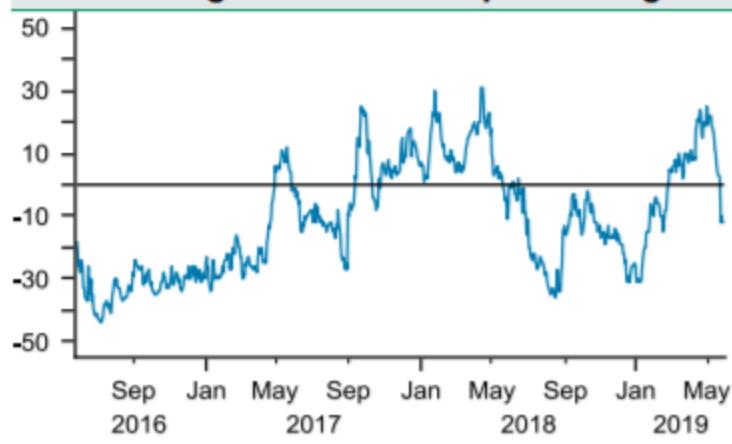
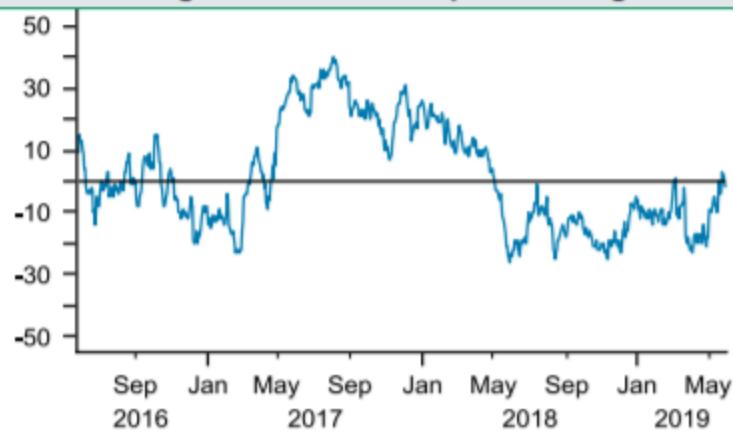
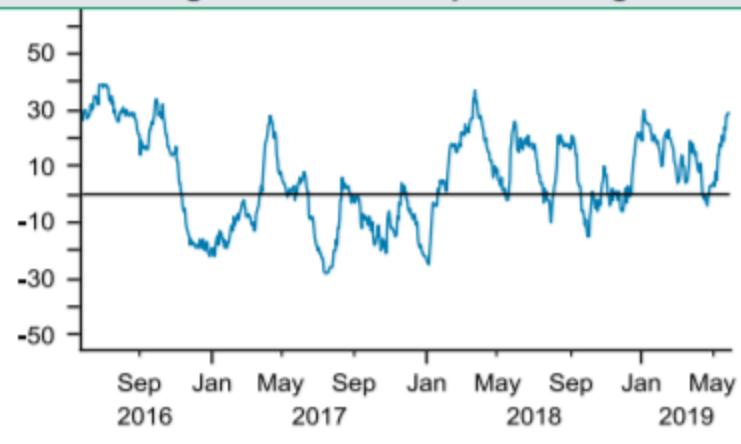


Source: BNP Paribas

\*The positioning scores above are reported as a percentile based on the prior five years of data. These percentiles are rescaled to give a value between -50 and +50. Values above 40 and below -40 represent extreme positions.

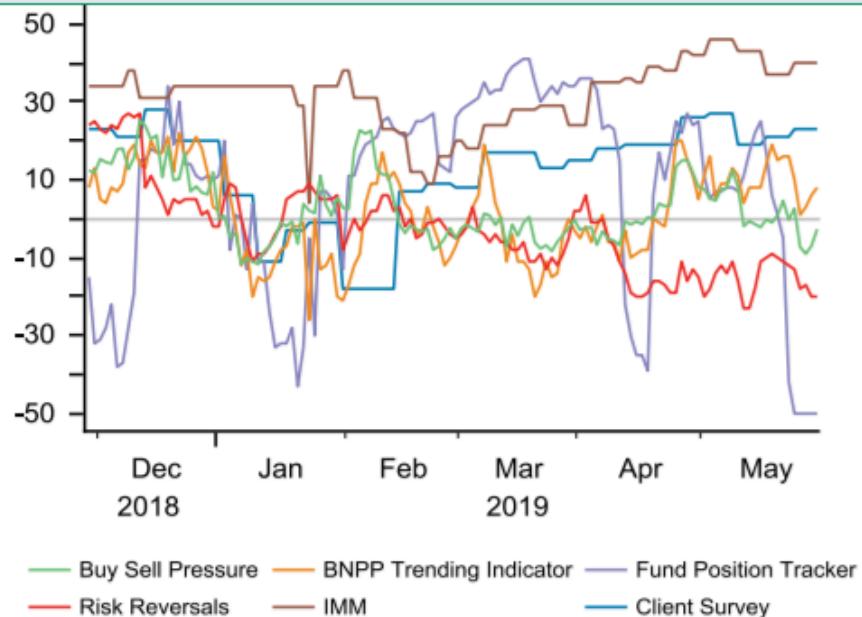
To interpret a score of -27, for example, add 50 to give 23. This tells us that 23% of observations over the past five years have been below the current observation.

Client Exposure	IMM	Risk Reversals	FX Fund Position Tracker	BNPP Trending Indicator	Buy Sell Pressure	
23	40	-20	-50	8	-3	USD
5	-18	-9	50	-4	-36	EUR
24	3	29	41	32	43	JPY
-22	9	6	-21	-26	-18	GBP
-20	-43	-39	41	26	25	CHF
-7	-27	37	34	-2	21	CAD
-19	-46	-39	43	-14	-18	AUD
-26	-26	-9	50	-23	-28	NZD
24	-	18	4	0	19	NOK
-40	-	-25	50	-4	-19	SEK

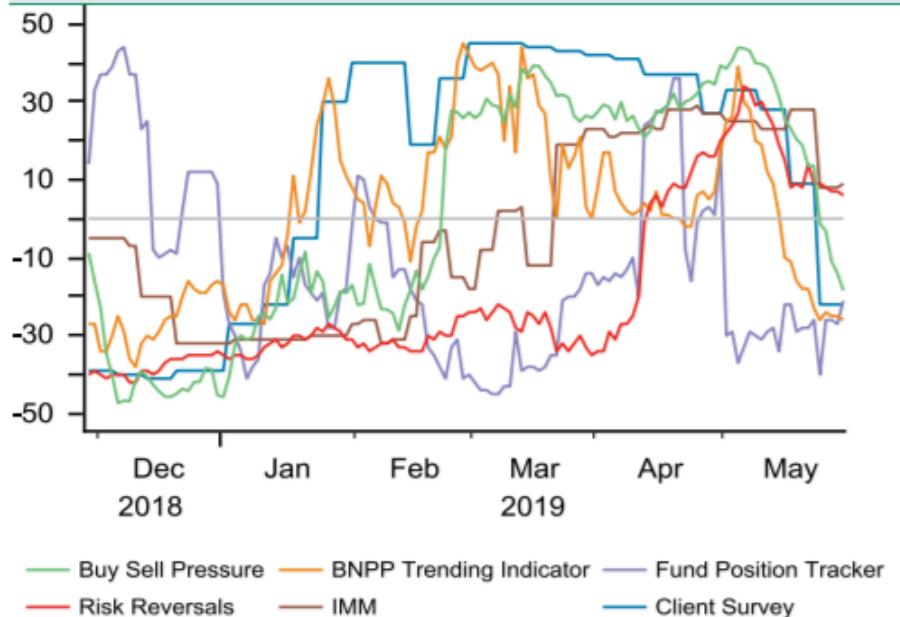
**Fig. 2: Absolute total G10 positioning****Three-year plot of G10 currency positioning scores****Fig. 3: USD overall positioning****Fig. 4: GBP overall positioning****Fig. 5: EUR overall positioning****Fig. 6: JPY overall positioning**

## One-year plot of G10 currency positioning – individual scores

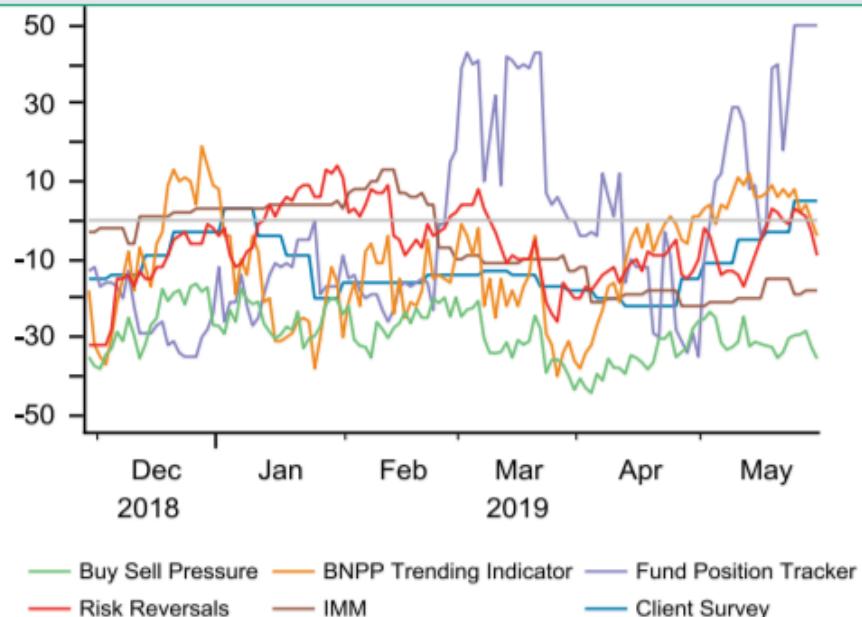
**Fig. 13: USD positioning components**



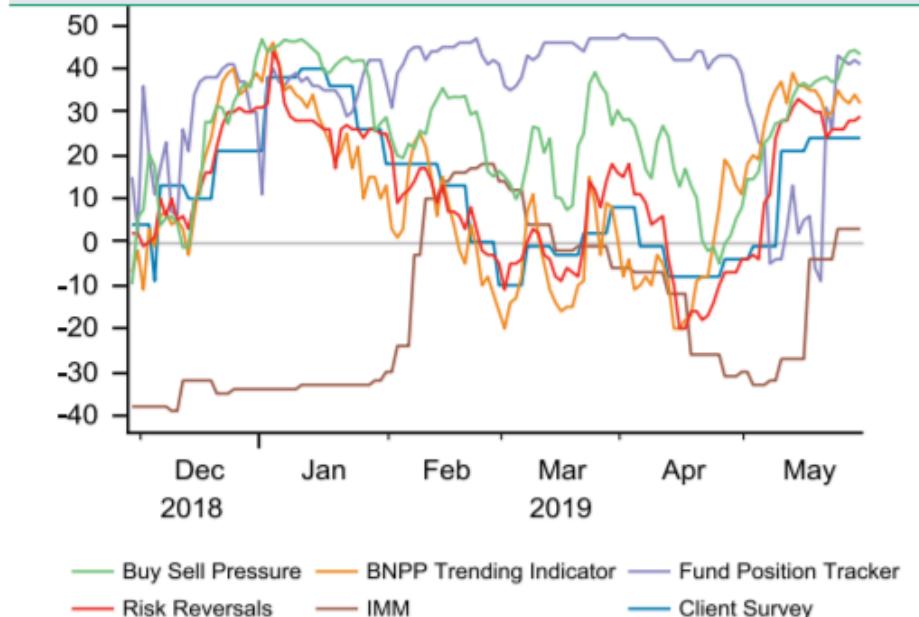
**Fig. 14: GBP positioning components**



**Fig. 15: EUR positioning components**



**Fig. 16: JPY positioning components**

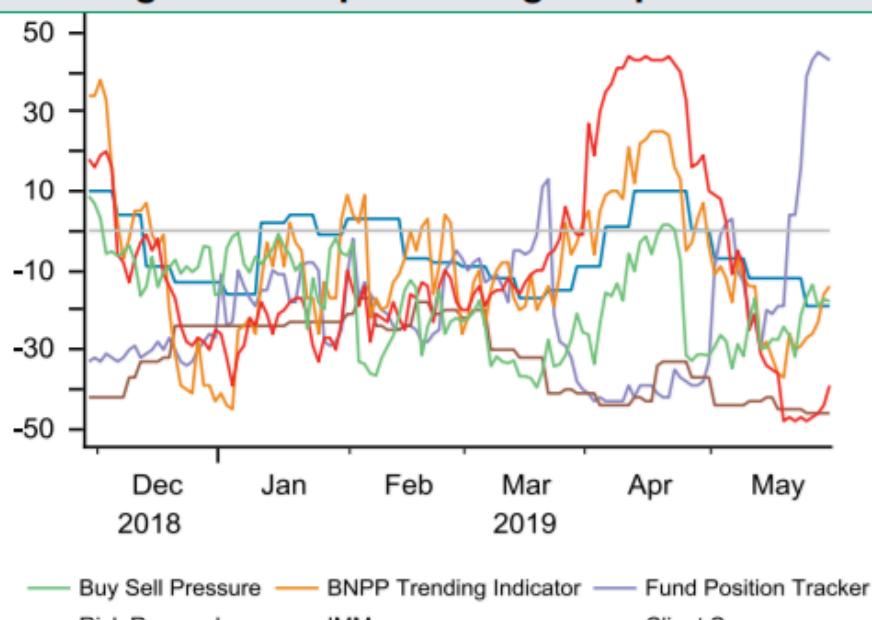


All chart sources: BNP Paribas

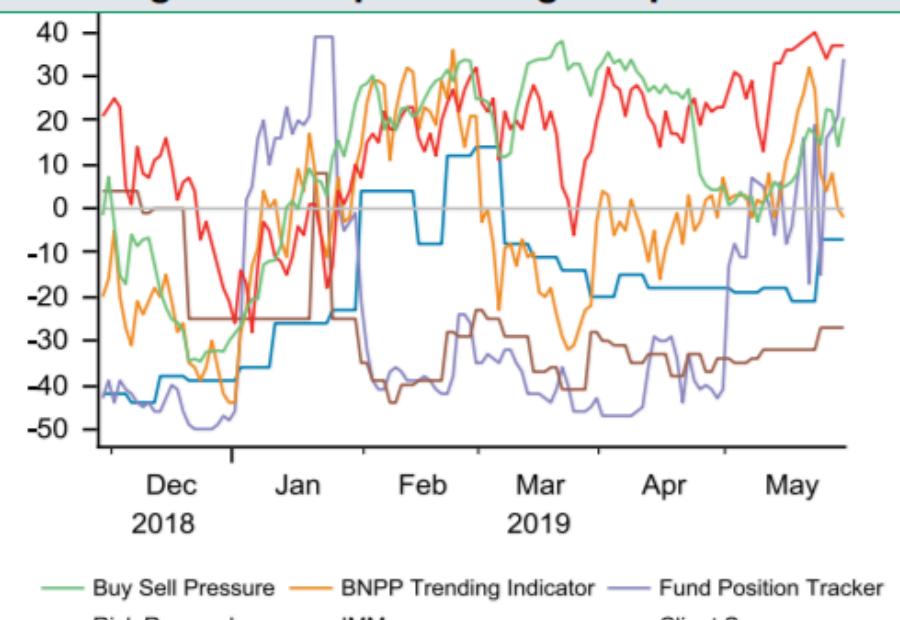
All chart sources: BNP Paribas

MACRO QUANT STRATEGY | G10 FX

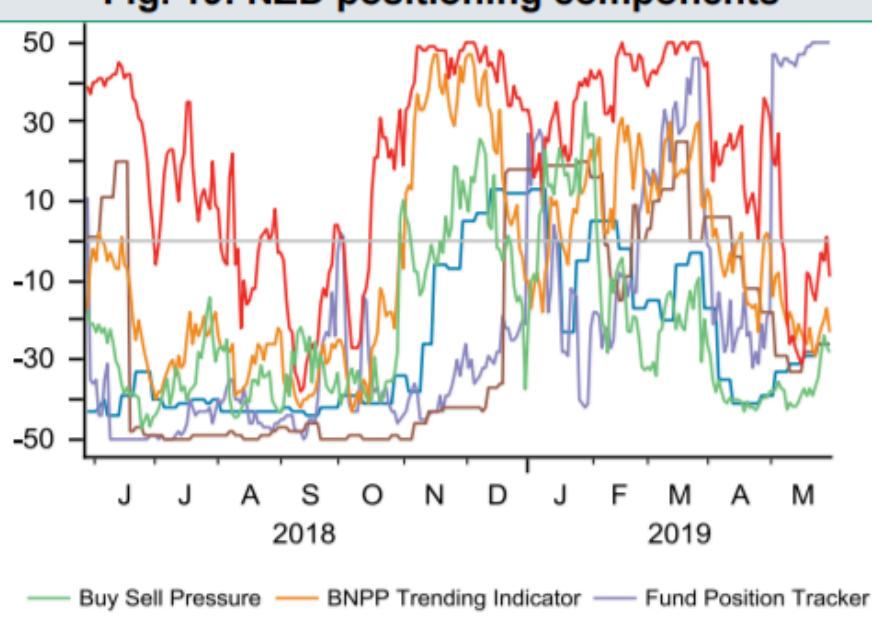
**Fig. 17: AUD positioning components**



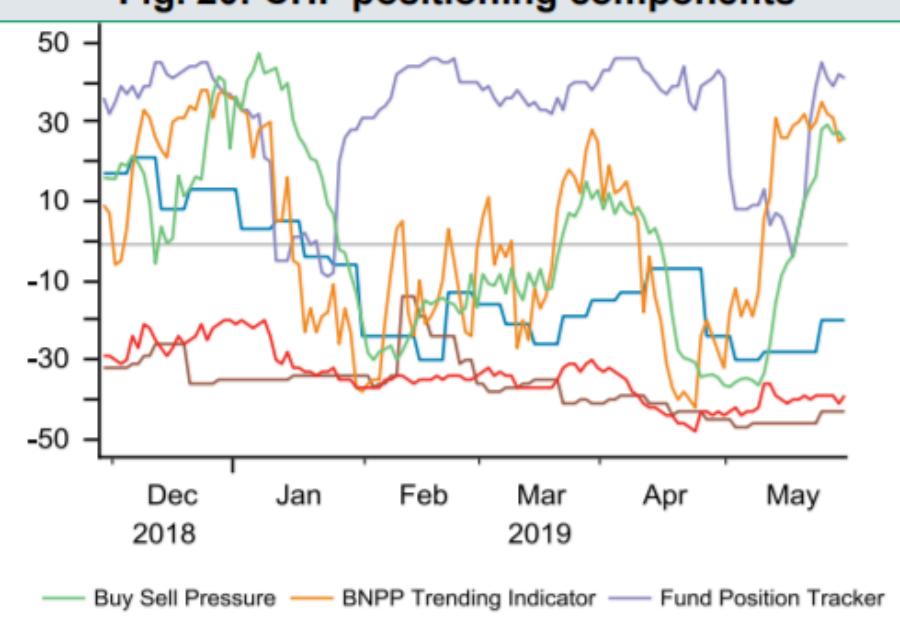
**Fig. 18: CAD positioning components**



**Fig. 19: NZD positioning components**



**Fig. 20: CHF positioning components**



# Flows & Liquidity

How overextended are bond markets?

- The universe of negatively yielding bonds across global bond markets has expanded further, reinforcing the rally at the longer end as bond investors try to escape negative yields.
- The yield spread between the 7-10 year minus the 1-3 year maturity buckets of our global government bond index shifted to even more negative territory this week, surpassing the previous negative episode of 2007.
- The worsening of the inversion means that at an aggregate level – abstracting from segmentation and currency hedging issues – global bond investors are prepared to effectively ‘pay’ an even bigger premium for holding longer-dated bonds.
- By looking at futures markets position proxies, the picture we get is of a barbell trade in USTs with longs at the front end and the very long end, and with a short base at the intermediate sector.
- Of these futures positions only the long base at the front end of the UST curve looks extreme.
- In 10y Bund futures there is a long base but less extreme relative to that seen at the beginning of the year.
- CTAs turning neutral on US equities and starting to turn short on Brent contributed to the sell-off in both markets.
- The pace of ESG adoption among retail investors has slowed.

- The inversion at the front end of the US curve gathered pace over the past week as rate markets priced in even more Fed easing. The 1-month OIS curve is now pricing in almost two rate cuts by the end of this year (from today also the JPM house view) and close to 85bp cumulatively by the end of 2020 (Figure 1).
- Not only does this market pricing at the front end of the US curve raise the hurdle for the Fed to “satisfy” market expectations, but it may create more fears of either a Fed policy mistake or trade conflicts are causing larger negative shocks, spooking bond markets both at the longer end and outside the US. The universe of negatively yielding bonds across global bond markets has expanded further as a result, reinforcing the rally at the longer end as bond investors try to escape negative yields.

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## Global Markets Strategy

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Figure 1: Fed rate cut expectations by the end of 2019 and by the end of 2020

In % as of May 31st

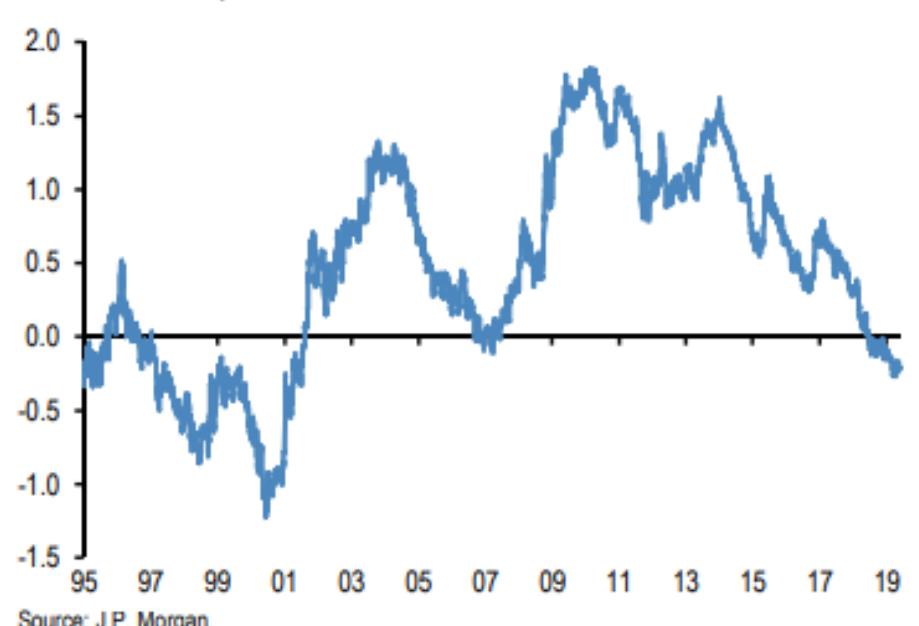


Source: J.P. Morgan.

- This is shown in Figure 2 which depicts the yield spread between the 7-10 year minus the 1-3 year maturity buckets of our global government bond index (JPM GBI Broad bond index). This spread inverted for the first time in this cycle a year ago in June 2018, and this week it shifted to even more negative territory. The worsening of the inversion means that, while at the local level in certain markets bond investors are still demanding a premium for longer-dated bonds, at an aggregate level – abstracting from segmentation and currency hedging issues – global bond investors are not demanding a premium for holding longer-dated bonds, but are rather effectively 'paying' a premium for holding them.
- This is rather unusual as can be seen in Figure 2. The last time the 7-10y minus 1-3y yield spread of our GBI Broad bond index turned so negative was in late 1990s, after the 1997/1998 EM crisis but also in 1999 ahead of a burst in the equity bubble and a reversal of Fed policy.
- In other words, in normal times, bond investors demand a premium to hold longer-dated bonds and to tie their money for a long period of time vs. investing in lower risk short-dated bonds. But when investors have little confidence in the trajectory of the economy or they think monetary policy tightening is overdone or they see a high risk of a correction in risky markets such as equities, they may prefer to buy longer-dated government bonds as a hedge even though they receive a lower yield than short-dated bonds. This is perhaps why empirical literature found that the slope of the yield curve has been a good predictor of economic slowdowns and/or corrections in risky assets.
- As mentioned above this global yield curve flattening is reinforced by the expansion of the universe of negatively yielding bonds which leaves fewer options for bond investors (e.g. pension funds and insurance companies) who wish to avoid negatively yielding bonds so as to avoid locking in capital losses if held to maturity.
- The expansion of the universe of negatively yielding bonds is depicted in Figure 3 which shows the proportion of our GABI index trading at negative yields. This proportion had increased further over the past week to around 26% vs. only 18% in early October. The current proportion of 26% is still below the mid-2016 record high of 33%. In notional terms, the universe of negatively yielding bonds in our GABI index stands at \$11tr currently compared to a mid-2016 high of around \$12.5tr.

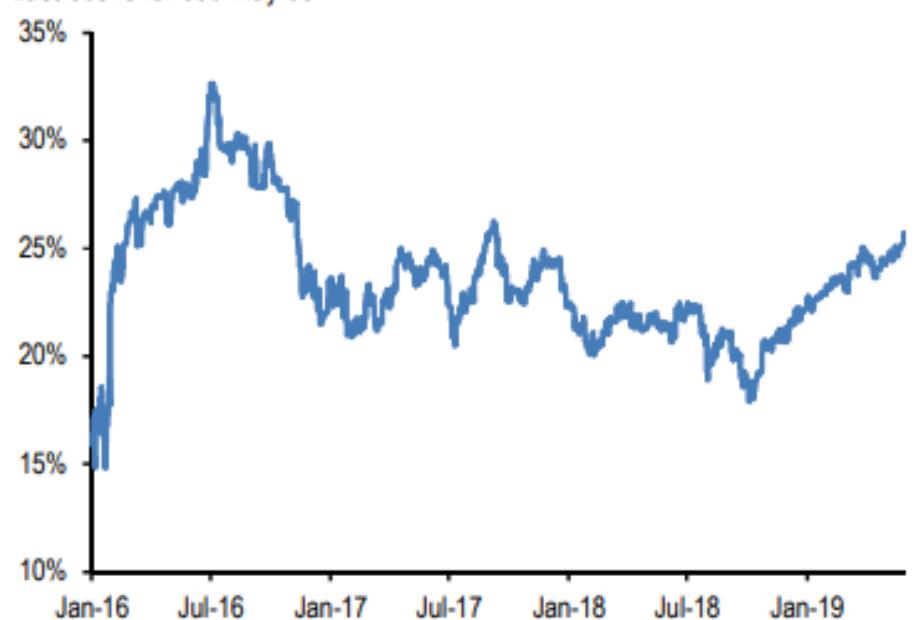
**Figure 2: Yield spread between the 7-10y and 1-3y buckets of the JPM GBI Broad bond index**

In % as of cob May 30<sup>th</sup>



**Figure 3: Bond Outstanding in negative yield as a % of total outstanding in GABI index**

Last obs is for cob May 30<sup>th</sup>



Source: Global Index Research team, J.P. Morgan.

- For investors in markets where a large portion of the universe is trading at negative yields (e.g. Japan and the Euro area), this leaves investors who wish to avoid negatively yielding bonds with the options of extending further along the curve taking on more duration risk, moving down the credit spectrum (e.g. corporates, or from core Euro area markets towards the periphery), or moving to foreign bonds assuming hedging costs and differences in funding rates do not erode the yield advantage.

- One question that arises from this discussion is who buys bonds with negative yields. In previous work (see F&L: [Who buys bonds with negative yields?](#)), we noted a number of investor groups that buy bonds, particularly government bonds, at negative yields. These include investors who fear or expect deflation, who speculate on currency appreciation, who expect capital gains resulting

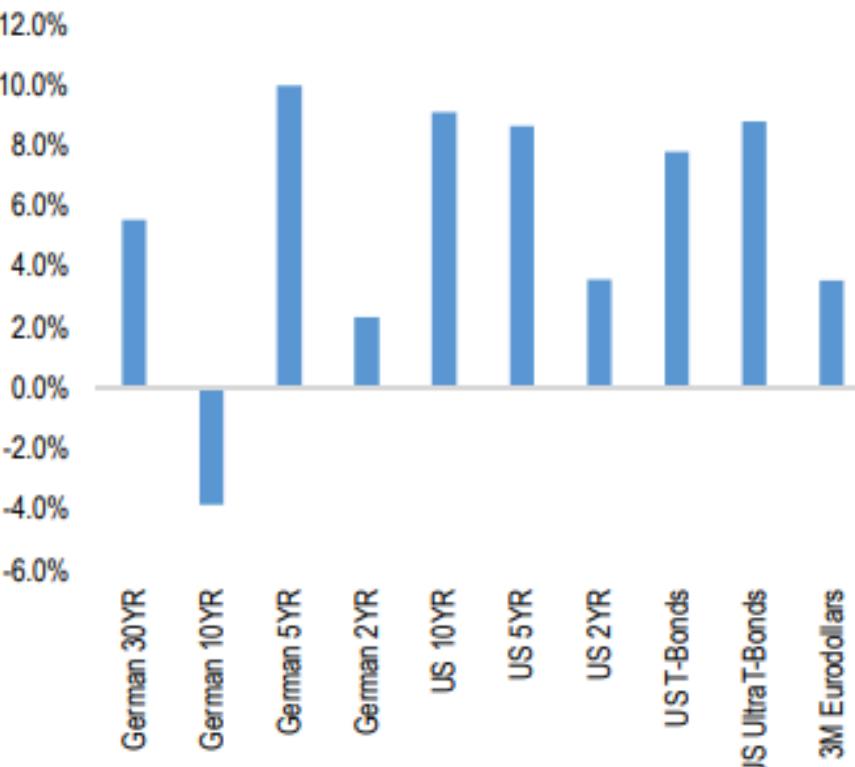
from central bank easing, central banks themselves, indexed or passive funds, as well as banks who seek to avoid potentially even more negative deposit rates. In addition, negatively yielding Euro area or Japanese bonds may also be attractive for US investors who can take advantage of the negative cross-currency basis as well as the differential in funding rates. For example, a dollar-based investor could achieve around 44bp of yield pickup, currency-hedged to maturity, via negatively yielding 10y JGBs over 10y USTs.

- But despite these buyers of negatively yielding bonds, there is little doubt that the steady decrease in the portion of positively yielding bonds since the last quarter of last year, is equivalent to a supply shock by shrinking the bond universe available to more yield constrained investors such as pension funds and insurance companies.
- In addition, the strong bond rally over the past weeks is raising questions about position overextension. By looking at futures markets, there is little doubt that over the past month there has been a significant build-up of long positions. This is shown by Figure 4 which shows the percentage change in open interest across rate futures contracts. Since the recent peak in yields on April 17<sup>th</sup> there has been universal rise in the open interest across rate futures contracts pointing to significant build-up of fresh long positions. The only exception is the 10y Bund futures contract which saw a reduction in the open interest since April 17<sup>th</sup> pointing to short covering rather than build up of fresh longs.
- How high are investors' positions on these futures contracts after the past month's position build up? One way of assessing the size of these positions is via using our position proxy based on the cumulative absolute change in the open interest multiplied by the sign of the futures price change every week. The rationale behind this position proxy is that when there is a price increase, the net long position of spec investors increases also with the magnitude of the increase determined by the absolute change in the open interest. It does not matter whether the open interest rises or falls as the net long position can increase either via fresh longs (increase in open interest) or a reduction of previous shorts (reduction in open interest). And vice versa. When there is a price decrease, the net long position of spec investors decreases also with the magnitude of the decrease determined by the absolute change in the open interest. It does not matter whether the open interest rises or falls as the net long position can decrease either via fresh shorts (increase in open interest) or reduction of previous longs (reduction in open interest).
- Figure 5 to Figure 9 show this position proxy for five futures contracts: 2y, 5y, 10y and Ultra Long among UST futures contracts and the 10y Bund futures contract

among German government bond futures. By looking at Figure 5 to Figure 9 we find that for 2yr and Ultra Long UST futures a significant long base appears to have emerged, which looks rather extreme for the 2yr contract. But for the 5yr and 10yr UST futures contracts the previous short base that was built up during the first three quarters of 2018 has yet to be fully unwound. There appears to be a decent long base in the 10y Bund futures contract but somewhat lower relative to last February's highs.

- In all, by looking at futures markets position proxies the picture we get is of a barbell trade in USTs with longs at the front end and the very long end and with a short base at the intermediate sector. Of these futures positions only the long base at the front end of the UST curve looks extreme. In 10y Bund futures there is a long base but less extreme relative to that seen at the beginning of the year.

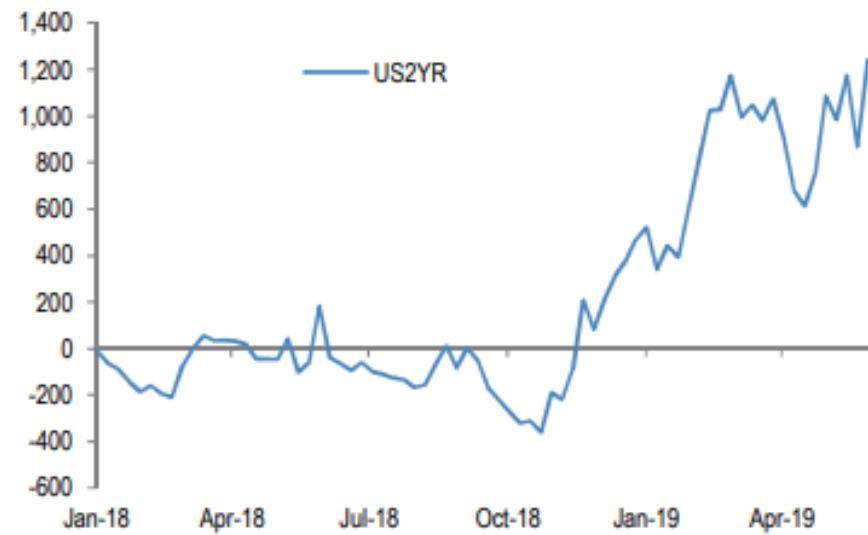
**Figure 4: Change in open interest across rate futures contracts**  
% change in number of contracts



Source: CFTC, Eurex, Bloomberg, J.P. Morgan.

**Figure 5: Position proxy for 2Y UST futures**

Number of contracts in thousands across all expiries. Cumulative weekly absolute change in open interest multiplied by the sign of the futures price change every week.



Source: CFTC, Bloomberg, J.P. Morgan.

**Figure 6: Position proxy for 5Y UST futures**

Number of contracts in thousands across all expiries. Cumulative weekly absolute change in open interest multiplied by the sign of the futures price change every week.



Source: CFTC, Bloomberg, J.P. Morgan.

**Figure 7: Position proxy for 10Y UST futures**

Number of contracts in thousands across all expiries. Cumulative weekly absolute change in open interest multiplied by the sign of the futures price change every week.



Source: CFTC, Bloomberg, J.P. Morgan.

**Figure 8: Position proxy for Ultra Long UST futures**

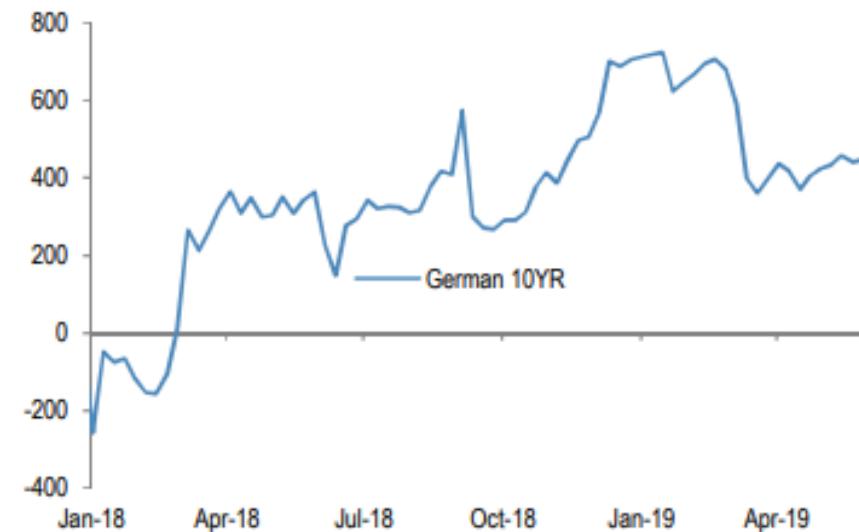
Number of contracts in thousands across all expiries. Cumulative weekly absolute change in open interest multiplied by the sign of the futures price change every week.



Source: CFTC, Bloomberg, J.P. Morgan.

**Figure 9: Position proxy for 10Y Bund futures**

Number of contracts in thousands across all expiries. Cumulative weekly absolute change in open interest multiplied by the sign of the futures price change every week.



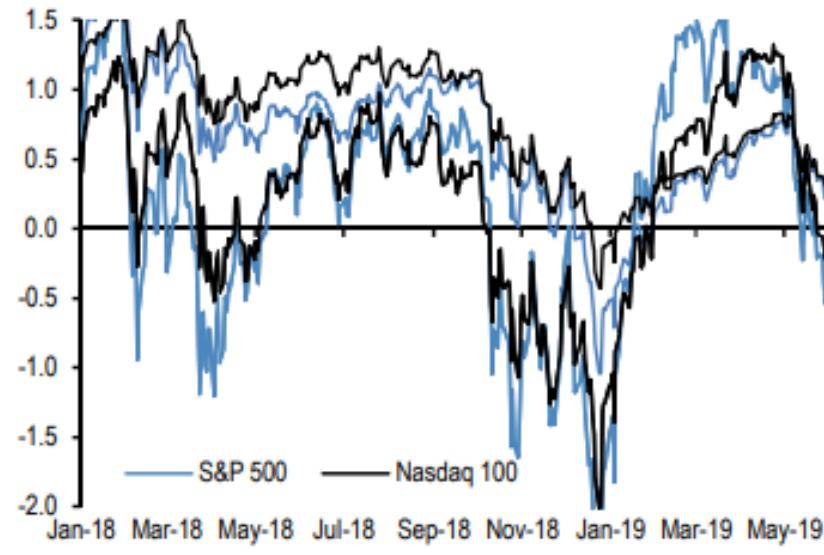
Source: Eurex, Bloomberg, J.P. Morgan.

### CTAs turning neutral on US equities and starting to turn short on Brent contributed to the sell-off in both markets

- Headlines suggesting the potential for a broadening of trade conflicts beyond China to Mexico at the end of this week saw a continuation of risk-off moves in markets. We have in recent weeks flagged that our framework of trend-following signals (Tables A5 and A6 in the Appendix) have suggested that CTAs and other momentum-based investors have gradually been turning neutral and then increasingly short in non-US equity markets, contributing to equity market declines. Moreover, the shorter-term signal for both S&P and Nasdaq futures have turned negative, the former around the middle of the month and the latter at the start of this week, signaling that CTAs have likely turned neutral on US equity exposures.

**Figure 10: Momentum signals for S&P 500 Index and Nasdaq 100 Index**

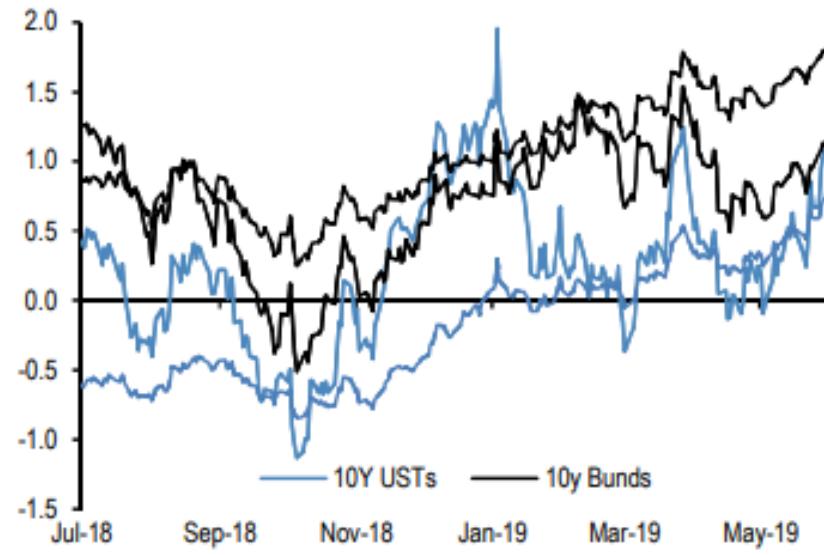
z-score of the momentum signal in our Trend Following Strategy framework shown in Tables A5 and A6 in the Appendix. Solid lines are for the shorter term and dotted (and lighter shaded) lines for longer-term momentum.



- What about CTA positions in bonds? As we noted last week, the rally in DM bond markets means our positioning signals for 10y benchmark bonds across G4 markets is firmly long. Until the last few days, only the long-term signal for 10y Bunds has been in extreme territory despite the bullish momentum. Looking at changes in futures contracts intra-day at the time of writing on Friday, however, the shorter-term signals for 10y USTs and Bunds are also beginning to approach more extreme territory with z-scores of 1.3 and 1.2 respectively, which suggests some risk of mean reversion signals being triggered.

**Figure 11: Momentum signals for 10Y UST and 10Y Bunds**

z-score of the momentum signal in our Trend Following Strategy framework shown in Tables A5 and A6 in the Appendix. Solid lines are for the shorter term and dotted (and lighter shaded) lines for longer-term momentum.

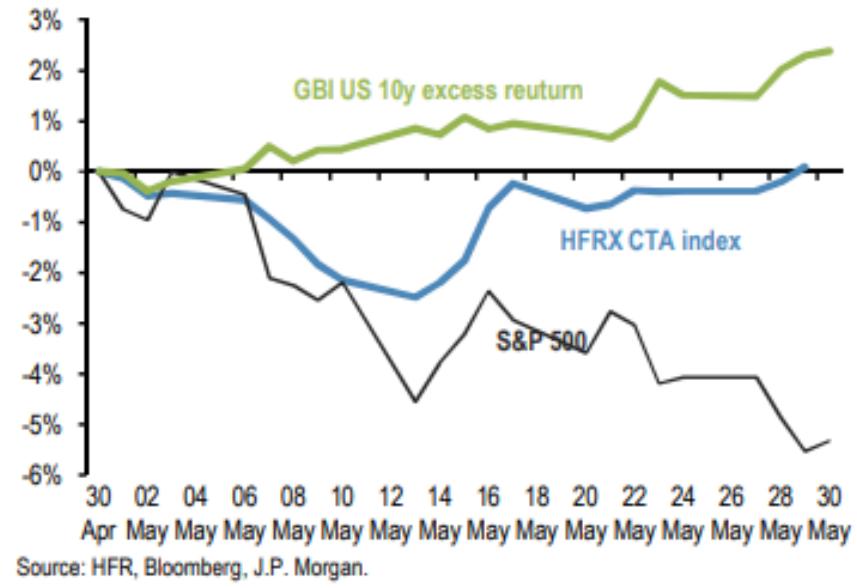


- Returns for CTAs over the course of the month of May suggest a similar picture. As Figure 12 shows, CTA returns were broadly directionally consistent with S&P returns until around the middle of May, after which the

sensitivity to equity returns has largely disappeared while the (positive) correlation with bond returns appears to have increased.

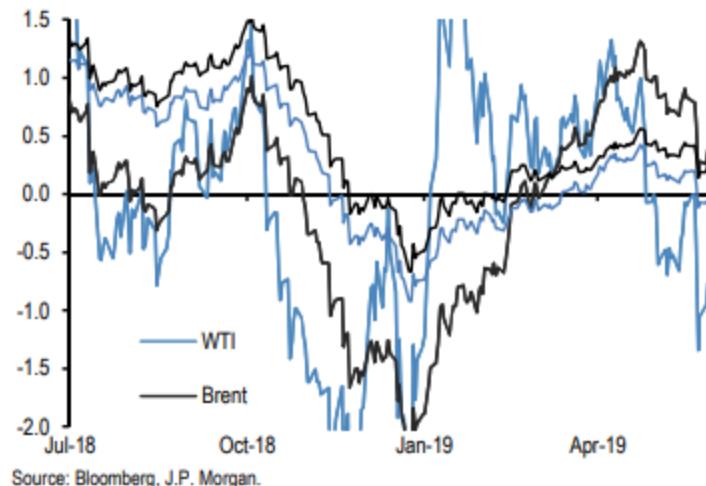
**Figure 12: CTA returns vs. S&P 500 and GBI US**

Cumulative returns since 30<sup>th</sup> Apr 2019; latest obs if close May 30<sup>th</sup> for equity and bond returns, May 29<sup>th</sup> for CTA returns.

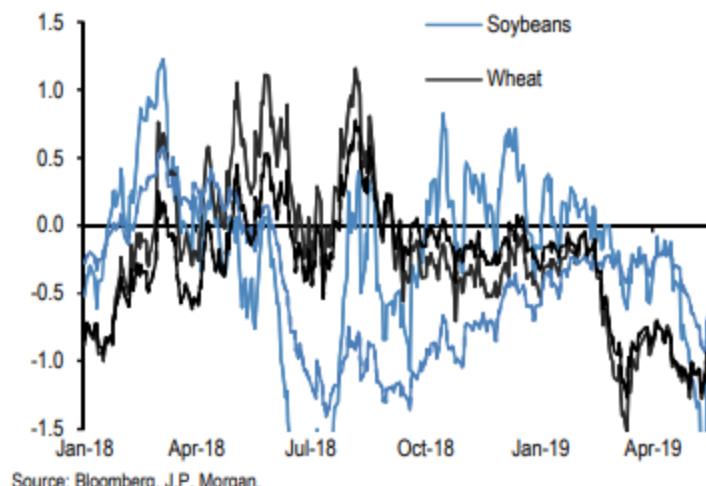


- In commodities, we noted last week that CTAs likely contributed to the falls in oil prices as the longer-term momentum signal joined the shorter-term one in signaling a turn to WTI shorts on May 23<sup>rd</sup>. Based on the intra-day data at the time of writing on May 31<sup>st</sup>, it looks likely that both the shorter- and the longer-term momentum signals for Brent have turned short (Figure 13), suggesting that decline in Brent from \$70 to below \$65 this week has also been exacerbated by CTAs beginning to turn short. Our momentum signals for industrial metals remain firmly in negative territory, though some way from extreme levels that would increase the risk of mean reversion signals being triggered. And as we noted last week, heavy US rains and flooding in recent weeks with likely negative effects on crop yields has seen short term momentum signals for corn turn positive on May 16<sup>th</sup>, and this week both wheat and soybeans have followed suit (Figure 14).

**Figure 13: Momentum signals for WTI and Brent**  
z-score of the momentum signal in our Trend Following Strategy framework shown in Tables A5 and A6 in the Appendix. Solid lines are for the shorter term and dotted (and lighter shaded) lines for longer-term momentum.



**Figure 14: Momentum signals for Soybeans and Wheat**  
z-score of the momentum signal in our Trend Following Strategy framework shown in Tables A5 and A6 in the Appendix. Solid lines are for the shorter term and dotted (and lighter shaded) lines for longer-term momentum.



## 2019 Cross-Asset Winners & Losers

**Chart 16: 2019 Ranked Returns, USD-terms**

**Ranked Returns, USD-terms (2019)**

Assets		Equities		Sectors		Fixed Income		FX vs. USD		Commodities	
1 Oil	29.5%	1 Russia Equities	19.3%	1 ACWI Info Tech	15.2%	1 30-year Treasury	8.6%	1 Russian ruble	7.3%	1 Iron Ore	54.2%
2 US Equities	12.2%	2 Greece Equities	17.1%	2 ACWI Real Estate	11.9%	2 US Corp HY	7.8%	2 Mexican peso	2.7%	2 WTI Crude Oil	29.5%
3 Pacific Rim xJapan	12.1%	3 Switzerland Equities	15.4%	3 ACWI Telecoms	10.6%	3 CCC HY	7.8%	3 Canadian dollar	0.9%	3 Brent Crude Oil	26.2%
4 Europe Equities	9.5%	4 Canada Equities	15.2%	4 ACWI Industrials	10.3%	4 BBB IG	7.3%	4 Japanese yen	0.1%	4 Gold	0.0%
5 UK Equities	8.1%	5 Australia Equities	13.9%	5 ACWI Cons. Discretionary	9.5%	5 US Corp IG	6.5%	5 Indian rupee	-0.1%	5 Platinum	-0.5%
6 High Yield Bonds	6.8%	6 US Equities	12.2%	6 ACWI Consumer Staples	9.4%	6 EM Corporate	6.4%	6 Indonesian rupiah	-0.2%	6 Copper	-1.5%
7 EM Sovereign Bonds	5.7%	7 Hong Kong Equities	11.5%	7 ACWI Financials	7.3%	7 EM Sovereign	5.7%	7 Chinese renminbi	-0.5%	7 Silver	-7.3%
8 Japan Equities	5.0%	8 Portugal Equities	9.9%	8 ACWI Utilities	6.4%	8 TIPS	4.8%	8 British pound	-1.0%	8 Natural Gas	-10.7%
9 Investment Grade Bonds	4.9%	9 France Equities	9.6%	9 ACWI Energy	5.9%	9 UK Govt	3.7%	9 Norwegian krone	-1.3%		
10 EM Equities	2.8%	10 Italy Equities	9.4%	10 ACWI Banks	5.1%	10 Treasury Master	3.7%	10 Singapore dollar	-1.3%		
11 Government Bonds	2.5%	11 Germany Equities	8.3%	11 ACWI Materials	3.3%	11 US Mortgage Master	3.1%	11 Australian dollar	-1.9%		
12 US Dollar	2.0%	12 UK Equities	8.1%	12 ACWI Healthcare	2.2%	12 European HY	2.8%	12 South African rand	-2.1%		
13 Industrial Metals	0.3%	13 India Equities	6.9%	13 ACWI BioTechnology	-4.5%	13 Japan Govt	2.0%	13 Brazilian real	-2.5%		
14 Gold	0.0%	14 Brazil Equities	6.6%			14 Non-US IG Government	1.8%	14 Swiss franc	-2.6%		
		15 Spain Equities	5.9%			15 2-year Treasury	1.7%	15 Taiwanese dollar	-2.7%		
		16 Mexico Equities	5.3%			16 3-Month Treasury Bills	1.0%	16 Euro	-2.9%		
		17 Japan Equities	5.0%			17 German Govt	0.3%	17 NZ dollar	-3.1%		
		18 China Equities	4.7%					18 Korean won	-6.6%		
		19 Singapore Equities	4.1%					19 Swedish krona	-7.4%		
		20 Taiwan Equities	2.3%					20 Turkish lira	-12.0%		
		21 S. Africa Equities	0.8%								
		22 Korea Equities	-5.8%								
		23 Turkey Equities	-14.0%								

Source: BofA Merrill Lynch Global Investment Strategy, Bloomberg, as of 29 May 2019

## The Asset Class Quilt of Total Returns

Chart 13: The Asset Quilt of Total Returns



Source: BofA Merrill Lynch Global Investment Strategy, Bloomberg. \*YTD returns

## Chart 17: The Overbought & Oversold

Ranked Deviation from 200-Day Moving Average, USD-terms (as at 29 May '19)

Assets		Equities		Sectors		Fixed Income		FX vs. USD		Commodities	
1 Pacific Rim xJapan	4.8%	1 Russia Equities	9.9%	1 ACWI Real Estate	4.1%	1 30-year Treasury	9.6%	1 Russian ruble	1.8%	1 Iron Ore	41.2%
2 EM Sov Bonds	3.7%	2 India Equities	6.9%	2 ACWI Telecoms	2.8%	2 BBB IG	5.1%	2 Indian rupee	1.7%	2 Gold	1.6%
3 Investment Grade Bonds	3.3%	3 Switzerland Equities	6.6%	3 ACWI Utilities	2.6%	3 US Corp IG	4.9%	3 Japanese yen	1.7%	3 Brent Crude Oil	-1.4%
4 Government Bonds	2.9%	4 Greece Equities	5.6%	4 ACWI Consumer Staples	2.5%	4 EM Corporate	4.5%	4 Mexican peso	1.1%	4 WTI Crude Oil	-1.8%
5 High Yield Bonds	2.7%	5 Australia Equities	5.6%	5 ACWI Info Tech	1.9%	5 UK Govt	4.2%	5 Indonesian rupiah	0.4%	5 Silver	-3.2%
6 US Dollar	1.8%	6 Hong Kong Equities	4.8%	6 ACWI Industrials	-0.7%	6 Treasury Master	4.1%	6 Singapore dollar	-1.1%	6 Platinum	-4.6%
7 Gold	1.5%	7 Brazil Equities	3.8%	7 ACWI Cons. Discretionary	-0.7%	7 EM Sovereign	3.7%	7 Swiss franc	-1.2%	7 Copper	-5.1%
8 US Equities	1.3%	8 Canada Equities	2.0%	8 ACWI Financials	-1.4%	8 TIPS	3.6%	8 Chinese renminbi	-1.3%	8 Natural Gas	-15.3%
9 Europe Equities	0.7%	9 Portugal Equities	1.6%	9 ACWI Healthcare	-3.0%	9 US Mortgage Master	3.2%	9 Canadian dollar	-1.9%		
10 UK Equities	-0.3%	10 US Equities	1.3%	10 ACWI Banks	-3.4%	10 US Corp HY	2.8%	10 Euro	-2.2%		
11 Oil	-1.8%	11 France Equities	0.6%	11 ACWI Materials	-4.2%	11 German Govt	2.7%	11 Taiwanese dollar	-2.3%		
12 Japan Equities	-1.9%	12 Italy Equities	0.1%	12 ACWI Energy	-6.3%	12 Non-US IG Government	2.3%	12 British pound	-2.5%		
13 EM Equities	-2.6%	13 Singapore Equities	-0.2%	13 ACWI BioTechnology	-8.1%	13 European HY	2.2%	13 Brazilian real	-2.7%		
14 Industrial Metals	-4.5%	14 UK Equities	-0.3%			14 2-year Treasury	1.8%	14 South African rand	-2.7%		
		15 Spain Equities	-0.4%			15 Japan Govt	1.7%	15 Norwegian krone	-2.7%		
		16 Germany Equities	-1.1%			16 3-Month Treasury Bills	0.9%	16 NZ dollar	-3.0%		
		17 Japan Equities	-1.9%			17 CCC HY	0.2%	17 Australian dollar	-3.0%		
		18 Mexico Equities	-2.9%					18 Swedish krona	-4.1%		
		19 S. Africa Equities	-2.9%					19 Korean won	-5.1%		
		20 Taiwan Equities	-3.3%					20 Turkish lira	-6.0%		
		21 China Equities	-4.5%					21 Argentine peso	-11.8%		
		22 Korea Equities	-10.2%								
		23 Turkey Equities	-12.6%								

Source: BofA Merrill Lynch Global Investment Strategy, Bloomberg

## GLOBAL EM CREDIT: 5/10 CURVES

FIGURE 35

5/10s curves for Global EM corporates and quasi sovereigns

	5Y SPREAD	10Y SPREAD	CURVE	1Y RANGE	1M	3M	6M	1Y
ALL CORPS*	123	162	34	20   48	11	7	9	15
BIDU	121	185	65	30   75	23	20	13	
CHGRID	92	115	24	30   50	7	0	7	
CITLTD	123	162	39	35   65	11	2	-8	
CMPCCI	163	185	22	-2   -30	-2	7	9	10
CNOOC	106	126	20	30   48	14	5	13	
EMBRBZ	154	188	34	3   39	11	20	7	26
EXIMCH	83	102	20	14   27	1	-6	-2	5
HUAWEI	173	271	98	18   84	32	38	10	70
ISRELE	132	157	25	20   45	-1	11	16	
KOROIL	78	94	16	-4   20	3	-1	6	13
KWIPKK	171	262	91	15   87	12	32	9	58
KZOKZ	136	178	41	-5   93	5	-9	19	18
PAMPAR	721	735	14	-5   93	61	-14	-13	-50
PETBRA	215	329	114	100   115	12	45	41	28
QTELQD	95	136	41	5   45	15	21	22	17
SDBC	64	100	37	20   42	0	-5	5	14
SDIC	97	125	28	20   37	0	2	-6	5
SINOPE	101	123	23	-124   24	14	9		
SOPOWZ	88	113	25	18   44	5	-2	-20	-1

Note: \*Top row is a median of the individual ticker values for the corresponding column.

Source: Barclays Research

FIGURE 36

5/10s curves for Global EM sovereigns

	5Y SPREAD	10Y SPREAD	CURVE	1Y RANGE	1M	3M	6M	1Y
ALL SOVS*	151	238	54	7   62	10	17	14	18
QATAR	71	114	44	11   30	17	10	5	-6
DOMREP	230	295	65	29   57	34	18	18	20
TURKEY	569	560	-9	-48   57	-10	-48	-16	-48
RUSSIA	117	190	72	43   71	12	25	23	13
MALAYS	72	83	11	-1   11	2	5	9	1
CHILE	31	74	43	4   42	8	9	6	32
INDON	106	146	40	31   49	2	5	12	25
MEX	73	153	80	32   75	10	24	43	47
COLOM	127	145	18	-15   16	20	27	22	16
BRAZIL	103	223	121	61   130	24	31	47	25
LEBAN	874	819	-55	-119   69	-4	-54	-32	-78
PHILIP	67	69	2	-31   27	2	10	17	-16
BHRAIN	256	397	141	74   219	47	65	30	-15
UKRAIN	659	672	13	-22   67	-1	15	9	-11
SRILAN	432	530	97	-1   104	24	27	82	46
SOAF	212	282	70	37   67	10	29	19	21
GUATEM	175	252	78	31   80	28	15	2	20
REPNAME	208	344	136	57   143	29	42	-5	55
POLAND	61	67	6	-6   10	9	2	3	8
ECUA	531	613	81	-16   72	5	31	58	51

Note: \*Top row is a median of the individual ticker values for the corresponding column.

Source: Barclays Research

## GLOBAL EM CREDIT: 10/30 CURVES

FIGURE 37

10/30s curves for Global EM corporates and quasi sovereigns

	10Y SPREAD	30Y SPREAD	CURVE	1Y RANGE	1M	3M	6M
ALL CORPS*	179	272	76	55   100	7	14	20
AIA	87	123	36	-3   34	3	16	30
AMXLMM	71	146	75	29   71	7	14	15
CDEL	115	161	46	11   34	14	18	33
CENSUD	265	372	106	42   170	1	7	58
CFELEC	216	288	72	42   82	2	13	20
CHGRID	118	116	-2	-10   15	-9	1	8
CNOOC	112	132	20	10   37	-4	-7	8
ECOPET	193	307	114	70   25	12	21	31
FUNOTR	227	371	144	106   151	18	30	40
GGBRBZ	237	358	121	74   150	-3	10	20
KORGAS	89	107	18	-10   15	9	10	15
KTZKZ	194	289	95	85   130	1	4	-4
KZOKZ	178	285	107	85   124	8	18	2
MEXCAT	223	316	93	69   148	6	30	28
OCPMR	211	351	139	80   122	29	23	38
PETBRA	329	416	88	28   100	24	34	49
PETMK	98	113	14	7   38	8	-1	-20
PLBIJ	181	290	109	60   103	11	21	43
QTELQD	136	177	41	-8   14	9	18	44
RILIN	141	176	34	15   44	-3	-5	2
SCCO	152	249	97	61   123	9	1	29
SINOPE	122	127	5	1   28	-9	2	2
TELVIS	184	258	74	54   118	36	15	-16

Note: \*Top row is a median of the individual ticker values for the corresponding column.

Source: Barclays Research

FIGURE 38

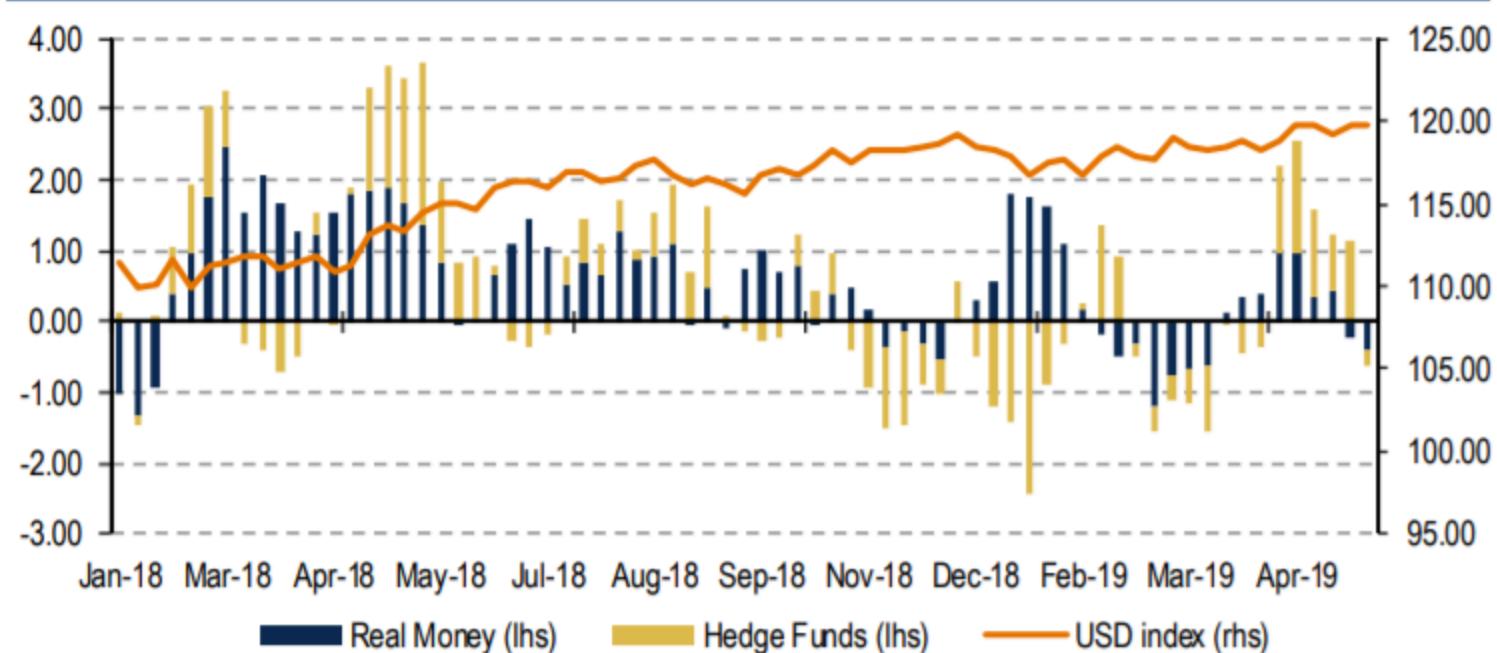
10/30s curves for Global EM sovereigns

	10Y SPREAD	30Y SPREAD	CURVE	1Y RANGE	1M	3M	6M	1Y
SOVS*	183	239	66	36   67	15	14	14	-4
ARGENT	1008	813	-195	-139   107	60	-109	-136	-283
BHRAIN	397	471	74	-16   68	14	13	23	53
BRAZIL	223	304	81	41   82	10	21	7	4
CHILE	74	110	36	16   40	7	14	11	-3
COLOM	111	213	102	69   98	17	26	21	18
COSTAR	342	491	150	46   43	34	51	78	20
DOMREP	295	374	78	54   85	15	7	20	-6
EGYPT	490	579	89	60   103	23	14	18	
ELSAVL	475	507	32	-5   49	32	31	23	-4
INDON	146	174	28	11   45	6	12	7	-14
JAMAN	266	370	104	66   114	19	21	30	-2
MEX	153	221	69	51   86	16	14	7	-14
PARGUY	176	253	78	43   60	24	26	28	
KAZAKS	107	190	83	61   105	4	25	7	-13
PHILIP	69	91	2					

## FX investors getting active again

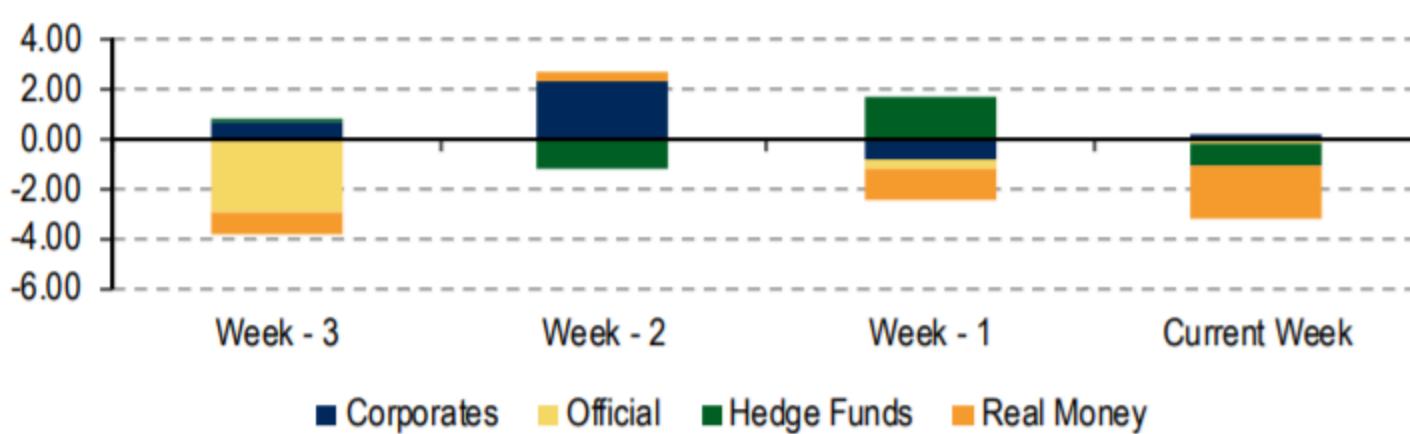
Our proprietary flows show FX investors trading actively again, after being cautious for most of this year. This is particularly the case for hedge funds in the last three weeks (Table 1). EM FX selling continues as trade tensions intensify (Table 2), but not to the benefit of the USD. Real money is buying JPY, while hedge funds are buying EUR, GBP, and last week AUD and CAD. These flows point to more FX volatility ahead, with investors looking for opportunities to sell the USD rally during risk off (Chart 1, Chart 2).

**Chart 1: Proprietary 4-week USD flows (z-score) and USD TWI**



Source: BofA Merrill Lynch Global Research

**Chart 2: Weekly USD indexed proprietary flows**



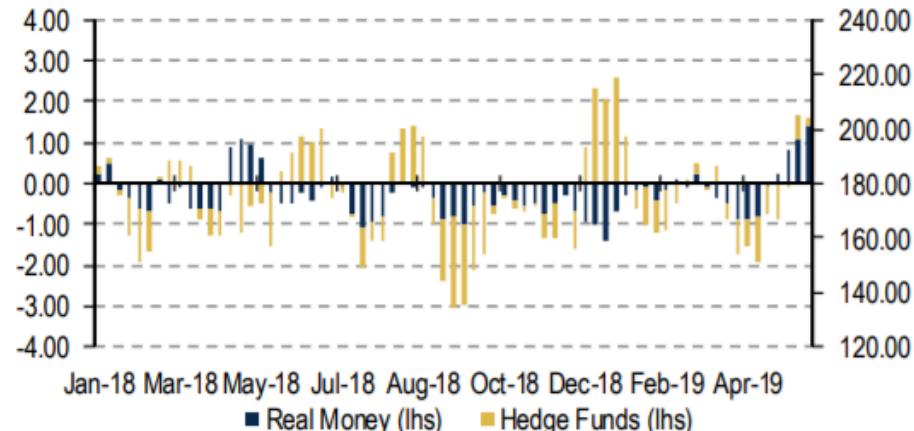
Source: BofA Merrill Lynch Global Research

# Highlights from flows and positioning

## Trade tensions and risk-off benefit JPY

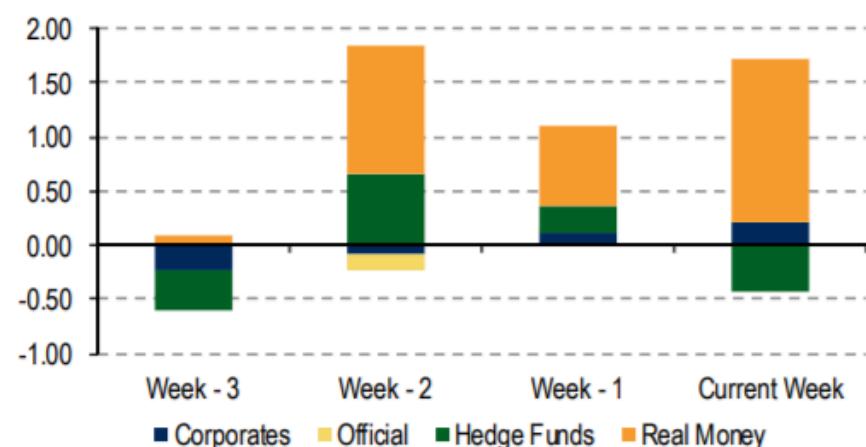
As trade war risks increase, JPY has starts attracting flows, particularly from real money (Chart 3 and Chart 4).

**Chart 3: Proprietary 4-week JPY flows (z-score)**



Source: BofA Merrill Lynch Global Research

**Chart 4: Weekly JPY indexed proprietary flows**

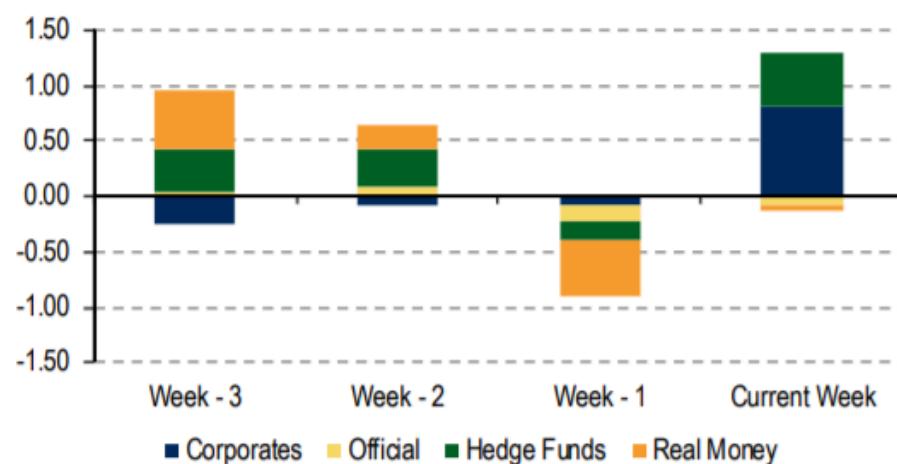


Source: BofA Merrill Lynch Global Research

## Investors sold May, but bought her resignation

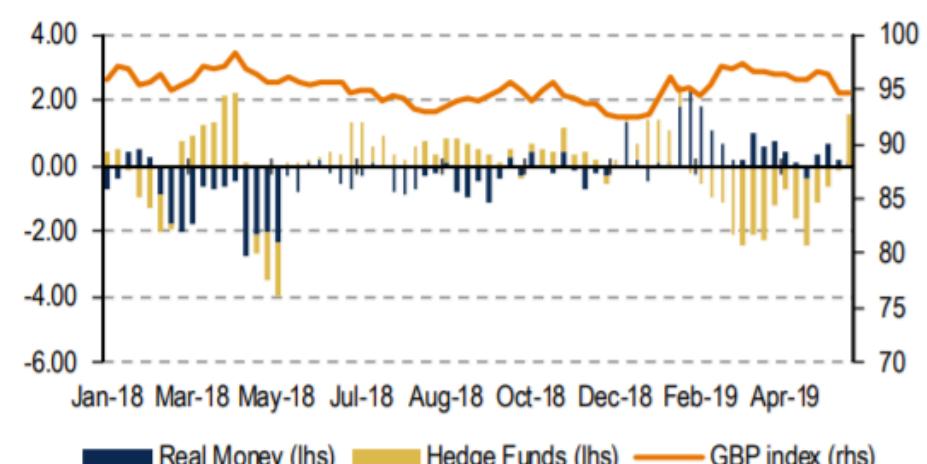
Two weeks ago, as Theresa May was trying to save her Brexit deal, investors sold GBP. However, as her resignation became inevitable last week, GBP flows turned positive and hedge funds and corporates bought the GBP dip (Chart 5, Chart 6). Although substantial Brexit uncertainty remains, these flows suggests balanced GBP risks for now, and even some upside as we get more clarity on the UK politics.

**Chart 5: Weekly GBP indexed proprietary flows**



Source: BofA Merrill Lynch Global Research

**Chart 6: Proprietary 4-week GBP flows (z-score)**

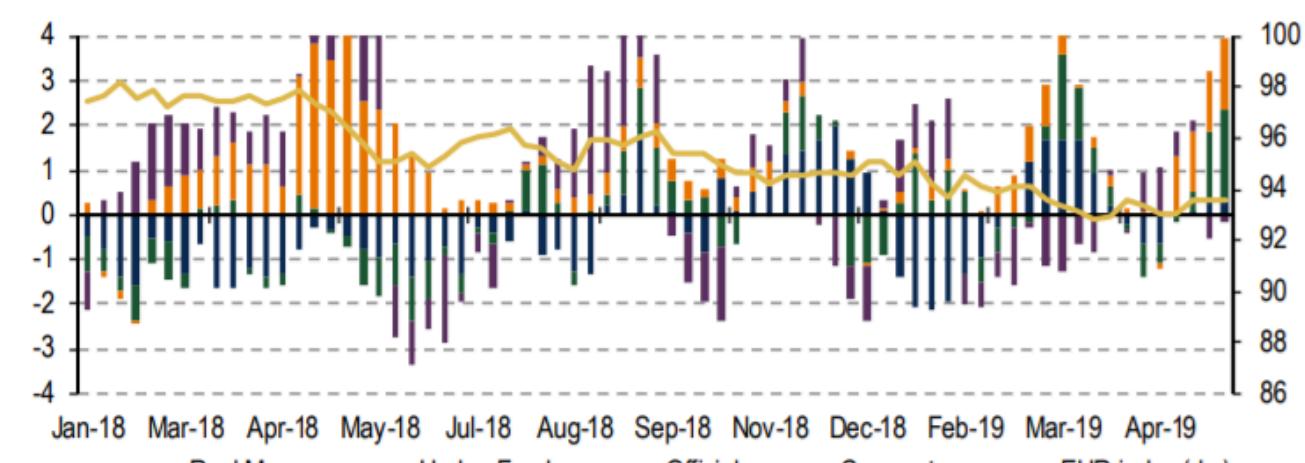


Source: BofA Merrill Lynch Global Research

## Back to the EUR

Despite the EUR being under pressure, still weak Eurozone data and uncertainty from the EU elections, our proprietary flows show strong demand for the EUR in recent weeks, primarily from hedge funds and officials (Chart 7). These flows could limit further EUR downside in the short-term and could support the EUR if data improves and the EU politics settle after last week's elections.

**Chart 7: Proprietary 4-week EUR flows (z-score)**



Source: BofA Merrill Lynch Global Research

# Snapshot of flows

Table 1: Snapshot of G10 Flows (Z-score)

	Corporate				Official				Hedge funds				Real money			
	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t
<b>G10</b>																
USD	↑	↑	↓	↑	↓	↑	↓	↓	↑	↓	↑	↓	↓	↑	↓	↓
EUR	↓	↓	↑	↓	↑	↑	↓	↑	↑	↑	↑	↑	↑	↓	↑	↑
JPY	↓	↓	↑	↑	↑	↓	↑	↑	↑	↑	↑	↓	↑	↑	↑	↑
GBP	↓	↓	↓	↑	↑	↑	↓	↓	↑	↑	↑	↑	↑	↑	↓	↓
CAD	↑	↓	↓	↓	↑	↓	↑	↑	↓	↑	↑	↓	↑	↑	↑	↑
AUD	↓	↓	↑	↓	↓	↓	↓	↓	↓	↓	↓	↓	↑	↑	↑	↑
NZD	↑	↓	↓	↓	↓	↓	↑	↓	↓	↓	↓	↓	↓	↑	↑	↑
CHF	↑	↑	↑	↑	↓	↑	↑	↑	↑	↑	↑	↓	↓	↑	↑	↑
NOK	↓	↑	↓	↑	↓	↓	↓	↓	↓	↑	↑	↓	↓	↓	↑	↑
SEK	↓	↑	↓	↓	↓	↓	↑	↓	↑	↓	↑	↓	↓	↓	↑	↓
<b>EM</b>																
Asia	↑	↑	↑	↓	↑	↑	↑	↑	↑	↓	↓	↓	↓	↓	↓	↓
EMEA	↓	↓	↑	↑	↑	↓	↑	↓	↓	↓	↑	↓	↑	↓	↓	↓
LatAm	↑	↓	↑	↑	↓	↓	↑	↑	↓	↓	↓	↑	↑	↓	↑	↑

Table 2: Snapshot of EM Flows (Z-score)

	Corporate				Official				Hedge funds				Real money			
	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t
<b>LatAm</b>																
BRL	↓	↑	↑	↑	-	-	-	-	↓	↑	↓	↑	↓	↓	↓	↓
MXN	↑	↑	↑	↑	↓	↓	↓	↑	↓	↓	↓	↑	↓	↑	↑	↑
CLP	↓	↓	↓	↓	↑	↑	↓	-	↓	↓	↓	↓	↑	↓	↓	↓
COP	↑	↓	↓	↓	-	-	-	-	↑	↓	↑	↓	↑	↓	↓	↓
PEN	↑	↓	↑	↑	-	-	-	-	↑	↑	↓	↓	↓	↓	↓	↑
ARS	↓	↓	↑	↓	-	-	-	-	↓	↑	↑	↓	↓	↑	↑	↑
<b>Asia</b>																
CNY	↓	↓	↓	↑	↓	-	-	-	↓	↓	↓	↓	↑	↓	↓	↓
CNH	↑	↑	↑	↑	↓	-	-	-	↓	↓	↓	↓	↓	↓	↓	↑
INR	↑	↓	↑	↑	↑	↑	↑	↑	↑	↓	↓	↓	↑	↑	↑	↑
KRW	↑	↑	↑	↑	↑	↑	↑	↑	↑	↓	↓	↓	↓	↓	↓	↓
IDR	↓	↓	↓	↓	↑	-	↓	↓	↓	↓	↓	↓	↑	↓	↓	↓
MYR	↑	↑	↑	↓	↑	-	↑	↑	↑	↑	↑	↑	↑	↓	↓	↓
SGD	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
TWD	↑	↓	↑	↓	-	↑	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑
THB	↓	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
<b>EMEA</b>																
TRY	↓	↑	↓	↑	↑	↓	↓	↓	↑	↓	↓	↓	↑	↓	↓	↓
HUF	↑	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↓	↓	↓
PLN	↓	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
ILS	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
CZK	↑	↓	↓	↓	-	-	-	-	↓	↓	↓	↓	↑	↑	↑	↑
ZAR	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
RUB	↓	↓	↓	↓	-	-	-	-	↑	↓	↓	↓	↓	↑	↓	↓

KEY:

<span style="background-color: green; width: 10px; height: 10px;"></span>	More than 2
<span style="background-color: lightgreen; width: 10px; height: 10px;"></span>	Between 1.5 and 2
<span style="background-color: yellow; width: 10px; height: 10px;"></span>	Between 1 and 1.5
<span style="background-color: lightgray; width: 10px; height: 10px;"></span>	Between 1 and -1



Between -1 and -1.5  
Between -1.5 and -2  
Less than -2

↑ Buying  
↓ Selling  
- No flow

Note: The heatmaps measure the strength of each flow compared to its own history. The z-score is calculated as the weekly flow minus the 2-year average flow, divided by the 2-year standard deviation of flows. A positive (negative) number does not necessarily suggest buying (selling), as it is expressed relative to the 2-year average flow and depends on whether the latter is a positive or a negative number. In this context, the arrows indicate whether our flow, and not the z-score, is positive or negative, suggesting buying or selling.

Source: BofA Merrill Lynch Global Research

# Snapshot of flows; z-scores

Table 3: Snapshot of G10 Flows (Z-score)

	Total				Corporate				Official				Hedge funds				Real money			
	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t
<b>G10</b>																				
USD	-1.00	0.69	-0.16	-0.95	-0.04	0.66	-0.65	-0.22	-1.91	0.50	0.15	0.30	0.02	-1.03	1.34	-0.82	-0.15	0.51	-0.38	-0.81
EUR	1.30	-0.13	0.49	0.81	-0.12	-0.67	0.56	-0.01	4.00	-0.09	-0.22	0.46	0.30	1.68	0.38	1.51	0.61	-0.17	0.04	0.33
JPY	-0.87	1.24	0.76	0.99	-0.88	-0.38	0.23	0.63	-0.16	-1.51	-0.35	-0.34	-0.82	1.50	0.59	-0.93	-0.25	1.03	0.54	1.46
GBP	0.26	0.17	-0.64	0.49	-0.28	-0.17	-0.17	0.35	0.43	0.85	-1.03	-0.40	1.44	1.24	-0.79	1.65	0.95	0.32	-0.97	-0.19
CAD	1.83	-0.79	-0.78	0.21	1.08	-1.02	-0.57	-0.07	2.99	-0.50	-0.31	-0.42	-0.23	0.24	-0.61	1.35	-0.25	-0.14	-0.22	0.08
AUD	0.41	-0.46	-0.08	0.85	-0.04	-0.59	0.59	-0.65	-0.51	-0.15	-0.20	-0.26	-0.37	-0.91	-1.42	1.56	0.68	0.35	0.34	0.40
NZD	-0.71	-0.07	0.58	0.20	0.58	-0.38	-0.07	-0.22	-0.02	-0.02	-0.01	-0.01	-0.93	-1.18	-0.05	-0.15	-0.26	0.71	0.65	0.34
CHF	-0.42	0.84	1.58	0.00	-0.05	0.07	-0.01	0.37	0.04	0.02	4.00	-0.02	0.26	1.23	-0.50	-0.48	-1.00	0.42	3.02	-0.17
NOK	-0.73	-1.05	1.16	-1.06	-0.12	0.37	-0.46	0.11	-0.10	-0.09	-0.09	-0.10	-0.18	-1.08	-0.01	-0.63	-0.63	-0.52	1.66	-0.76
SEK	-0.45	-1.18	2.55	-0.42	0.01	0.20	-0.60	0.05	0.07	-0.44	0.08	0.01	0.17	-0.21	-0.14	-0.61	-0.66	-1.35	3.59	-0.17
G10-x USD	1.22	0.16	0.49	1.44	-0.25	-0.82	0.18	0.32	4.00	-0.56	-0.45	-0.11	0.01	1.98	-0.28	1.49	0.62	0.46	0.82	1.01
<b>EM</b>																				
Asia	-0.13	-1.02	-0.23	-0.72	0.68	0.13	1.38	-0.61	-0.33	-0.33	0.03	-0.35	0.43	-0.45	-1.49	-0.62	-0.71	-1.24	-0.22	0.12
EMEA	-0.18	-1.85	0.04	-0.94	0.13	-0.19	0.48	0.53	0.11	-0.34	0.07	-0.08	-0.65	-1.01	0.20	-0.97	0.08	-1.77	-0.32	-0.94
LatAm	-0.22	-0.89	-1.11	0.56	1.36	0.21	1.11	0.57	0.15	0.36	0.13	0.15	-1.55	-0.25	-1.89	1.06	-0.24	-1.04	-1.02	-0.12

Note: The z-score is calculated as the weekly flow minus the 2-year average flow, divided by the 2-year standard deviation of flows. A positive (negative) number does not necessarily suggest buying (selling), as it is expressed relative to the 2-year average flow and depends on whether the latter is a positive or a negative number. Weeks with no flow are marked with '-'.

Source: BofA Merrill Lynch Global Research

**Table 4: Snapshot of EM Flows (Z-score)**

	Total				Corporate				Official				Hedge funds				Real money			
	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t	t-3	t-2	t-1	t
<b>LatAm</b>	-0.22	-0.89	-1.11	0.56	1.36	0.21	1.11	0.57	0.15	0.36	0.13	0.15	-1.55	-0.25	-1.89	1.06	-0.24	-1.04	-1.02	-0.12
BRL	-0.48	0.52	-0.47	0.33	0.15	0.38	0.99	0.52	-	-	-	-	-0.83	1.45	-0.94	0.92	-0.31	-0.20	-0.71	-0.26
MXN	-0.14	-1.65	-1.14	0.65	1.32	0.69	0.74	0.05	0.27	0.25	0.24	0.26	-0.93	-1.85	-2.39	1.07	-0.40	-1.41	-0.58	0.17
CLP	0.83	-1.85	-1.53	-0.31	0.80	-1.04	-0.38	-0.31	-0.16	3.17	-0.20	-	-2.35	-0.67	-1.14	0.01	2.29	-1.46	-1.02	-0.25
COP	0.45	-2.69	0.13	-0.24	0.80	-1.45	-0.53	0.25	-	-	-	-	0.18	-3.57	0.62	0.10	0.03	-0.87	0.21	-0.54
PEN	1.31	0.14	-0.39	0.52	3.70	0.12	0.76	1.51	-	-	-	-	1.96	1.58	-1.83	-0.59	-1.12	-0.53	-0.12	0.04
ARS	-1.31	1.43	0.62	0.66	0.19	0.38	0.45	-0.31	-	-	-	-	-0.52	0.65	1.38	-0.25	-1.47	1.18	-0.55	1.28
<b>Asia</b>	-0.13	-1.02	-0.23	-0.72	0.68	0.13	1.38	-0.61	-0.33	-0.33	0.03	-0.35	0.43	-0.45	-1.49	-0.62	-0.71	-1.24	-0.22	0.12
CNY	0.11	-0.38	-0.10	0.81	0.19	-0.05	-0.07	1.10	-	-	-	-	-0.19	-0.18	-0.17	-0.28	-0.01	-0.82	0.01	-0.22
CNH	-0.62	-0.89	-0.45	-0.15	0.26	0.21	0.57	0.39	-	-0.36	-0.36	-0.36	-0.57	-0.66	-0.38	-0.26	-0.73	-2.23	-0.62	1.27
INR	-0.22	-0.23	0.36	0.31	0.23	-1.10	1.35	-1.42	-	0.65	-0.01	-0.01	0.28	-0.18	-0.72	0.77	-0.74	0.73	-0.18	1.23
KRW	1.02	0.10	0.97	-0.46	0.86	2.22	1.17	-0.06	-	-	-	-	1.15	-0.20	0.03	-0.79	0.14	-0.63	0.71	-0.03
IDR	-0.08	-0.73	-1.10	-2.08	0.38	0.10	0.26	-0.30	1.74	-	-2.03	-0.21	-0.70	-0.71	-0.53	-0.50	0.06	-0.48	-1.07	-2.11
MYR	-0.23	1.49	-2.93	0.11	-0.25	3.43	-1.44	0.11	0.16	-	0.16	0.15	-0.04	0.13	0.04	-0.06	-0.25	-2.18	-4.00	-0.01
SGD	-0.35	-0.64	0.94	-0.21	0.31	-0.21	-0.14	-0.06	-0.18	-0.17	1.62	-0.20	0.26	0.30	1.58	0.71	-0.94	-1.17	-2.34	-0.68
TWD	0.38	-0.96	-2.11	-1.65	0.28	-0.67	0.57	-0.85	-	-0.14	-0.14	-	1.78	-0.69	-4.00	-0.85	-1.10	-0.32	0.42	-1.03
THB	-0.79	0.98	0.74	-0.82	-0.67	-1.06	-0.10	-0.99	0.25	0.26	0.30	0.26	-2.85	4.00	0.59	-0.94	2.04	-1.76	0.84	0.55
<b>EMEA</b>	-0.18	-1.85	0.04	-0.94	0.13	-0.19	0.48	0.53	0.11	-0.34	0.07	-0.08	-0.65	-1.01	0.20	-0.97	0.08	-1.77	-0.32	-0.94
TRY	0.74	-1.33	0.43	-0.02	-0.04	0.13	-0.10	0.28	0.37	-1.63	-	-0.07	-0.02	-1.05	0.32	-0.26	1.33	-1.59	0.63	-0.19
HUF	-0.03	0.05	0.56	-2.06	3.02	0.05	2.40	-0.46	-	0.11	-	0.14	-0.14	-0.29	-0.55	-0.65	0.22	0.16	-1.96	
PLN	0.08	-0.28	-0.16	0.62	-1.22	-0.84	0.87	1.44	-0.07	-0.06	0.05	-	0.03	-0.55	0.59	0.62	0.61	0.34	-0.90	-0.23
ILS	-0.54	1.18	1.13	-0.96	0.95	-0.13	0.66	-0.09	-	-	0.29	-	-1.29	0.54	1.11	-0.60	-0.77	1.59	0.38	-1.11
CZK	0.14	-0.62	-0.41	-0.87	0.70	-0.93	-0.81	-0.31	-	-	-	-	-0.36	-1.08	0.16	-0.16	0.08	0.24	-0.22	-0.82
ZAR	-0.66	-1.69	0.29	0.19	-0.55	0.69	0.59	-0.02	0.20	-0.17	0.08	-0.16	-0.71	-0.25	-0.14	-0.98	-0.19	-2.08	0.23	0.84
RUB	-0.32	-1.49	-0.88	-0.71	-0.25	0.07	-0.65	0.10	-	-	-	-	0.01	-0.32	-0.51	-0.79	-0.28	-1.50	-0.52	-0.44
<b>KEY:</b>	<span style="background-color: green; width: 100px; height: 10px;"></span> Z > 2				<span style="background-color: lightgreen; width: 100px; height: 10px;"></span> 2 > Z > 1.5				<span style="background-color: yellow; width: 100px; height: 10px;"></span> 1.5 > Z > 1				<span style="background-color: grey; width: 100px; height: 10px;"></span> 1 > Z > -1				<span style="background-color: yellow; width: 100px; height: 10px;"></span> -1 > Z > -1.5			

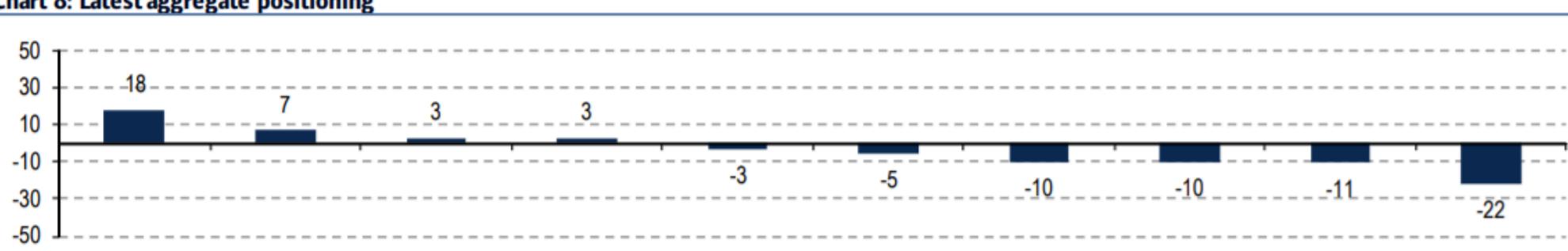
## Positioning Scorecard G10

**Table 5: G10 FX Positioning Scorecard**

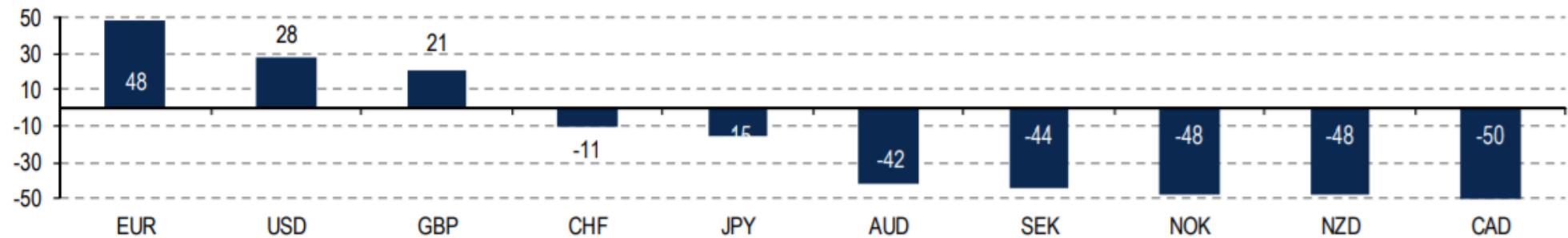
Currency	BofAML HF	BofAML RM	FXRS	COT	TFF LF	TFF AM	EPFR	Aggregate Positioning Signal	Change in positioning	MAA Breadth
NOK	25	-10	39	-	-	-	38	18	↓	↔
USD	30	-17	5	34	24	-7	27	7	↓	↑
GBP	20	19	-1	-16	-1	-21	43	3	↓	↔
JPY	3	23	15	-27	-11	-17	36	3	↑	↑↑
SEK	6	-41	26	-	-	-	34	-3	↓	↓↓
EUR	-19	10	-27	-18	-26	37	28	-5	↑	↔
CHF	24	3	-	-41	-16	-50	36	-10	↓	↑
CAD	-10	27	-30	-29	-23	-14	49	-10	↓	↔
AUD	-23	37	-23	-35	-5	-40	41	-11	↑	↓
NZD	-18	-22	-45	-14	5	-31	42	-22	↑	↓↓

Source: BofA Merrill Lynch Global Research, Bloomberg, EPFR Global; See appendix for details; HF: Hedge Fund, RM Real Money, [FXRS: FX and Rates Sentiment Survey](#)

Note: Aggregate positioning is the unweighted average of BofAML HF, BofAML RM, FXRS, TFF LF and TFF AM

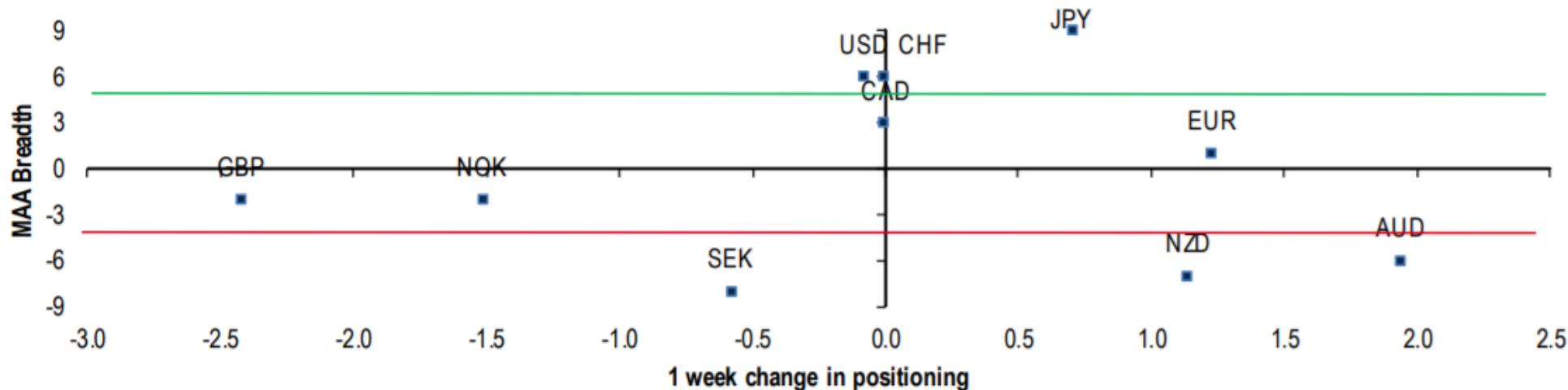
**Chart 8: Latest aggregate positioning**


**Chart 9: Latest positioning relative to the past year (1Y percentile, scaled +50 to -50)**



Source: BofA Merrill Lynch Global Research, Bloomberg

**Chart 10: G10 FX Change in positioning vs price trend as measured by MAA**



Source: BofA Merrill Lynch Global Research, Bloomberg; See FX Quant Trader for detail on MAA (Moving Average Aggregation)

Goldman Sachs

GOAL Kickstart

## Cross-asset: Implied and realised vol, call and put skew

**Exhibit 32: Cross-asset volatility, current and historical percentiles, implied 3m and realised 1m**

	Equities						Rates						Credit			Commodities			Currencies		
	S&P 500	EURO STOXX 50	Nikkei 225	FTSE 100	MSCI EM	MSCI EAFE	USD 2-year	USD 10-year	EUR 2-year	EUR 10-year	CDX IG	CDX HY	iTraxx Europe	WTI	Gold	Copper	EUR/USD	JPY/USD	GBP/USD		
<b>Implied (3-month ATM, %)</b>																					
Current:	15.0	15.0	16.7	12.6	19.4	13.1	4.0	3.8	1.1	2.2	47.1	36.2	51.1	31.6	8.8	16.4	5.3	6.5	7.5		
Percentile:	51%	19%	18%	28%	38%	20%	81%	12%	20%	7%	41%	16%	35%	56%	1%	10%	2%	5%	24%		
3M change:	2.2	1.8	0.7	-0.5	2.1	1.1	1.3	0.5	0.3	0.2	6.2	1.6	8.3	1.2	-1.4	-2.5	-1.0	0.1	-4.0		
Average:	16.1	20.1	20.5	15.8	22.2	18.3	3.4	5.4	2.5	4.0	52.0	47.9	58.7	31.5	16.2	24.6	9.6	10.0	9.4		
95th:	25.9	29.7	27.6	24.5	34.3	29.5	6.5	8.0	5.6	6.5	74.7	71.0	85.8	48.0	24.3	41.4	14.2	13.9	13.9		
5th:	10.0	12.7	14.2	10.4	15.2	10.4	1.5	3.5	0.9	2.2	38.7	30.8	40.3	17.1	9.7	15.5	5.9	6.6	5.8		
<b>Realised (%)</b>																					
1-month:	14.1	16.4	10.5	10.9	13.0	8.5	4.0	3.7	0.5	1.9	43.2	34.0	46.5	28.2	7.9	16.6	3.8	5.1	7.0		
Percentile:	61%	46%	7%	31%	45%	16%	86%	30%	13%	8%	75%	58%	67%	53%	5%	28%	2%	10%	29%		
Average:	13.9	18.8	20.0	14.3	14.9	14.1	2.9	4.9	1.8	3.4	37.2	33.5	43.7	30.6	15.1	21.7	8.7	9.0	8.6		

Source: Goldman Sachs, Goldman Sachs Global Investment Research

**Exhibit 33: 10y percentile for cross-asset average volatility**

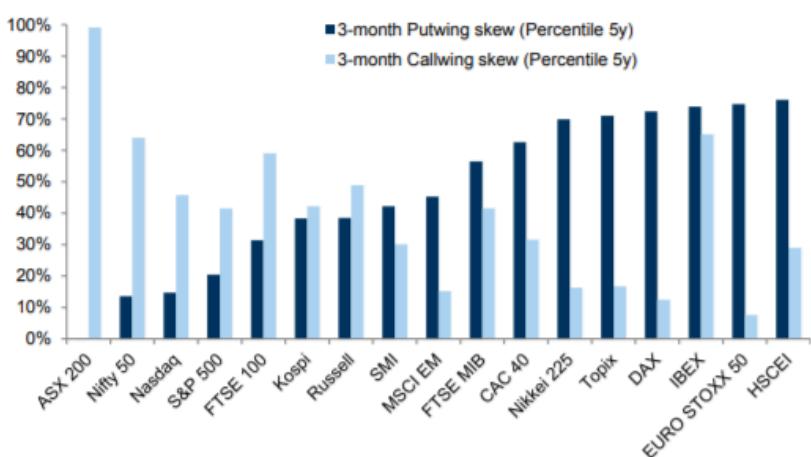
Using 16 assets across equity, government bonds, credit, commodities and FX



Source: Goldman Sachs, Goldman Sachs Global Investment Research

**Exhibit 34: Putwing and Callwing normalised skew 5y percentile**

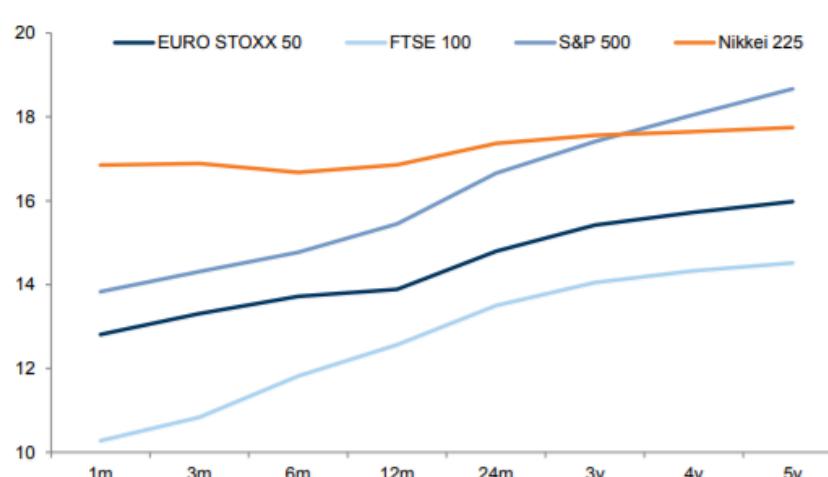
Normalised skew = (impl. vol 25 delta put/call minus implied vol 50 delta call)/50 delta call



Source: Goldman Sachs, Goldman Sachs Global Investment Research

## Cross-asset: Volatility, skew, CDS with equity vol, rate vol

**Exhibit 39: ATM implied volatility term structure for equity indices**



Source: Goldman Sachs, Goldman Sachs Global Investment Research

**Exhibit 40: Normalised implied volatility skew across regions**  
3m 25 delta put vol minus 25 delta call vol scaled by ATM implied vol



Source: Goldman Sachs, Goldman Sachs Global Investment Research

**Exhibit 41: CDS and equity vol levels in the US**

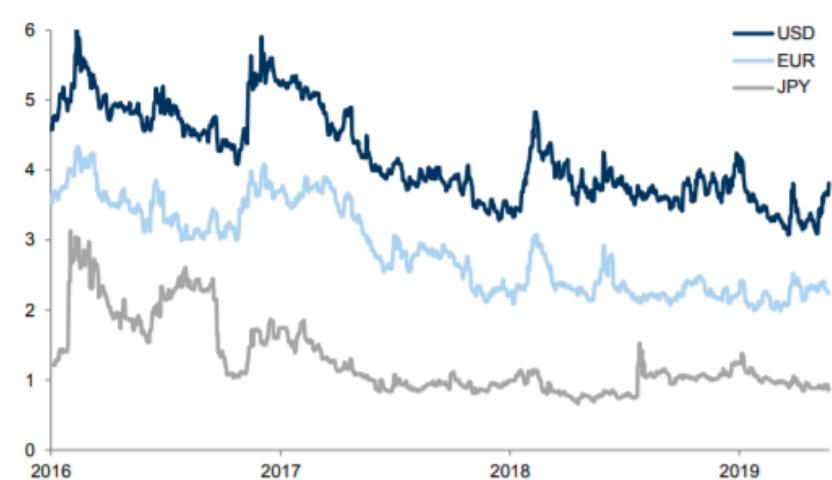
CDX HY, 3m ATM S&P 500 implied vol



Source: Goldman Sachs, Goldman Sachs Global Investment Research

**Exhibit 42: 3m ATM implied rate volatility across regions**

3-month implied volatility of 10-year rates (bp/day)



Source: Goldman Sachs, Goldman Sachs Global Investment Research



30 May 2019 | 2:36PM BST

### Trade Update: Add 2y CNY Receivers to 2y KRW Payers

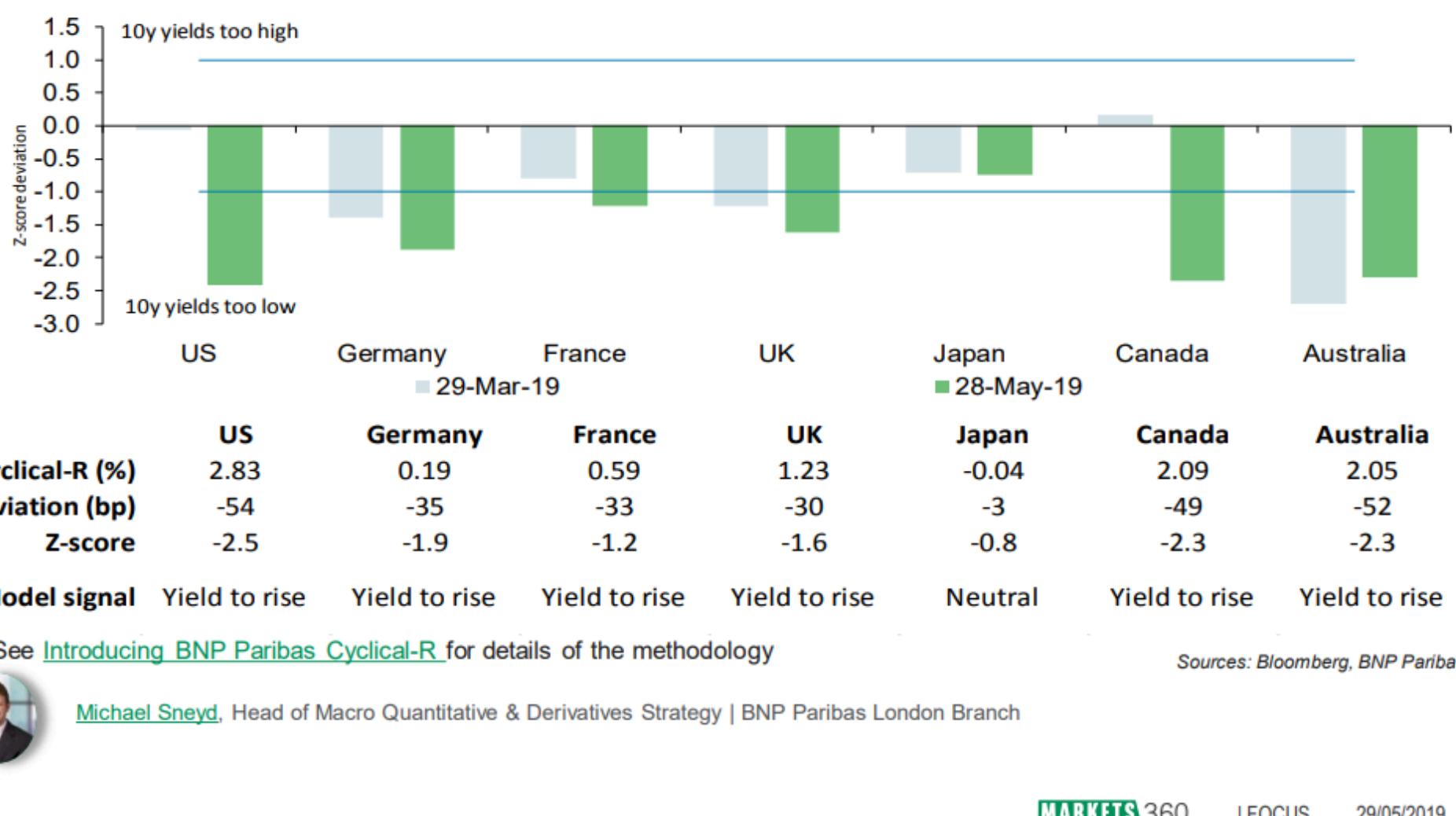
In early May, we [initiated](#) a trade idea to pay 2y KRW interest rate swaps (IRS), based on the view that the rate cut priced in the Korean curve would not materialise, given our expectation for a rebound in Q2 GDP after Q1 weakness (for reasons including better activity data in March, spillovers from China growth and an acceleration in fiscal spending). Since then, a resurgence of US-China trade tensions has overshadowed these local considerations, leading to a further rally in KRW rates. From here, our [base case](#) remains that regional growth will benefit from Chinese stimulus, and the trade tensions will ultimately subside, but both of these positive developments will likely take time to materialise, and it may be necessary for market pressure to build first. So, uncertainty around trade will likely continue to weigh on the fixed income complex, and incentivise Chinese policymakers to keep the [policy](#) bias (including monetary policy) relatively dovish.

... Specifically, we are closing the KRW 2y trade at 1.5975 (ahead of the stop at 1.55), for a potential loss of 10bp including carry, and initiate a relative trade idea (receiving 2y CNY IRS vs. paying 2y KRW IRS) at a starting value of 1.20 with a target of 0.90 and stop of 1.35. The position pays a positive carry/roll of around 9bp per three months (around +2.5bp comes from the CNY leg and +6.5bp from the KRW leg).

**Exhibit 2: We add a 2y CNY rate receiver leg to our paying 2y KRW rates trade idea, to better position for increased US-China trade uncertainty**



Fig. 1: Cyclical-R values across G7, now vs 2m ago



MARKETS 360 | FOCUS 29/05/2019 1

Fig. 7: Cyclical-R – US 10y since 2001

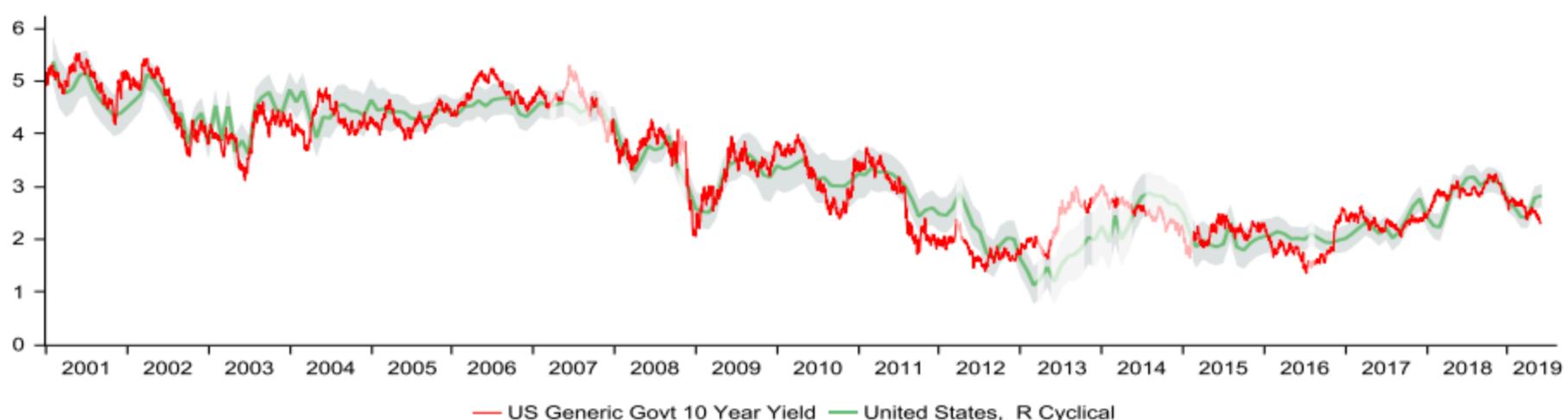


Fig. 8: Cyclical-R – US 10y since 2016



Fig. 9: Contribution to changes in rates  
% contribution to change in fair-value, US

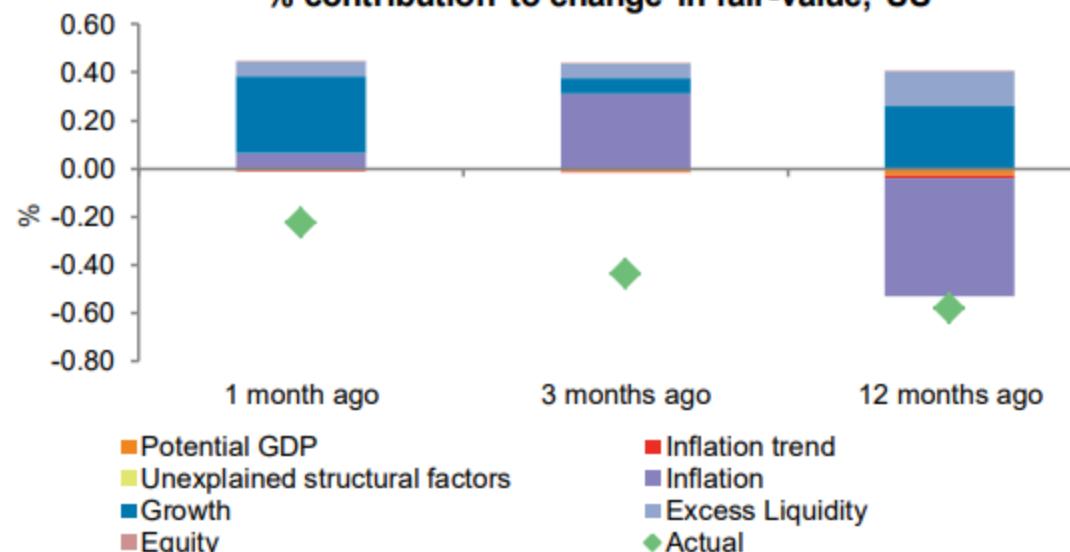
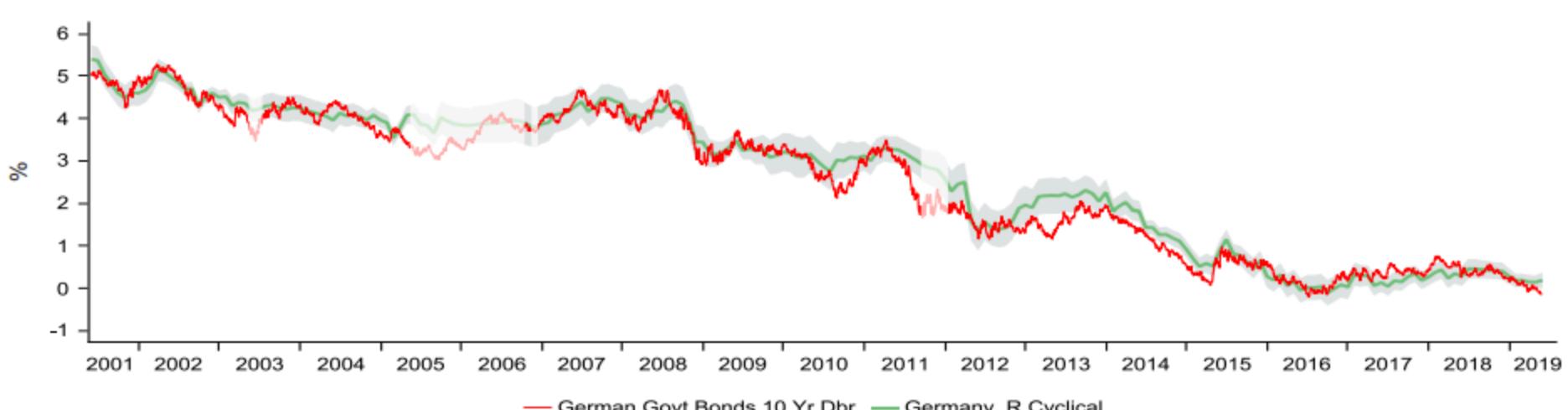
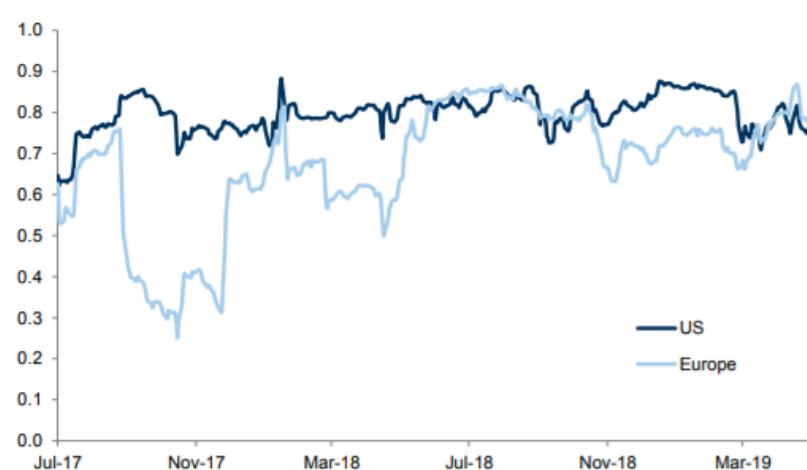


Fig. 10: Cyclical-R – Germany 10y since 2001



# Cross-asset: Correlations: Equity vol/CDS, commodity prices/credit & FX, equity/bond, equity/FX

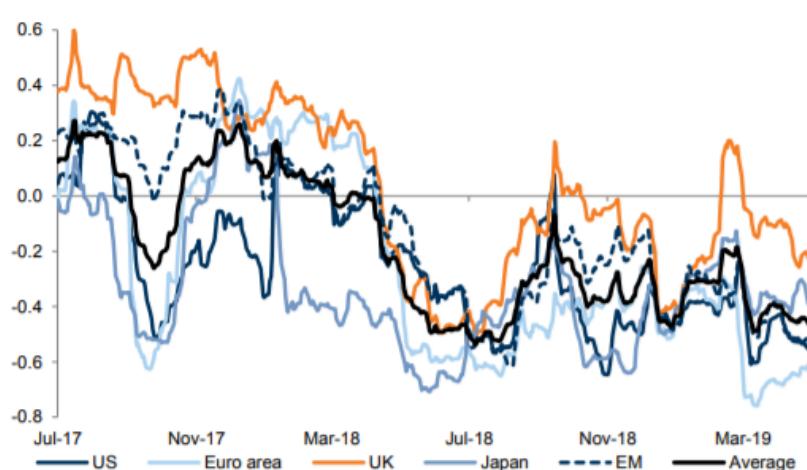
**Exhibit 28: 3m rolling equity vol/CDS correlation of weekly level changes**  
CDX HY for the US, iTraxx Xover for Europe; ATM implied vol for S&P 500 and Euro Stoxx 50



**Exhibit 29: 3m rolling commodity price correlations of weekly % changes with different assets**  
US HY returns, oil, copper and USD TWI spot return



**Exhibit 30: 3m rolling equity/bond correlation of weekly returns**



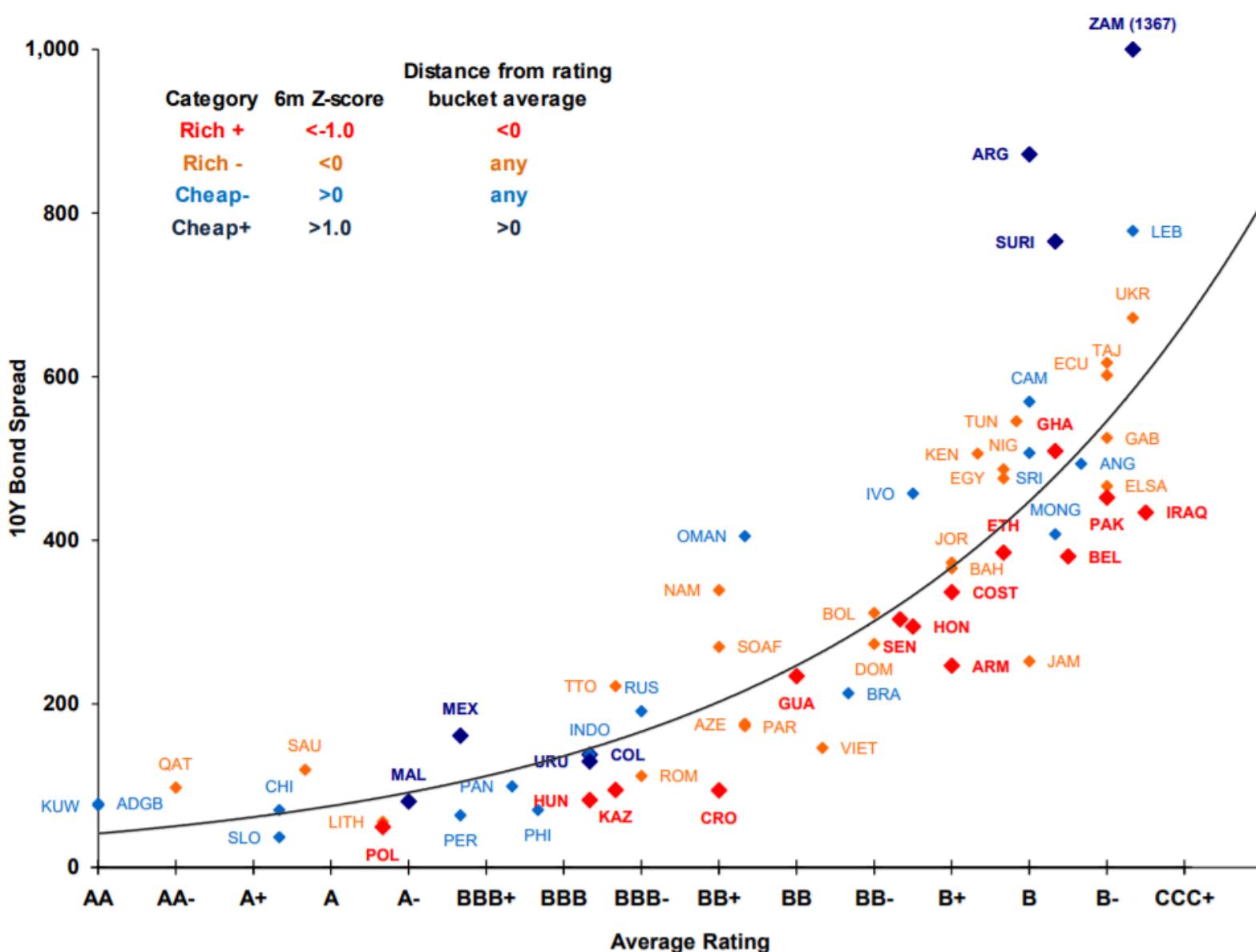
**Exhibit 31: 3m rolling equity/FX correlation of weekly returns**



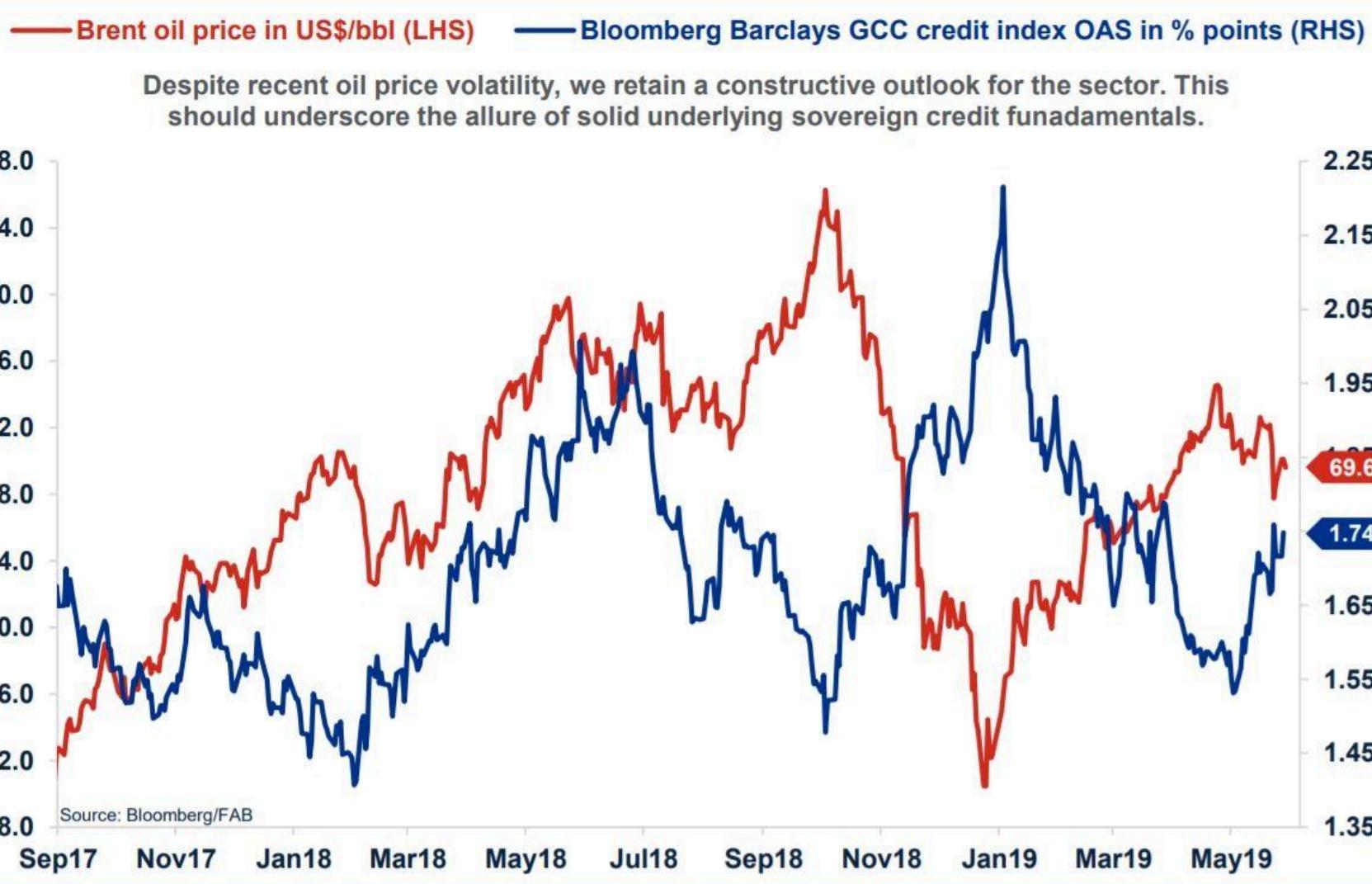
Morgan Stanley

MORGAN STANLEY RESEARCH  
EM Fixed Income Strategy  
May 2019

## Sovereign Credit – 10y Bond Valuations vs. Ratings



## Oil price watching



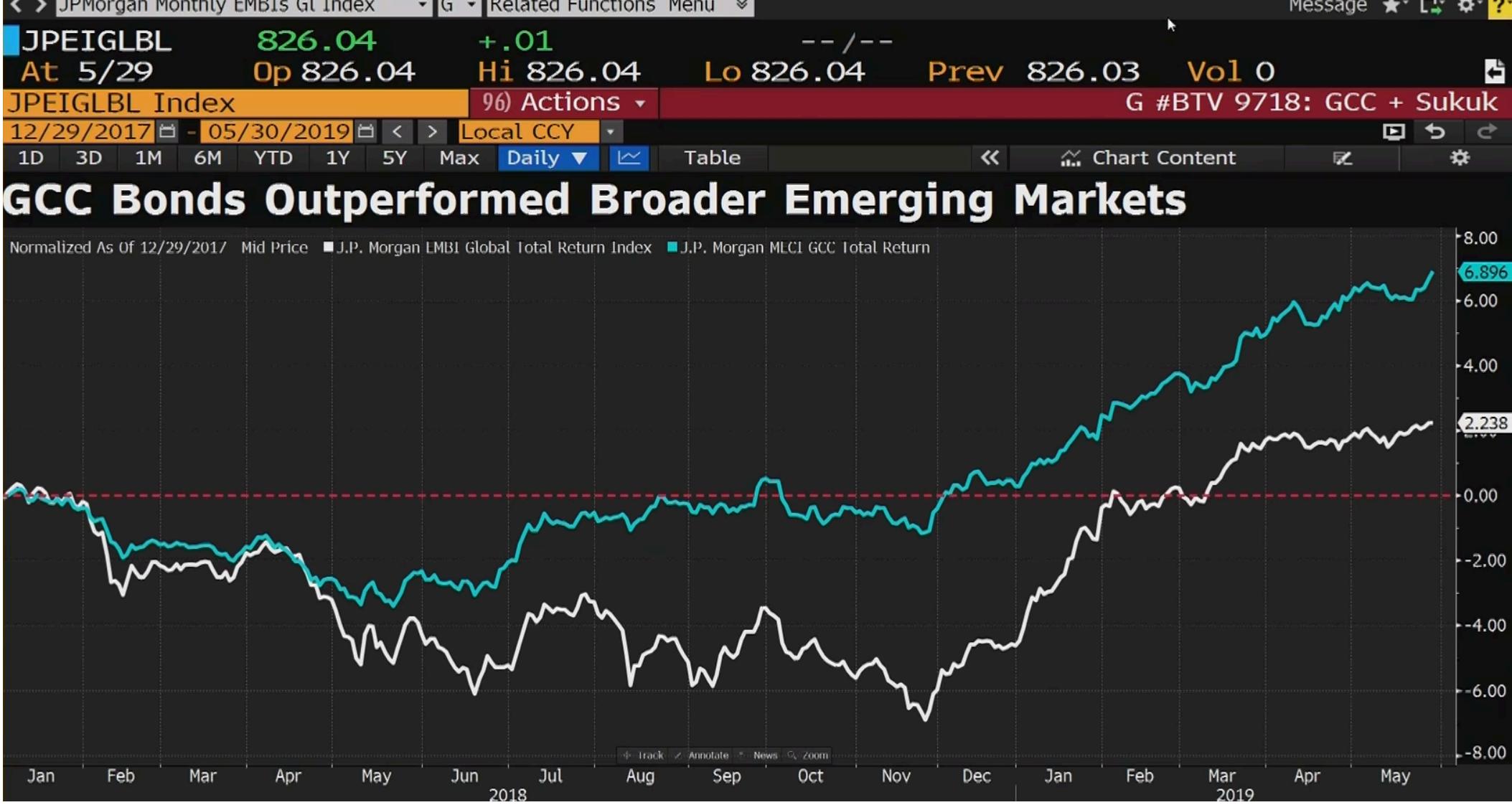
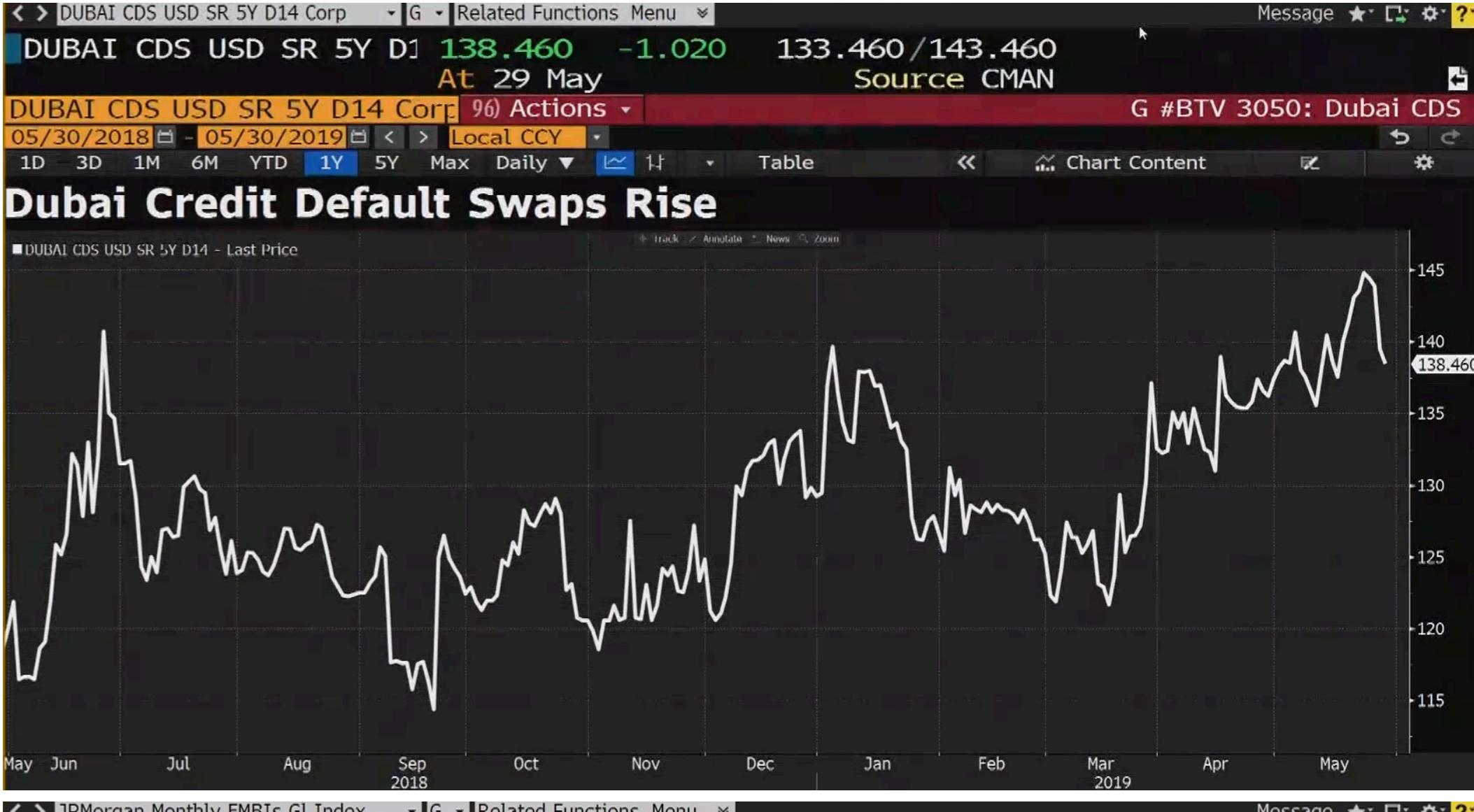
## USD strength buoys GCC



## GCC credit allure







# Saudi Arabia

## FX reserves top USD500bn

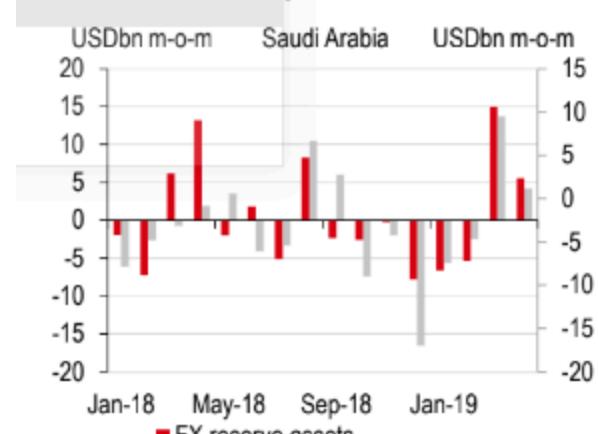
- ◆ FX reserves gained in April on rising government deposits...
- ◆ ...and could be supported further through the rest of 2019 by equity inflows and oil price stability...
- ◆ ...however this will depend on outward investment plans

Saudi Arabia's FX reserves rose USD5.5bn in April to hit USD505bn – their highest level in seven months and the equivalent of 29 months of goods and services imports. For the second month in succession, FX reserves were driven higher by the replenishment of the government's deposits with the central bank. Those increased USD4.3bn in April after rising USD13.7bn in March. The increase in those two months however only reversed half of the USD34bn that was drawn down over the previous five months.

Oil prices – which are up USD15/b on their end-2018 levels – and portfolio inflows from equity-index inclusions could further support FX reserves through the rest of 2019. However the extent of the drain on SAMA's foreign assets will depend on capital outflows and external investment plans, which are challenging to predict. As we saw in 2018, in spite of a current account surplus of USD72bn and USD13bn of inward portfolio investments, Saudi Arabia's FX reserves only managed to hold flat y-o-y as of end-2018. This was largely due to sharp increases in outward investment (FDI, portfolio investments and deposits abroad), which in total rose 47% y-o-y in 2018, to USD83bn.

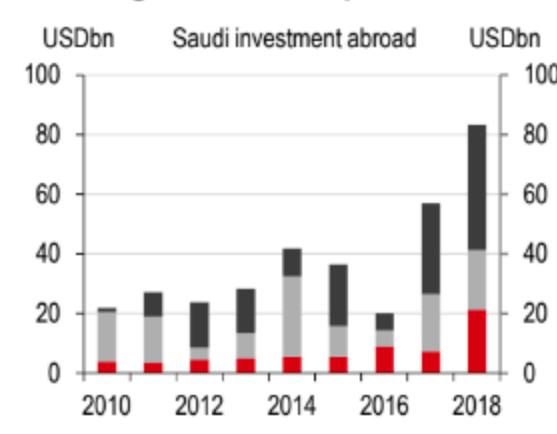
Beyond foreign flows, SAMA's latest monetary release continued to point to marginal improvement in economic activity. Annual private credit growth fell 1ppt to 2.1% in April, but remained above its previous 12-month average. Point-of-sales transactions meanwhile grew 24% y-o-y, up from 20% in March.

**1. Government deposits supported FX reserves in April**



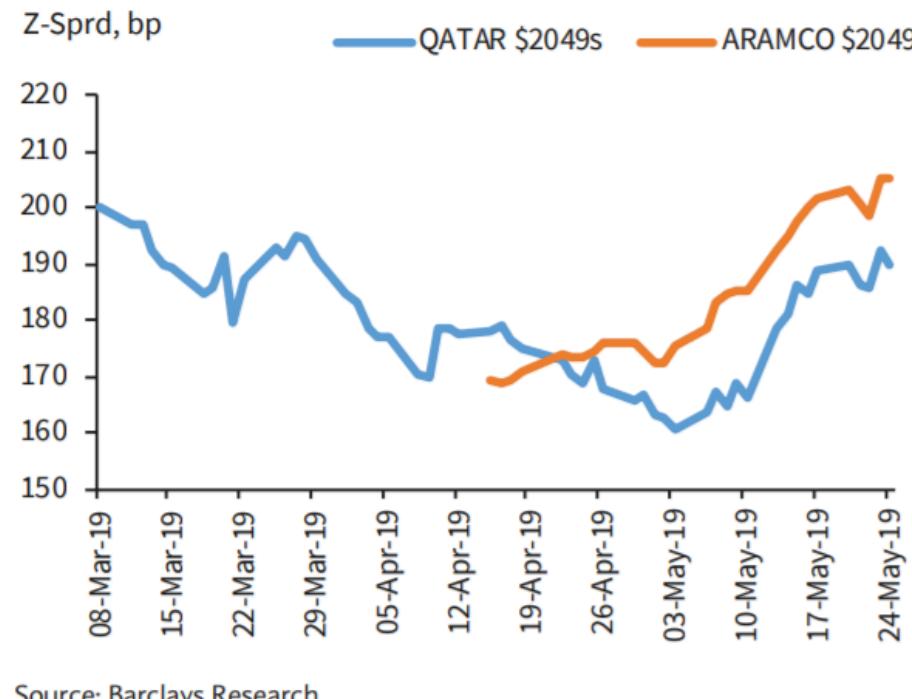
Source: SAMA

**2. Drain on FX reserves will depend on foreign investment plans**



Source: SAMA

- Saudi Aramco's debut multi-tranche eurobond deal was hotly anticipated and saw a peak order book in excess of \$12bn, with bonds pricing c.15bp inside the Saudi sovereign. We recognise Aramco's extremely strong financials and its unrivalled position in global oil markets. However, we see the credit as inextricably linked to the Saudi sovereign and see little reason to own bonds that trade inside the KSA curve.
- As such, we recommend that investors switch from Aramco \$2049s, which trade c. Z+215bp (c. 15bp inside Saudi Arabia). However, rather than recommending a switch into the Saudi sovereign, we recommend moving into Qatar \$2049s (we are Overweight on the Qatari sovereign but Underweight on the Saudi sovereign). At current oil prices Qatar is likely to enjoy a fiscal surplus, in contrast to Saudi Arabia's ongoing deficits and need to bring new supply. Qatar \$2049s trade c. Z+195bp, which is c. 20bp inside Aramco but offsetting this give-up in spread is the fact this switch allows investors to move from a single-A credit into one boasting double-A ratings.



If you're like me (nauseated by the sight of Equities) my apologies, but for Flows and/or FX this much is necessary.....

## Implications of MSCI China Rebalance This Week

### Tuesday sees the first of several large MSCI rebalances to expand the weighting of China A-Shares

- Tuesday May 28<sup>th</sup> will be the first of a 3-part rebalance to increase the A-Share inclusion factor in MSCI EM from 5% to 20%. The final rebalance will also see the addition of China mid-cap stocks and eligible Chinext stocks (which was somewhat of a surprise at the time of announcement).
- According to estimates of funds directly tracking MSCI indices by UBS Index Analysis team, this week's rebalance will result in an estimated 4bn USD of inflows to China A-Shares and 2.8bn USD of outflows from Hong Kong equities (US listed China stocks will see 800mn USD inflows).
- However, compared to trading volumes, the rebalance will be relatively small. For China A-Shares, the outflows will amount to just 0.2x the weighted average trading volumes of the stocks impacted while for Hong Kong, the outflows will amount to just 0.3x daily volumes.

### This Week's Rebalance more impactful on other markets: Saudi Arabia, Argentina, Thailand, Taiwan and South Africa

- Saudi Arabia will see 6.8bn USD of inflows (70% more than China A-Shares), which equates to 15x daily volumes (weighted average basis). Argentina and Thailand are likely to see 10x and 7.5x volumes respectively. In terms of outflows, Taiwan and Korea will see the largest after Hong Kong. As a proportion of GDP, Taiwan and South Africa will see the largest outflows at 2.9% and 2.4% of GDP respectively.

### Take advantage of elevated A-Share Outperf swap rates

- The build-up to the MSCI rebalance resulted in strong demand for broad-based hedges which has driven A-Share outperformance swap rates to their YTD highs and in the case of CSI500, to the highs of last year: CSI500 3m outperformance vs 3m USD Libor swap is now at 9%. This provides an attractive opportunity to use the swap rate to fund a downside hedge (see next page).

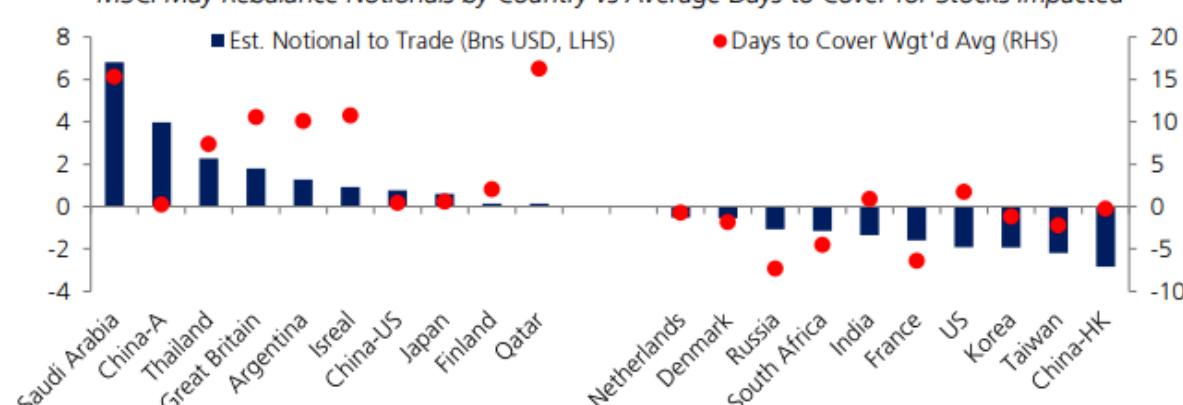
Figure 2: MSCI announcements

May 2019	• MSCI will increase the index inclusion factor of all China A Large Cap shares currently in the MSCI Indexes from 5% to 10% and add ChiNext Large Cap shares with a 10% inclusion factor coinciding with the May 2019 Semi Annual Index Review
Aug 2019	• MSCI will increase the inclusion factor of all China A Large Cap shares in the MSCI Indexes from 10% to 15% coinciding with the August 2019 Quarterly Index Review
Nov 2019	• MSCI will increase the inclusion factor of all China A Large Cap shares in the MSCI Indexes from 15% to 20% and add China A Mid Cap shares, including eligible ChiNext shares, with a 20% inclusion factor to the MSCI Indexes coinciding with the November 2019 Semi-Anual Index Review

Source: MSCI

Link: [A guide to MSCI A-Share Inclusion and Constituents](#) (Ting Gao, 16<sup>th</sup> April, 2019)

MSCI May Rebalance Notionals by Country vs Average Days to Cover for Stocks Impacted



Latest China Outperformance vs 3m USD Libor rates Swap

BBG Ticker	Name	3M	6M	12M	Break fee	Notional mmUSD
CSIN0300	CSI300 NTR	3.00%	2.75%	2.50%	0.10%	50
CSIN0905	CSI500 NTR	9.00%	8.00%	7.00%	0.70%	50
M7CN1A	MSCI China A NTR	4.00%	3.56%	3.13%	0.30%	50
M1CNA	MSCI China Inclusion NTR	3.00%	2.75%	2.50%	0.10%	50
XINA50NC	FTSE A50 NTR	1.50%	1.00%	0.50%	0.10%	50

NTR stands for Net Total Return; USDCNY Composite Swap (except for M1CNA which will be USD vanilla); Execution - Index target TWAP, FX on agency; Market charge 10bps on sell (stamp duty)

## Hedging A-Share Exposure and Positioning for Chinext Inclusion

### Hedging Long China A-Share Exposure through Hong Kong:

- Elevated CSI500 Outperformance swap rates can be combined with an index hedge in order to reduce the risk of being long China equities outright. Among indices to hedge with, HSCEI currently looks one of the most attractive. Unlike the A-Share ETFs listed in Hong Kong, the HSCEI index has seen much more structured product issuance on both the index level and underlying level. As such, the index currently screens as having one of the lowest vol percentiles on our Cross-asset Hedging Screen on slide 2. This has created a large divergence between HSCEI and 3188 HK (CSI300 ETF) implied vol levels. The HSCEI has also tended to be quite correlated to CSI500, particularly during episodes of equity sell-offs as can be seen on the chart middle right.

- Trade Idea:** Enter CSI500 3m Outperformance Swap vs 3m USD Libor at 9% and buy HSCEI 3m 93%/85% put spread for 1.2% (ref: 10454)

### Hedge positively correlated RMB exposure:

- Given investors' increased exposure to RMB and its positive correlation to China equity returns, hedging FX exposure looks increasingly attractive. UBS Investment Research Asia Economist does not expect a significant sell-off in CNY but still expects it to "depreciate modestly" ([China Economic Perspectives](#), Tao Wang, 13<sup>th</sup> May 2019). Given the recent increase in skew, USDCNH call spreads look an attractive hedge.

- Trade Idea:** 6m 7.00 / 7.25 CS, offer 0.69bps (fwd ref 6.9360).

### Diversify into Chinext Option structures ahead of MSCI inclusion in November:

- Chinext Top5 Basket Call Spread vs Collar:** Given lack of Chinext option market, an investor can instead go long a call spread vs put on a basket of the top5 equal weighted Chinext names. The basket is 85-90% correlated with Chinext performance and has historically outperformed the index. As implied volatility levels are quite high, doing zero premium structures such as call spreads vs puts looks attractive, particularly given that equities have already corrected from their highs.
  - Trade Idea:** Buy Top5 Chinext Names (equal weighted) basket 6m 110%/120% Call Spread, sell 6m Put with 80% strike to get zero premium .
- Switch into delta-replication calls:** a delta-replication strategy goes long delta equivalent to the delta of a call option and rebalances accordingly during the life of the contract. Due to the rebalancing, this strategy is better suited to low volatility periods such as 2017 and 2018. It also provides a lot of flexibility to structure the payoff in accordance with investor needs. Please consult UBS sales for more details.

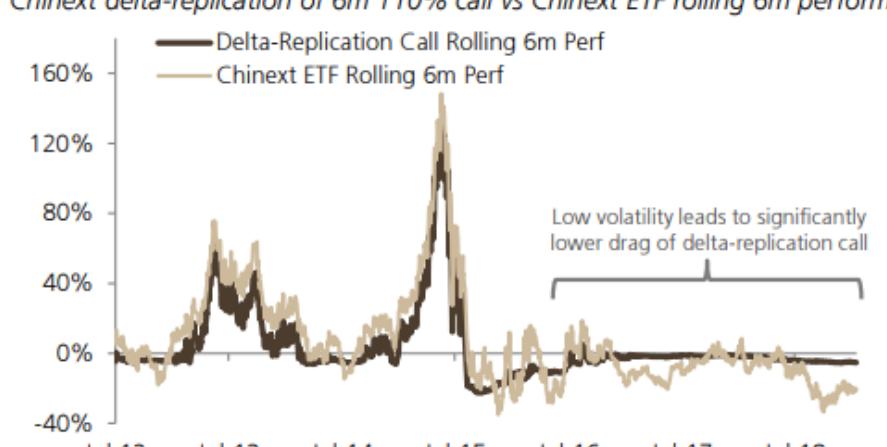
Difference between 3m ATM Vol on HSCEI and 3188 HK (CSI300 ETF)



CSI500 and HSCEI Rolling Monthly Returns



Chinext delta-replication of 6m 110% call vs Chinext ETF rolling 6m performance



## GS Macro Strategy:

### Global FX Trader

#### Our thoughts on CNY, MXN, EUR, CLP, ILS, ARS, & EM Spillovers

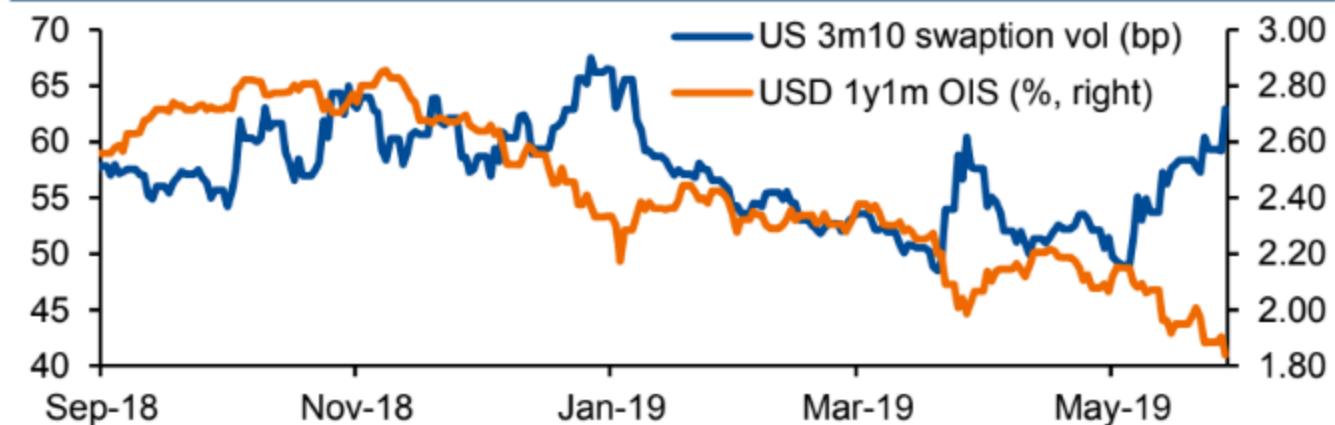
**CNY: Lean short amidst the trade storm.** The multi-front conflict between the US and China escalated further this week. And while our DC-based analysts think an eventual deal would help the US President's [reelection prospects](#), our economists think that market pressure or available polling data would likely not cause the White House to shift its stance any time soon. We therefore recommend leaning long USD vs. CNH and TWD (possibly paired with short USD/JPY) to position for a further worsening over the near-term. Although long USD/KRW had been one of our preferred trade war hedges, we find this cross less attractive at current levels, and think the Won would outperform other currencies in the region on any positive trade-related news. For investors looking for 'safer' sources of carry, the Indian Rupee still looks like the best port in the storm.

**MXN: Don't fade the weakness (yet).** There are a number of potential reasons for a climb-down of US tariffs on Mexican imports: White House demands for reduced immigration flows were not precisely-worded (which suggests wiggle-room), Mexico-to-US immigration flows may decrease in the coming weeks due to seasonality (which may make it easier to accomplish a reduction in flows), and rising tariffs run the risk of disrupting—rather than pushing forward—ratification of the USMCA. Still, we would not fade Friday's roughly 2.5% move in USD/MXN: i) our economists [expect](#) the White House's proposal of 5% tariffs on Mexican imports to be enacted on June 10, ii) rhetoric between the US

## FX Compass

### Here to stay

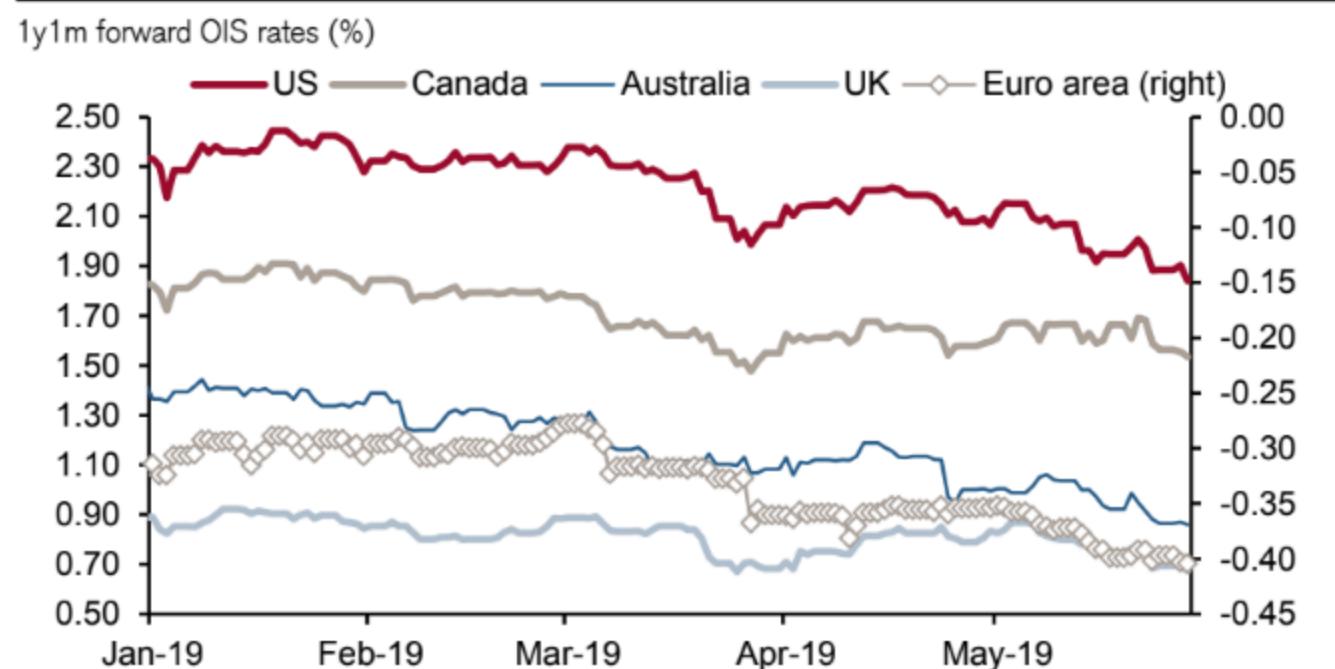
**Figure 1: US rates vol rising as markets reprice Fed expectations lower**



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

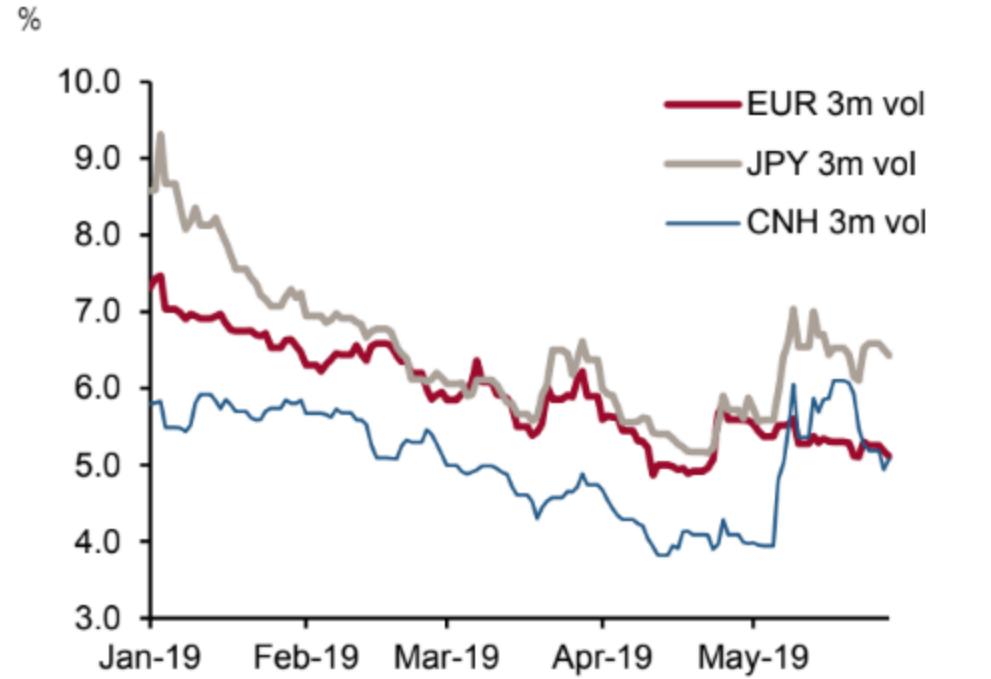
FX markets remain in a state of contained nervousness, with more spectacular moves taking place instead in the rates space, where the repricing of central bank policy expectations in a dovish direction continues unabated. Fears related to US-China trade tensions remain the driving catalyst. Despite increasingly jittery moves in equities and rates space, FX delivered vol remains for the most part contained. We see two main reasons:

**Figure 2: Dovish repricing of monetary policy expectations continues**



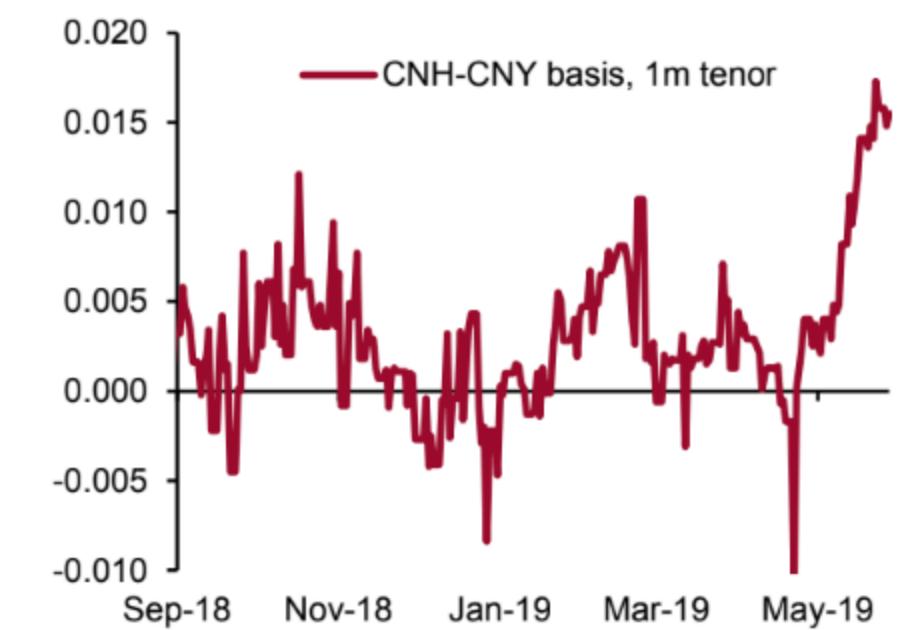
Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

**Figure 3: CNH vols have abated from recent highs in line with EUR vols, at odds with still high JPY vols**



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

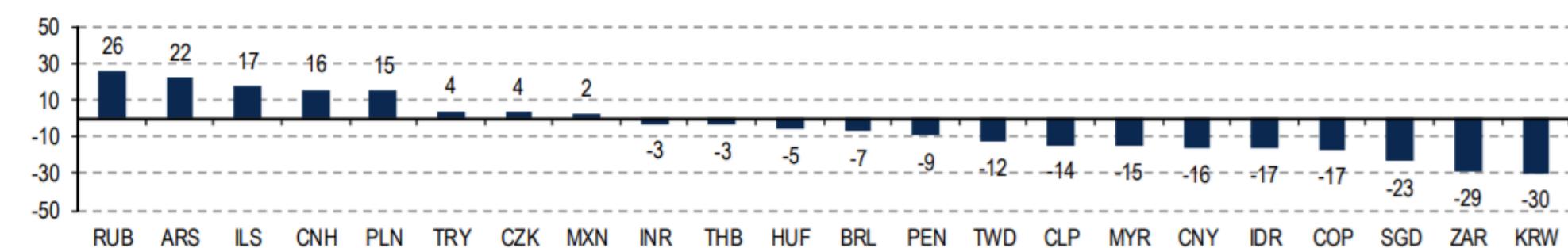
**Figure 4: Widening CNH-CNY basis suggests market pressure for a weaker currency remain in place**



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

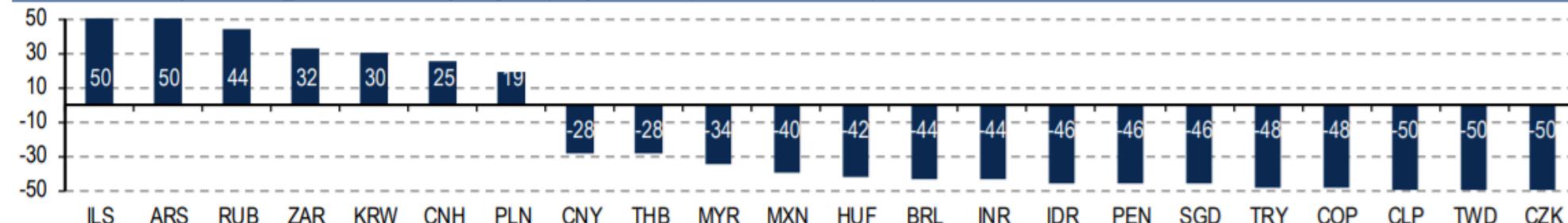
## Positioning Scorecard EM

**Chart 11: EM aggregate positioning**



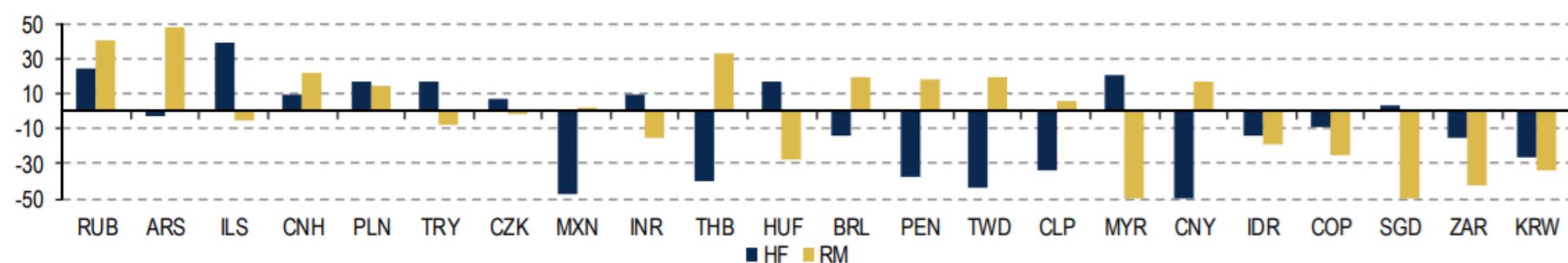
Source: BofA Merrill Lynch Global Research, Bloomberg; Positioning is measured relative to January 2012, using an expanding window of data. See Appendix for details.

**Chart 12: Latest positioning relative to the past year (1Y percentile, scaled +50 to -50)**



Source: BofA Merrill Lynch Global Research, Bloomberg

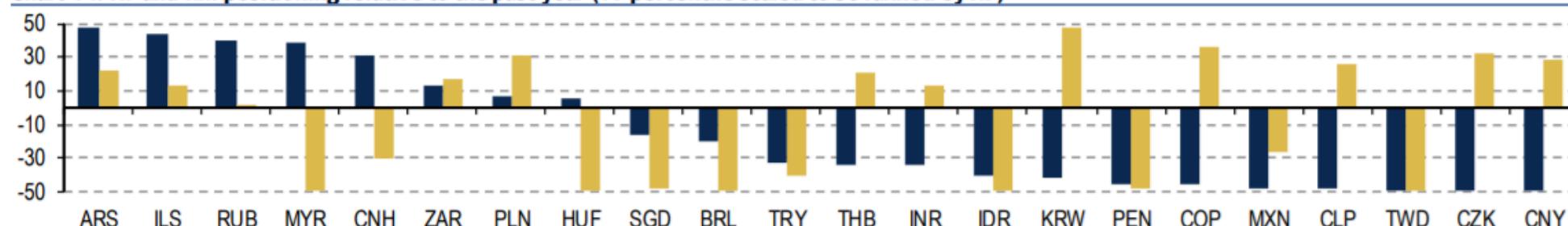
**Chart 13: Latest HF and RM positioning ranked by aggregate positioning**



Source: BofA Merrill Lynch Global Research

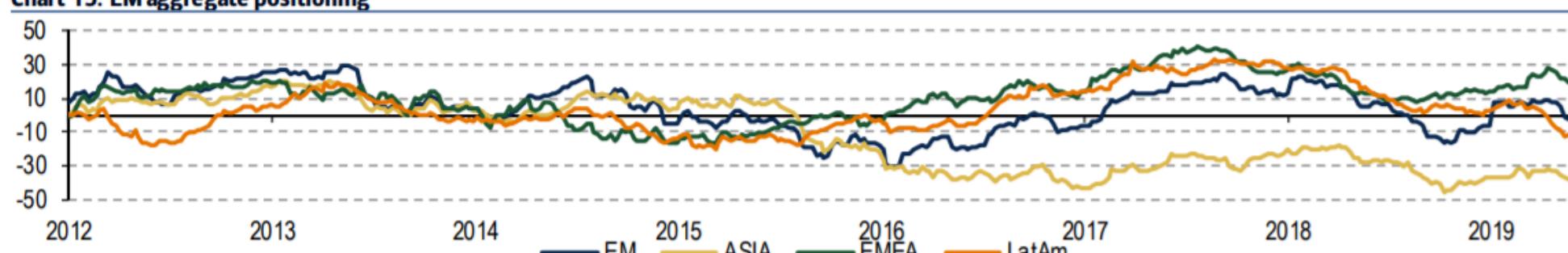
Note: HF and RM are ranked by latest aggregate positioning

**Chart 14: HF and RM positioning relative to the past year (1Y percentile scaled to 50 ranked by HF)**



Source: BofA Merrill Lynch Global Research

**Chart 15: EM aggregate positioning**



Source: BofA Merrill Lynch Global Research, Bloomberg

1. Stay short SGD vs. top 8-currencies in the GS SGD NEER index, indexed at 100 on January 17, 2019, with a target of 98 and a stop of 101, currently trading at 99.88.
2. Stay long CDX IG vs. the Bloomberg-Barclays IG index (rates-hedged) at a 2x to 1 notional ratio, opened on February 28, 2019, with a target of 150bp and a stop of -150bp, with a PnL of 22bp (value as of May 24).
3. Close short EUR 2y2y payers, opened on March 15, 2019 at 0.17%, with a potential PnL of 15bp (of notional).
4. Stay short FFV9 futures, opened on March 27, 2019 at 2.20%, with a target of 2.40% and a stop of 2.05%, currently trading at 2.25% with a PnL of 5bp.
5. Stay short CAD/NOK, opened on April 5, 2019 at 6.43, with a target of 6.17 and a stop of 6.60, currently trading at 6.46.
6. Stay long the Bloomberg-Barclays Investment Grade Wirelines index vs. the Bloomberg Barclays US Corporate IG Index, notional-neutral and rates-hedged, opened on April 8, 2019 with a target of 2.00% and a stop of -2.00%, with a PnL of -0.25%.
7. Pay KRW 2y IRS, opened on May 2, 2019 at 1.71%, with a target of 1.95% and a stop of 1.55%, currently trading at 1.61%.
8. Stay short 5y5y RPI inflation swaps, opened on May 3, 2019 at 3.58%, with a target of 3.35% and a stop of 3.75%, currently trading at 3.61% with a PnL of -3bp (value as of May 24).
9. Stay long EM ex-China equities vs. Global Materials stocks, opened on May 13, 2019, with a target of 106 and a stop of 97, currently trading at 100.66.
10. Stay long 5y5y real yields via long 5y5y EONIA and 5y5y EUR inflation swaps, opened on May 17, 2019 at -0.62%, with a target of -0.80% and a stop of -0.45%, currently trading at -0.63% (value as of May 24).
11. Stay short EUR/HUF, opened on May 17, 2019 at 326.60, with a target of 315 and a stop of 331, currently trading at 325.38 (value as of May 24)

FIGURE 40

New and existing dislocations in LatAm

Relationship	Spread History (Z-Spread)				Z-Score	Difference Chart	Conclusion
	6mo Chart	Min	Now	Max			
JBSSBZ \$2023 - MRFCGBZ \$2023		-226	-208	-32	3.0		JBSSBZ \$2023 is RICH to MRFCGBZ \$2023
BRASKM \$2022 - VOTORA \$2021		-29	36	49	2.5		BRASKM \$2022 is CHEAP to VOTORA \$2021
JBSSBZ \$2024 - MRFCGBZ \$2024		-358	-323	-68	2.3		JBSSBZ \$2024 is RICH to MRFCGBZ \$2024
BANBRA \$2022 sub - DAVIVI \$2022 sub		9	9	58	2.1		BANBRA \$2022 sub is RICH to DAVIVI \$2022 sub
BRASKM \$2022 - PETBRA \$2021		24	87	100	2.1		BRASKM \$2022 is CHEAP to PETBRA \$2021
BRADES \$2022 sub - ITAU \$2022 sub		-21	-19	9	2.0		BRADES \$2022 sub is RICH to ITAU \$2022 sub
COLOM \$2027 - MEX \$2027		-32	-13	-11	1.9		COLOM \$2027 is CHEAP to MEX \$2027
PERU €2026 - PERU \$2027		-5	-2	29	1.9		PERU €2026 is RICH to PERU \$2027
NEXA \$2027 - PETBRA \$2027		-104	-38	-37	1.8		NEXA \$2027 is CHEAP to PETBRA \$2027
MEX €2023 - MEX €2029		-82	-82	-35	1.8		MEX €2023 is RICH to MEX €2029
BANBRA \$2022 sub - ITAU \$2022 sub		-4	3	23	1.8		BANBRA \$2022 sub is RICH to ITAU \$2022 sub
MEX €2024 - MEX \$2026		-59	-56	-25	1.8		MEX €2024 is RICH to MEX \$2026
BIMBOA \$2044 - MEX \$2044		-12	-8	17	1.7		BIMBOA \$2044 is RICH to MEX \$2044
MEX \$2022 - URUGUA \$2022		42	44	69	1.7		MEX \$2022 is RICH to URUGUA \$2022
DOMREP \$2027 - HONDUR \$2027		-70	-13	-13	1.7		DOMREP \$2027 is CHEAP to HONDUR \$2027
Existing Dislocations							
Relationship	Spread History (Z-Spread)				Z-Score	Difference Chart	Conclusion
	1y Chart	Min	Now	Max			
JBSSBZ \$2023 - PETBRA \$2023		-52	-41	149	3.7		JBSSBZ \$2023 is RICH to PETBRA \$2023
JBSSBZ \$2023 - BRAZIL \$2023		-1	11	243	3.3		JBSSBZ \$2023 is RICH to BRAZIL \$2023
BUENOS \$2024 - ARGBON \$2024		-651	-624	361	3.3		BUENOS \$2024 is RICH to ARGBON \$2024
YPFDAR \$2025 - ARGBON \$2024		-1485	-1458	-75	3.2		YPFDAR \$2025 is RICH to ARGBON \$2024
YPFDAR \$2024 - ARGBON \$2024		-1555	-1528	-88	3.2		YPFDAR \$2024 is RICH to ARGBON \$2024

Note: Dislocation defined as a spread differential between a pair of bonds more than 1.5 standard deviations from the 6mo median (modified z-score; see highlighted column). Existing dislocations denotes a spread differential with a z-score above 1.5x at least over the past two weeks. Source: Barclays Research

## GS Risk appetite indicator: principal component analysis

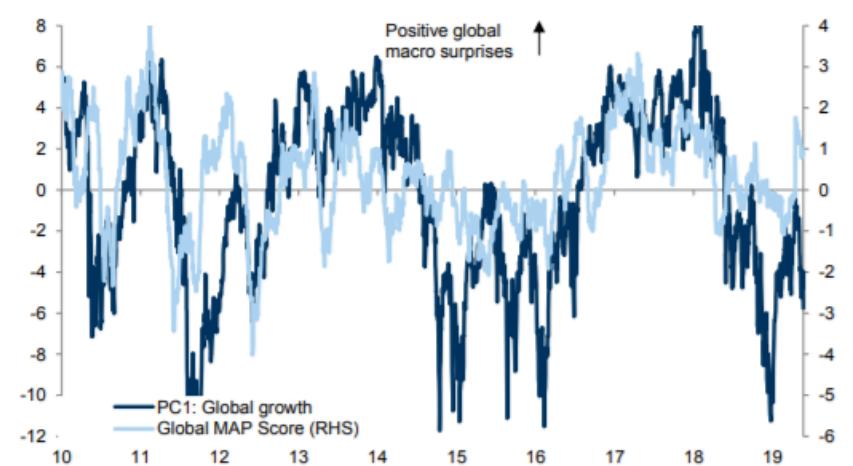
### Exhibit 21: GS RAI principal component

See April 2019 GOAL for construction details



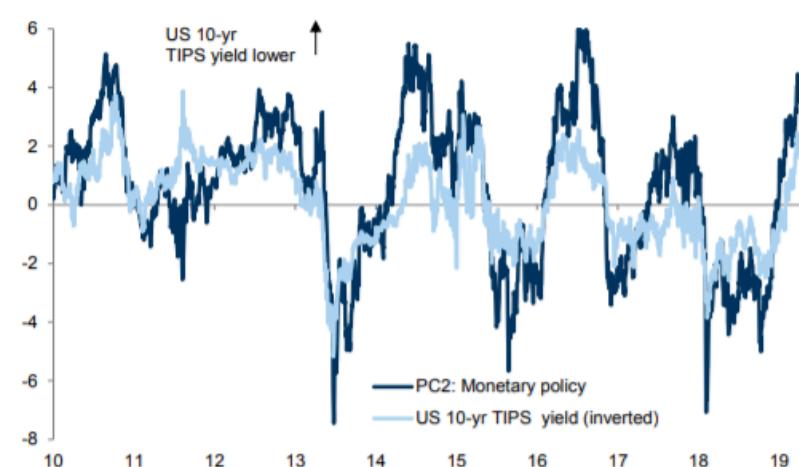
Source: Datastream, Goldman Sachs Global Investment Research

### Exhibit 22: PC1: Global growth factor vs. Global MAP score



Source: Datastream, Goldman Sachs Global Investment Research

### Exhibit 23: PC2: Monetary policy factor vs. US 10-year TIPS yield



Source: Datastream, Goldman Sachs Global Investment Research

### Exhibit 24: PC3: Dollar factor vs. USD TWI



Source: Datastream, Goldman Sachs Global Investment Research

## Cross-asset: Correlation matrix

### Exhibit 13: Cross-asset correlation matrix

Upper half of matrix: current 1-year correlation (black shading = more/less than 0.50/-0.50); lower half of matrix: percentile since 2001 (dark grey shading indicates above 75th percentile, orange shading indicates below 25th percentile); correlations are calculated on weekly, local currency returns.

	S&P 500	STOXX 600	MXAPJ	TOPIX	MSCI EM	US 10 yr	Germany 10 yr	Japan 10 yr	UK 10 yr	EUR/USD	USD/JPY	AUD/USD	iBoxx US IG	iBoxx EUR IG	BAML US HY	BAML EUR HY	EM Credit (\$)	WTI Crude Oil	Copper	Gold	VIX
Current 1y correlation of weekly returns																					
S&P 500		0.77	0.60	0.73	0.56	-0.37	-0.30	-0.17	-0.31	0.03	0.49	0.45	-0.08	0.17	0.76	0.53	0.18	0.28	0.16	-0.27	-0.84
STOXX 600	0.26		0.65	0.79	0.62	-0.49	-0.38	-0.32	-0.39	-0.04	0.57	0.37	-0.09	0.25	0.67	0.67	0.22	0.33	0.18	-0.30	-0.81
MXAPJ	0.49	0.46		0.73	0.96	-0.22	-0.26	-0.25	-0.29	0.30	0.35	0.58	0.00	0.14	0.50	0.50	0.25	0.10	0.49	0.05	-0.58
TOPIX	0.94	0.94	0.83		0.67	-0.52	-0.42	-0.40	-0.40	0.07	0.62	0.36	-0.16	0.09	0.65	0.57	0.09	0.34	0.33	-0.27	-0.62
MSCI EM	0.26	0.30	0.63	0.79		-0.19	-0.30	-0.26	-0.30	0.38	0.30	0.65	0.03	0.10	0.48	0.46	0.36	0.14	0.51	0.17	-0.56
US 10 yr	0.43	0.30	0.46	0.09	0.56		0.81	0.60	0.78	0.01	-0.61	-0.08	0.67	0.23	-0.29	-0.47	0.19	-0.10	-0.14	0.46	0.36
Germany 10 yr	0.47	0.43	0.45	0.12	0.46	0.78		0.51	0.90	-0.33	-0.49	-0.15	0.59	0.40	-0.21	-0.40	0.09	-0.12	-0.20	0.20	0.30
Japan 10 yr	0.49	0.30	0.31	0.41	0.31	0.94	0.61		0.57	-0.08	-0.34	-0.10	0.40	0.16	-0.13	-0.36	0.15	-0.05	-0.11	0.30	0.08
UK 10 yr	0.50	0.39	0.34	0.23	0.38	0.51	0.78	0.82		-0.31	-0.46	-0.16	0.57	0.32	-0.20	-0.43	0.09	-0.13	-0.17	0.26	0.32
EUR/USD	0.37	0.52	0.44	0.67	0.53	0.22	0.12	0.17	0.11		-0.15	0.51	0.00	-0.26	0.02	0.09	0.33	0.17	0.30	0.40	-0.09
USD/JPY	0.82	0.88	0.83	0.68	0.81	0.25	0.25	0.34	0.42	0.85		0.06	-0.28	0.02	0.36	0.50	-0.14	0.18	0.11	-0.49	-0.50
AUD/USD	0.66	0.65	0.42	0.71	0.63	0.43	0.42	0.29	0.38	0.44	0.76		0.07	-0.09	0.39	0.20	0.45	0.14	0.41	0.10	-0.49
iBoxx US IG	0.58	0.58	0.47	0.46	0.55	0.20	0.27	0.48	0.26	0.14	0.59	0.39		0.56	0.16	0.07	0.44	0.15	-0.06	0.28	0.02
iBoxx EUR IG	0.83	0.80	0.48	0.56	0.47	0.08	0.10	0.18	0.12	0.11	0.88	0.05	0.19		0.28	0.50	0.22	0.04	-0.04	0.02	-0.14
BAML US HY	0.99	0.81	0.31	0.93	0.24	0.21	0.29	0.19	0.35	0.27	0.89	0.41	0.22	0.33		0.64	0.28	0.55	0.17	-0.15	-0.69
BAML EUR HY	0.72	0.91	0.30	0.75	0.27	0.00	0.08	0.08	0.03	0.42	0.98	0.14	0.26	0.68	0.12		0.18	0.30	0.14	-0.18	-0.51
EM Credit (\$)	0.21	0.27	0.08	0.24	0.09	0.51	0.46	0.52	0.47	0.64	0.37	0.54	0.49	0.22	0.07	0.06		0.17	0.08	0.22	-0.33
WTI Crude Oil	0.61	0.71	0.20	0.86	0.18	0.52	0.46	0.54	0.50	0.40	0.82	0.27	0.86	0.64	0.92	0.80	0.48		0.08	0.05	-0.21
Copper	0.18	0.22	0.60	0.68	0.61	0.57	0.51	0.55	0.52	0.54	0.66	0.51	0.48	0.51	0.29	0.27	0.28	0.25		0.30	-0.19
Gold	0.15	0.17	0.25	0.22	0.38	0.91	0.66	0.86	0.71	0.39	0.31	0.05	0.66	0.39	0.08	0.13	0.54	0.29	0.51		0.26
VIX	0.40	0.15	0.36	0.13	0.49	0.60	0.63	0.41	0.60	0.37	0.15	0.21	0.26	0.17	0.09	0.20	0.47	0.50	0.69	0.69	0.82

Source: Datastream, iBoxx, Goldman Sachs Global Investment Research

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## Cross-asset: Valuation and risk premia

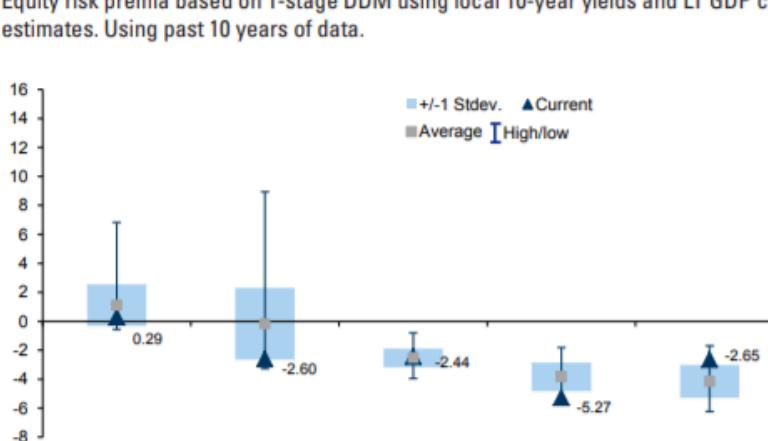
### Exhibit 14: Cross-asset valuation table

A higher percentile means more expensive relative to 10y history

	Equity					Government bonds				Credit					FX	
	S&P 500	Stoxx 600	MXAPJ	Topix	MSCI EM	US 10y	German 10y	Japan 10y	UK 10y	US IG	US HY	EUR IG	EUR HY	EM (\$)	EUR/USD	USD/JPY
<b>Valuation metric</b>																
Current:	16.3x	13.4x	12.8x	11.9x	11.3x	93bp	148bp	73bp	158bp	149bp	422bp	141bp	408bp	431bp	-0.17 €/\$	15.2 \$/¥
Expensiveness (last 10y percentile):	65%	50%	63%	12%	55%	99%	100%	99%	100%	58%	70%	55%	62%	4%	13%	30%
3M change:	-0.1x	0.0x	-0.2x	-0.4x	-0.4x	39bp	16bp	2bp	14bp	-1bp	18bp	-10bp	-10bp	36bp	-0.01 €/\$	0.2 \$/¥
Average:	15.0x	13.0x	12.4x	14.3x	11.2x	11bp	11bp	16bp	19bp	163bp	529bp	159bp	530bp	336bp	0.00 €/\$	1.8 \$/¥
95th:	17.8x	15.4x	14.4x	20.1x	12.9x	80bp	122bp	67bp	136bp	230bp	795bp	281bp	953bp	423bp	0.20 €/\$	23.0 \$/¥
5th:	11.8x	9.7x	10.5x	11.3x	9.4x	-95bp	-138bp	-41bp	-129bp	117bp	347bp	103bp	278bp	249bp	-0.21 €/\$	-22.0 \$/¥

### Exhibit 15: Credit spread minus equity risk premium estimates across markets

Equity risk premia based on 1-stage DDM using local 10-year yields and LT GDP consensus estimates. Using past 10 years of data.



Source: Datastream, iBoxx, Goldman Sachs Global Investment Research

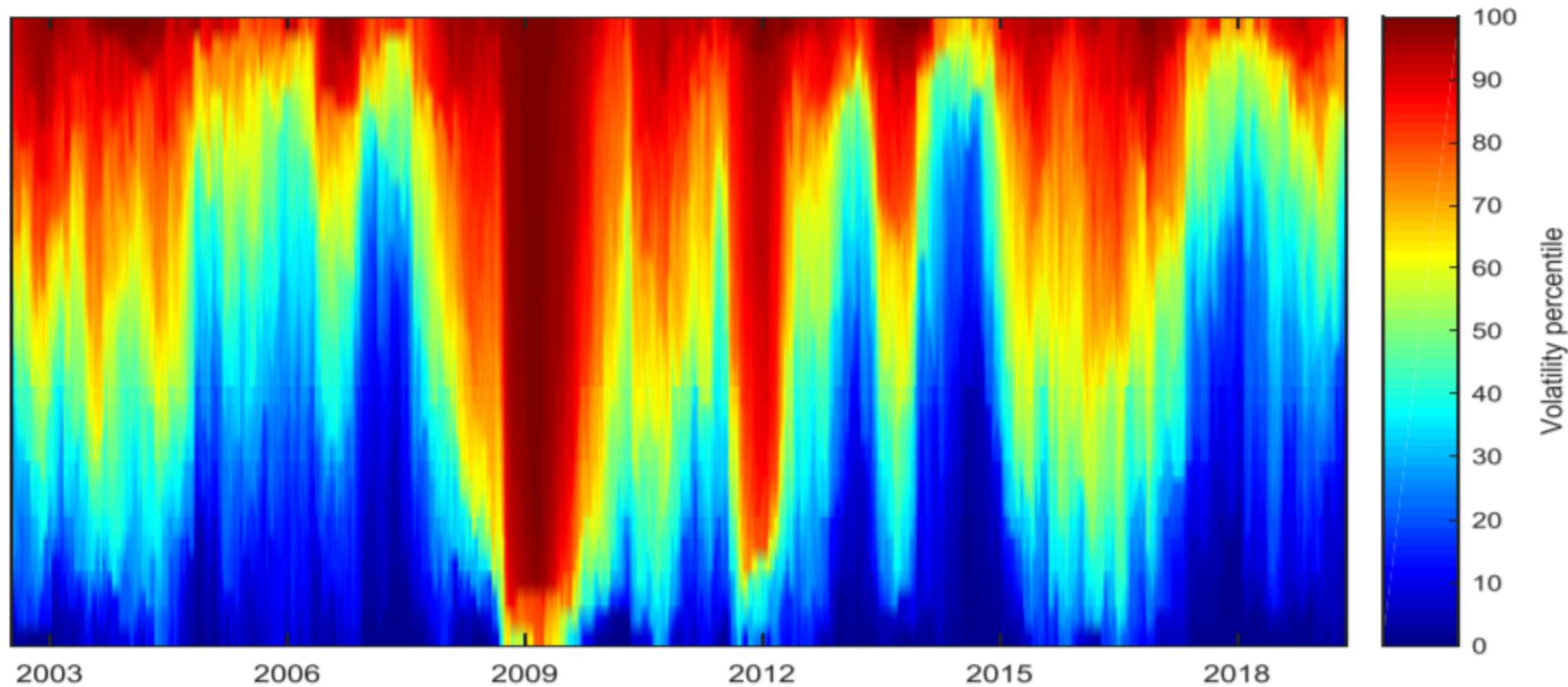
### Exhibit 16: US equity expected returns vs. credit risk premia (plus risk free rates)

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## Volatility

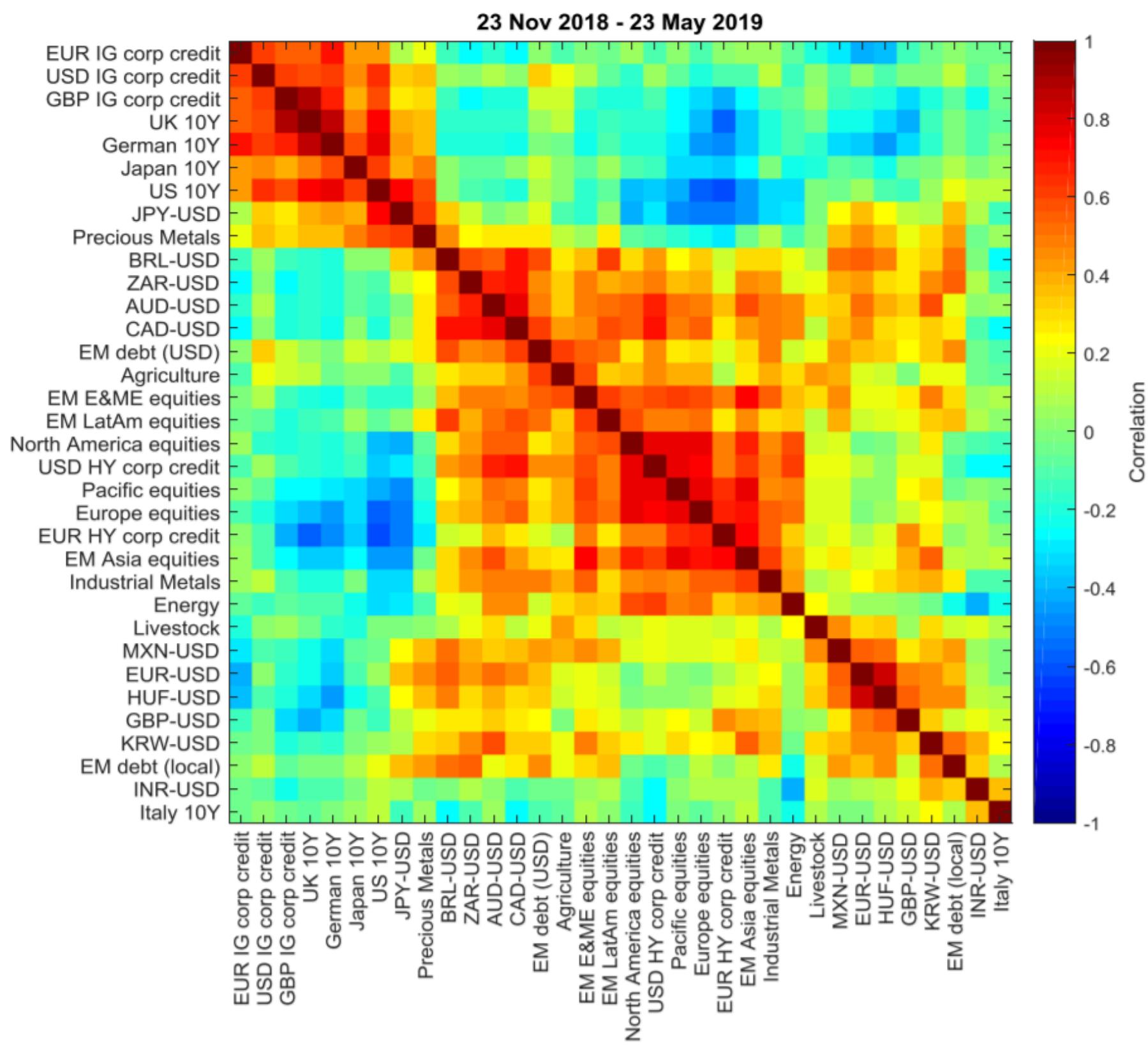
- ◆ Short-term volatilities across asset classes have remained fairly low, despite Thursday's sell-off in risk assets. Particularly short-term volatilities in FX markets – such as in EUR-USD – and gold continue to remain extremely low vs their 5Y ranges.
- ◆ Implied to realised volatilities for 10-year BTPs remains the highest by far across asset classes. Broadly implied vols either track or are above recent realised volatilities.
- ◆ Option implied skewness in US and Eurozone equities is close to their respective 5-year averages, making downside hedges by no means excessively expensive.

### 1. Volatility wave is waning



Source: MSCI, Bloomberg, Refinitiv Datastream, HSBC; for more information see [Data Matters](#), 17 January 2019

#### 4. Multi-Asset heat map

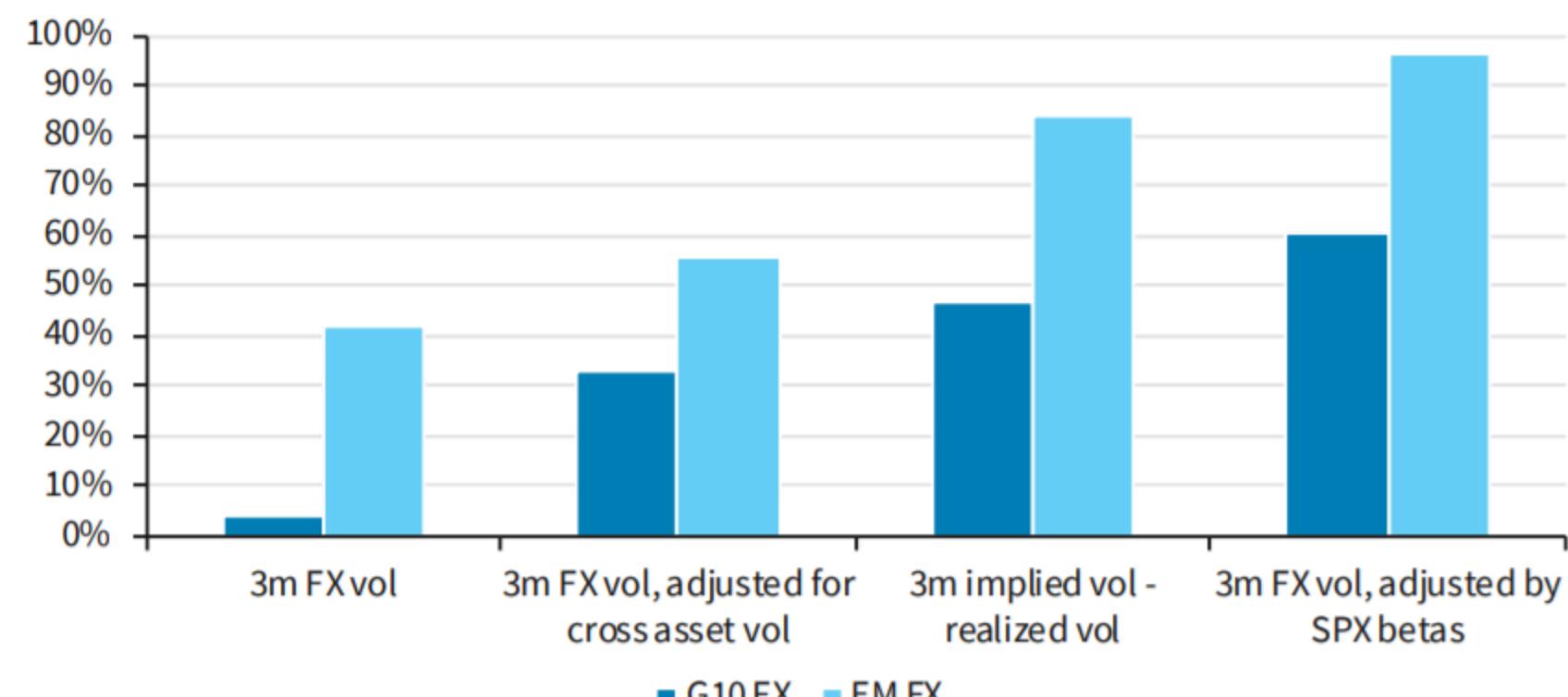


Source: MSCI, Bloomberg, Refinitiv Datastream, HSBC

FIGURE 1

G10 and EM FX adjusted for cross-asset vol, realized vol and betas to market risk appetite (percentiles since 2005 shown)

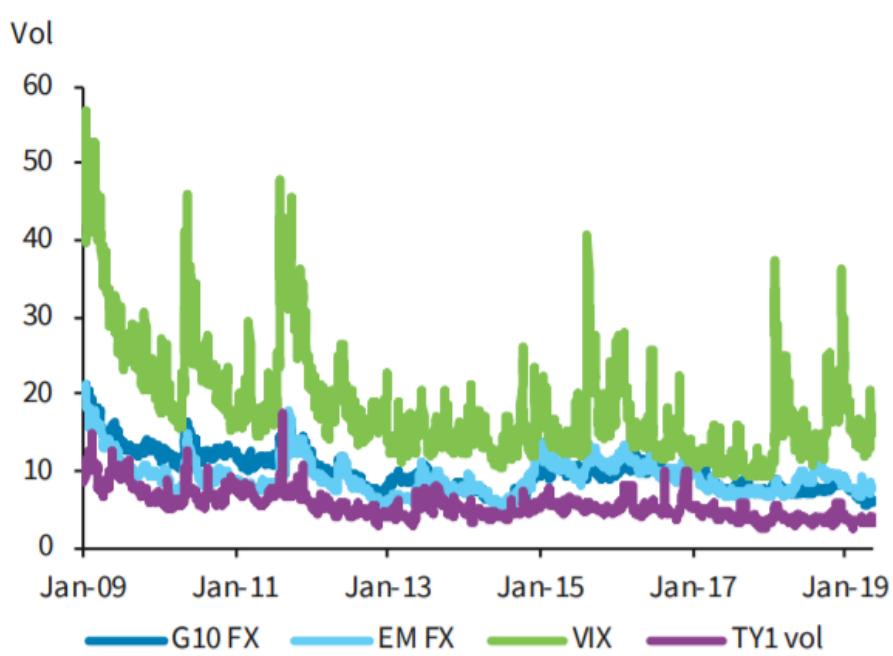
#### Percentiles



Source: Bloomberg, Barclays Research

FIGURE 2

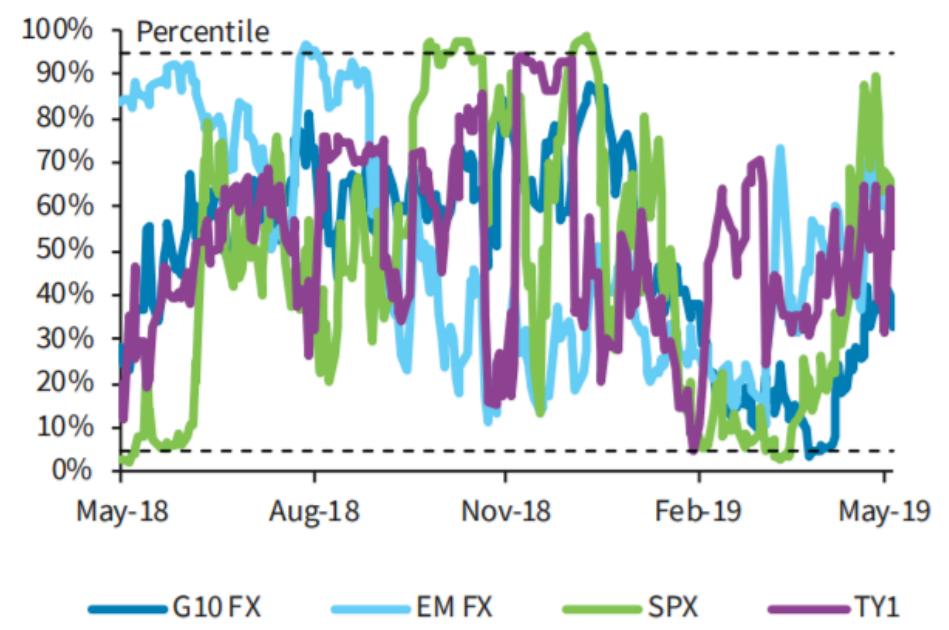
Market-implied volatilities are broadly at low levels



Source: Bloomberg, Barclays Research

FIGURE 3

FX vols do not appear to be at extreme levels after stripping out common asset market volatilities



Note: Dashed lines represent 5th and 95th percentiles for implied vols stripped of their common component derived using PCA.

Source: Bloomberg, Barclays Research

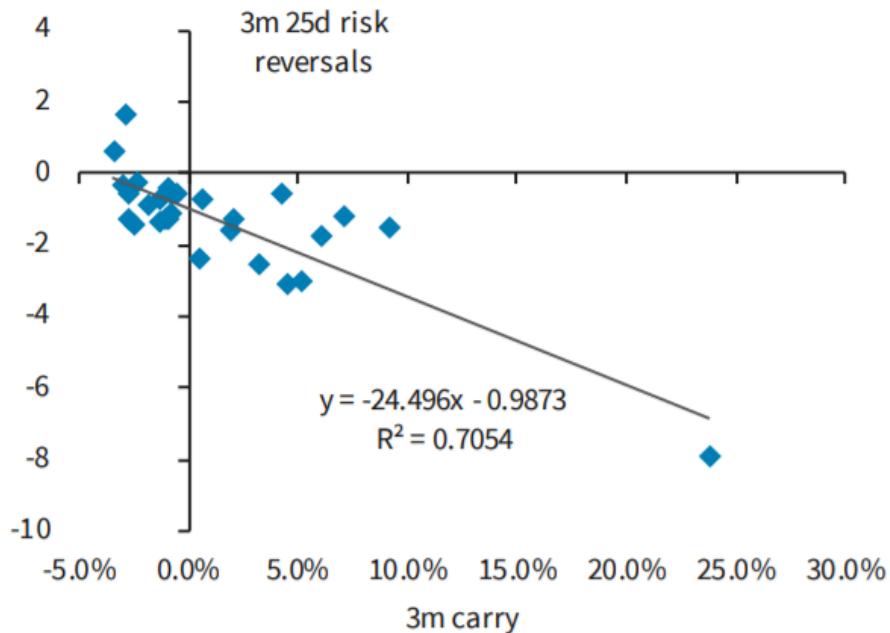
<sup>1</sup> We calculate percentiles for the residuals that is unexplained by a common factor (determined by principal component analysis - PCA)

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FIGURE 12

Systematic relationship between option market price of skew (3m 25D RR) and risk (3m carry) for different FX (CCYUSD)...



Note: Cross-sectional regression as of 3 May 2019.

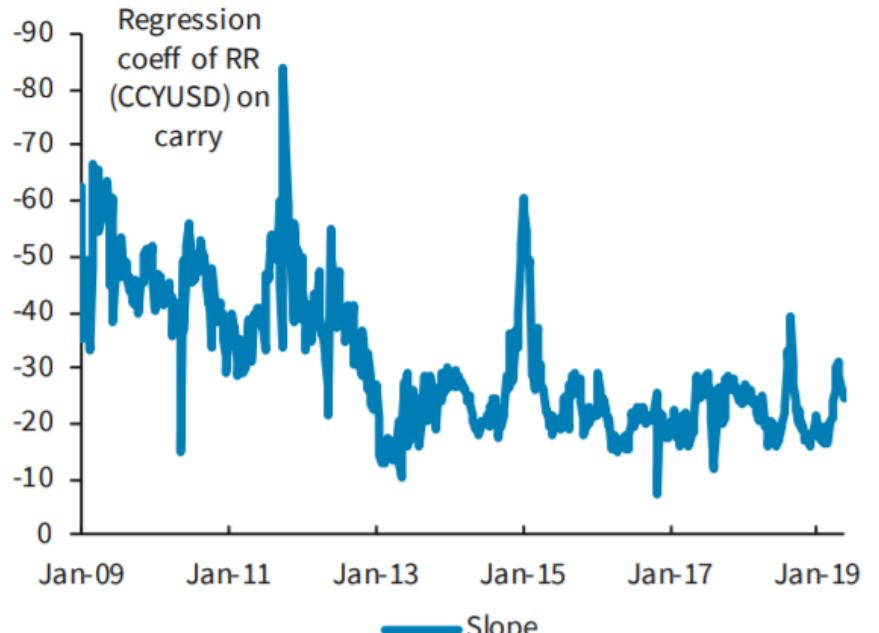
Source: Bloomberg, Barclays Research

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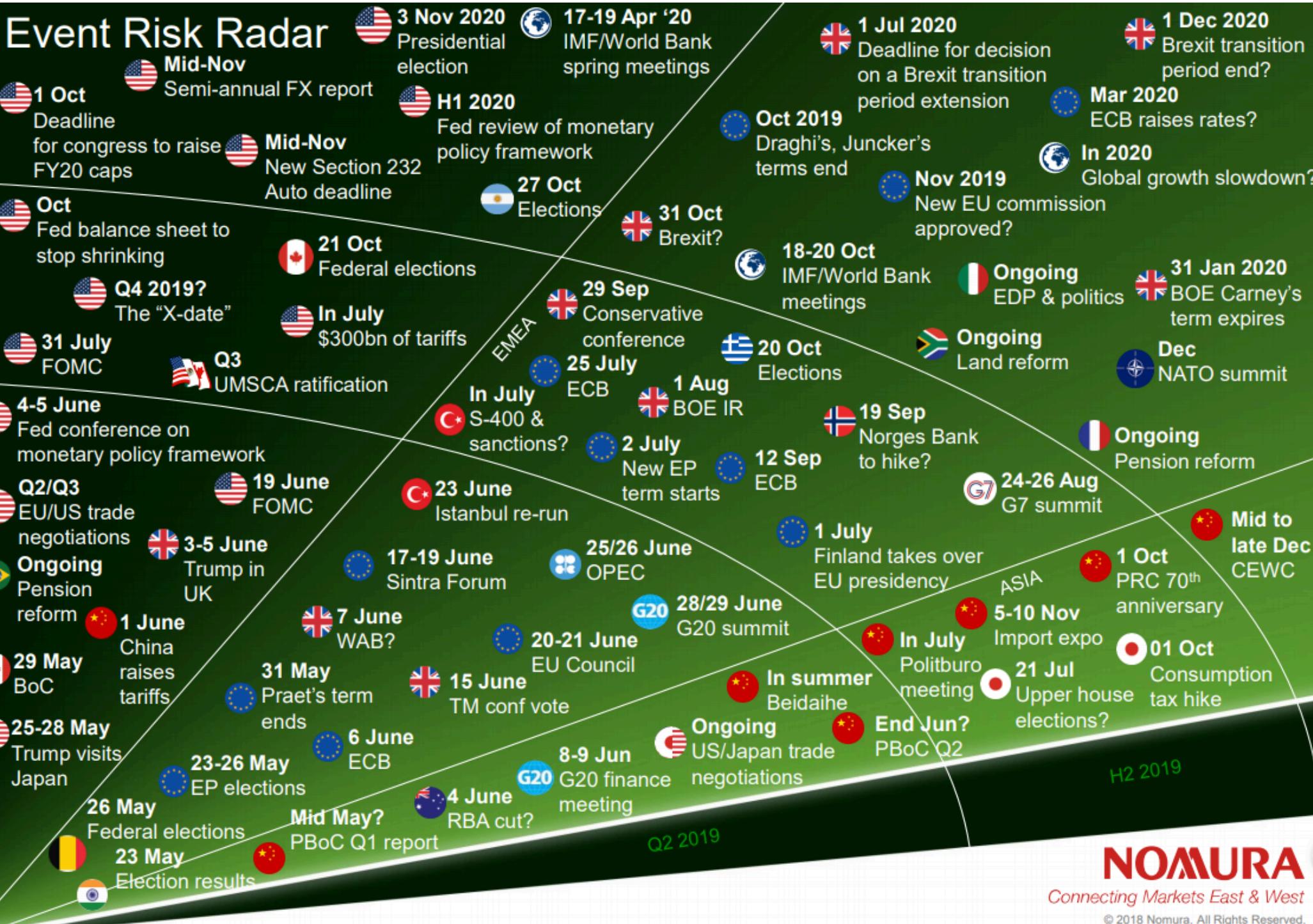
FIGURE 13

...which shows significant time variation (historical regression slope of 3m 25D RR and carry)



Note: We run cross-sectional regressions on a weekly basis.

Source: Bloomberg, Barclays Research



**NOMURA**

Connecting Markets East & West

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Country Flow HeatMap

	May18	Jun18	Jul18	Aug18	Sep18	Oct18	Nov18	Dec18	Jan19	Feb19	Mar19	Apr19	May19 MTD
Argentina	-0.7	-1.4	0.4	-0.7	0.2	-0.6	-0.6	-1.3	2.3	1.3	1.4	0.7	-0.4
Brazil	-0.9	-1.5	0.4	-0.7	0.0	-0.7	-0.8	-1.1	1.7	1.2	1.3	0.3	-0.3
Chile	-0.8	-1.7	0.4	-0.8	0.4	-0.6	-0.4	-0.8	2.7	1.5	1.5	0.8	-0.4
China	-0.6	-1.5	0.5	0.5	0.6	-0.7	0.2	-0.3	1.2	0.9	0.9	2.6	0.2
Colombia	-0.8	-1.6	0.1	-0.2	-0.1	0.2	-0.3	-2.0	2.3	1.1	1.3	1.4	-0.9
CzechRepublic	-0.6	-1.1	0.5	-0.6	0.1	-0.8	-0.3	-1.2	2.0	1.3	1.3	0.7	-0.5
Hungary	-0.7	-1.5	0.9	-0.7	0.4	-0.6	-0.6	-1.2	2.9	1.4	1.3	0.8	-0.5
India	-1.0	-2.1	-0.5	-0.3	-0.6	-0.8	-0.1	-1.1	2.3	0.7	0.6	0.6	-0.5
Indonesia	-1.0	-1.7	0.3	-0.4	0.4	-0.6	-0.4	-1.2	2.5	1.3	1.5	1.0	-0.4
Malaysia	-1.2	-1.9	0.3	-0.4	0.4	-0.6	-0.3	-1.2	2.4	1.4	1.5	1.0	-0.3
Mexico	-0.7	-1.2	0.2	-0.7	0.1	-0.7	-0.7	-1.4	1.9	1.2	1.3	0.7	-0.3
Peru	-0.8	-1.8	0.4	-0.8	0.5	-0.5	-0.6	-1.3	2.8	1.8	1.6	0.7	-0.6
Philippines	-1.4	-2.2	0.4	-0.3	0.5	-0.6	-0.3	-1.2	2.8	1.2	1.6	1.1	-0.4
Poland	-0.7	-1.3	0.8	-0.6	-0.1	-0.8	-0.8	-1.2	2.1	1.1	1.2	0.8	-0.3
ElSalvador	-0.9	-1.9	0.3	-1.0	0.3	-0.5	-0.6	-1.4	2.7	1.9	1.8	0.8	-0.7
SouthAfrica	-0.3	-1.0	0.6	-0.5	0.4	-0.4	-0.6	-1.1	2.0	1.1	1.5	0.7	-0.1
Turkey	-0.7	-1.5	0.6	-0.7	0.3	-0.7	-0.7	-1.3	2.5	1.4	1.3	0.6	-0.4
Venezuela	-0.7	-1.2	0.3	-0.6	0.0	-0.8	-0.7	-1.4	1.8	1.2	1.4	0.7	-0.4
Ecuador	-0.7	-1.4	0.4	-0.7	0.4	-0.6	-0.6	-1.3	2.8	1.7	1.5	0.7	-0.6
ElSalvador	-0.9	-1.9	0.3	-1.0	0.3	-0.5	-0.6	-1.4	2.7	1.9	1.8	0.8	-0.7
Kazakhstan	-0.7	-1.3	0.5	-0.7	0.4	-0.6	-0.6	-1.3	2.7	1.6	1.5	0.7	-0.6
Lebanon	-0.7	-1.4	0.4	-0.7	0.3	-0.6	-0.6	-1.3	2.5	1.6	1.5	0.7	-0.6
Oman	-0.8	-1.5	0.4	-0.7	0.5	-0.5	-0.6	-1.3	3.1	1.9	1.6	0.7	-0.6
Panama	-0.9	-1.9	0.4	-0.8	0.4	-0.5	-0.6	-1.3	2.8	1.9	1.7	0.7	-0.7
Qatar	-0.9	-1.3	0.4	-0.6	0.4	-0.6	-0.6	-1.2	2.8	1.7	1.5	0.6	-0.6
SriLanka	-1.1	-1.7	0.4	-0.5	0.4	-0.6	-0.5	-1.3	2.8	1.8	1.6	0.8	-0.6
Ukraine	-0.7	-1.5	0.5	-0.7	0.4	-0.6	-0.6	-1.3	2.7	1.6	1.5	0.7	-0.6
Uruguay	-0.7	-1.7	0.4	-0.7	0.5	-0.5	-0.6	-1.3	3.0	1.9	1.6	0.7	-0.7

Note:- Color scheme of heat map is based on flow as %AUM which varies from dark red (-4% AUM) to dark blue (+4% AUM)

Source : Deutsche Bank research, EPFR

# Currencies against the US dollar, year-to-date change

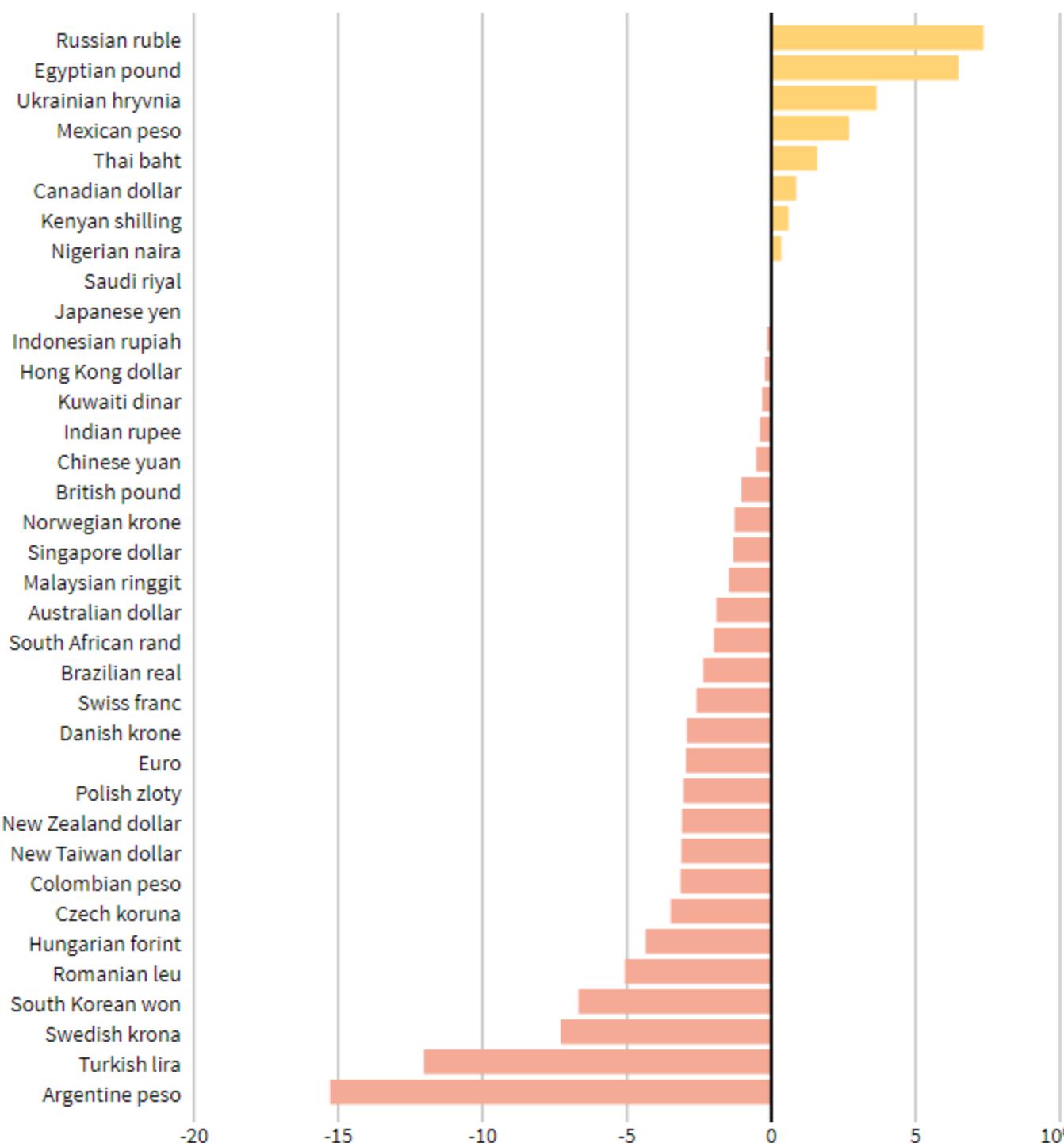


Figure 11: Country Positioning

EMBI Div. benchmarked funds' country positioning (OW/UW), in bp														Change in Positioning (in bp): Apr end vs Mar end	Historical Positioning (Percentile rank, 1Y)	Change in spread (in bp) since Apr end	
Region	Countries	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19			
Asia	China	-150	-176	-207	-168	-143	-129	-151	-158	-175	-160	-132	-91	-77	14	100%	6
	Indonesia	-2	-4	-49	-30	-15	12	31	70	34	74	95	109	129	21	100%	15
	Malaysia	-161	-147	-128	-142	-165	-170	-171	-178	-176	-174	-164	-164	-163	1	67%	1
	Philippines	-239	-243	-247	-245	-248	-248	-241	-254	-257	-254	-252	-250	-251	-1	33%	8
	Sri Lanka	13	-39	-39	-35	-42	-45	-49	-46	-39	-64	-61	-85	-74	10	8%	30
EMEA	Angola	-3	1	-17	-13	-12	4	4	3	-4	-12	-7	6	7	1	100%	32
	Azerbaijan	-65	-82	-85	-80	-53	-39	-2	-18	-31	-39	-45	-31	-30	2	83%	4
	Bahrain*	77	74	59	56	54	52	69	70	77	41	17	-5	-28	-23	0%	32
	Croatia	6	-2	4	1	9	2	43	27	26	9	16	13	11	-2	58%	4
	Egypt	-41	-41	-45	-20	-34	-33	-33	-35	-38	-36	40	28	55	27	100%	34
	Ghana	49	67	27	24	29	27	27	36	34	35	21	70	30	-40	50%	45
	Hungary	-80	-76	-78	-82	-72	-79	-72	-77	-46	-64	-68	-62	-59	3	92%	-2
	Ivory Coast	31	39	41	44	60	52	50	54	51	37	32	32	32	1	25%	23
	Kazakhstan	-38	-67	-57	-53	-43	-46	-39	-55	-68	-78	-107	-107	-102	5	17%	5
	Kenya	-28	-31	-33	-32	-36	-30	-21	-26	-30	-45	-35	-36	-40	-4	8%	4
	Kuwait*	10	8	9	1	1	1	1	1	1	-6	-14	-24	-25	-1	0%	0
	Lebanon	-82	-81	-83	-105	-99	-104	-138	-121	-134	-126	-112	-108	-100	8	67%	70
	Nigeria	72	83	84	70	64	57	77	89	17	-1	16	38	49	10	33%	26
	Oman	-31	-10	-7	-23	-25	-25	-54	-54	-49	-58	-58	-61	-68	-7	0%	36
	Poland	-220	-220	-180	-182	-181	-180	-179	-186	-185	-179	-181	-177	-170	7	100%	6
	Qatar*	69	88	109	111	113	115	107	105	124	92	60	93	66	-27	8%	14
	Russia	75	79	99	57	0	-27	-31	-67	-93	-74	-70	-21	-43	-22	33%	10
	Saudi Arabia*	76	81	98	103	120	121	111	118	132	149	113	80	107	27	42%	16
	South Africa	-11	23	-1	4	-28	12	13	33	5	7	8	6	11	5	67%	-4
	Turkey	43	33	8	0	-34	-28	-43	15	21	36	31	21	7	-14	33%	29
	Ukraine	34	40	48	48	65	74	101	95	79	56	39	45	56	12	58%	-6
	United Arab Emirates*	109	112	120	112	124	124	120	113	122	80	52	29	-4	-32	0%	10
LatAm	Argentina	209	215	197	216	161	183	167	184	175	171	170	143	115	-28	0%	-38
	Brazil	158	168	167	191	192	199	180	211	222	205	207	216	226	10	100%	8
	Chile	-89	-93	-94	-104	-90	-100	-109	-124	-121	-106	-78	-68	-66	2	100%	6
	Colombia	-109	-108	-106	-101	-84	-78	-69	-84	-91	-73	-72	-79	-88	-8	42%	18
	Costa Rica	-8	-2	25	25	3	-6	4	-6	-7	-9	-2	11	15	4	83%	8
	Dominican Republic	20	29	37	16	24	25	22	19	23	14	11	5	12	7	17%	18
	Ecuador	-65	-55	-68	-47	-50	-50	-41	-57	-63	-19	-5	-7	2	9	100%	6
	El Salvador	8	20	29	19	14	7	16	42	30	23	18	10	23	13	75%	26
	Mexico	1	4	-9	14	67	92	82	70	78	133	128	150	156	6	100%	15
	Panama	-136	-140	-144	-145	-135	-133	-109	-122	-126	-136	-136	-140	-119	22	92%	9
	Peru	-86	-95	-89	-103	-102	-119	-113	-116	-112	-119	-108	-106	-126	-20	0%	12
	Uruguay	-66	-104	-110	-117	-120	-123	-134	-138	-146	-144	-168	-172	-171	0	8%	11
	Venezuela	34	27	26	30	24	27	25	43	46	59	56	51	52	1	83%	126
Cash		360	370	486	520	469	455	407	440	513	628	600	509	456			

Source : Deutsche Bank research, EPFR  
 Methodology: A sample of c.15 EMBI Diversified benchmarked funds with total AUM of c.USD25bn (source EPFR country allocation data) has been used in this analysis. First we calculate the average country allocation of the funds, before computing OW (green in the heatmap) or UW (red) positioning for a specific country against its weight in EMBI Div index. Because country positioning data has a lag of one month, we also show a country's approximate spread change (based on DB's estimate of EMBI Div country index moves) for the last month, to help understand recent price action for a country.

\* GCC countries Qatar, UAE, Saudi Arabia, Bahrain, Kuwait were included in EMBI div. index from end-Jan'19. This affects positioning changes for those names.

# FX Model Portfolio Update

Global Rates, FX & Commodities Strategy

28 May 2019

► EMEA

► FX

► GLOBAL MARKETS

Position	Entry Level	Target Level	Stop-Loss	Trade Size	PnL
Long ZARRUB	4.5169	4.70	4.40	USD 1mln	-USD26.5k

EM Alpha

**Oil the next shoe to drop: buy ZAR/RUB**

**Bank of America  
Merrill Lynch**

29 May 2019

## Risk-off becoming pervasive

The poor price action of the last couple of days has triggered several technical bearish signals. EMBI spreads pushed through the 200-day moving average, and our technical strategist [Paul Ciana](#) sees risk of further widening. More broadly he is calling for further risk-off across markets. EUR/USD also looks poised to attempt a break lower and retest the YTD lows. Fundamentally, it appears increasingly likely that a breakthrough in the China-US trade talks may first require a bout of market volatility to focus minds.

## Crude is where positioning remains crowded

Against this backdrop, crude oil and related assets stand out with still crowded positioning. CFTC data and our own [Liquid Cross Border Flows](#) shows that speculative positioning in crude is substantially long, and RUB is extremely long. Our [Real Money Tracker](#) also shows that OFZs are the biggest overweight in local bonds, and the same holds true for Russian equities. This hard data also matches our impressions from 30+ meetings on Russia/CIS with our economist Vladimir Osakovskiy in London last week.

## Potential Iran war a risk, but first comes the trade war

The rationale for this long in crude has been tightly managed supply plus concerns about Iran. We actually think that Iran risks are even under-appreciated by markets. However, before these concerns are likely to escalate in July, the month ahead is more likely to be characterized by concerns about growth – which puts the crowded RUB long at risk.

GEM FI & FX Strategy  
Emerging Markets Global

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For a list of open and closed trades,  
please see our latest [weekly](#).

EMBI: Emerging Market Bond Index

CFTC: Commodity Futures Trading  
Commission

## Buy ZAR/RUB for crude realignment

So far ZAR has taken the brunt of the risk-off in EEMEA FX, but RUB is likely to catch up. Indeed ZAR/RUB has just triggered the 14-day RSI on the downside, usually pointing to a correction higher. Alternatively, in the case of positive surprises for the global economy, ZAR is likely to benefit more as positioning is now short there. Seasonality is also turning positive for ZAR/RUB. Buy ZAR/RUB @ 4.38, target 6% move to 4.63, stop @ 4.25 (last reached pre-Ramaphosa in December 2017). The carry is -3bp/month.

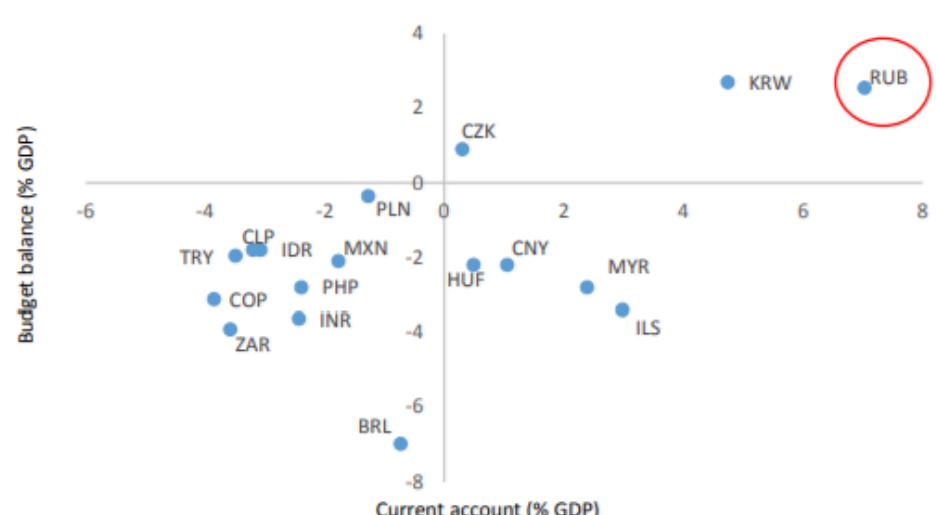
## More cuts priced for CBR than for SARB

In terms of domestic factors, rate cuts are starting to get priced in across both markets. For the next 12 months Russia is pricing about 75bp, and South Africa about 25bp. We think in both markets there will ultimately be room for more, especially if Fed cuts start to become a drag on the USD. Near-term, however, rate easing appears reasonably priced in both markets as in the near-term the USD is likely to be supported by risk-off which will limit further pricing of rates easing.

## Main risk is early spike of Iran tensions

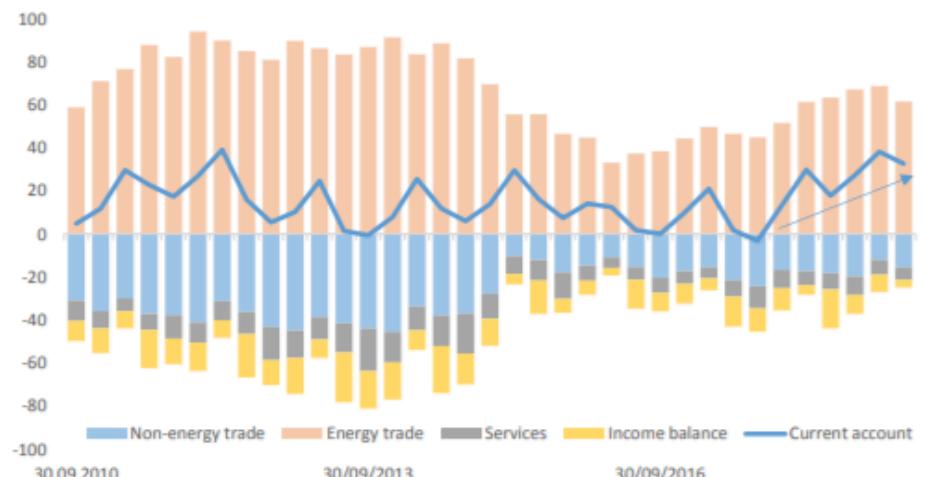
If Iran tensions spike earlier than expected by us, this would likely lead also to a spike in crude prices. It is not clear whether this would necessarily be positive for RUB here, as a major vol spike may actually force investors out of crowded positions. But definitely there is a possibility that ZAR/RUB could decline in such a scenario.

Figure 1: RUB stands out on twin surpluses



Source : Deutsche Bank, Bloomberg Finance LP

Figure 2: Current account improving on a seasonally adjusted basis (quarterly USDbn)



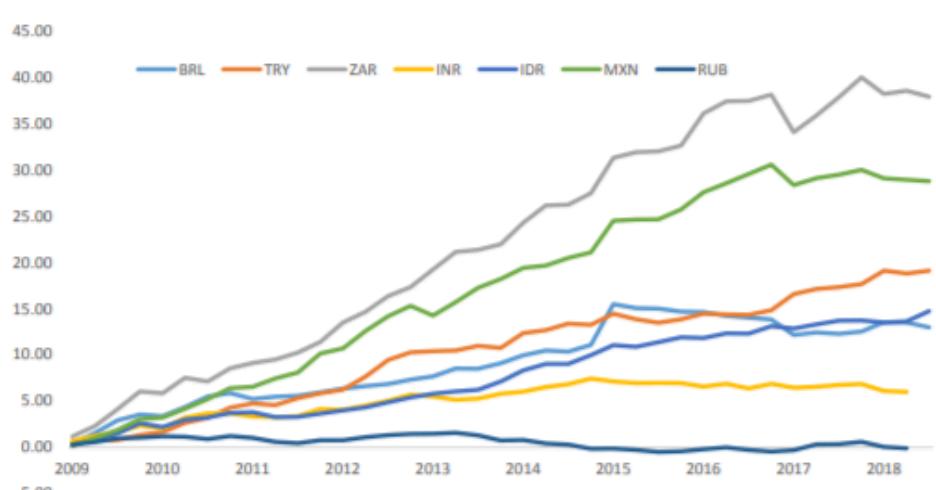
Source : Deutsche Bank, Haver

Figure 3: Real rates buffer to remain healthy even as CBR cuts rates



Source : Deutsche Bank, Haver

Figure 4: RUB only EM high-yielder not to suffer from long-term positioning overhang



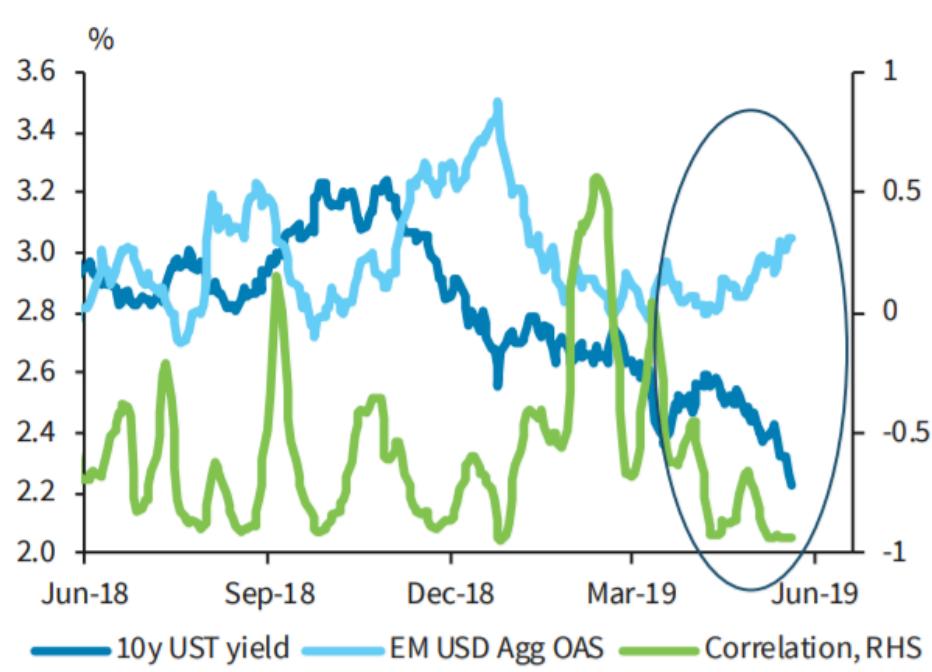
Source : Deutsche Bank, Haver \*cumulative portfolio inflows (% of GDP)

Deutsche Bank AG/London

Page 5

FIGURE 1

The correlation between UST yields and EM credit spreads has turned sharply negative again

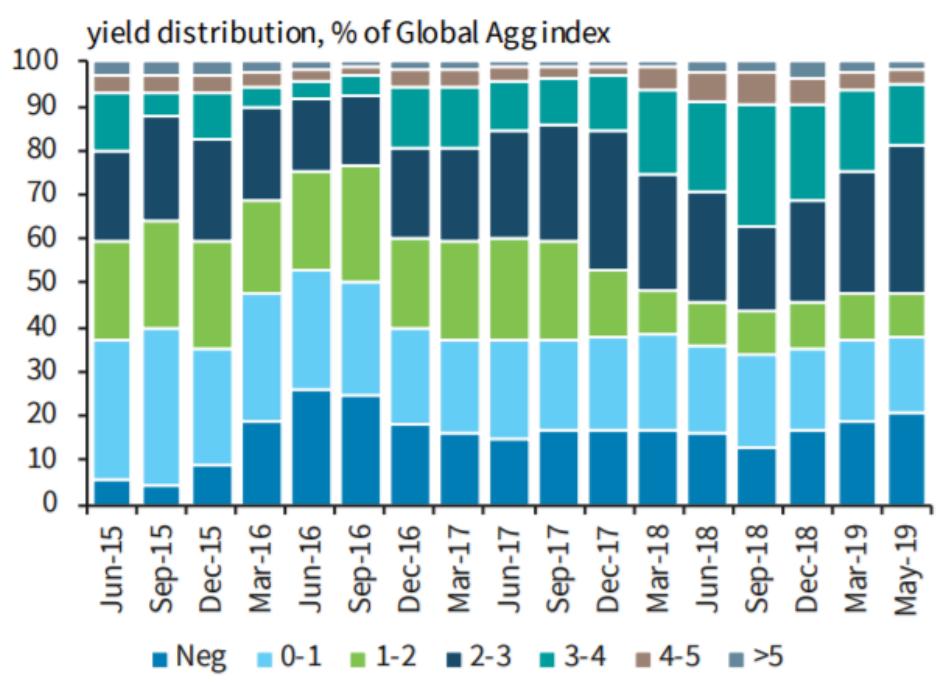


Note: 30d rolling correlations. Source: Bloomberg, Barclays Research

30 May 2019

FIGURE 2

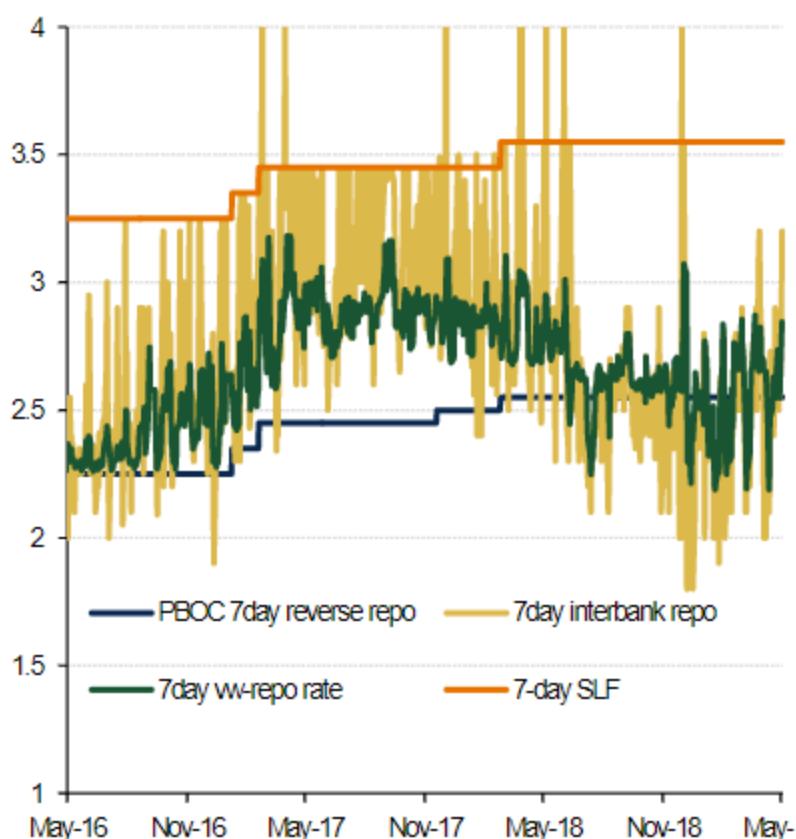
The rising share of very low-yielding bonds in global bond markets may anchor demand for EM bonds



Source: Bloomberg, Barclays Research

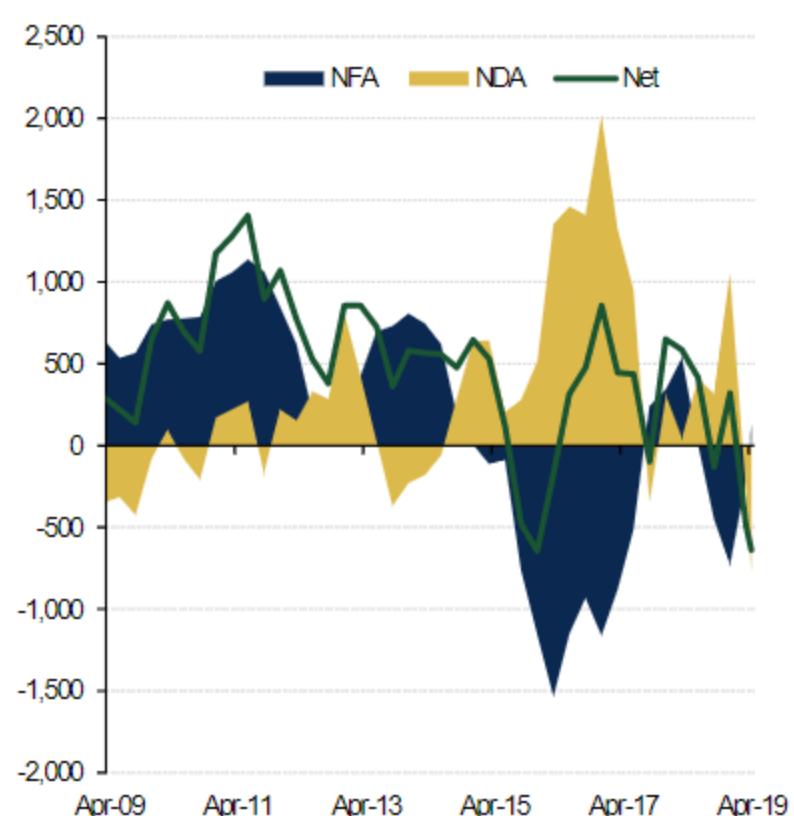
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**Chart 1: PBOC interest rate policy corridor bumping on the floor**



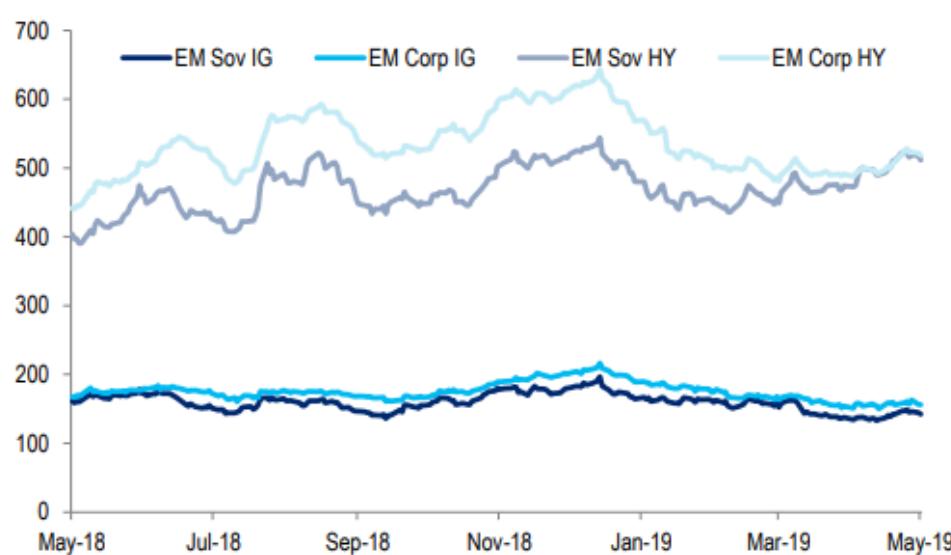
Source: BofA Merrill Lynch Global Research, Bloomberg, PBoC

**Chart 2: PBoC Balance Sheet RMBbn shows April contraction**



Source: BofA Merrill Lynch Global Research, Bloomberg, PBoC, CEIC

**Figure 41. EM Credit Spreads – Sovereign & Corporate**



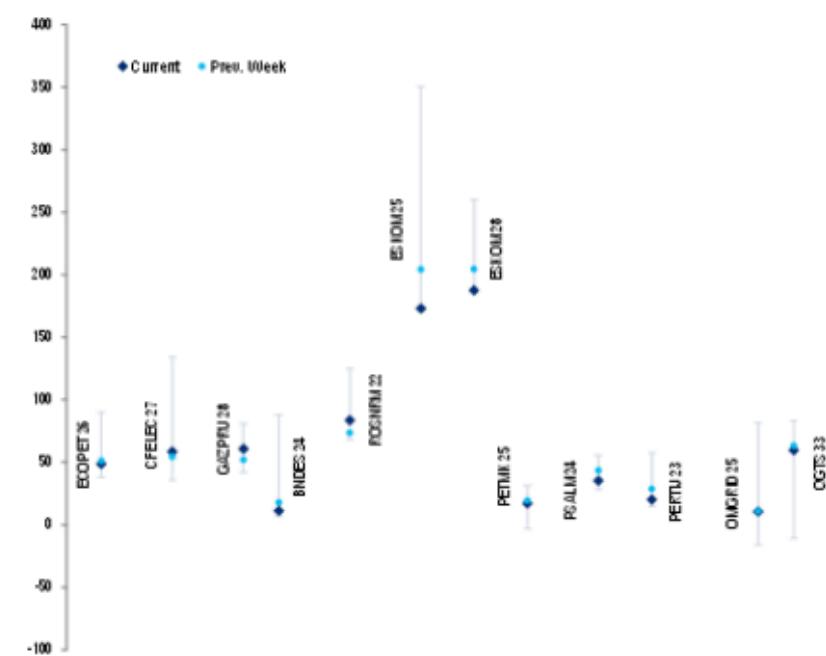
Source: Citi Research

**Figure 42. EM Credit Relative Spreads (vs US IG and HY)**



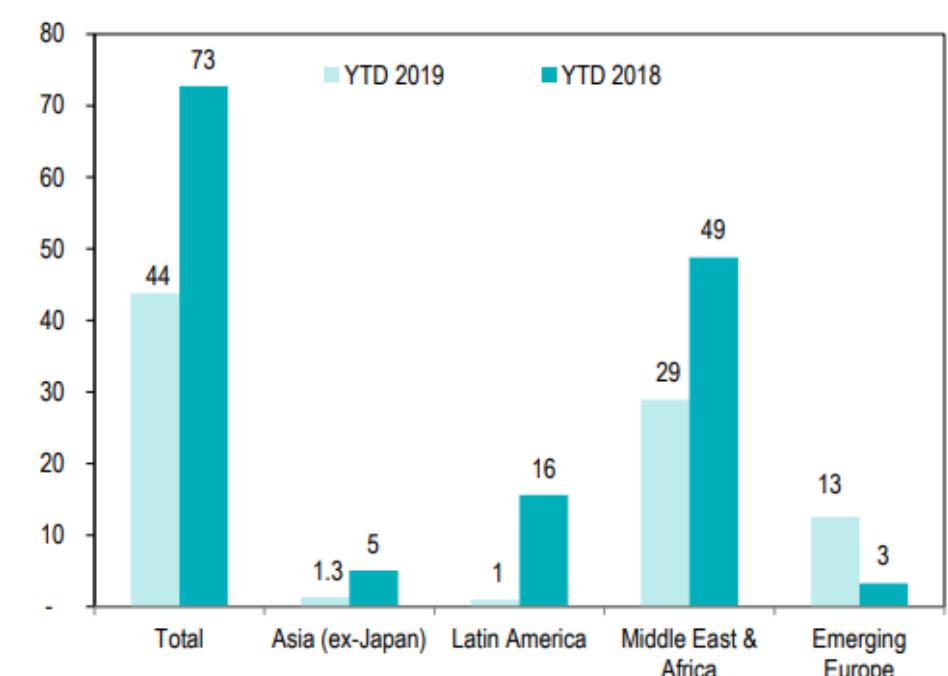
Source: Citi Research, Citi Fixed Income Indices, Bloomberg

**Figure 43. Quasi Sovereign Spread over Sovereign (with 1Y range)**



Source: Citi Research. Nearest matching sovereign maturity chosen for spread calculations

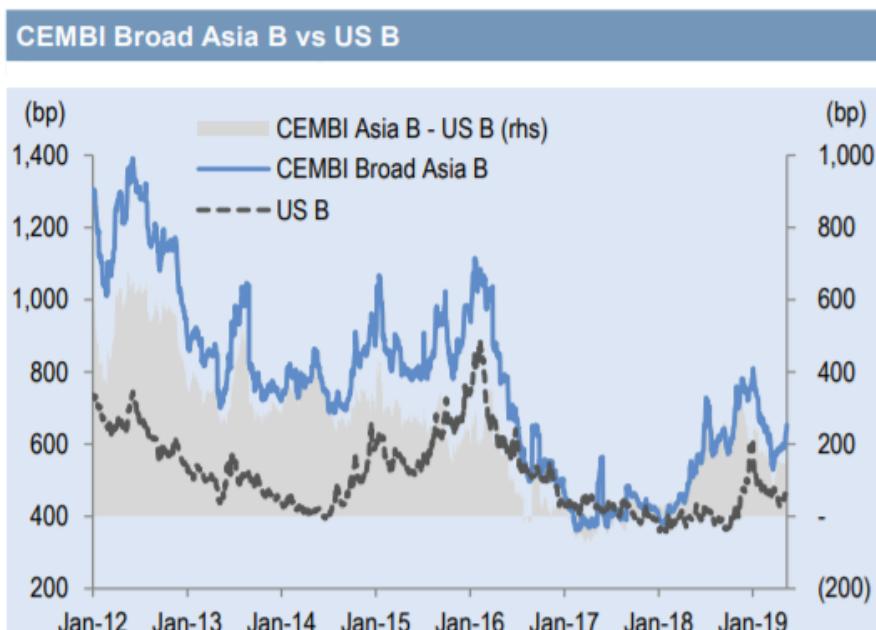
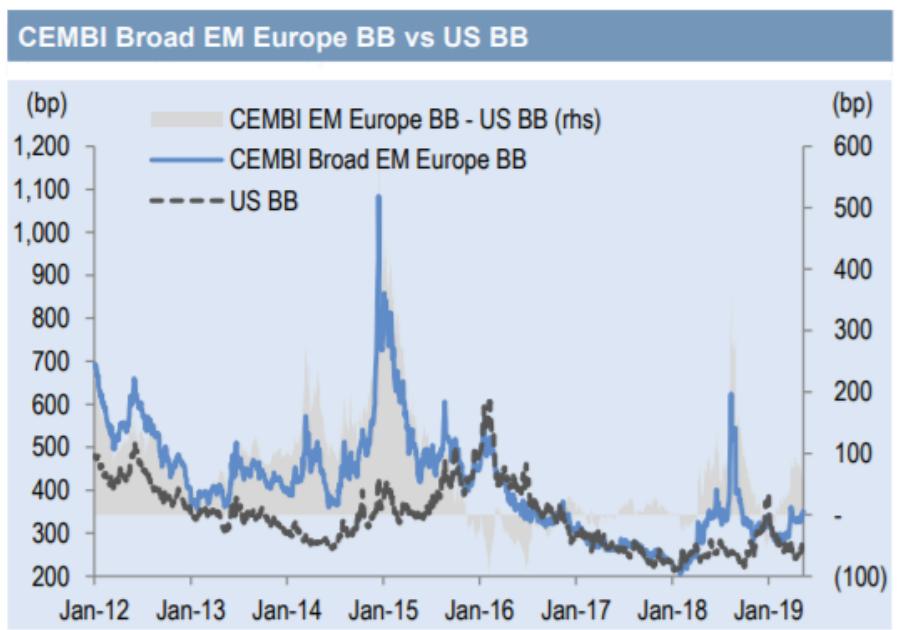
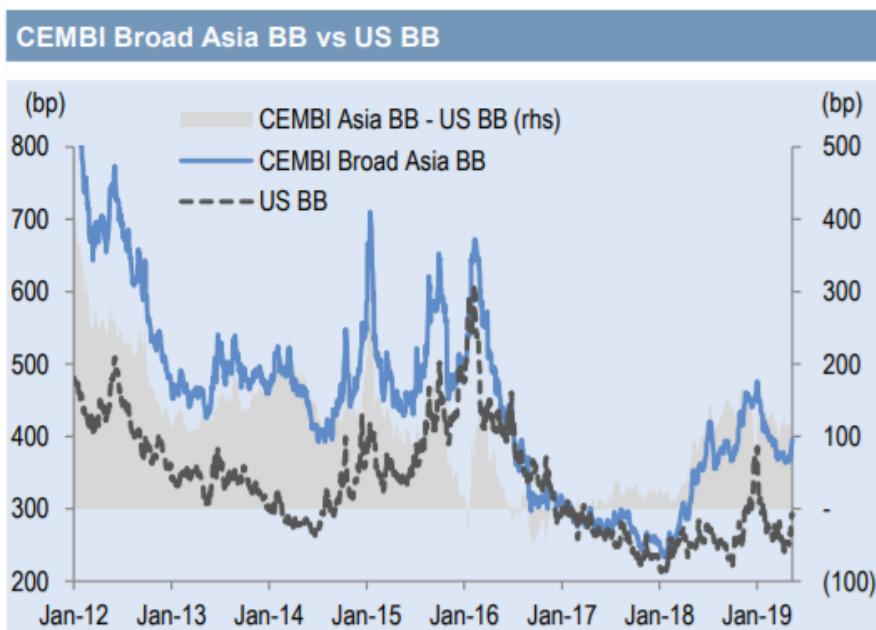
**Figure 44. Sovereign: Net Issuances – Regional Breakdown (USD bn)**



Source: Citi Research, Bloomberg

## EM vs. US HY spread difference most material for Asia

PERFORMANCE & RELATIVE VALUE



Source for all charts: J.P. Morgan.

J.P.Morgan

CNYRINDX 93.61 -1.18 0.00/0.00  
At 5/25 Op 93.61 Hi 93.61 Lo 93.61 Prev 94.79 Vol 0  
CNYRINDX Index 96 Actions G #BTV 1922: CFETS RMB Ind. + CNY

12/31/2018 - 05/28/2019 < > Local CCY

1D 3D 1M 6M YTD 1Y 5Y Max Daily ▾ Table

<> Chart Content

## Finally Showing the Strain

Yuan falls against basket of peers



SIVCTOTL 12780.00 As Of 05/24/19 10000 Tons

Steelhome China Iron Ore Total Ports Inventory

SIVCTOTL Index

96 Actions

G #BTV 8182: Iron Ore Stockpile

03/13/2018 - 05/28/2019 < > Local CCY

1D 3D 1M 6M YTD 1Y 5Y Max Daily ▾ Table

<> Chart Content

## What Trade War?

Iron ore rallies as inventories drop amid global supply crunch

Steelhome China Iron Ore Total Ports Inventory on 5/24/19 (R1) Iron ore futures on Singapore Exchange (L1)

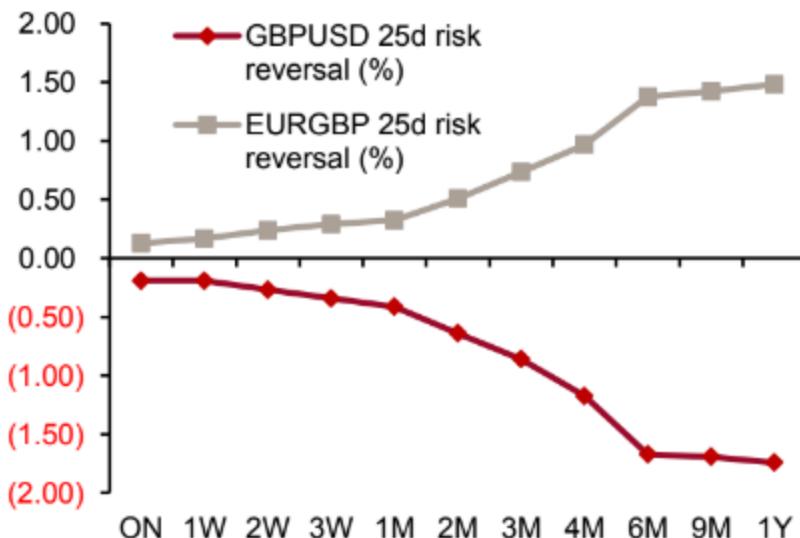




29 May 2019

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**Figure 5: The bid for GBP puts in risk reversals is relatively subdued until the 6m tenor**



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

**Figure 6: Pricing for a possible earlier exacerbation in political risk appears has lost ground in Q2 so far**

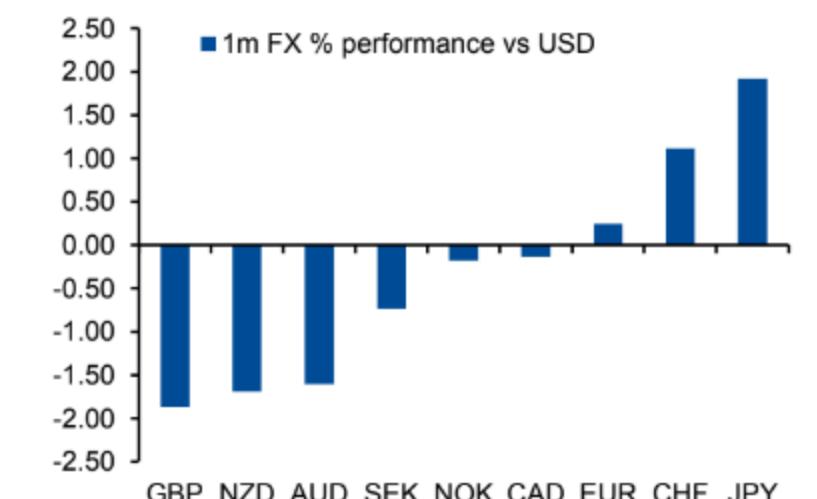


Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

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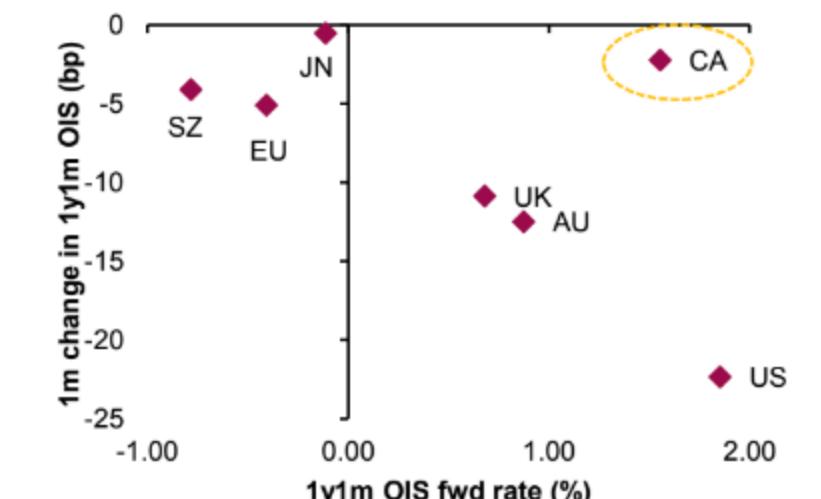
CREDIT SUISSE

**Figure 7: CAD has been amongst the best FX performer in G10 amongst the risk-sensitive pairs**



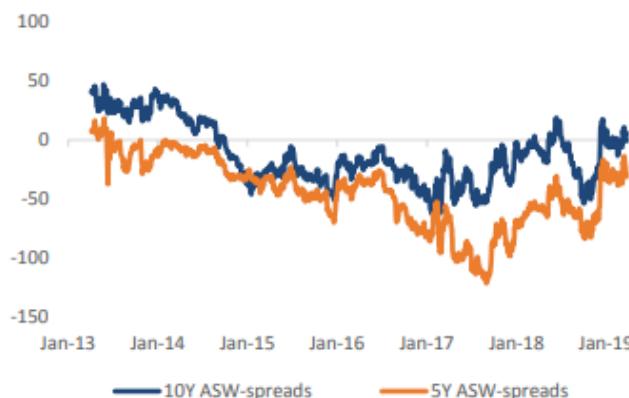
Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

**Figure 8: Policy expectations have been steady in Canada, at odds with dovish pressure elsewhere**



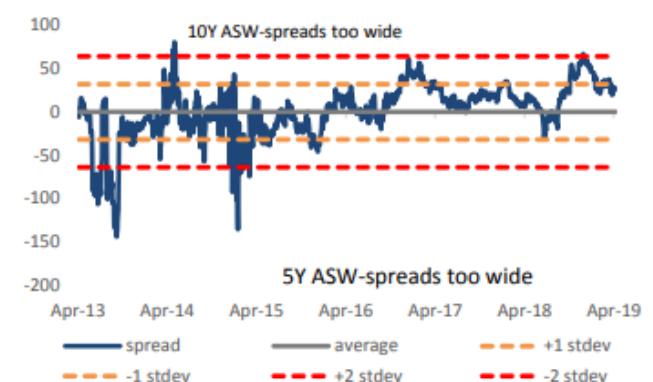
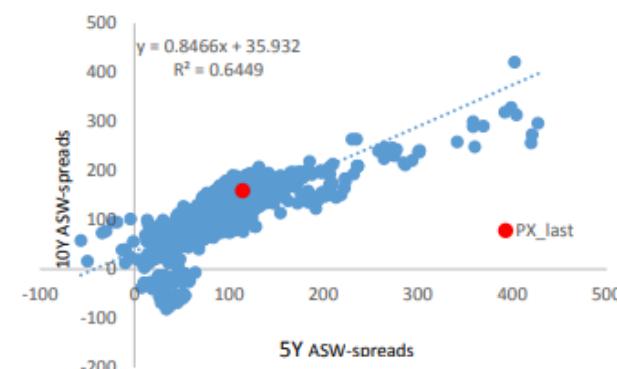
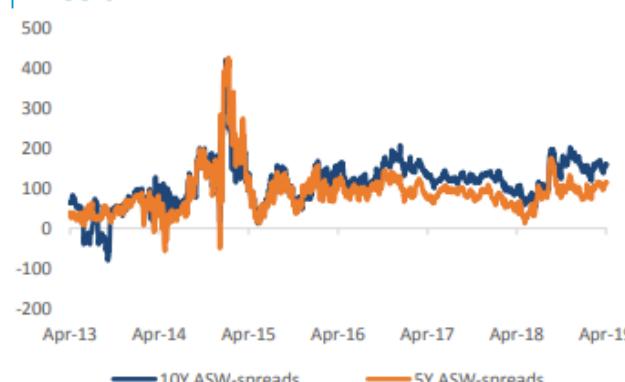
Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

## Czech Republic

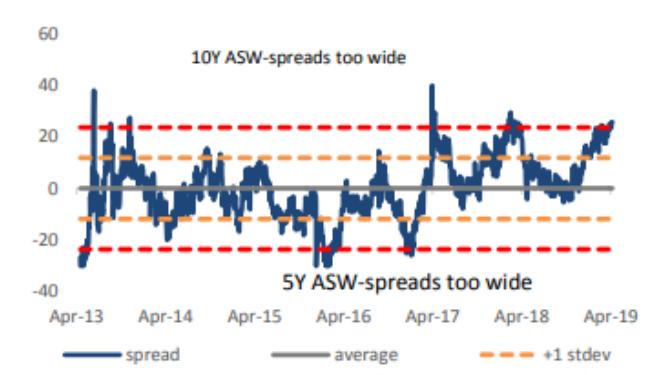
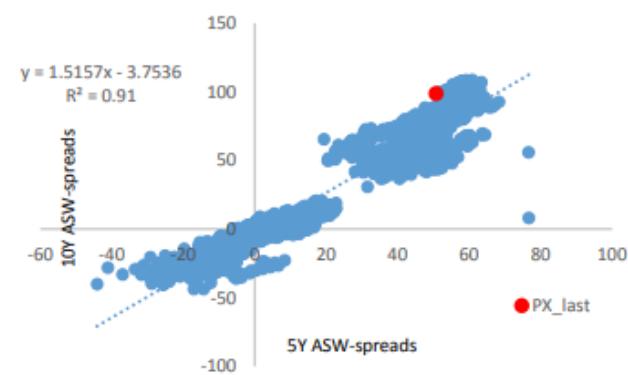


Source: Deutsche Bank

## Russia



## South Africa



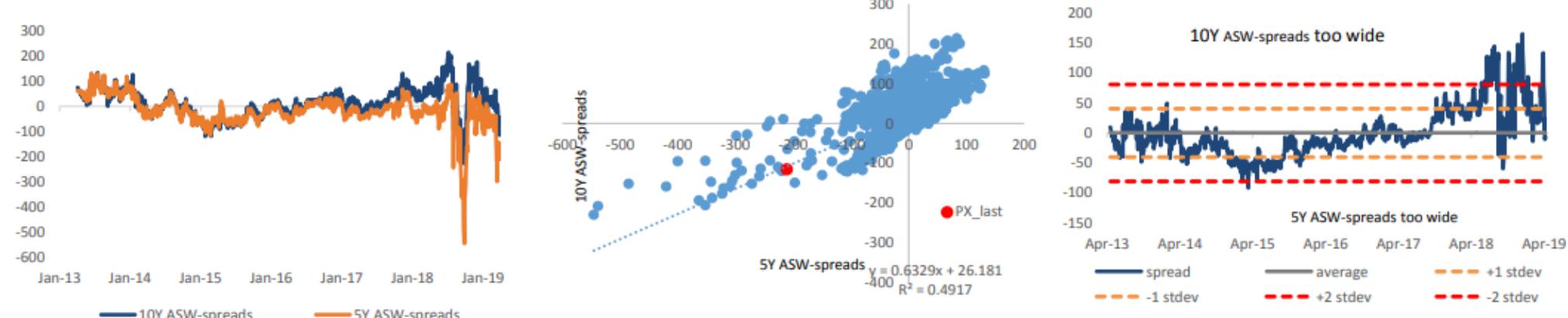
# ASW-spreads in EM - finding dislocations

## ASW-spreads in bp

Country	5Y ASW-spread				10Y ASW-spread				regressed 10Y ASW-spread	spread 10Y actual vs regressed	+/- 1 stdev	+/- 2 stdev	implications for 10Y ASW-spreads
	Level	5d	30d	1Y z-score	Level	5d	30d	1Y z-score					
Czech Republic	-41	1	-6	0.5	-5	-4	-4	0.4	-9	4	15	30	neutral
Hungary	32	-6	-1	0.6	65	-6	-9	0.6	48	17	13	27	wide
Israel	12	-4	1	0.5	10	-2	3	0.2	15	-6	6	12	tight
Poland	21	5	9	1.9	39	6	5	1.1	39	0	9	18	neutral
Romania	53	-1	5	2.1	62	0	10	2.6	73	-11	18	35	neutral
Russia	80	-18	-23	-0.4	115	-26	-33	-0.6	104	11	32	64	neutral
South Africa	51	4	4	-0.4	102	4	14	1.2	74	28	12	24	very wide
Turkey	-76	194	276	0.1	-28	112	230	-0.4	-25	-3	41	81	neutral
Brazil	123	13	2	-0.5	115	6	-2	-0.8	122	-7	30	61	neutral
Colombia	61	2	11	1.2	71	1	6	0.8	57	13	17	34	neutral
Chile	24	1	3	-0.4	17	3	7	-1.5	10	7	16	32	neutral
Mexico	6	-1	0	1.4	-2	-4	0	1.3	-8	6	8	15	neutral
Malaysia	14	3	0	2.0	19	3	11	2.1	10	9	12	24	neutral
India	130	-8	-10	1.3	143	2	-5	1.5	125	17	14	29	wide
Indonesia	4	24	66	0.2	32	-30	45	0.6	4	28	35	69	wide
South Korea	11	1	1	-0.7	20	1	0	-0.4	20	-1	4	8	neutral
Thailand	24	4	7	0.7	37	3	10	1.4	23	14	12	25	wide

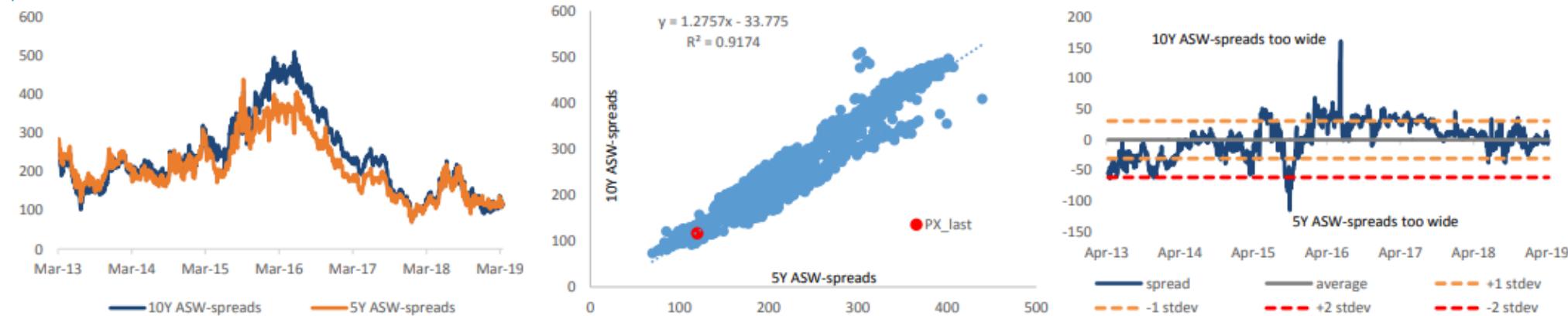
\*ASW-spreads based on constant maturity curves for EM EA/LatAm; >1stdev = wide, > 2 stdev = extremely wide, <1stdev = tight, <2 stdev - extremely tight

## Turkey



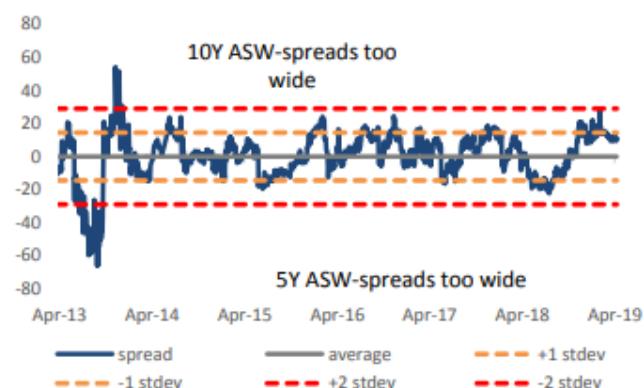
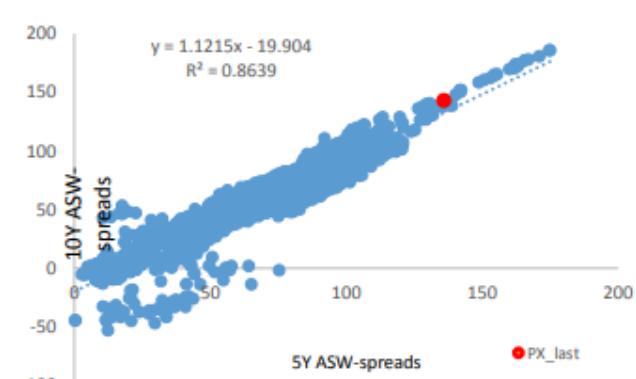
Source: Deutsche Bank

## Brazil

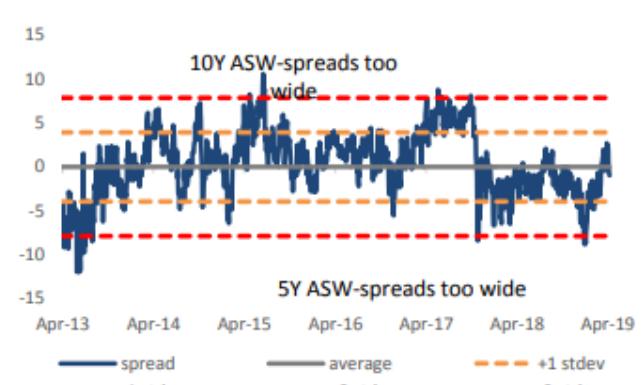
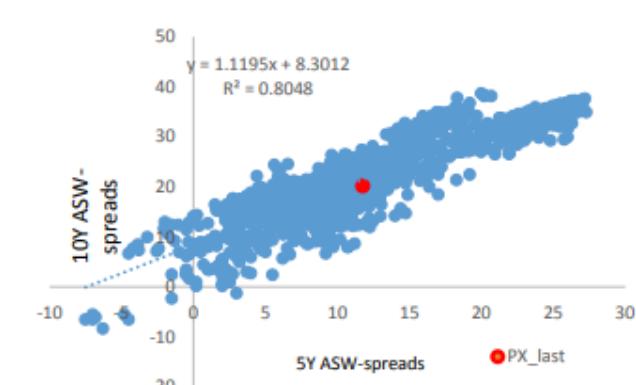


Source: Deutsche Bank

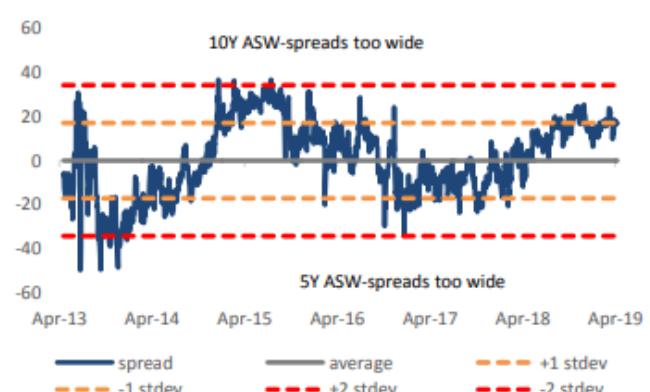
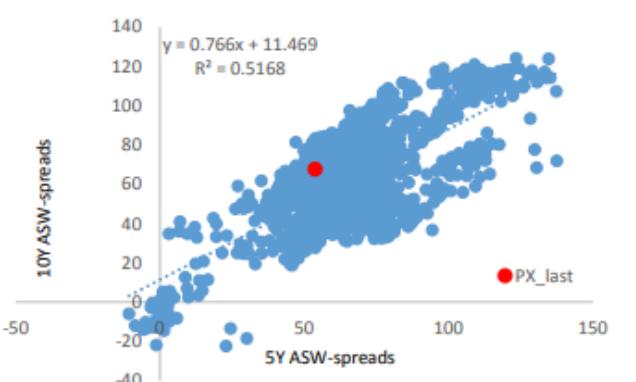
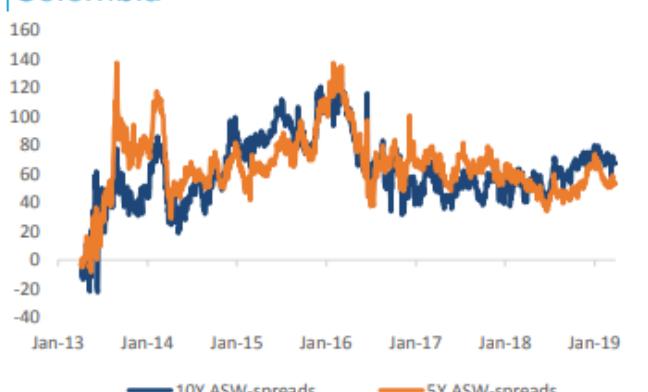
## India



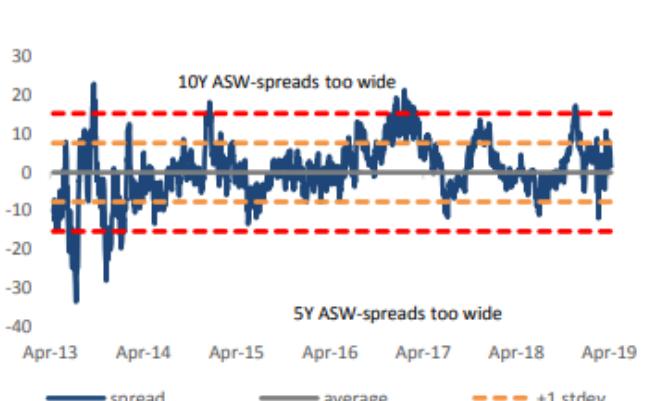
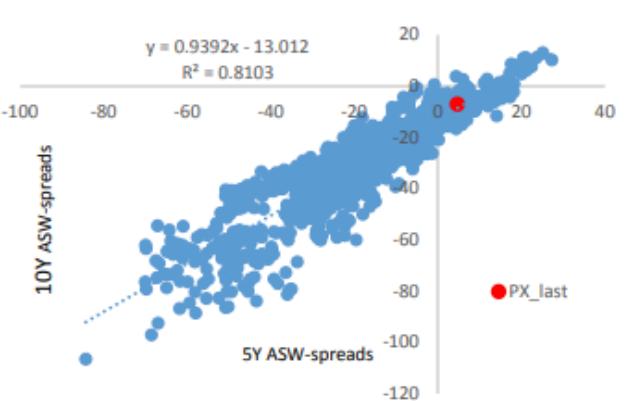
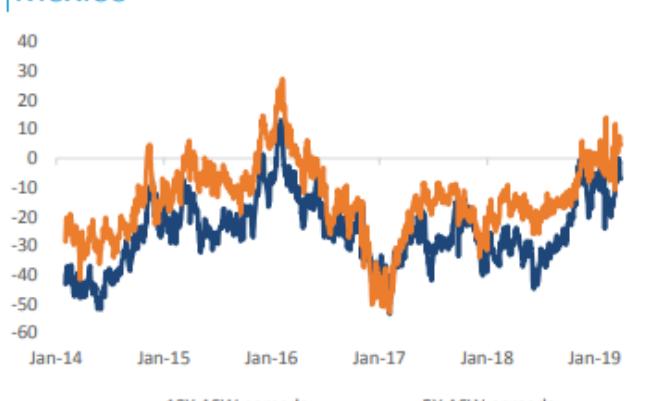
## South Korea



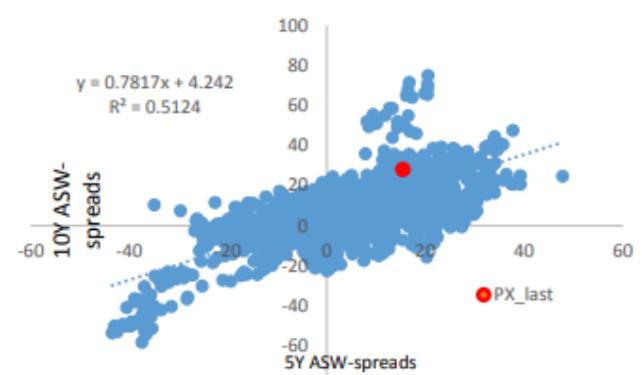
## Colombia



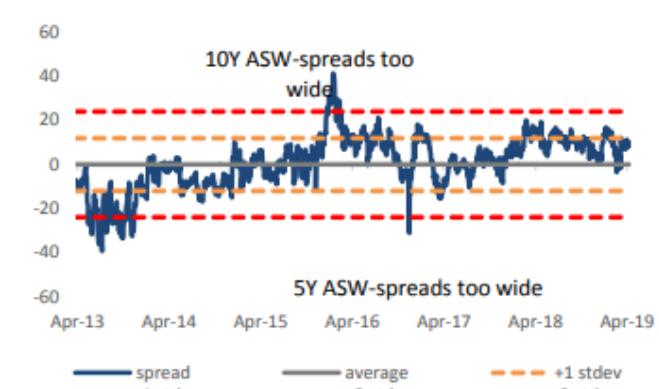
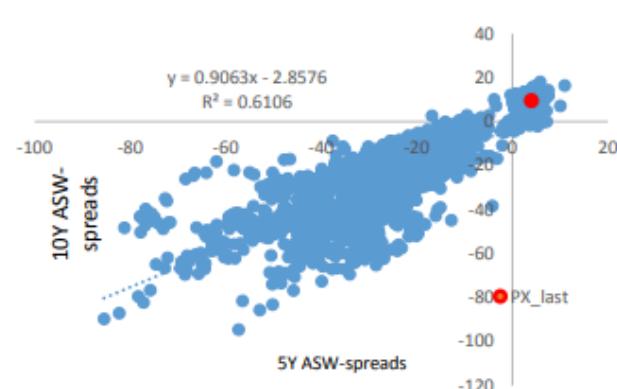
## Mexico



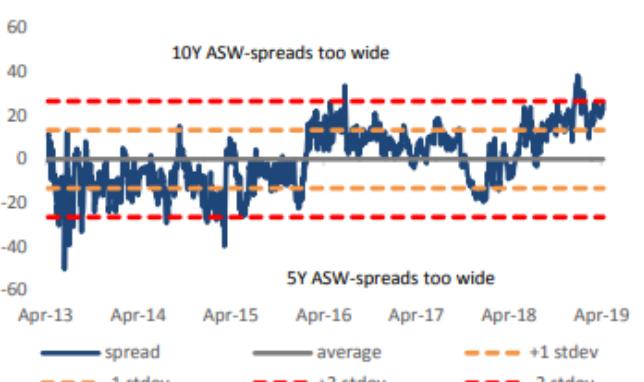
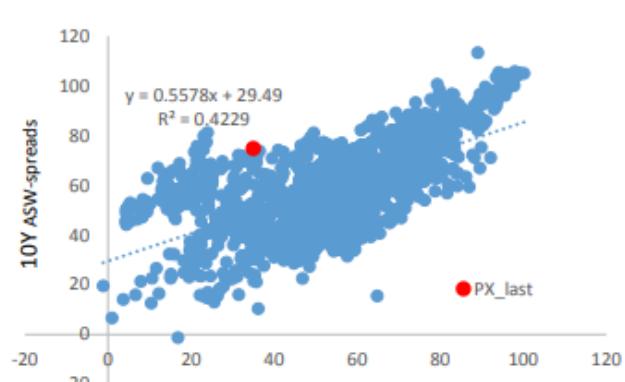
## Thailand



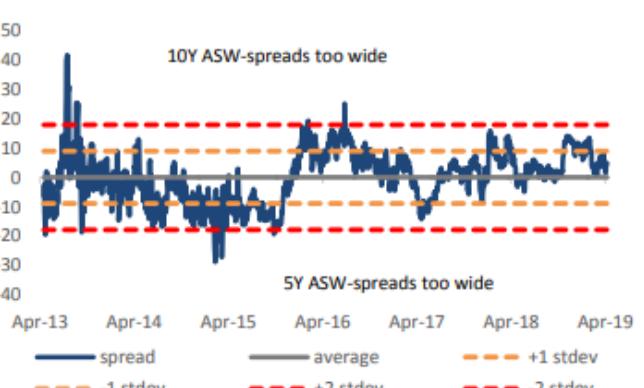
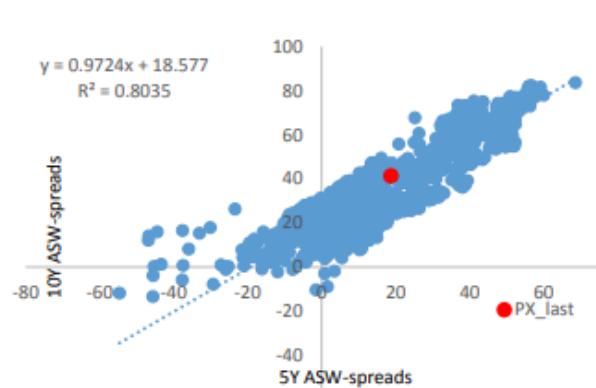
## Malaysia



## Hungary



## Poland



## Israel

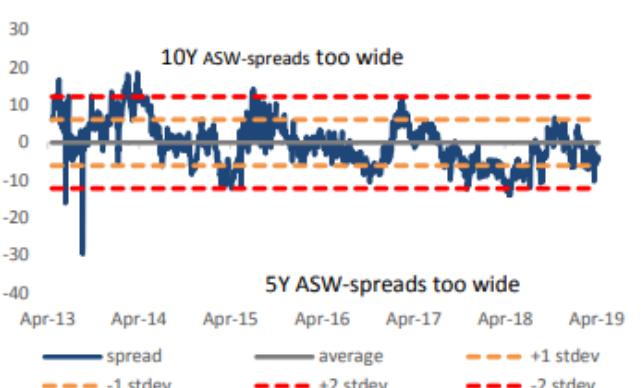
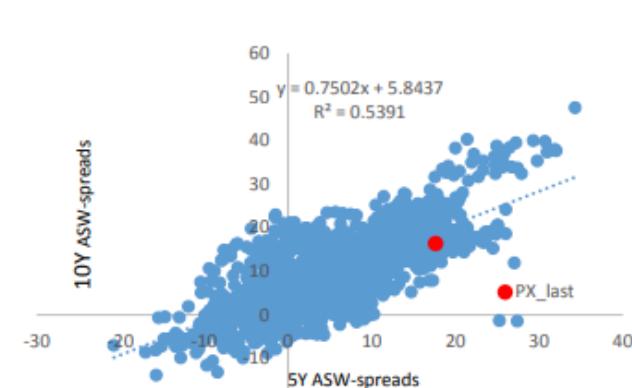
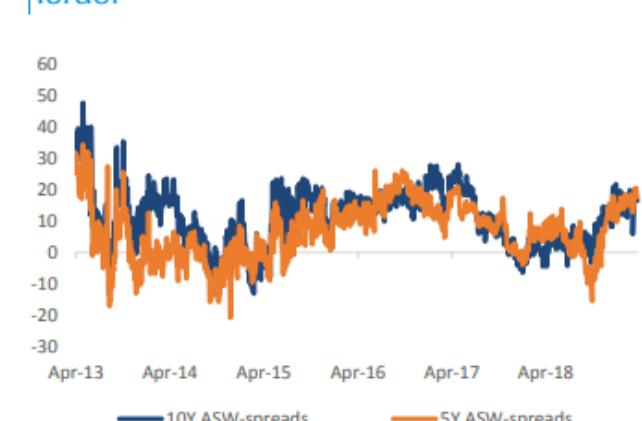
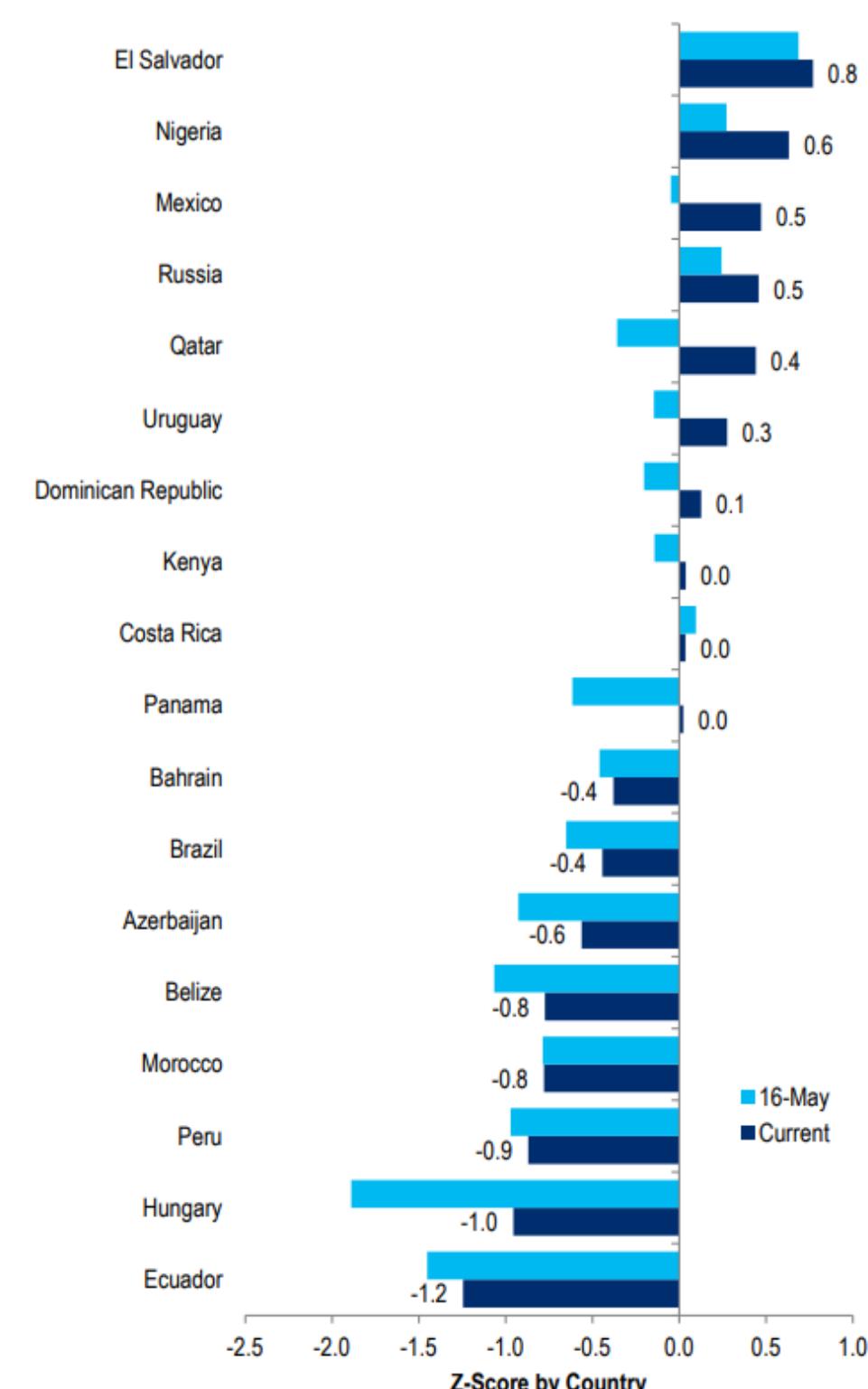


Figure 5. Citi EM Sovereign Bond Index: Returns by Country

Country	Weekly	Monthly	YTD	2018 return
Emerging Europe				
Turkey	-1.2%	-0.6%	-2.5%	-5.4%
Hungary	-0.1%	1.3%	5.1%	-0.3%
Poland	0.0%	0.5%	3.5%	0.9%
Romania	-0.4%	1.7%	5.4%	-2.5%
Russia & CIS				
Russia	0.6%	1.6%	7.6%	-1.9%
Azerbaijan	0.4%	2.1%	7.6%	0.7%
Armenia	0.2%	1.1%	6.9%	-0.6%
Georgia	-0.1%	0.6%	3.2%	0.0%
Ukraine	-0.5%	-1.3%	11.3%	-8.3%
Middle East				
Saudi Arabia	0.1%	0.8%	6.9%	-1.6%
Qatar	0.1%	1.3%	4.9%	3.8%
Kuwait	0.4%	1.3%	4.1%	1.6%
Bahrain	0.2%	1.2%	5.7%	5.2%
Iraq	-1.8%	-2.5%	6.8%	-1.0%
Egypt	0.5%	-1.4%	9.3%	-5.7%
Africa				
South Africa	0.4%	0.1%	6.6%	-2.4%
Ghana	0.0%	-0.3%	11.1%	-7.0%
Kenya	-0.3%	-0.4%	13.6%	-6.8%
Zambia	-3.7%	-4.9%	-6.1%	-24.3%
Morocco	0.5%	1.5%	5.8%	-2.3%
Nigeria	-0.4%	-2.0%	12.3%	-10.4%
Namibia	0.2%	1.0%	8.5%	-4.6%
Senegal	-1.0%	-3.2%	10.2%	-10.6%
Ethiopia	0.5%	0.0%	9.7%	-2.2%
Asia				
Vietnam	0.3%	0.8%	4.8%	0.3%
Mongolia	0.4%	0.2%	6.0%	0.7%
Latin America				
Mexico	0.3%	1.8%	8.2%	-3.8%
Brazil	0.4%	1.3%	5.8%	0.4%
Colombia	-0.3%	0.3%	7.9%	-2.9%
Peru	1.0%	1.3%	8.3%	-1.5%
Panama	0.4%	1.5%	8.1%	-2.6%
Argentina	0.2%	-2.1%	0.3%	-22.2%
Uruguay	0.7%	1.3%	8.0%	-4.0%
Dominican Republic	0.1%	-0.3%	7.5%	-2.9%
El Salvador	0.6%	-0.5%	8.4%	-3.0%
Costa Rica	1.3%	-0.9%	13.6%	-9.3%
Jamaica	0.1%	0.1%	7.3%	0.2%
Ecuador	0.1%	-0.5%	18.6%	-9.6%
Paraguay	0.4%	0.2%	7.7%	-1.7%
Honduras	0.0%	1.1%	6.7%	0.4%
Bolivia	0.5%	0.5%	9.1%	-5.1%
Trinidad & Tobago	0.3%	1.0%	8.3%	-3.5%
Belize	0.0%	5.3%	19.3%	-1.5%

Source: Citi Research, Citi Fixed Income Indices

Figure 6. Citi EM Sovereign Bond Index: Spread Z-Score (1 Year)

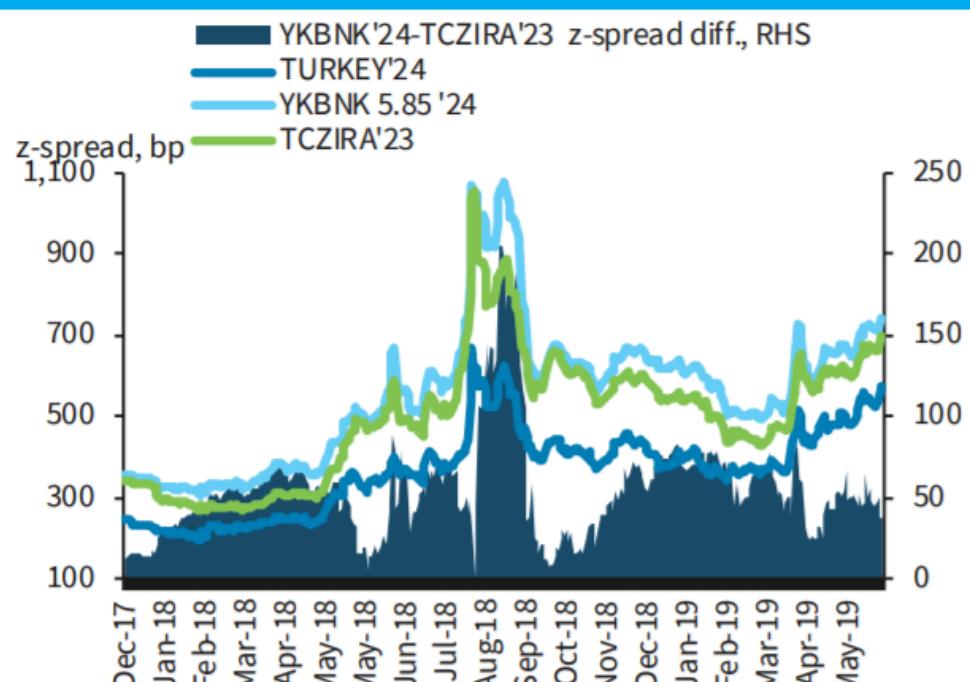


Source: Citi Research, Citi Fixed Income Indices. Note: Z score (1Y) = (current z spread - 1Y average)/ 1Y standard deviation

#### Switch out of TCZIRA'23 into YKBNK 5.85%'24

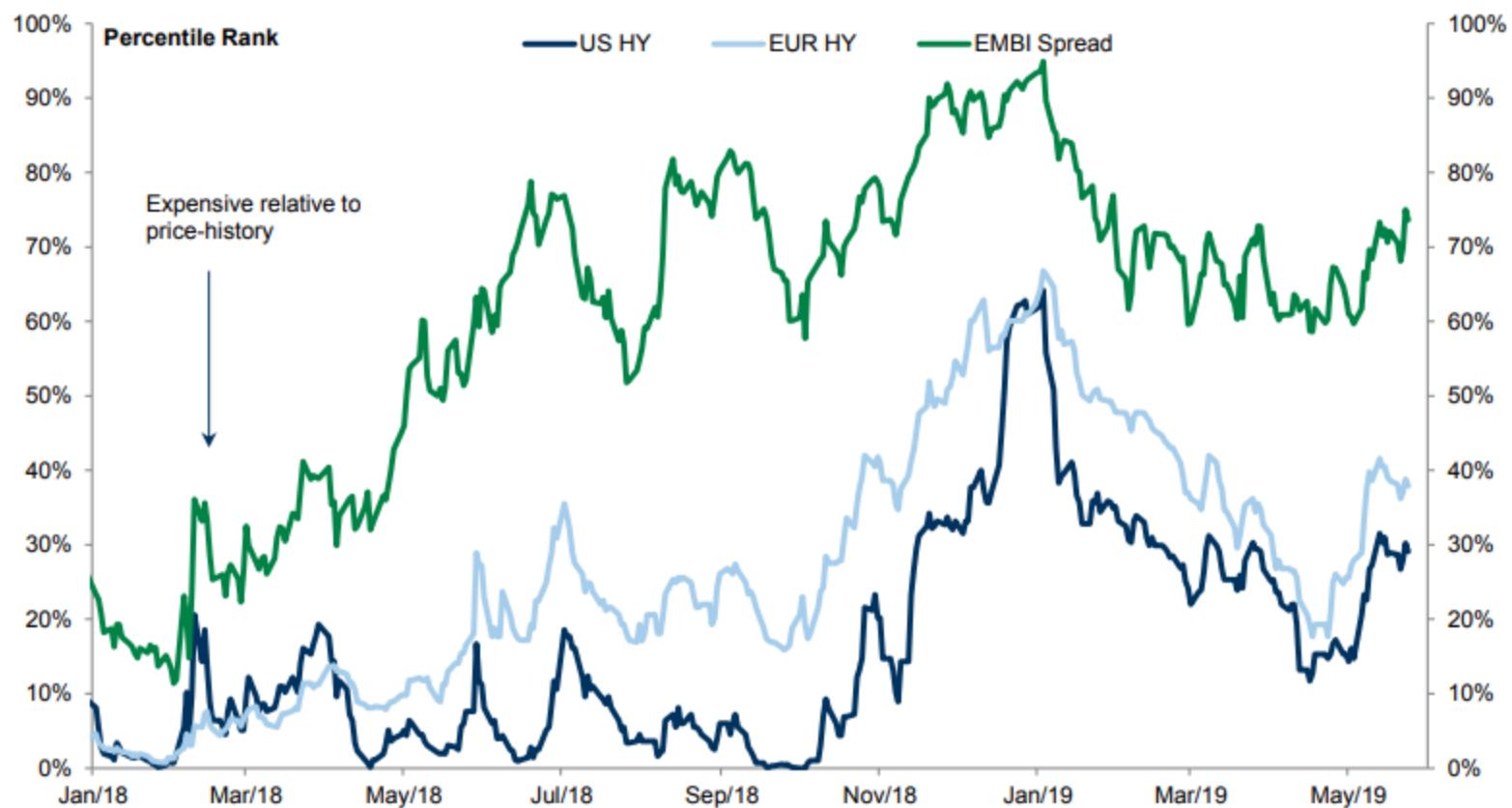
- We expect divergence between state and private banks to continue especially in TRY lending given the recently announced financial package for TRY30bn that will be done through the three deposit state banks. While state banks were recapitalized in April with AT1 bonds/loans at favorable terms, we think continued loan growth at the state banks could put further pressures on capitalization especially if it comes with stipulations. Deposit state banks have reported lower Q1 19 CET1 buffers and lower internal capital generation compared with most private banks we cover. We prefer private vs state banks in the near term.
- To express this view, we recommend switching out of TCZIRA'23s into YKBNK 5.85%'24s and picking up c10bp in z-spread (including switching costs), the swap would come with only c.8 months increase in duration. While both banks have ample FX liquidity to cover short-term maturities as of Q1 19, we note YKBNK's CET1 buffer over Basell III minimum (340bp) is slightly higher than TCZIRA's (320bp) on an unconsolidated basis. Moreover, starting in Q2 19 YKBNK's regulatory capital thresholds will be lowered by 50bp, which if applied to Q1 CET1 would mean YKBNK's buffer is 390bp. Additionally, we calculate Q1 19 ROE at YKBNK being c13%, whereas TCZIRA's was c8%.

Valentina Stoykova, Barclays, UK



Source: Barclays Research, Bloomberg

**Exhibit 1: EM Credit spreads widened in May, along with other risk assets**  
 Percentile rank of credit spreads since January 2010

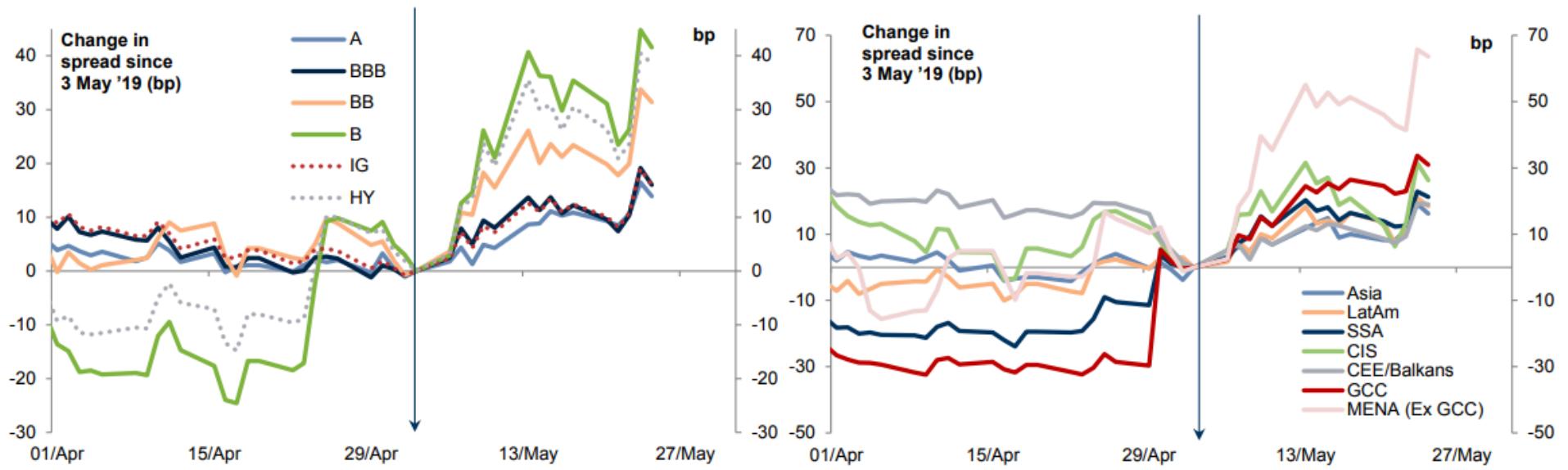


Source: Bloomberg, Goldman Sachs Global Investment Research

**The EM Credit spread sell-off in May has been a typical risk-off ...**

Within EM Credit spreads, the sell-off in May has been a 'flight to quality', with high-yield (HY) and riskier credits such as MENA (Ex GCC) underperforming, and Asia credit outperforming (Exhibit 2). Given the more direct exposure of Asia credit to the escalation in US/China trade tensions over the same period, this has raised questions of whether the sell-off in EM Credit spreads was more of a 'correction' in nature, and whether EM Credit is yet to price the impact of US/China trade.

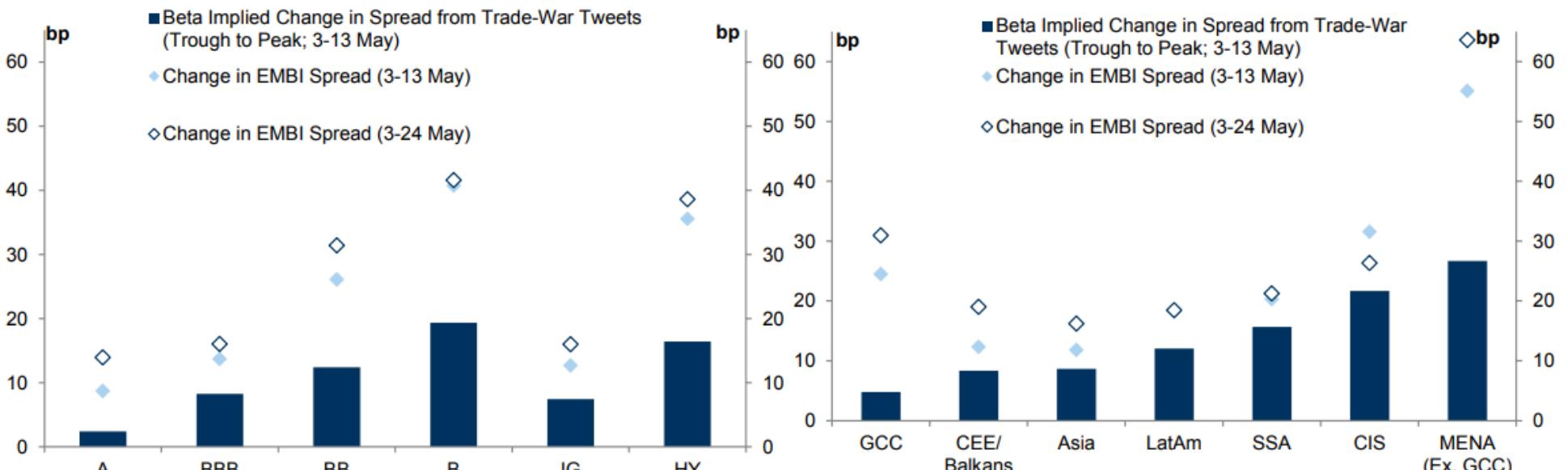
**Exhibit 2: The spread widening was mostly a 'flight to quality', with HY spreads widening the most**  
 Change in EMBI Diversified spreads since 3 May 2019



Source: Datastream, Goldman Sachs Global Investment Research

### Exhibit 3: Outside the Middle East (GCC and rest of MENA), we can explain most of the relative spread widening through the escalation in US/China trade tensions

Shows change in EMBI Global Diversified Spreads

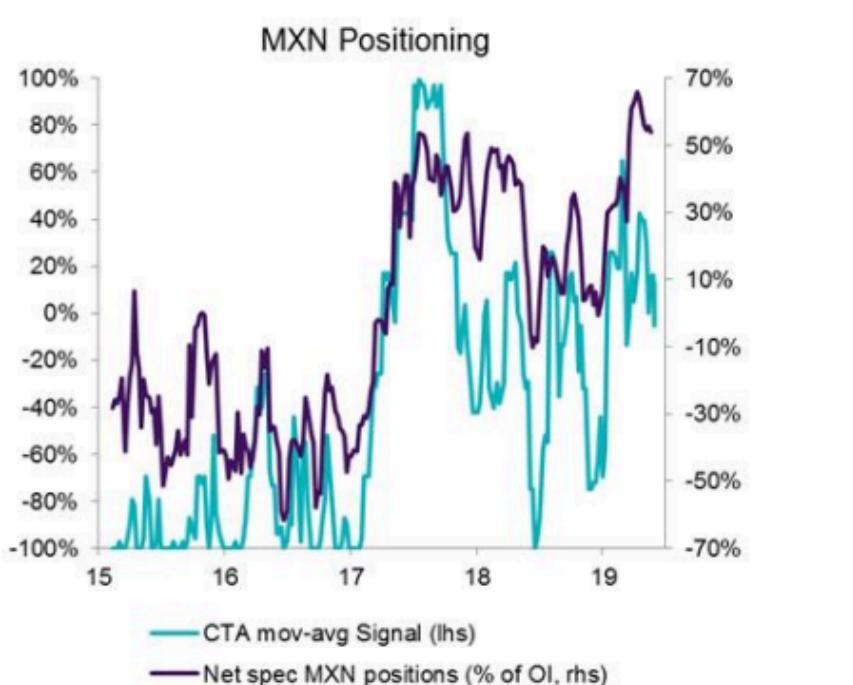


Source: Datastream, Dataminr, Goldman Sachs Global Investment Research

3. *Maybe the market is thinking about the big USD:* Probably something worth thinking about around EM local markets is the USD with the context of easing priced in. Six months ago, USD IRS 1y1y was 3.1%, and today it is 1.8%. The market is seeing a breakeven of -80 bp vs current fix on 1y1y. In our framework, we have not assigned much to US monetary policy and as Chart 4 and 5 show, while EMFX underperformed in 2013-2015 and some parts of the last few years has been in line with wider US rates, the recent relationship has been very poor.<sup>1</sup>

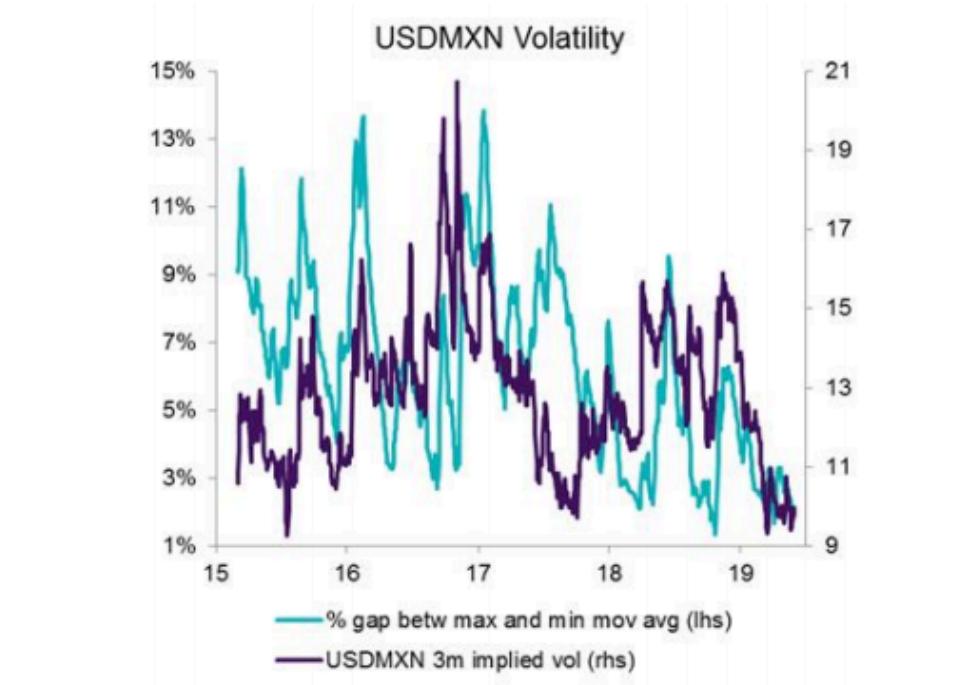
#### Chart 1: Long MXN positioning is very high

Source: Bloomberg; NatWest Markets



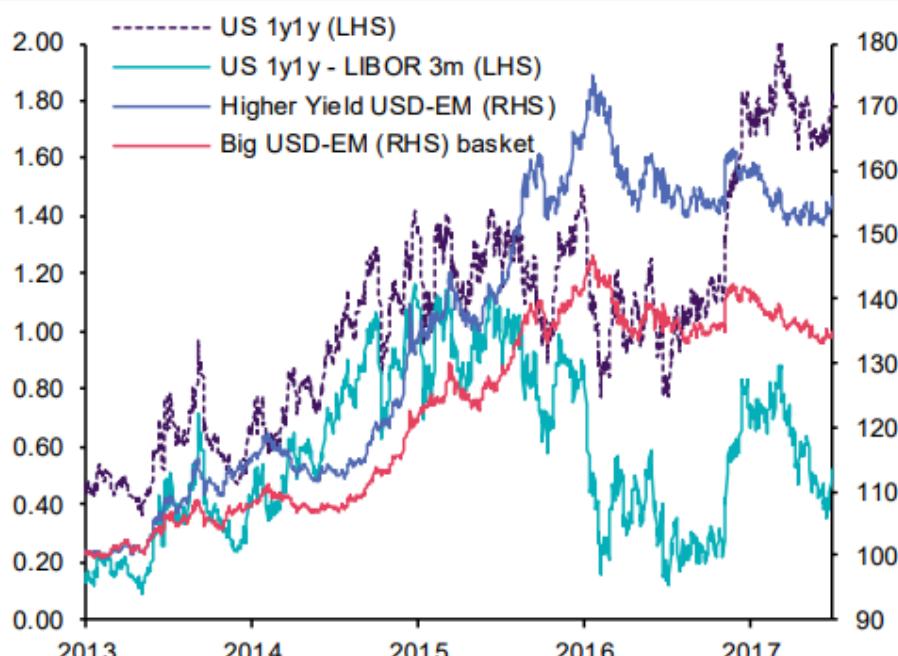
#### Chart 2: MXN high carry to vol ratio has been attractive for systematic accounts

Source: Bloomberg; NatWest Markets



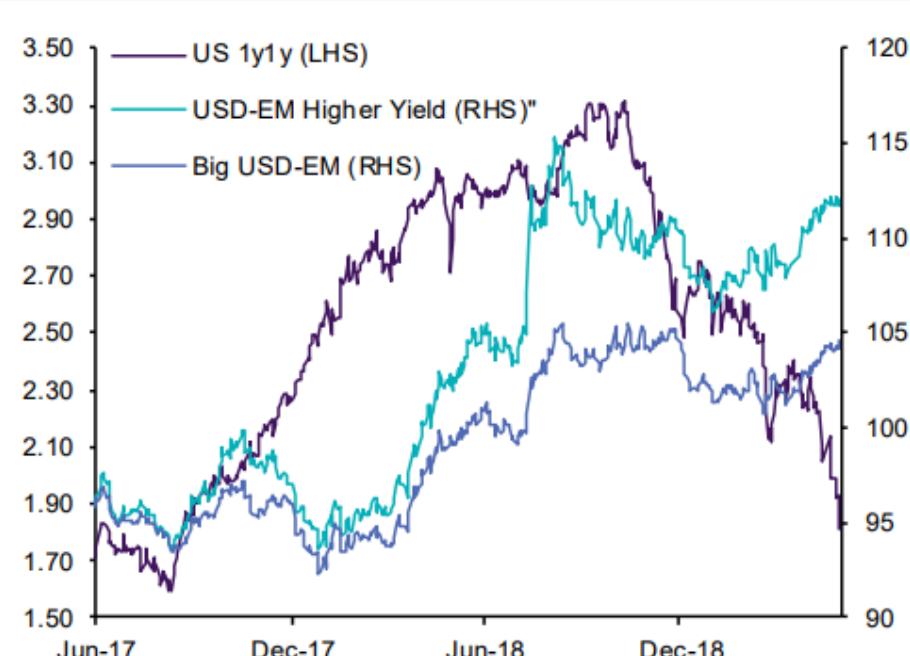
**Chart 4: from 2013 – 2017H2, EM FX traded closely with USD rates. The 2016 EM/commodity/oil selloff was the major exception.**

Source: Bloomberg; NatWest Markets



**Chart 5: USD-EM did not follow US rates in 2017 H2, and did not follow the easing that was priced... USD IRS 1y1y plotted with USD-EM FX**

Source: Bloomberg; NatWest Markets



While we are in the current untradeable / unpredictable stages of risk-aversion risk pricing, we are not sure if both 1y1y ranges can mean the USD outperforms EM. So if USD rates are right, then EMFX should perform well when the FED eases. The near-term difficulty is picking this moment. As Chart 6 shows – this combines well with low vols. USD-EM 6-month puts in countries less at risk of rising trade barriers, or who are less open and can ease, could be the way to trade this dynamic. A few examples: RUB, IDR, INR or even MXN for those investors who have a bullish medium term view – but we will discuss this in

<sup>1</sup> The "higher yield USD-EM" basket includes India, Indonesia, Russia, Turkey, South Africa, Brazil, Mexico, Colombia. The "Big USD-EM" basket includes Malaysia, India, Indonesia, Russia, Turkey, South Africa, Poland, Czech Republic, Hungary, Brazil, Mexico, Colombia, Chile, Thailand, South Korea, and China.

4. *Looking ahead, EM rates to trade more like rates than credit premia:* One could think of EM as a barbell, with low yielders, mid yielders, high yielders, and frontiers. The current picture puts mid-yielding EM FX under pressure for now (similar to earlier in May) e.g. MXN, COP, ZAR. The highest yielders have done well (Argentina, Turkey, Egypt, Nigeria), while the low yielders have been very mixed partly due to export / growth / trade concerns. EM rates have generally done well. Going forward, if things get worse around global growth, we will have a stronger (bullish) view on the rate markets of this barbell: i.e., mid-yielding-EM and more liquid local bond markets could potentially trade more like rates than credit, where risk premia can contract. This is also consistent with current (low) core inflation levels. For EMFX or EM credit, we are likely to have a mixture of factors at play making the near term difficult: the potential for lower growth revisions, DM monetary policy, general credit repricing, and commodity/energy prices.

We will be posting some more specific notes in the days ahead while assessing the implications for our existing recommendations further.

**Chart 6: USD-EM did not follow US rates in 2017 H2, and did not follow the easing that was priced... USD IRS 1y1y – 3m LIBOR plotted with USD-EM FX**

Source: Bloomberg; NatWest Markets



## Chart 7: EM vols have recently moved up, but in general they are low. Chart shows 3m FX vols.

Source: Bloomberg, NatWest Markets

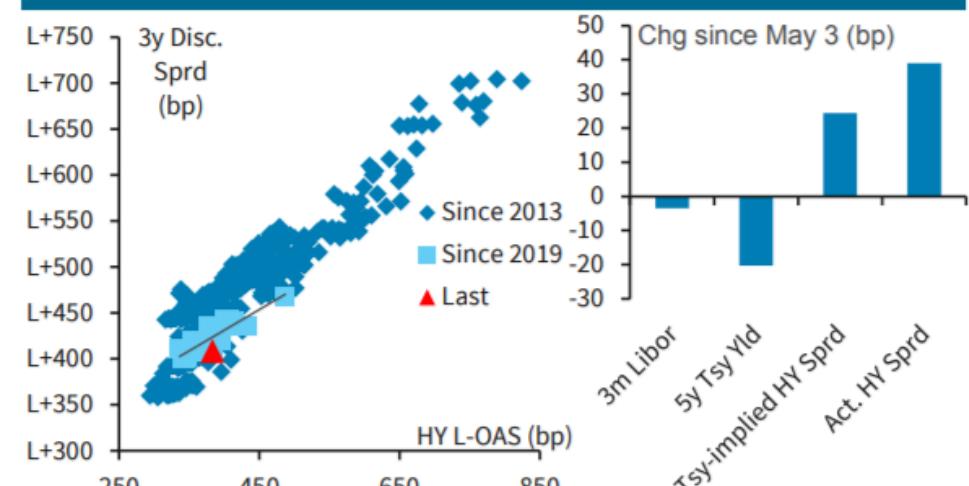
	USD-ILS	EUR-PLN	EUR-HUF	EUR-CZK	USD-TRY	USD-ZAR	USD-RUB	USD-KRW	USD-INR	USD-MXN	USD-BRL	USD-COP
Current Level	4.9	3.7	5.0	3.1	19.6	14.9	10.1	6.8	6.1	11.6	13.5	10.3
Z Score Since 2015	-1.76	-2.03	-0.68	-0.77	0.88	-0.82	-0.91	-1.68	-0.48	-0.63	-0.77	-1.48
Z Score Since 2010	-1.80	-1.62	-1.06	-1.01	1.44	-0.35	-0.59	-1.14	-0.94	-0.26	-0.30	-0.65
Z Score Since 2005	-1.16	-1.22	-1.01	-0.94	1.29	-0.46	-0.33	-0.57	-0.64	-0.04	-0.33	-0.65
Std dev: current from min since 2015	0.15	0.13	0.92	1.38	2.02	1.34	0.14	0.85	1.23	1.26	0.75	0.06
Std dev: current from min since 2010	0.49	0.07	0.43	0.71	3.22	1.76	0.41	0.62	0.52	2.14	1.82	1.15
Std dev: current from min since 2005	0.36	0.04	0.32	0.48	3.19	1.26	0.91	0.55	0.97	1.31	1.38	1.00

Loans have outperformed bonds on both price and spread terms; the floating-rate outperformance is also echoed in the IG world

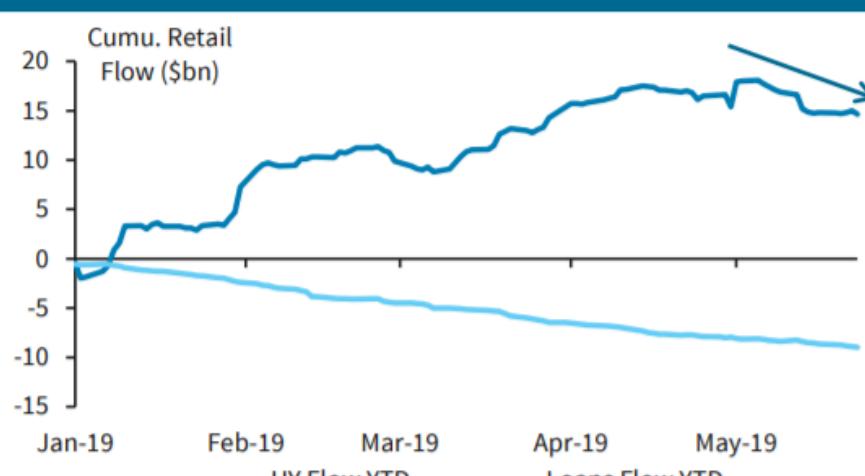
### Loans Outperformed Bonds in Px and Yld...



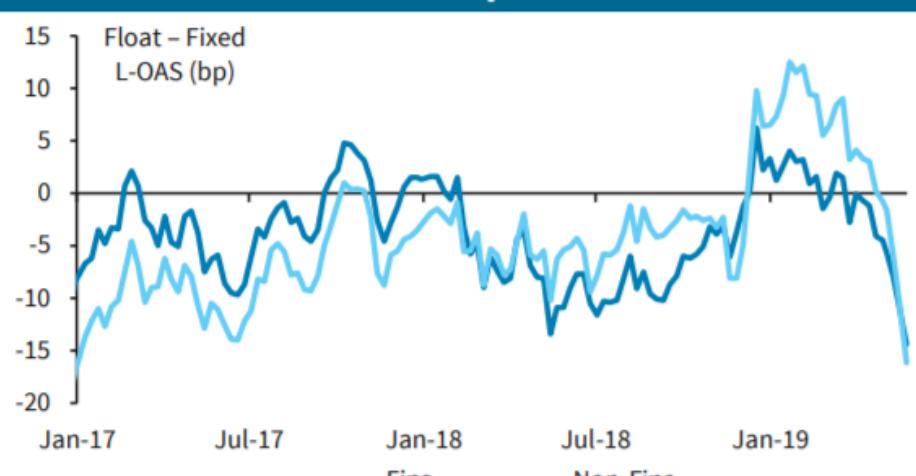
### ...also in Spread Terms



### Outflow from Retail HY Funds Since May



### IG FRNs Have Outperformed Fixed



Note: For bottom right chart, we compare 1-5y A3 or better IG FRNs for floats and A or better 1-5y portion of IG index for fixed.  
Source for all charts: S&P LCD, EPFR, Bloomberg, Barclays Indices, Barclays Research

FIGURE 1

The Bloomberg Barclays EM Corp/Quasi index is trading at record tight levels vs EM Sovereigns

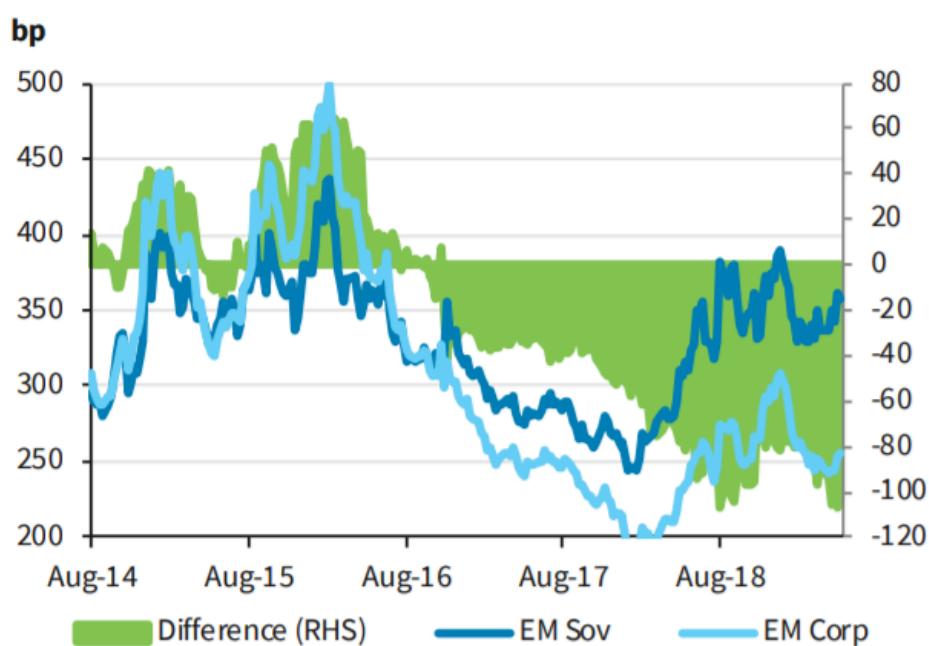
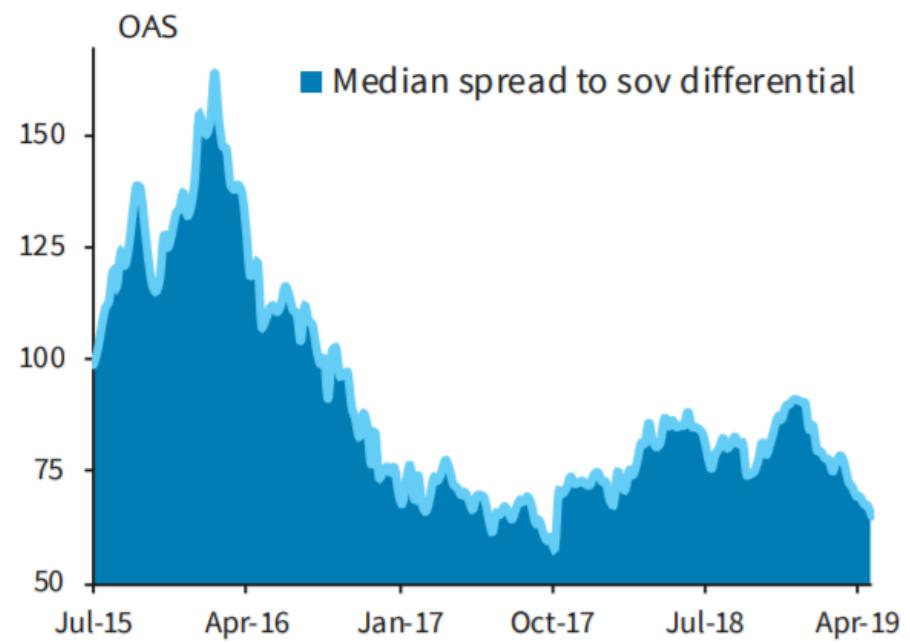


FIGURE 2

Not all of this was prompted by composition difference: the average spread to sovereigns\* has also compressed to record tight levels



28 May 2019

2



Figure 10: Our bond valuation models find 10Y bonds still cheap; however, the dislocation is less extreme

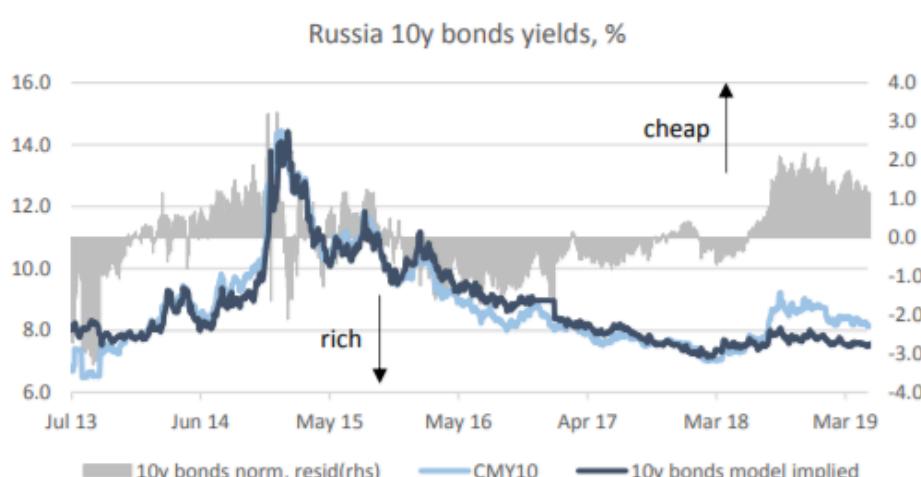


Figure 11: The share of foreign holdings has increased of late but remains well below the peak

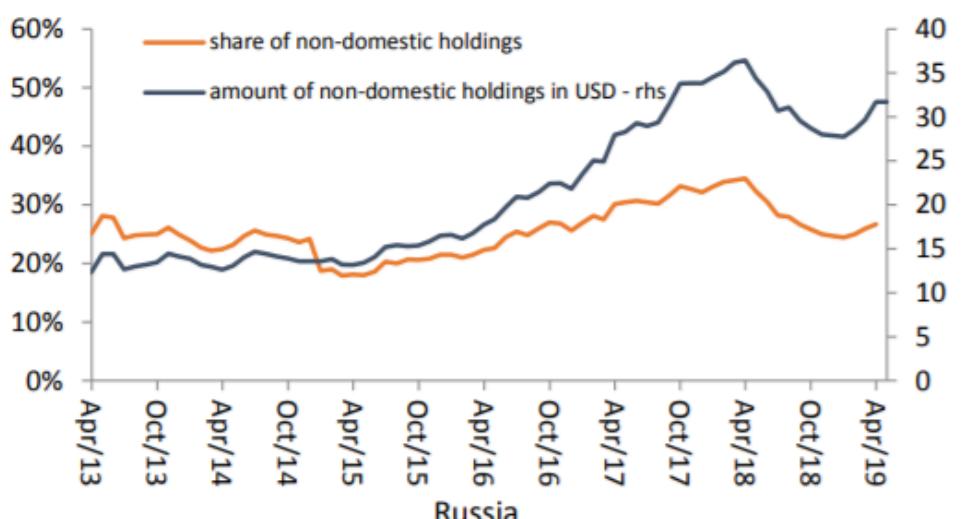
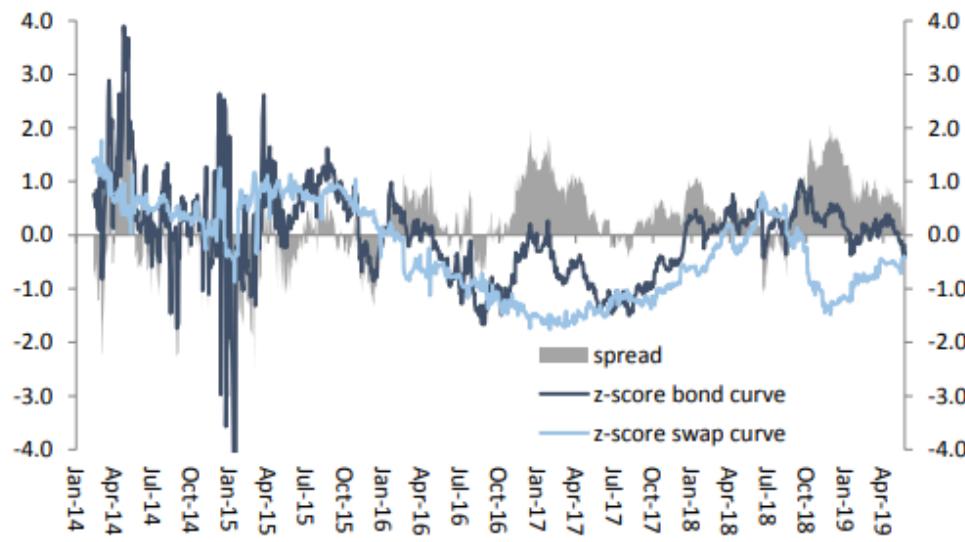
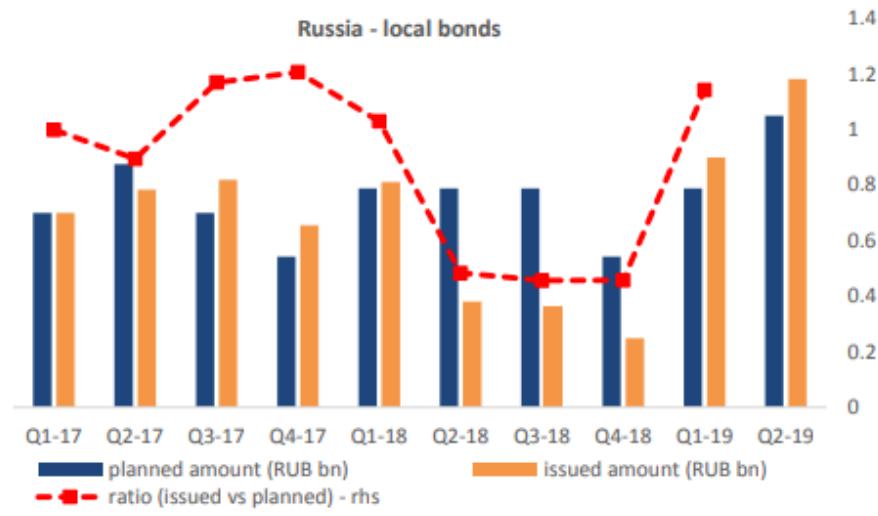


Figure 12: Term premium has declined recently but we expect a further decline to follow (shown as z-scores)



Source :Deutsche Bank

Figure 13: Strong supply/demand dynamics are supportive for local bonds



Source :Deutsche Bank

Figure 14: EM Fixed Income Scorecard - Russia ranks quite high on attractiveness of local debt

Countries	Final Rank	Technicals/Financials					Valuation/Dynamics					
		Positioning	Credit Risk	Real Rates	External valuation	Overall Technicals	Term Premium	Monetary Policy Impulse	Inflation impulse	Bond valuation	Expected return	
Czech Republic	15	14	5	14	10	14	11	9	9	11	18	14
Hungary	11	4	8	17	8	9	2	9	17	9	14	11
Israel	17	8	11	17	16	18	13	15	1	13	16	14
Poland	10	3	3	15	5	3	9	8	13	15	17	16
Romania	12	10	12	16	7	15	6	15	5	4	12	7
Russia	6	7	15	7	9	10	11	11	10	6	5	9
South Africa	9	13	17	5	6	13	2	13	6	10	10	6
Turkey	4	1	18	11	2	5	18	1	10	7	1	5
Brazil	8	12	14	9	15	17	1	3	7	14	4	2
Chile	14		7	6	17	12	6	15	4	16	15	12
Colombia	7	16	12	7	4	11	4	12	15	8	3	7
Mexico	5	15	16	2	1	6	16	5	18	1	7	10
Peru	18	17	6	12	14	16	9	18	14	12	13	17
India	3	2	9	3	13	4	8	6	12	3	6	4
Indonesia	1	8	10	1	3	1	4	2	3	2	2	1
Malaysia	2	5	4	4	11	2	13	4	1	5	9	3
South Korea	16	5	1	10	18	6	17	14	16	18	8	18
Thailand	13	10	1	13	12	8	15	6	7	17	11	12

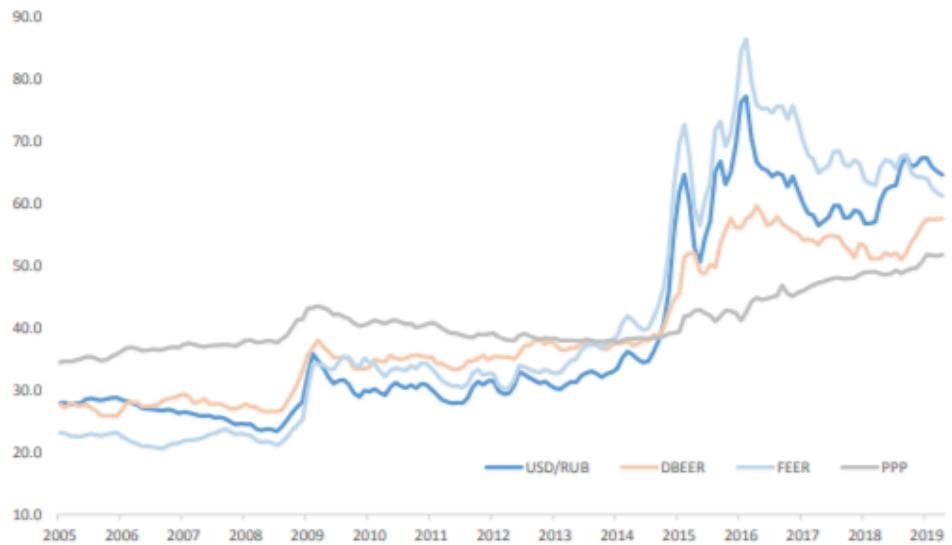
Source : Deutsche Bank; for more details, please see [EM Special Publication : Where is the value in EM local markets?](#)

**Figure 5: Lower foreign bond positioning has reduced RUB sensitivity to sanction headlines**



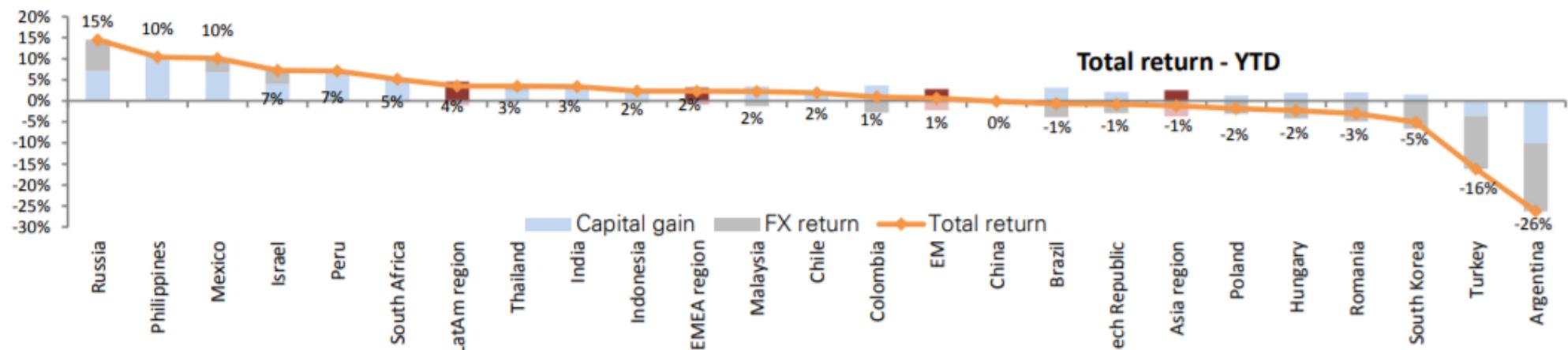
Source : Deutsche Bank, Haver

**Figure 6: RUB remains 'cheap' on long-term valuation models**



Source : Deutsche Bank, Haver

**Figure 7: This year, Russia is the best-performing country in local debt among all EMs**



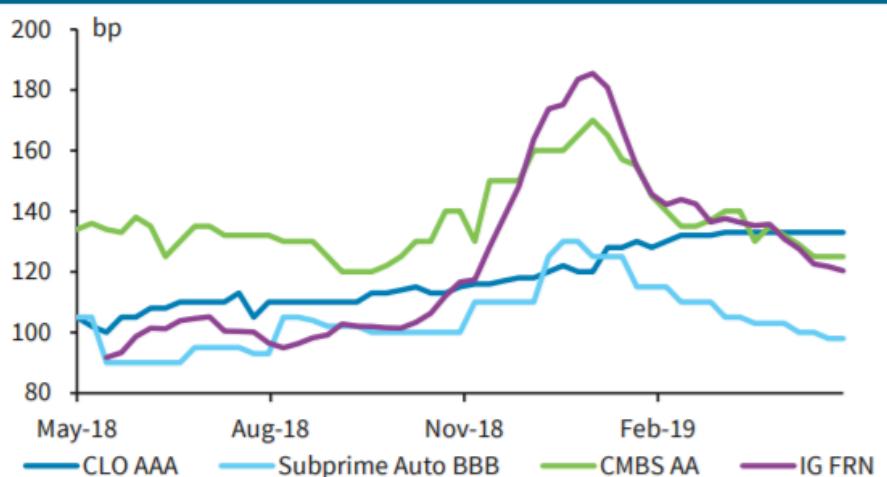
Source : Deutsche Bank, Bloomberg Finance LP

**EUR loans have delivered better risk-adj return; as CLOs have cheapened in general, we highlight the best opportunities across ratings and currencies**

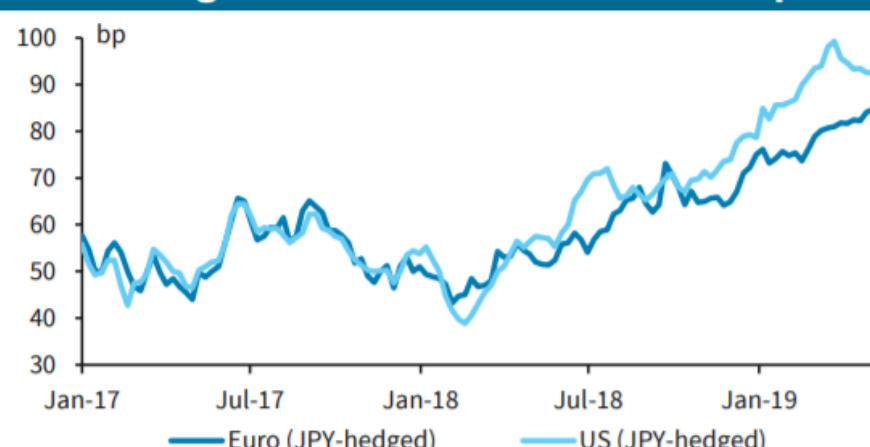
**US and EU Loans Market Risk-adj Return**



**US BSL CLO vs CMBS and US IG FRN**



**JPY-Hedged US & Euro CLO AAA Spreads**



**US and European CLO Rel-Val Picks**

	US BSL CLO	European CLO	Reason
AAA	★	★	US cheaper on xccy basis, but both cheap to other credit assets
AA			Not abnormally wide to CLO AAA or IG OAS
A	★	★	US and EU CLO historically wide to CLO AAA and IG OAS
BBB		★	EU CLO cheaper to underlying loan spreads, but prefer flat-rated notes
BB	★		US cheaper to underlying spreads than EU, and less par sub. decline than EU

For upper left chart, Risk-adjusted return calculated as LTM excess return divided by annualized standard deviation of weekly excess returns. Excess returns approximated as respective market loan total returns less the return of Libor or Euribor. For more detail, see "Rumble in the CLO Jungle: US versus Europe", May 17, 2019.  
Source for all charts: S&P LCD, Intex, Bloomberg, Barclays Indices, Barclays Research

## China cannot be ignored

- China issuers have been the main issuers in the last several months, making China 48% of 2018 Corp new issues in USD/EUR.
- EM Corp index face ex-China has declined in the last 12 months by \$9bn.
- **China index inclusion.** We expect foreign demand from benchmarked investors for China local govt debt will increase as China RMB bonds begin to go into the Bloomberg Barclays Global Agg over a 20m period starting Apr 2019. Currently we think some foreign holdings may be from Central Banks, not only investors.

Table 2: LDM China foreign holdings growth as of 30 April-19 - Changes in US\$

	FH Apr	Holdings USD (bn)	Changes in US\$			YTD	% of YTD flows
			1m	3m	6m		
China	2.5	165	3	2	6	1	9%
Total FH ex China	-5.6	641	-2	10	17	11	91%
Total FH	-3.1	806	1	11	23	12	100%

Source: BofA Merrill Lynch Global Research, Local government websites

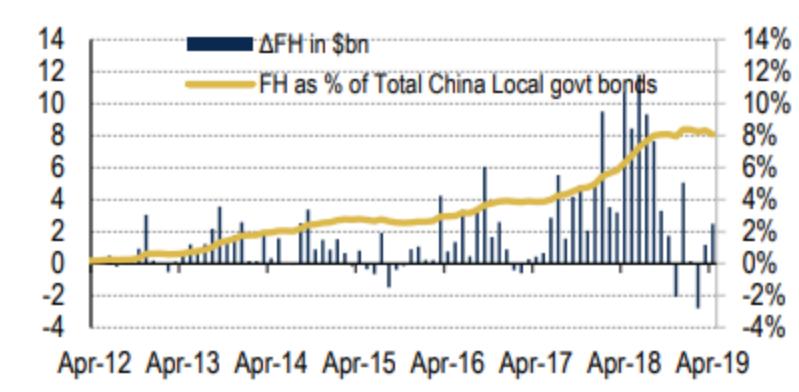
Chart 8: Foreign Holdings – Inflows into China



Source: BofA Merrill Lynch Global Research, Local government websites

Chart 9: China Foreign Holdings

Δ FH in \$bn vs FH as % of Total China Local govt bonds



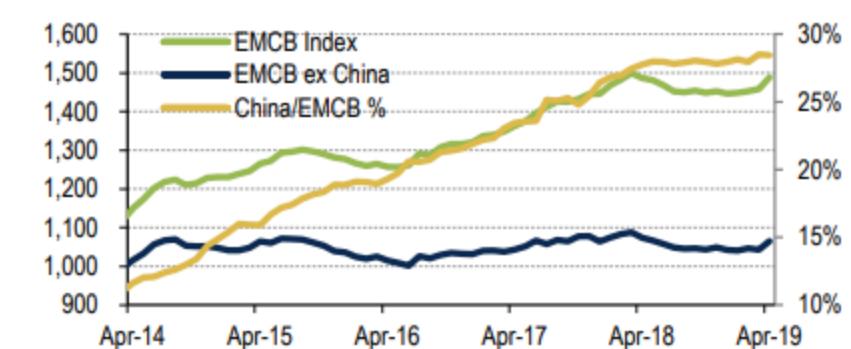
Source: BofA Merrill Lynch Global Research, Local government websites

Table 3: Annual USD/EUR Corporate New Issuance (US\$mn)

Country	2019 YTD	2018
China	72,776	165,332
Rest of EM corporates	103,653	178,063
Total	176,429	341,544
% China	41%	48%

Source: Merrill Lynch Global Research, EMDL on Bloomberg

Chart 10: EM Corp Index with and without China; ex-China index-eligible debt face is down \$9bn since April 2018



Source: BofA Merrill Lynch Global Research, Bloomberg, ICE Data indices, LLC.

## Uridashi bond market

Fig. 17: Major currency share in Uridashi issuance

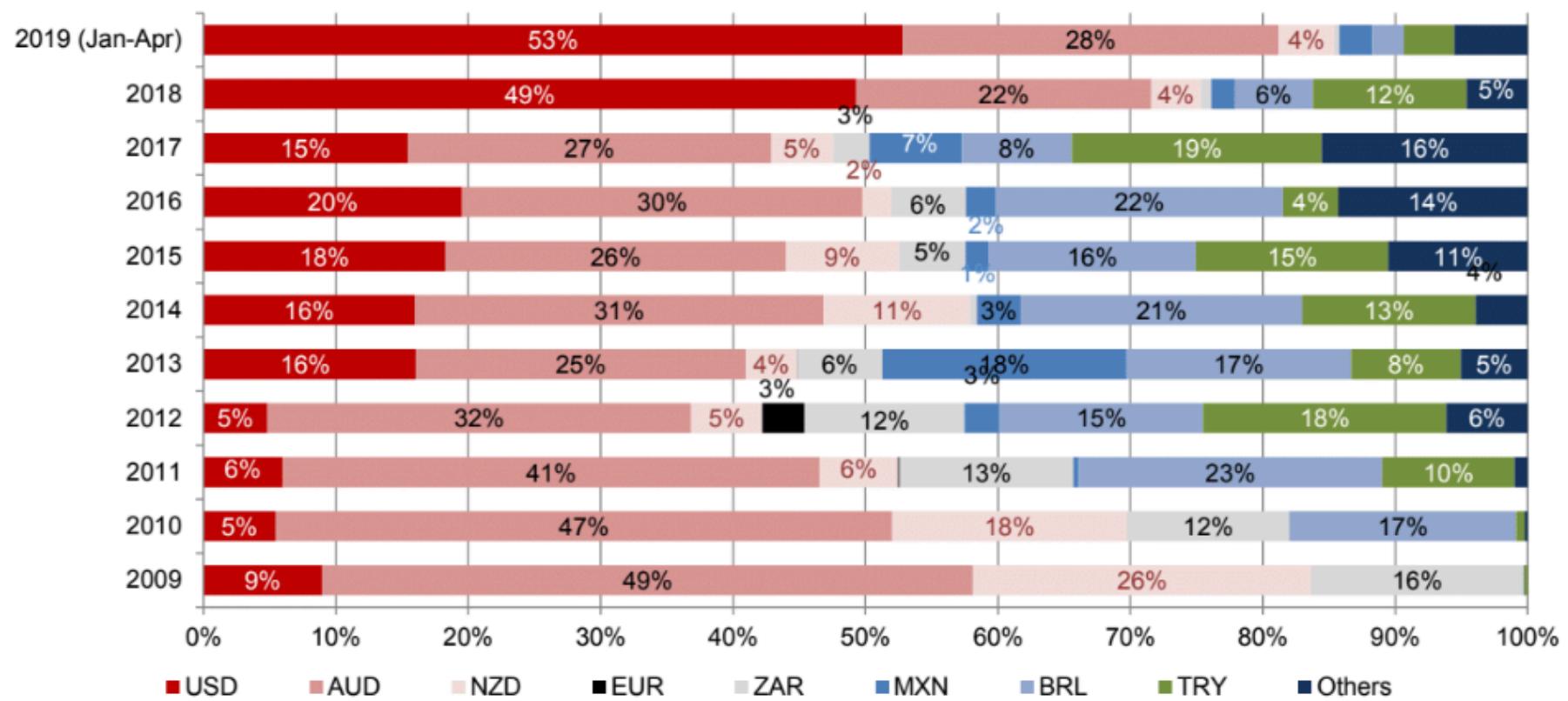
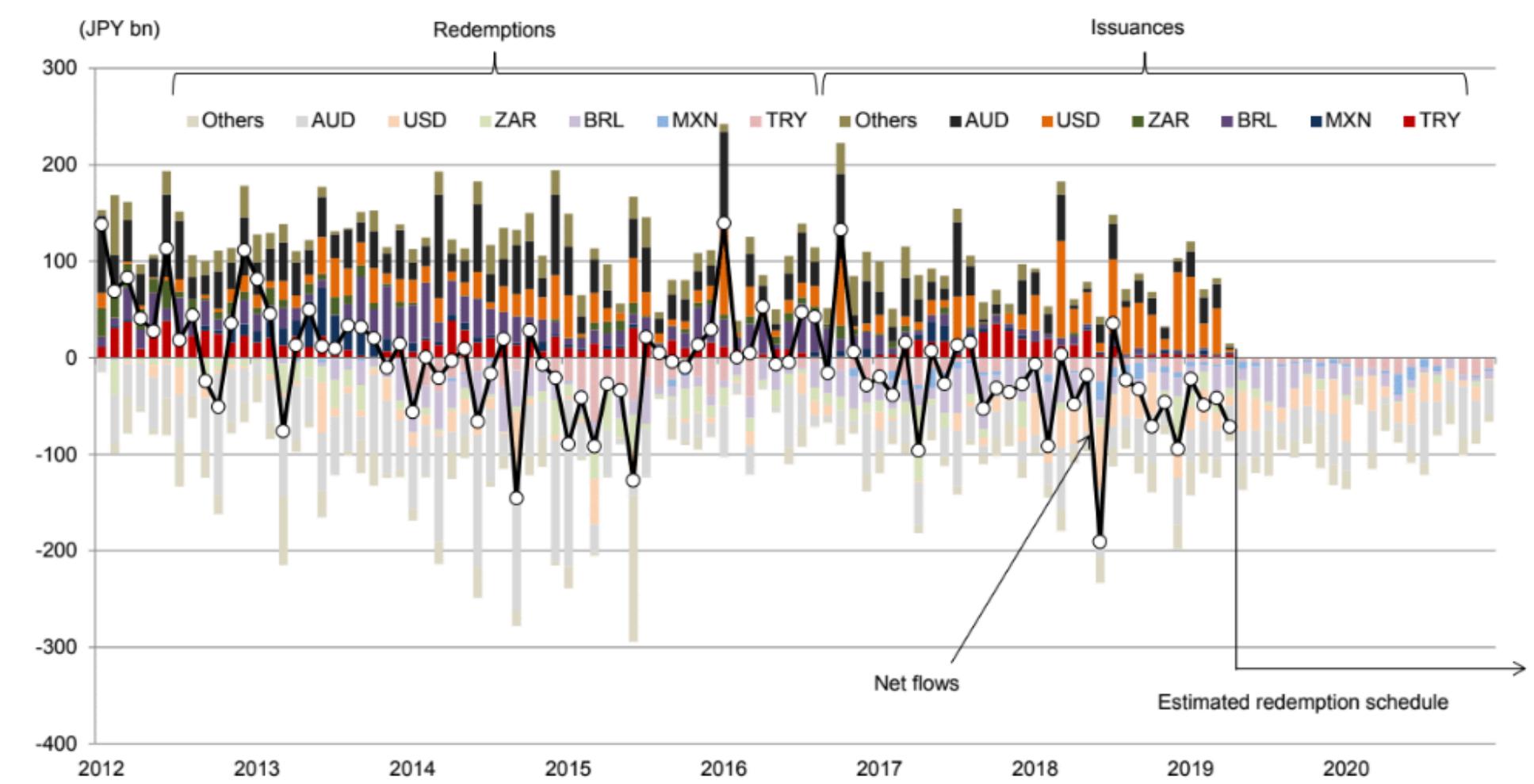


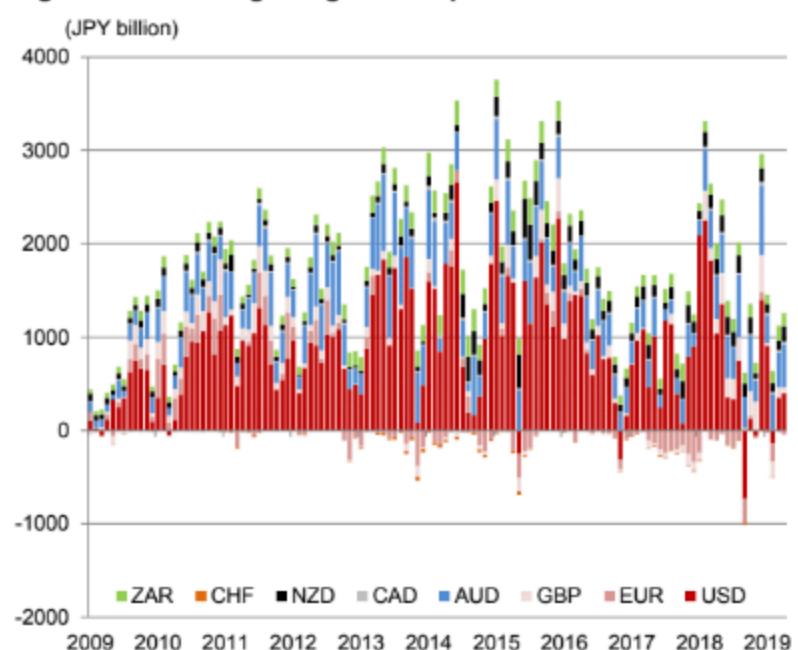
Fig. 18: Uridashi issues/redemption by currency



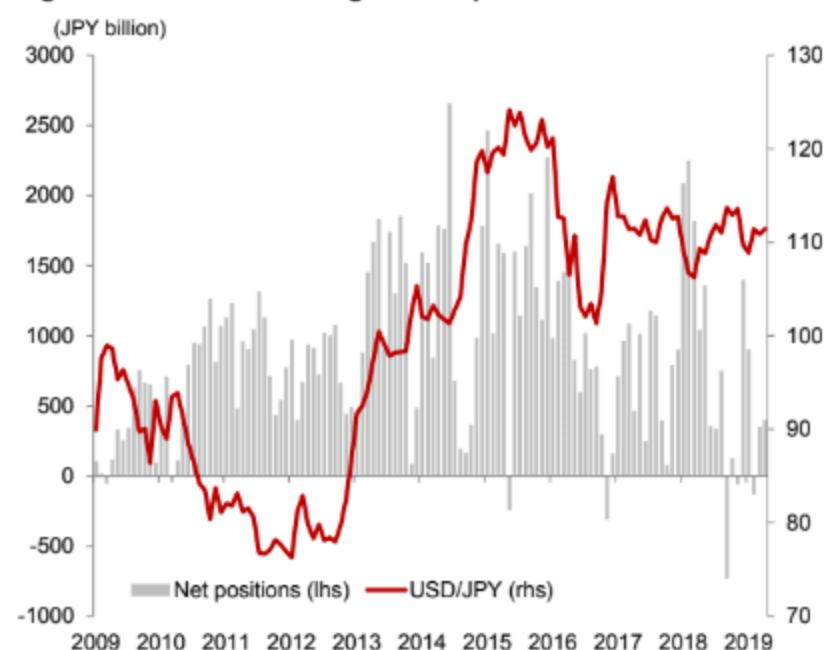
Source for all charts on this page: Bloomberg, Nomura.

## Margin trades

**Fig. 19: JPY selling margin trade positions at OTC**



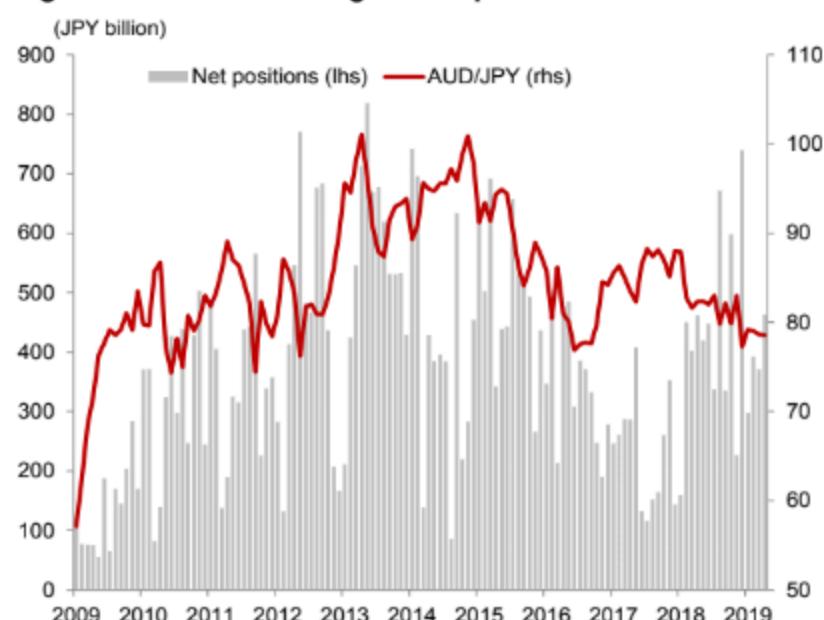
**Fig. 20: USDJPY and margin trade positions at OTC**



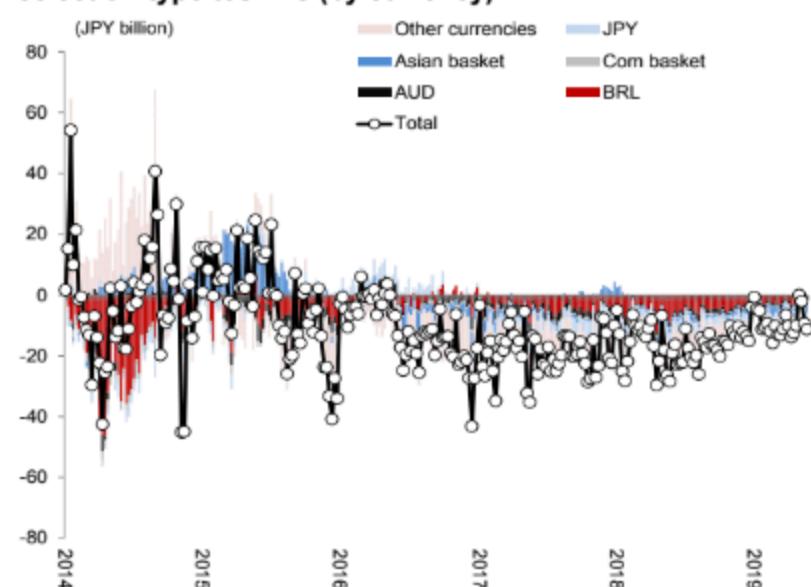
**Fig. 21: EURJPY and margin trade positions at OTC**



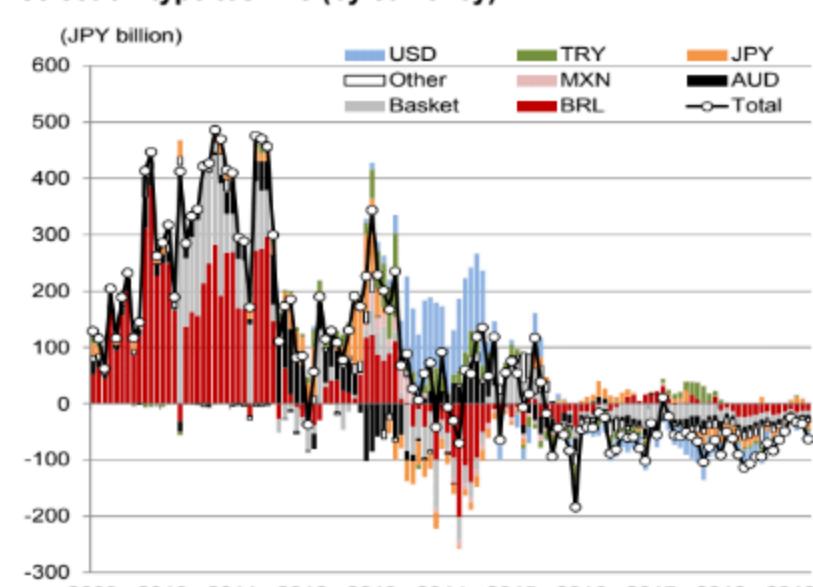
**Fig. 22: AUDJPY and margin trade positions at OTC**



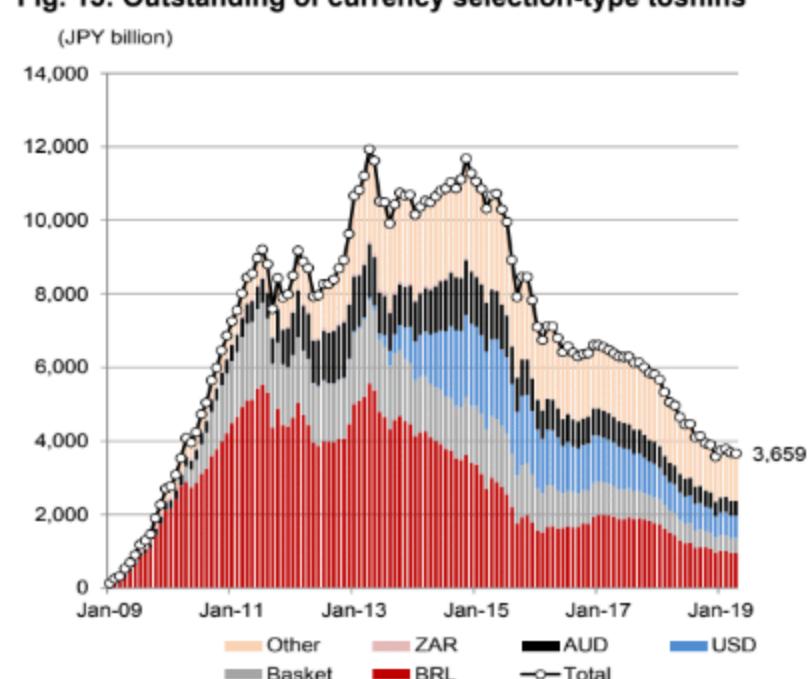
**Fig. 13: Estimated weekly retail investment via currency selection-type toshins (by currency)**



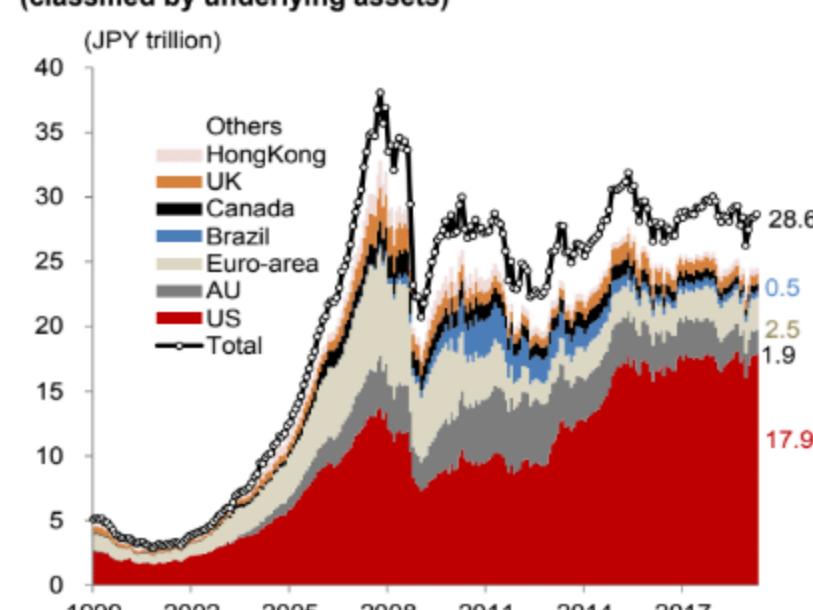
**Fig. 14: Estimated monthly retail investment via currency selection-type toshins (by currency)**



**Fig. 15: Outstanding of currency selection-type toshins**

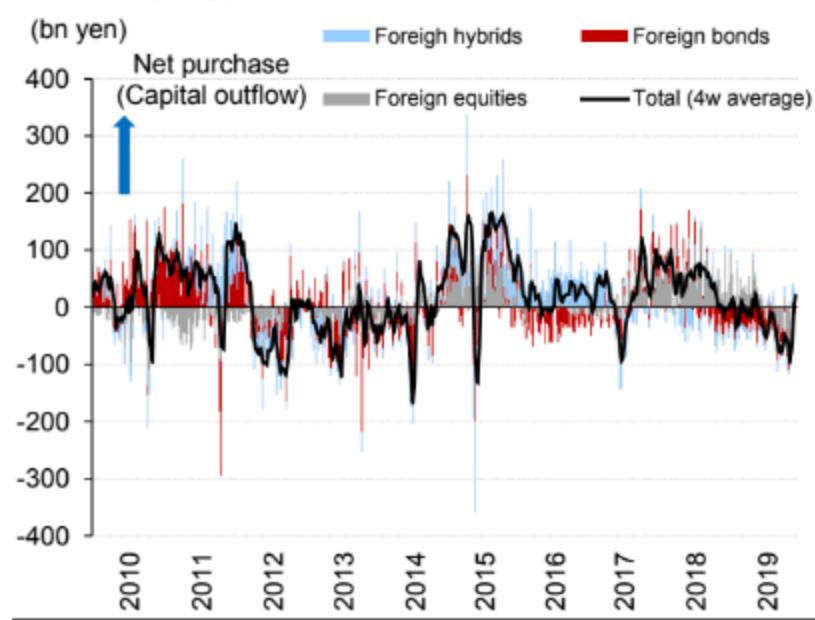


**Fig. 16: Outstanding of toshins investing in foreign assets (classified by underlying assets)**

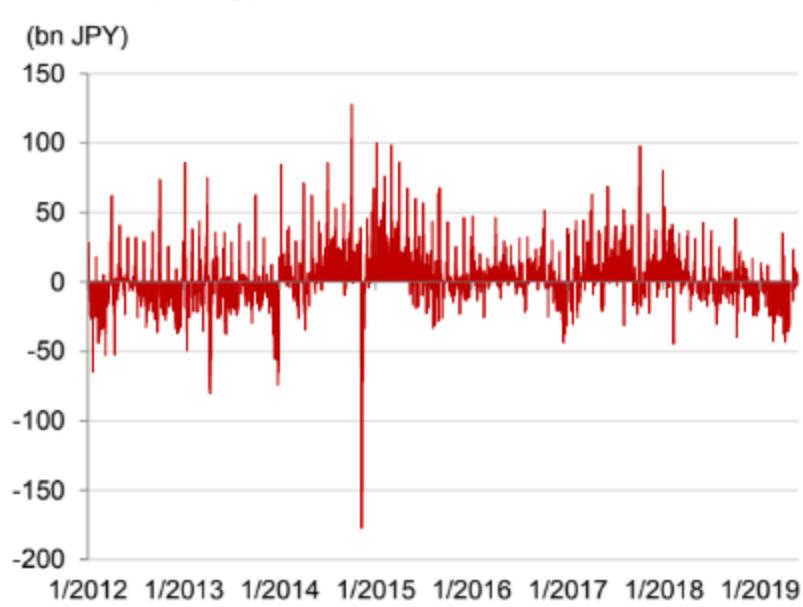


## Toshin market

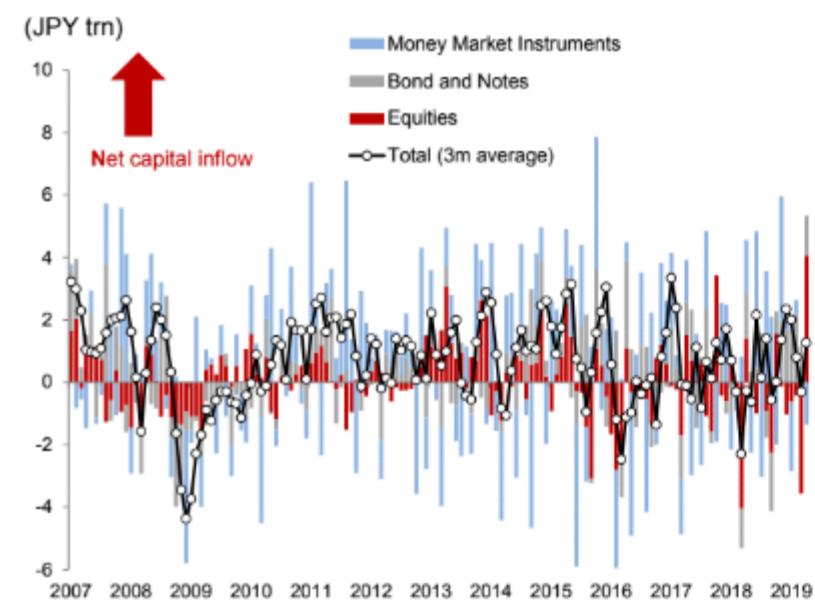
**Fig. 11: Net purchases of toshins investing in foreign securities (daily)**



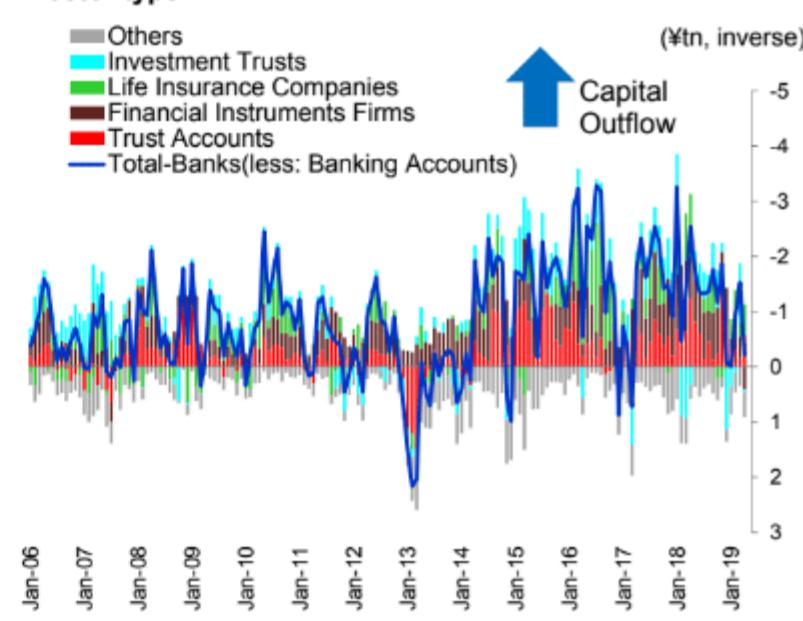
**Fig. 12: Net purchases of toshins investing in foreign securities (weekly)**



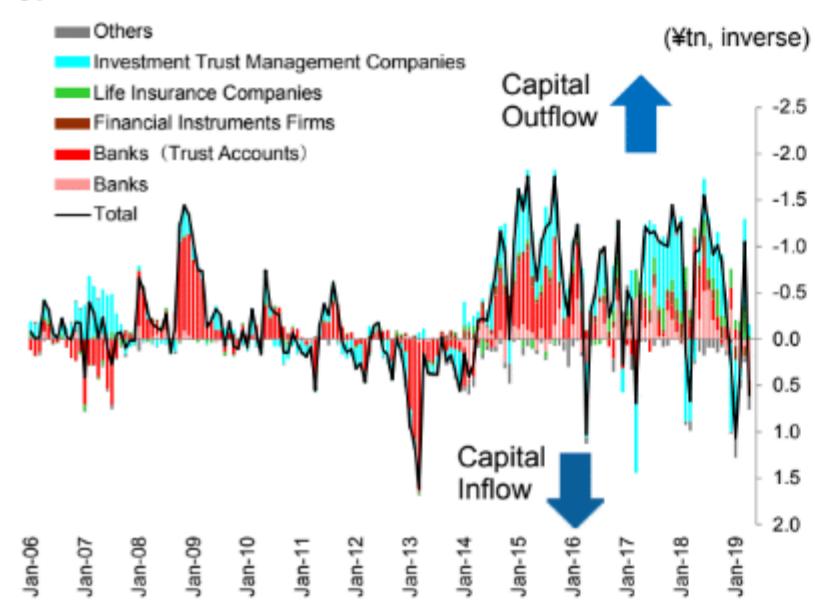
**Fig. 5: Foreign net purchases of Japanese securities**



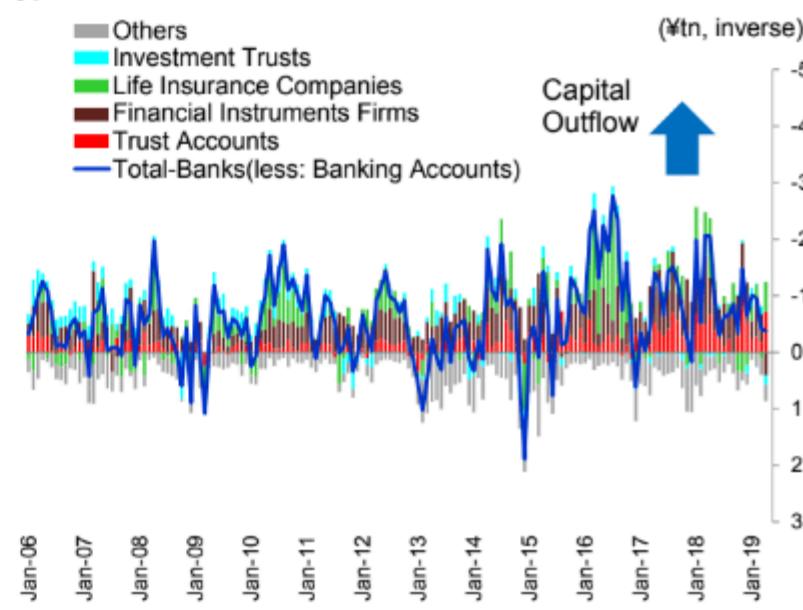
**Fig. 6: Japan's net purchases of foreign securities by investor type**



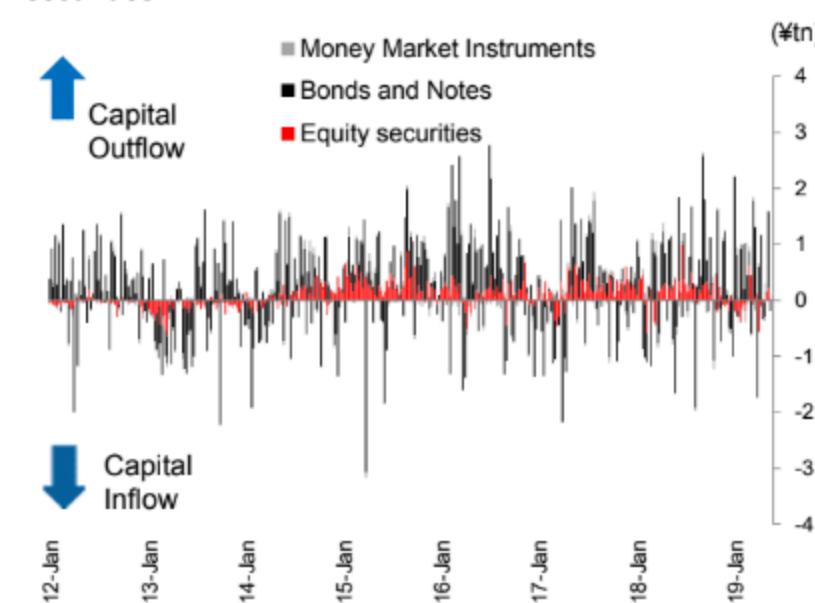
**Fig. 7: Japan's net purchases of foreign equities by investor type**



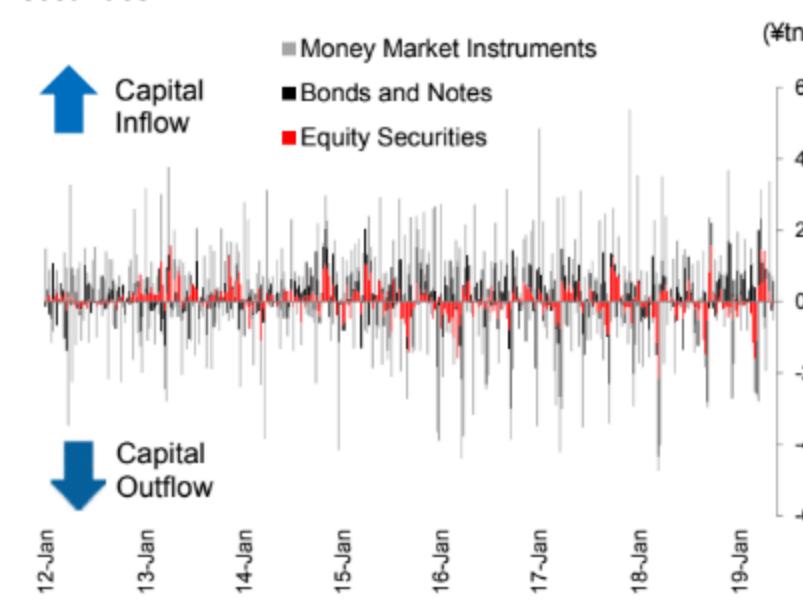
**Fig. 8: Japan's net purchases of foreign bonds by investor type**



**Fig. 3: Japanese investors' net purchases of foreign securities**



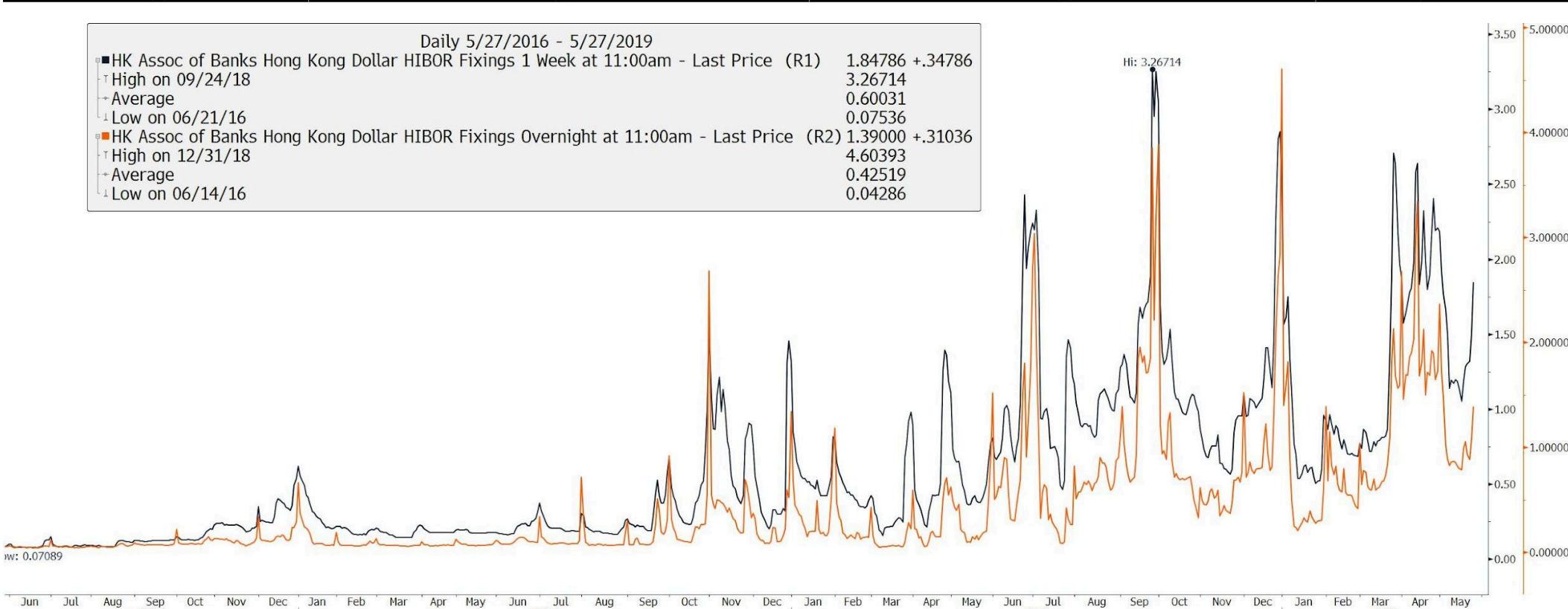
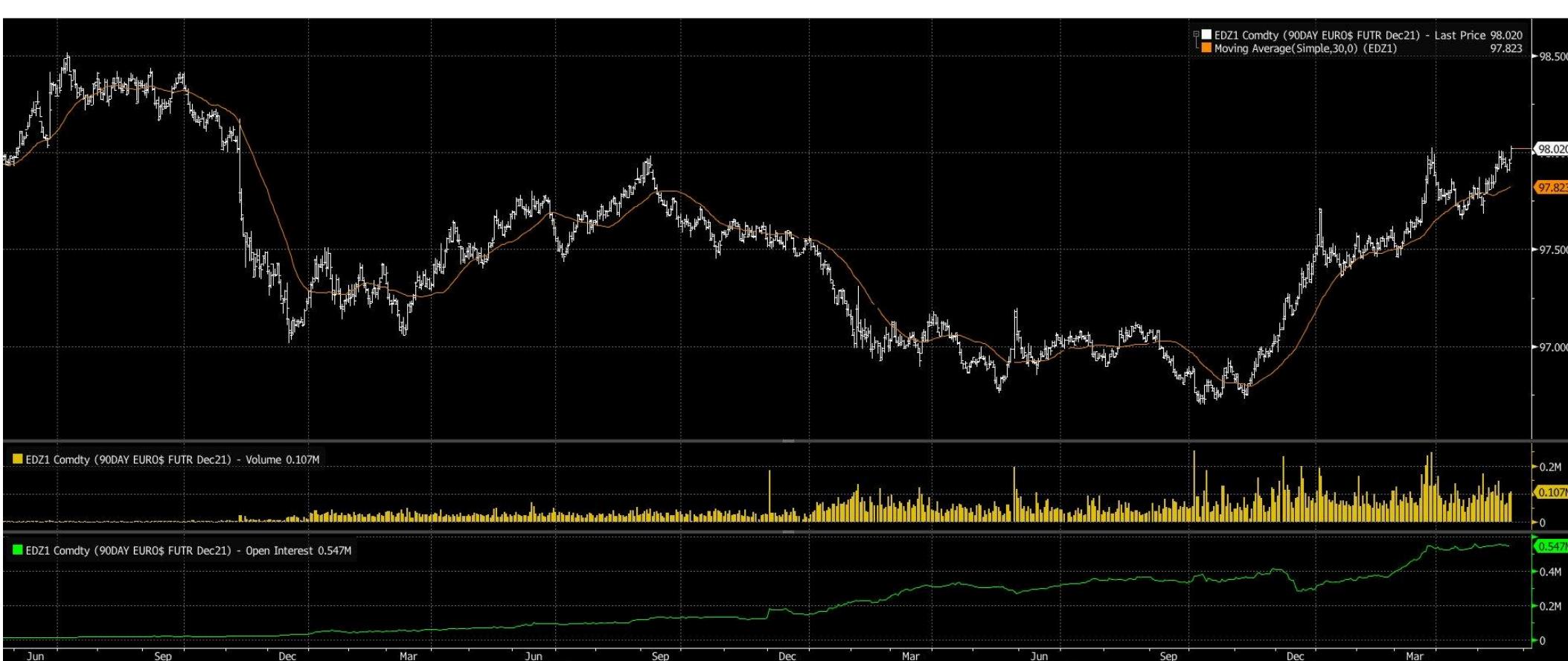
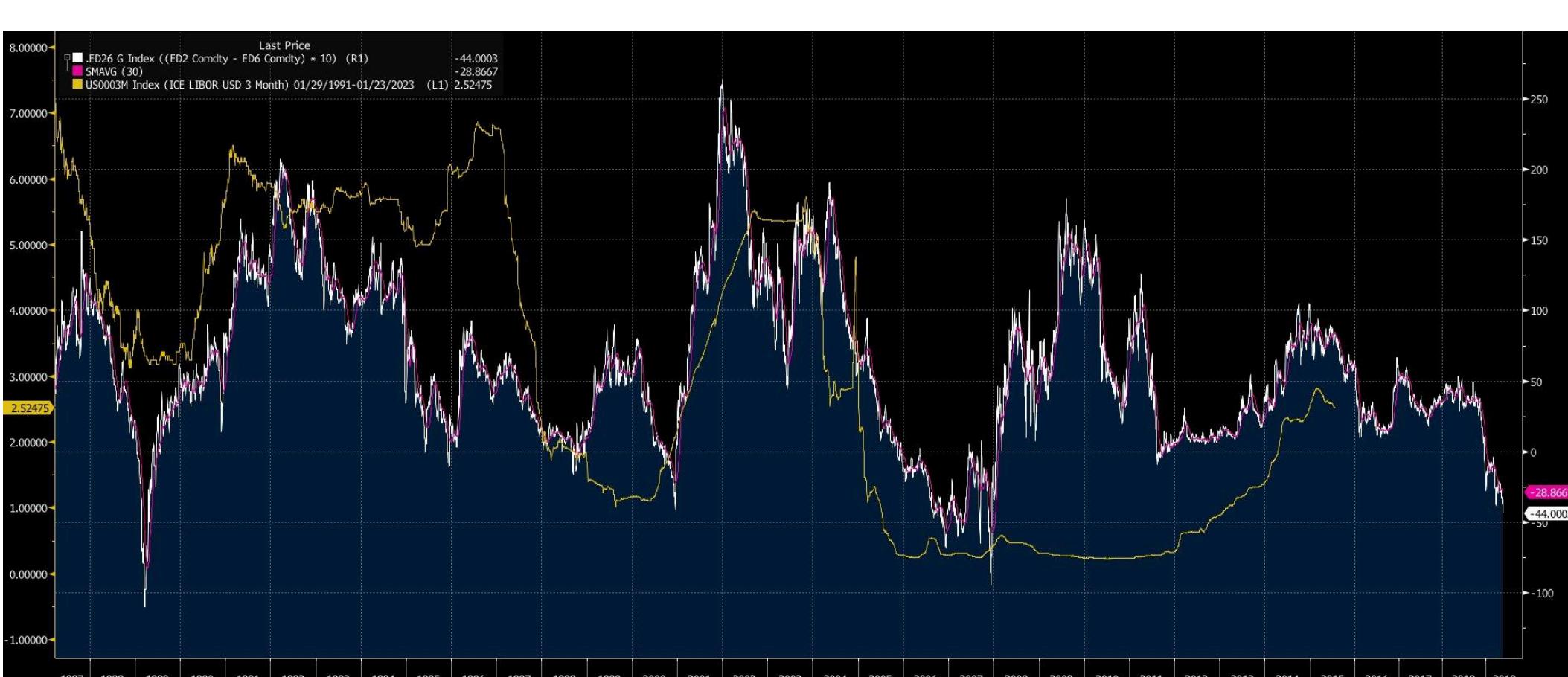
**Fig. 4: Foreign investors' net purchases of Japanese securities**

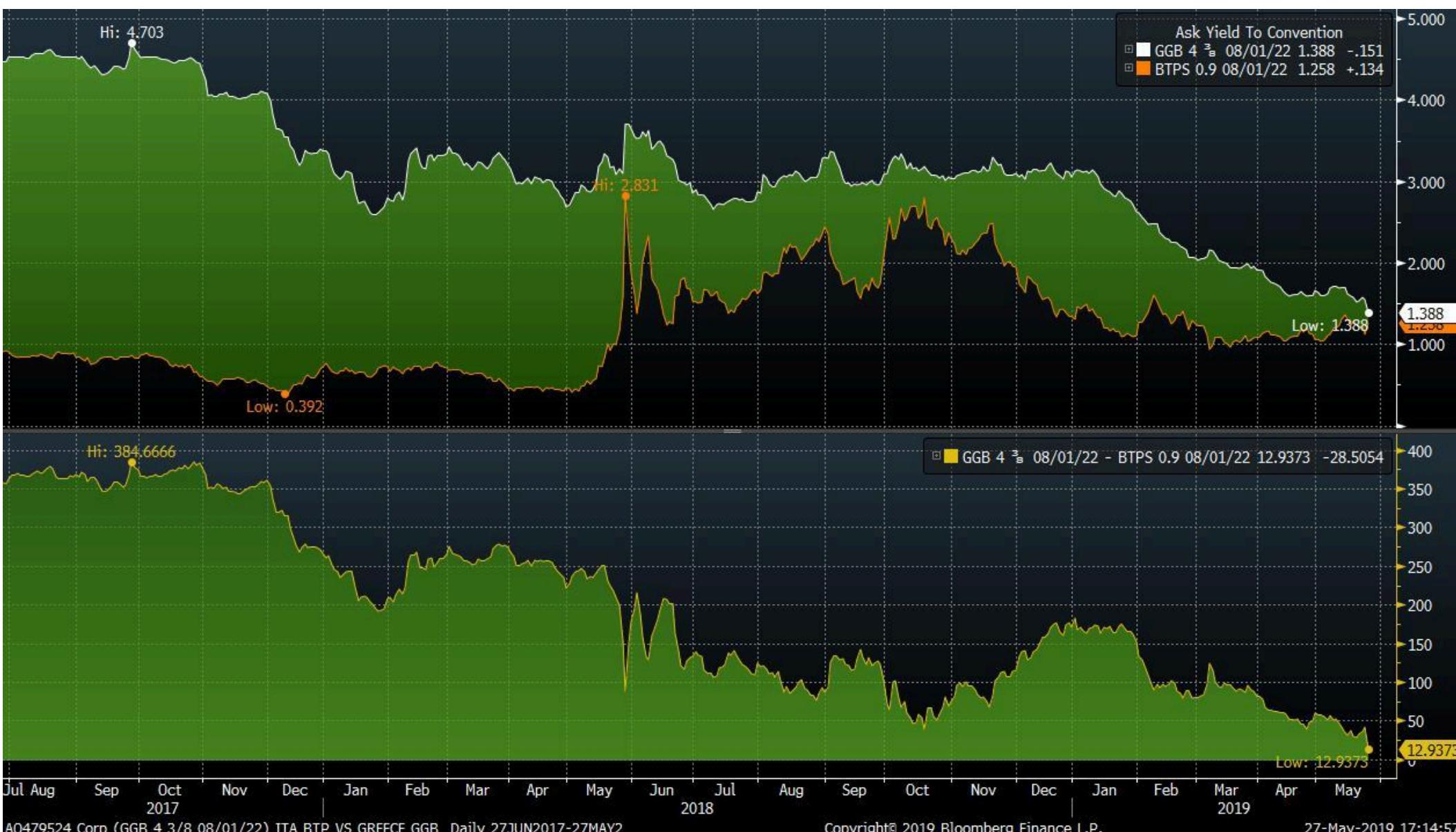
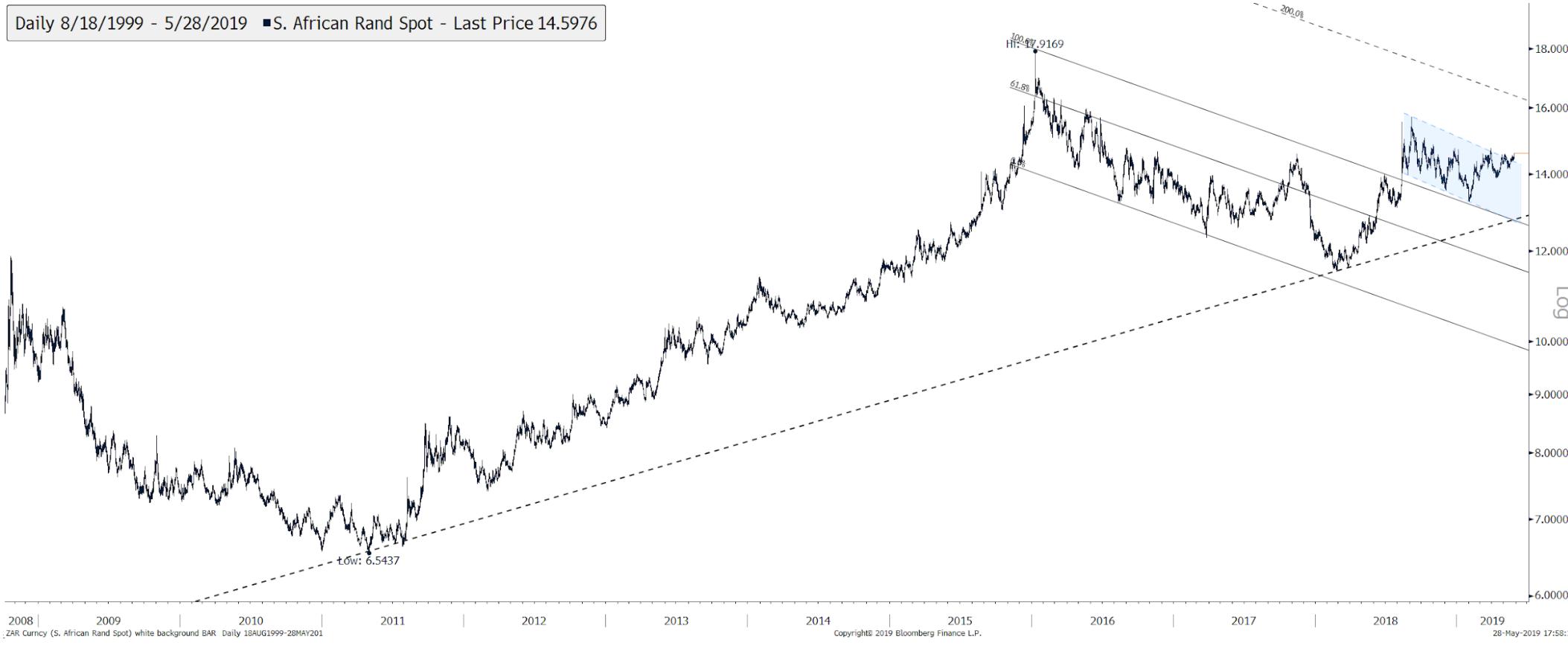


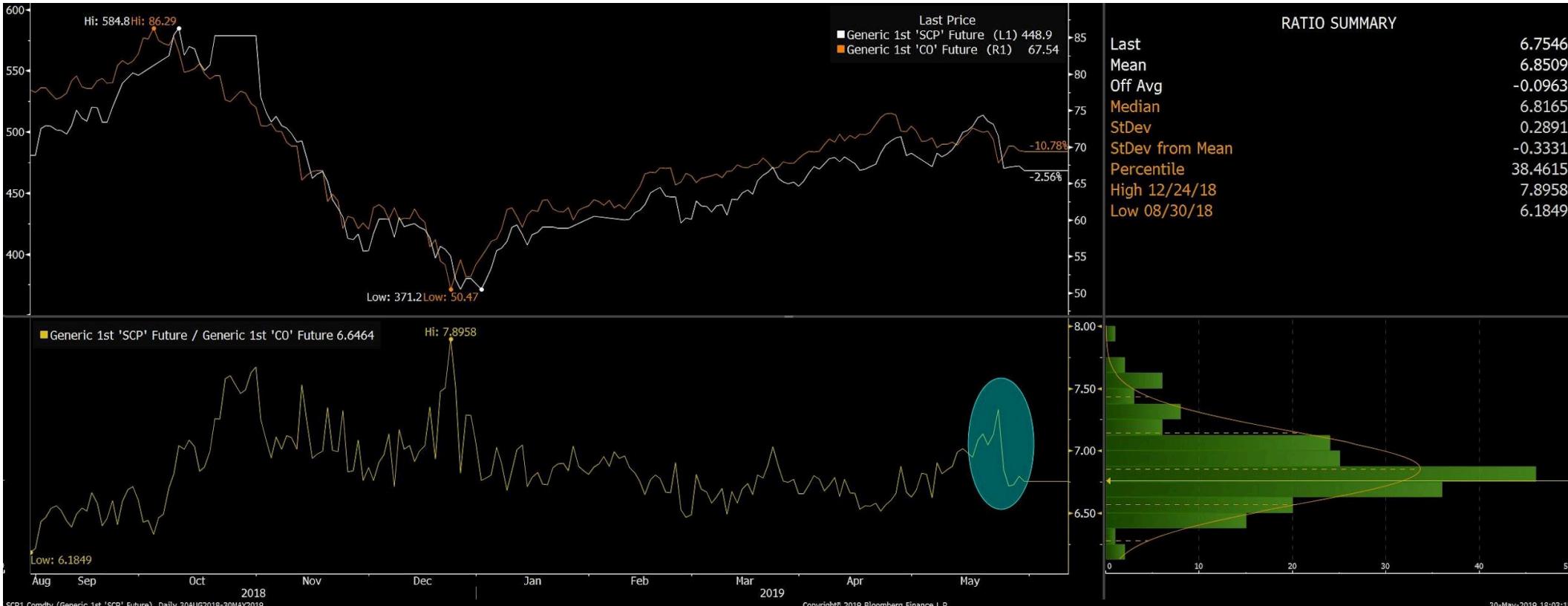
Source: MOF, Bloomberg, Nomura

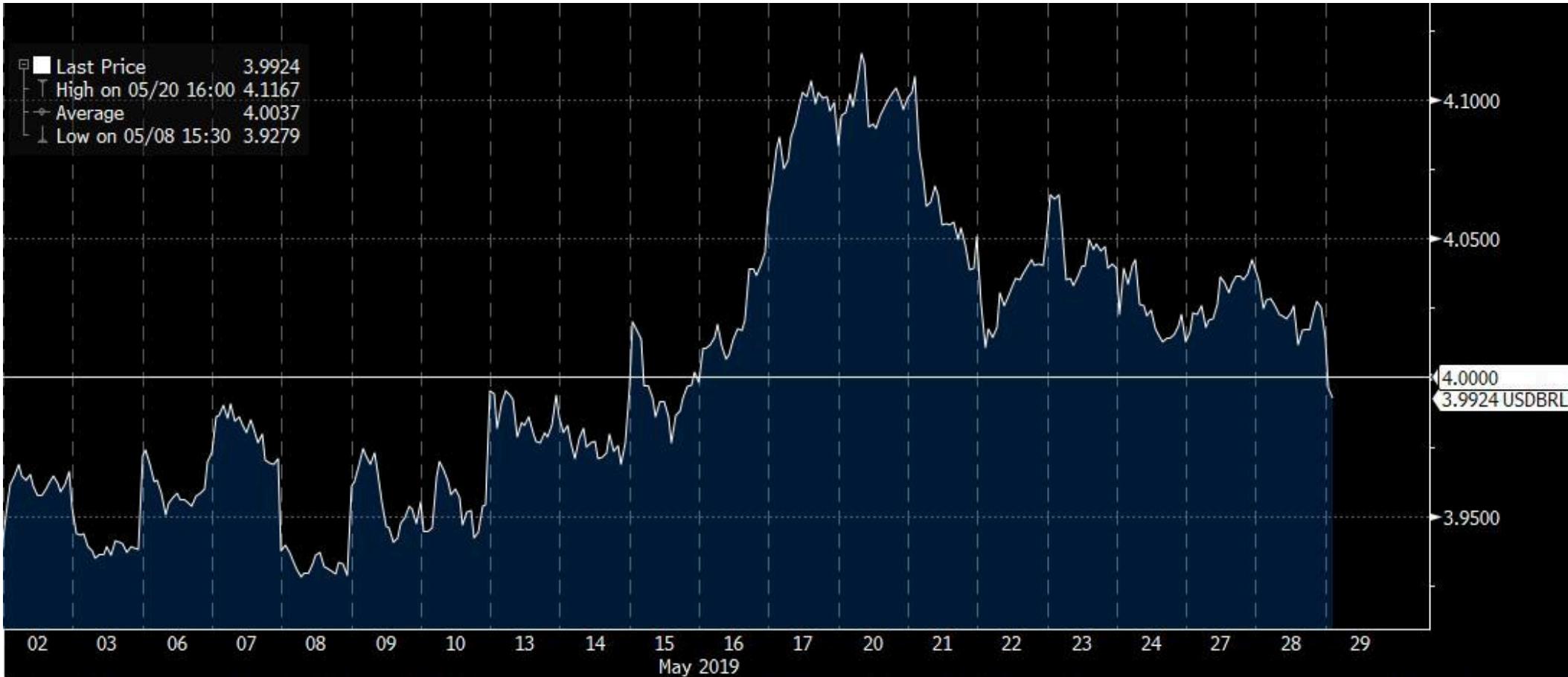
Appendix includes various figures and data on JPY flows

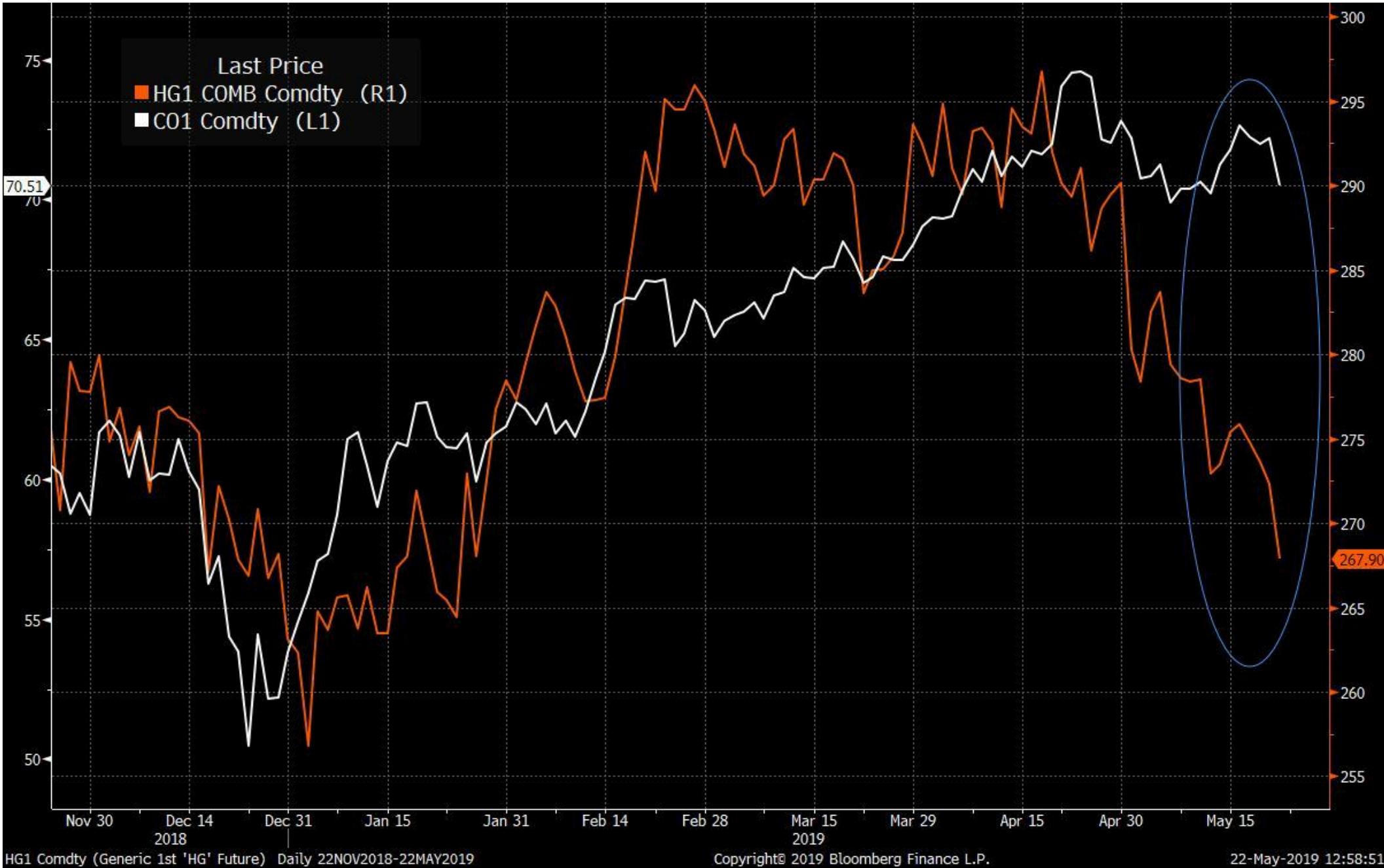










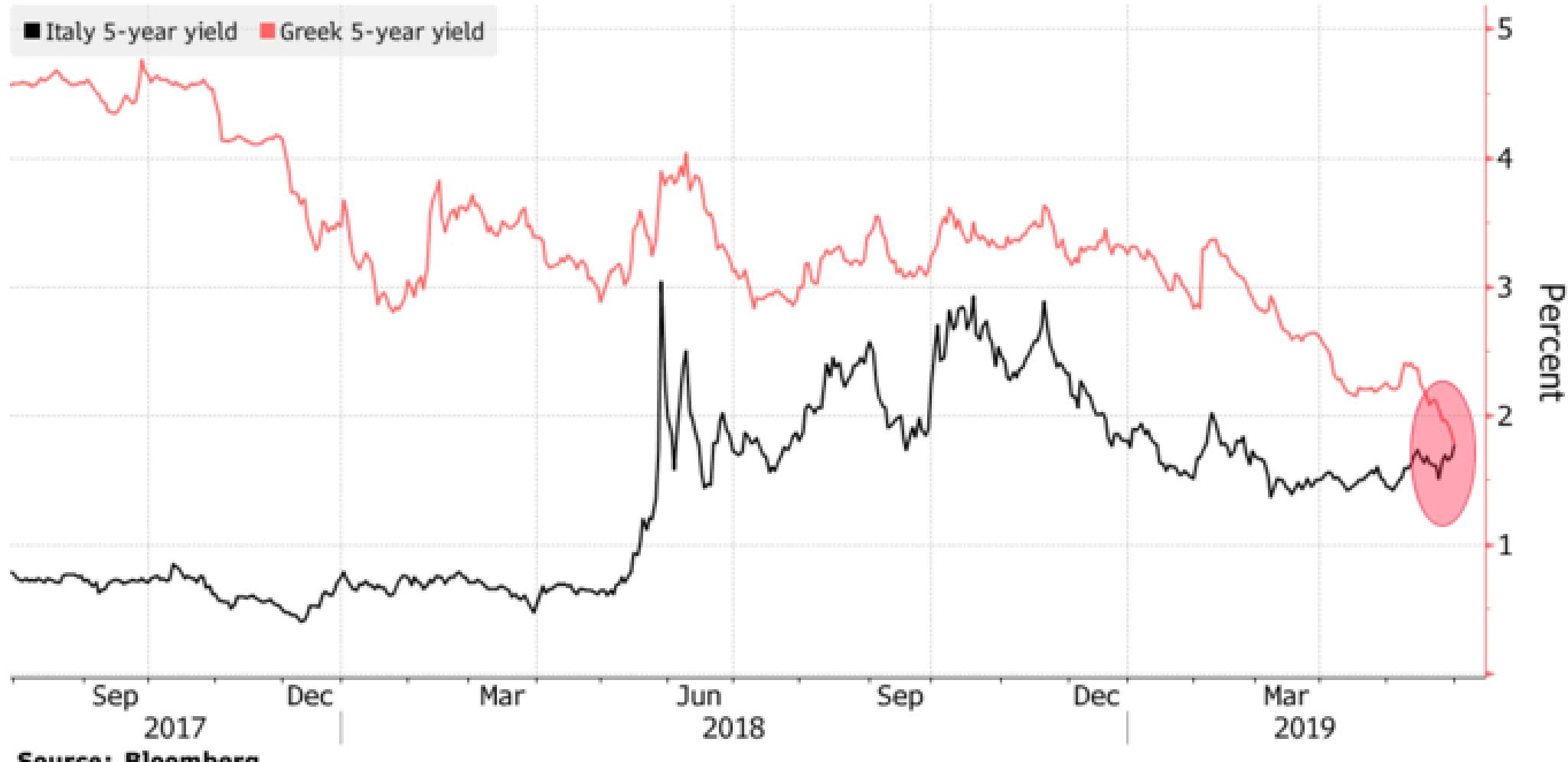






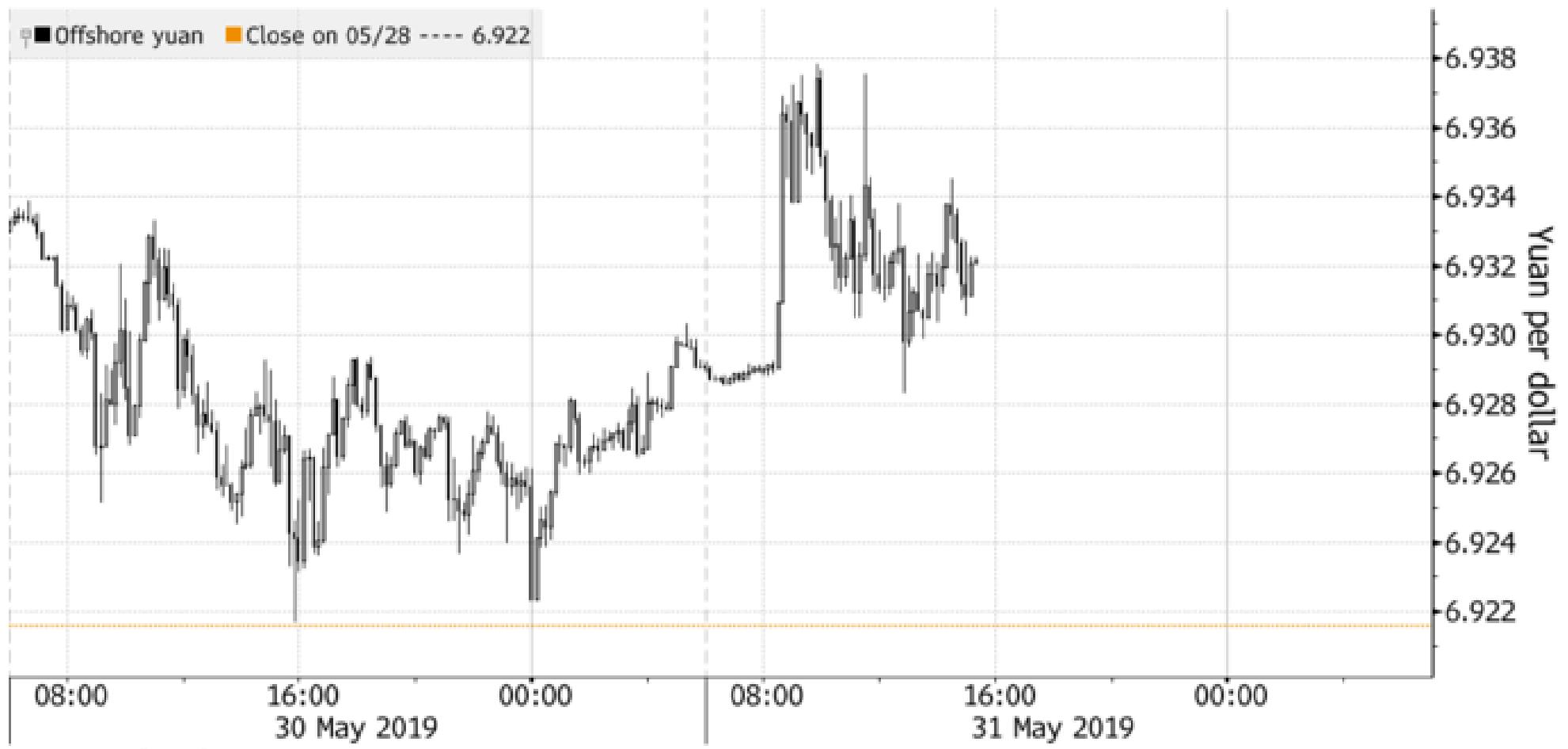
## Italy's Not Greece

Italy's five-year yield is higher than its Greek peer for the first time since 2008



## Stimulus Hope

Offshore yuan pared a drop on increased speculation of further government stimulus



Source: Bloomberg

## Peso Punch

Mexico's currency weakened by more than 2% after Trump's latest tariff shot

■ Mexican Peso Spot

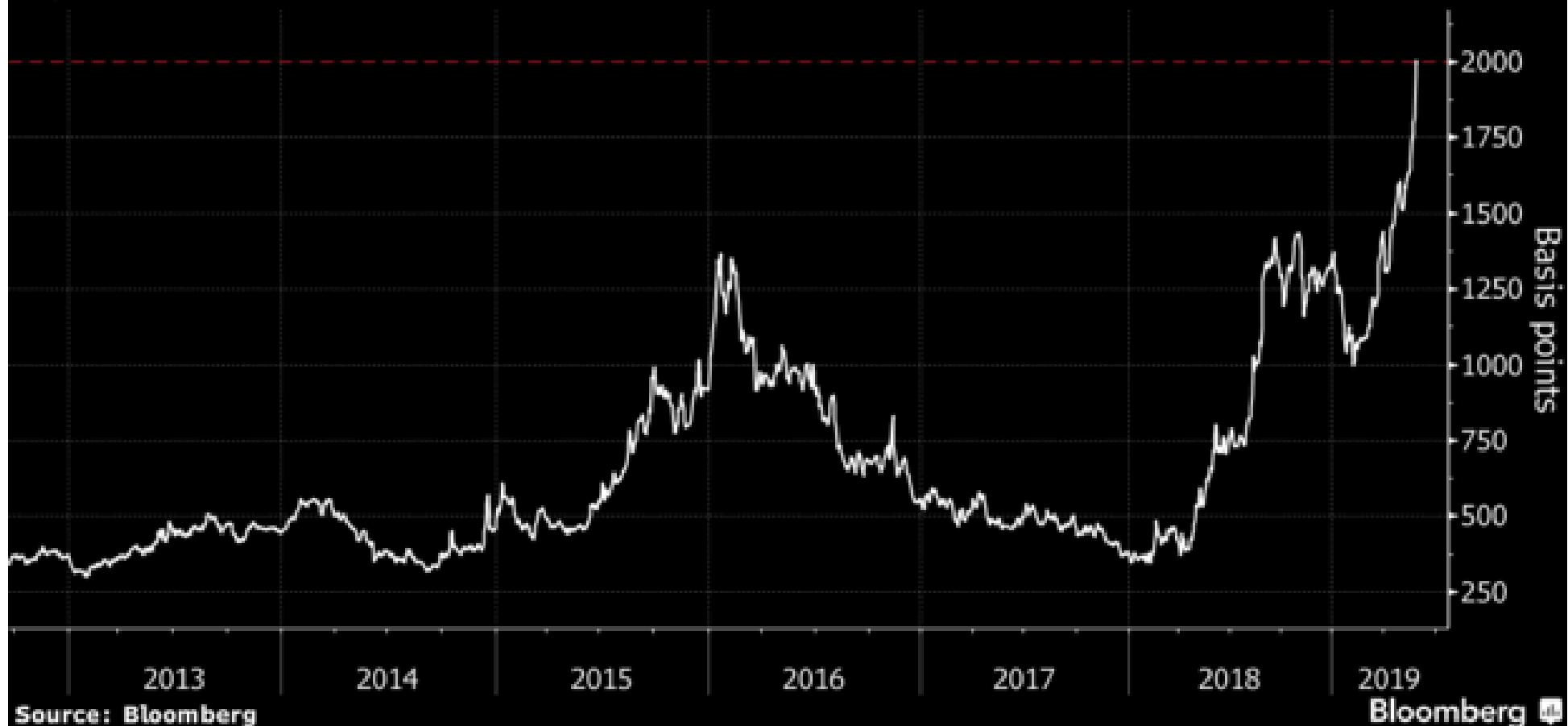


Source: Bloomberg

## Spreads Rising

Zambia's Eurobonds yield 20 percentage points more than U.S. Treasuries

■ Spread on Zambia's 2022 dollar bonds over US Treasuries



## Rupee Opens Higher

Source: Bloomberg

INR Curncy (Indian Rupee Spot) Rupee New 2 Days 2 Minutes



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31-May-2019 09:00:16



Goldman Sachs

The Credit Trader

## FX hedging and funding costs

Exhibit 86: 2-year Cross currency basis swap



Source: Goldman Sachs Global Investment Research

Exhibit 87: 5-year Cross currency basis swap



Source: Goldman Sachs Global Investment Research

Exhibit 88: 10-year Cross currency basis swap



Source: Goldman Sachs Global Investment Research

# EM IG Bond market outperformers and underperformers

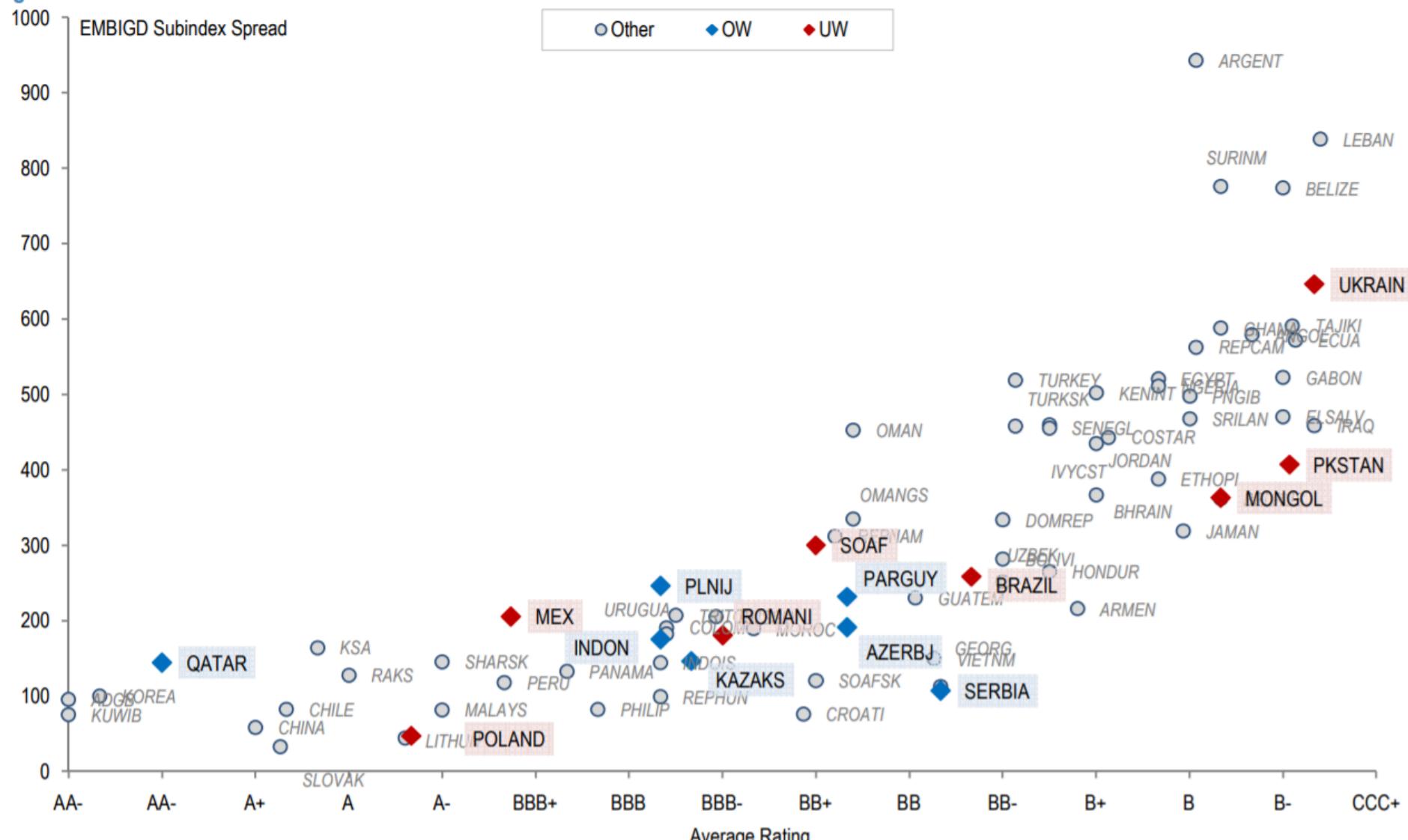
## Exhibit 51: EM IG Bond market outperformers and underperformers

All bonds have a residual maturity of 2 years or more.

AAA Rated		BBB Rated				
	Name	Current Spread	Week-over-week change in Z-spread	Name	Current Spread	Week-over-week change in Z-spread
Underperformers	Export-Import Bank of Malaysia Bhd 2.48 10/20/2021	96		19 Park Aerospace Holdings Ltd 5 50 02/15/2024	223	21
	Baidu Inc 4.38 03/29/2028	174		11 Chongqing Nan'an Urban Construction & Development Group Co Ltd 3.63 07/19/2	276	16
	Baidu Inc 3.88 09/29/2023	123		10 HPT Finance 17 Ltd 2.75 09/11/2022	110	14
	Export-Import Bank of China 3.38 03/14/2027	118		9 Petroleos Mexicanos 5.50 06/27/2044	466	12
	Alibaba Group Holding Limited 4.20 12/06/2047	162		9 Fresnillo PLC 5 50 11/13/2023	171	11
	CCBL Cayman 1 Corp Ltd 2.75 05/31/2021	127		9 Sunny Optical Technology Group Company Ltd 3.75 01/23/2023	167	11
	Alibaba Group Holding Limited 3.40 12/06/2027	135		8 Grupo Televisa SA 6.13 01/31/2046	255	11
	Industrial & Commercial Bank of China Ltd/New York 2.96 11/08/2022	97		8 Vale Overseas Ltd 6.88 11/21/2036	316	10
	DBS Group Holdings Ltd 2.85 04/16/2022	62		8 Mexichem SAB de CV 4.00 10/04/2027	203	9
	Saudi Arabian Oil Co 4.25 04/16/2039	189		7 Grupo Bimbo SAB de CV 3.88 06/27/2024	126	9
	Huarong Finance 2017 Co Ltd 4.75 04/27/2027	223		7 Adani Ports & Special Economic Zone Ltd 4.00 07/30/2027	222	8
	Baidu Inc 4.38 05/14/2024	131		6 Bank of The Philippine Islands 4 25 09/04/2023	121	8
	AIA Group Ltd 3.13 03/13/2023	83		6 NTPC Ltd 5.63 07/14/2021	122	7
	China Huadian Overseas Development 2018 Limited 3.88 05/17/2023	114		6 Huarong Finance 2017 Co Ltd 4.00 11/07/2022	246	6
	Baidu Inc 4.13 06/30/2025	142		6 Huafa Group 2018 I Co Ltd 5.40 09/07/2021	268	6
	CNOFC Finance 2015 USA LLC 4.38 05/02/2028	128		6 BDO Unibank Inc 2.95 03/06/2023	121	6
	Huarong Finance II Co Ltd 5 50 01/16/2025	197		6 JD.com Inc 3.88 04/29/2026	205	6
	Sinopec Group Overseas Development (2018) Limited 4.25 09/12/2028	127		6 Hunt Oil Co Of Peru LLC Sucursal del Peru 6.38 06/01/2028	240	6
	China Development Bank Corp 3.00 06/01/2026	115		6 Grupo Televisa SA 6.63 03/18/2025	185	6
	Alibaba Group Holding Limited 2.80 06/06/2023	89		5 Vale Overseas Ltd 6.88 11/10/2039	317	6
Outperformers	Abu Dhabi National Energy Co 3.63 01/12/2023	105	-8	Steel Funding DAC 4.00 09/21/2024	215	-16
	Rongshi International Finance Ltd 3.63 05/04/2027	132	-8	Shimao Property Holdings Ltd 6.38 10/15/2021	237	-17
	FAB Sukuk Company Limited 3.88 01/22/2024	114	-8	SDG Finance I Limited 5.25 10/23/2021	201	-17
	IPIC GMTN Ltd 5.50 03/01/2022	77	-8	Cencosud SA 4.38 07/17/2027	260	-18
	Africa Finance Corp 3.88 04/13/2024	160	-10	Shimao Property Holdings Ltd 5.20 01/30/2025	334	-18
	Abu Dhabi National Energy Co 3.63 06/22/2021	89	-10	China State Construction Finance Cayman I Ltd 6.00 12/03/2021	200	-19
	MDC - GMTN BV 2.75 05/11/2023	90	-11	Country Garden Holdings Co Ltd 8 00 01/27/2024	419	-20
	AI Ahli Bank of Kuwait KSCP 3.50 04/05/2022	109	-11	Vnesheconbank Via VEB Finance PLC 6.80 11/22/2025	290	-20
	BOC Aviation Ltd 2.75 09/18/2022	108	-11	Country Garden Holdings Co Ltd 6 50 04/08/2024	422	-20
	Banco del Estado de Chile 3.88 02/08/2022	72	-12	Weihai International Hong Kong Energy Group Co Ltd 3.75 09/14/2022	240	-20
	QIIB Senior Sukuk Limited 4.26 03/05/2024	158	-13	Wuhan Real Estate Development & Investment Group Co Ltd 5.70 08/09/2021	264	-21
	Q B Sukuk Ltd 3.25 05/23/2022	137	-14	Steel Funding Ltd 4 50 06/15/2023	198	-21
	Banco de Credito e Inversiones 4.00 02/11/2023	113	-16	RZD Capital Ltd 5.70 04/05/2022	165	-21
	FAB Sukuk Company Limited 3.63 03/05/2023	101	-16	Calyun International Investment Ltd 5.50 04/08/2022	439	-22
	SPIC 2018 USD Senior Perpetual Bond Co Ltd 5.80 05/21/2022	182	-16	Country Garden Holdings Co Ltd 5.13 01/17/2025	419	-22
	Want Want China Finance Ltd 2.88 04/27/2022	116	-19	Vnesheconbank Via VEB Finance PLC 5.94 11/21/2023	240	-23
	AKCB Finance Ltd 4.75 10/09/2023	150	-19	Country Garden Holdings Co Ltd 7 25 04/08/2026	494	-24
	First Abu Dhabi Bank PJSC 3.00 03/30/2022	70	-19	Pershing Square Holdings Ltd 5 50 07/15/2022	214	-41
	Union National Bank PJSC 2.75 10/05/2021	106	-22	Chengdu Communications Investment Group Corp Ltd 5.13 12/20/2021	225	-43
	Xingsheng BVI Co Ltd 4.50 09/20/2021	149	-28	Hong Kong International Qingdao Co Ltd 4.25 12/04/2022	287	-55

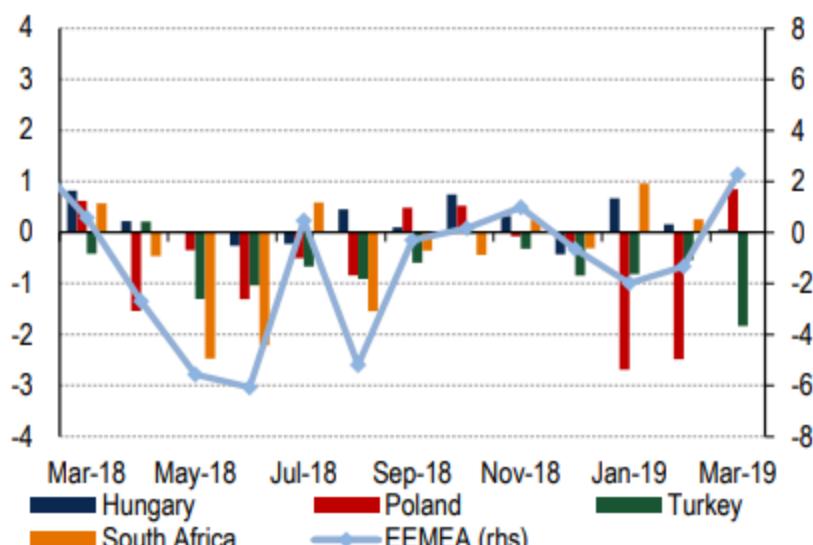
Source: iBoxx, data compiled by Goldman Sachs Global Investment Research

Figure 1: EMBIGD Model Portfolio Recommendations



Source: J.P. Morgan.

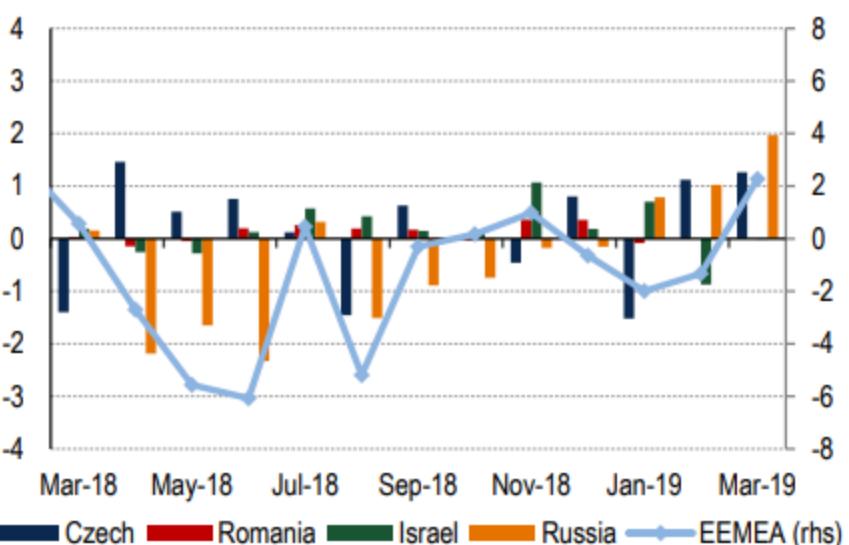
**Chart 43: EEMEA foreign purchases by country in current period USDbn**



Note: EEMEA is the sum of all 8 EEMEA countries

Source: BofA Merrill Lynch Global Research

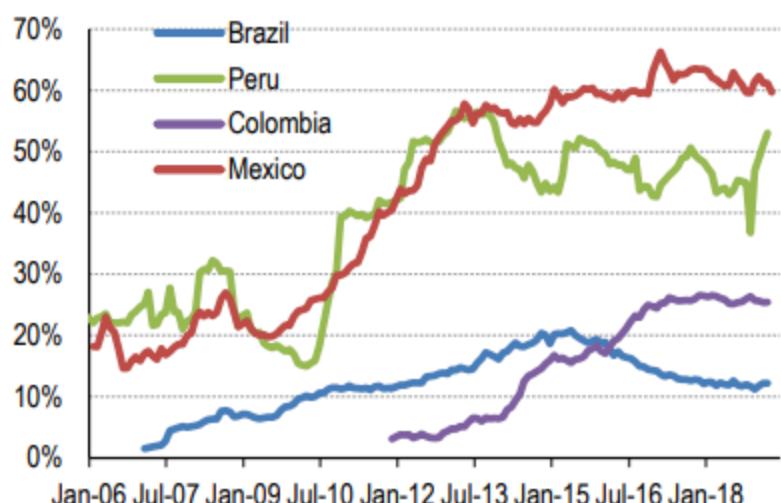
**Chart 44: EEMEA foreign purchases by country in current period USDbn**



Note: EEMEA is the sum of all 8 EEMEA countries. May is missing Romania.

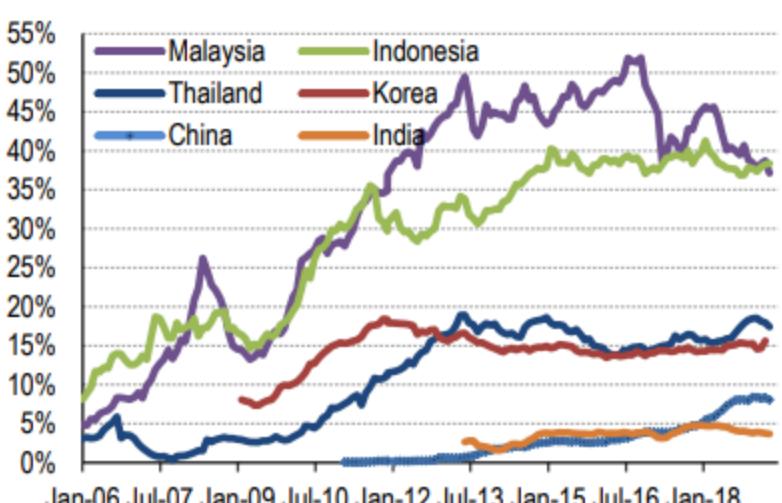
Source: BofA Merrill Lynch Global Research

**Chart 45: LatAm foreign bond holdings share**



Source: BofA Merrill Lynch Global Research, Haver

**Chart 46: Asia foreign bond holdings share**



Source: BofA Merrill Lynch Global Research, Haver

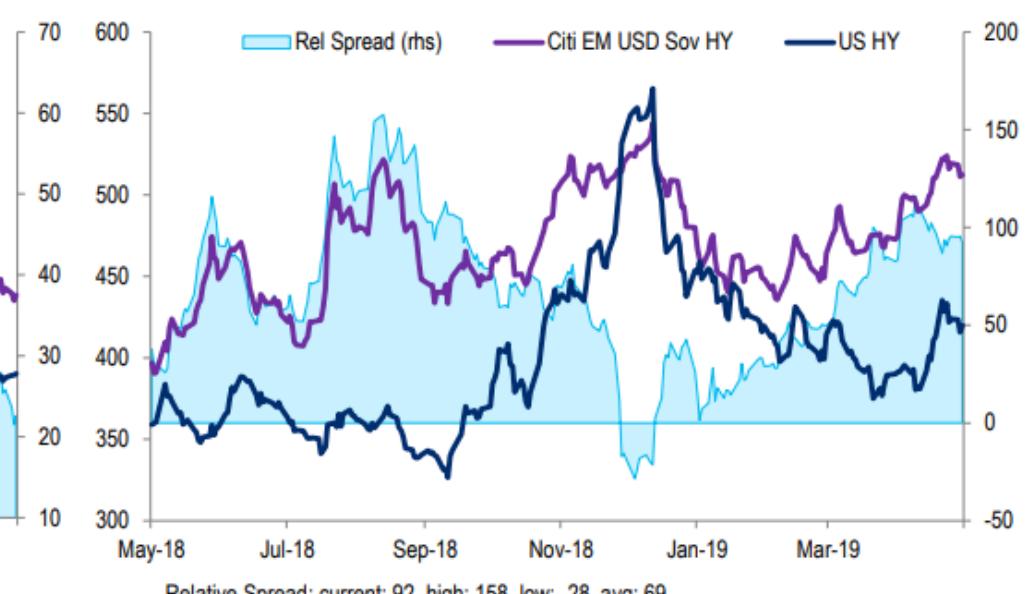
**Figure 11. EM Sovereign Investment Grade vs. US IG**



Relative Spread: current: 23, high: 61, low: 19, avg: 36

Source: Citi Research, Citi Fixed Income Indices.

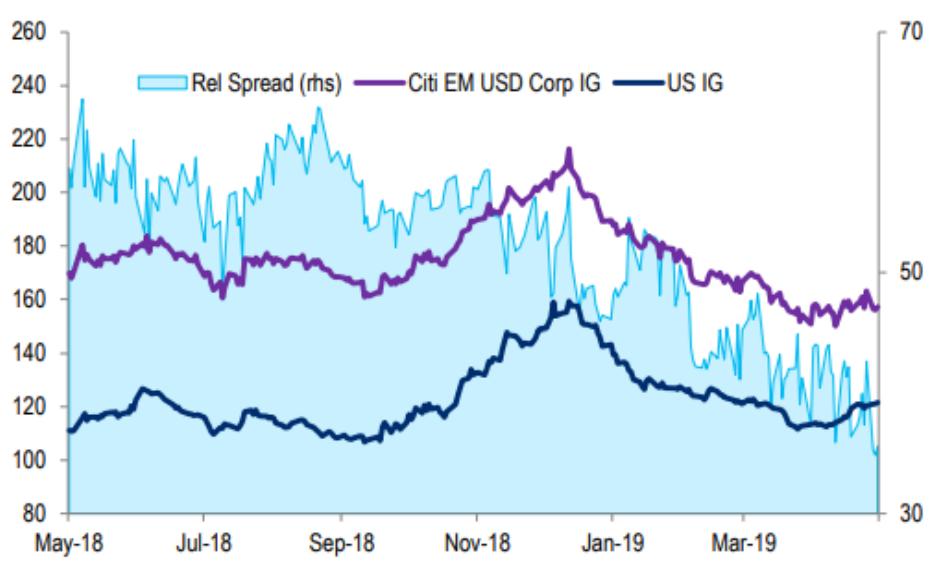
**Figure 12. EM Sovereign High Yield vs. US HY**



Relative Spread: current: 92, high: 158, low: -28, avg: 69

Source: Citi Research, Citi Fixed Income Indices.

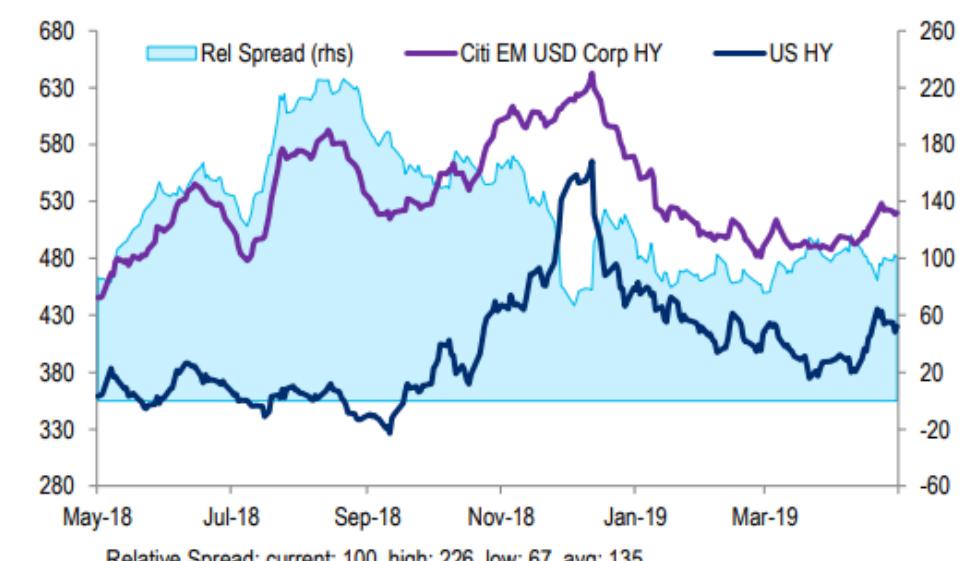
**Figure 13. EM Corporate Investment Grade vs. US IG**



Relative Spread: current: 36, high: 64, low: 35, avg: 52

Source: Citi Research, Citi Fixed Income Indices.

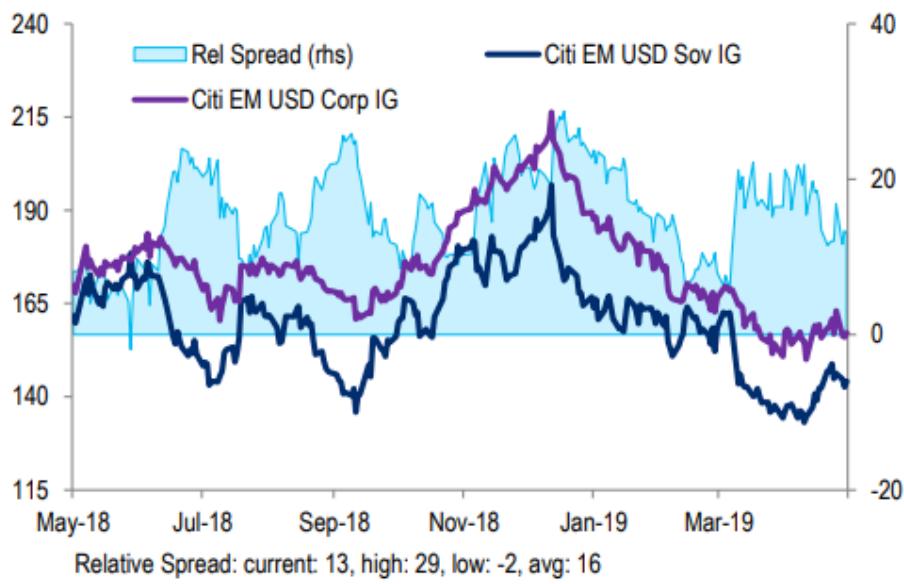
**Figure 14. EM Corporate High Yield vs. US HY**



Relative Spread: current: 100, high: 226, low: 67, avg: 135

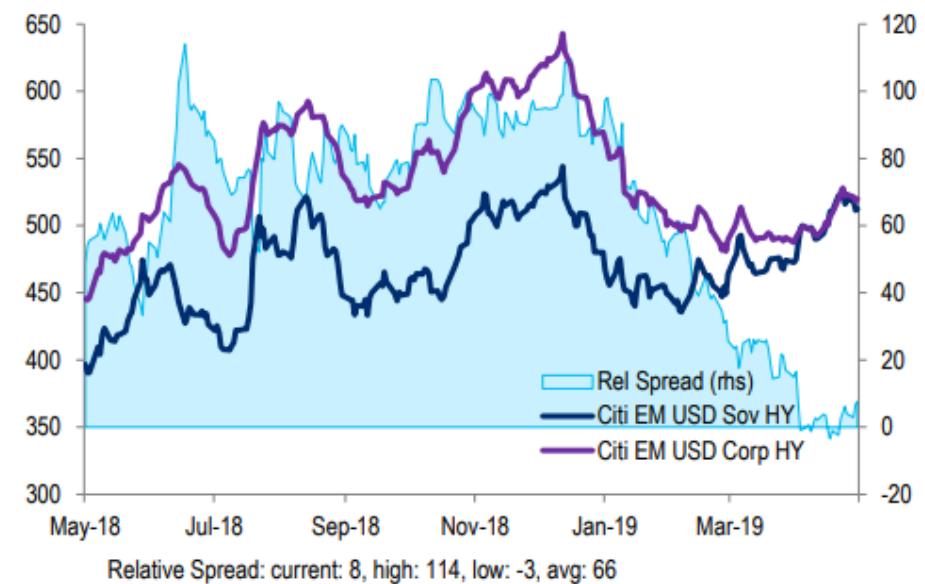
Source: Citi Research, Citi Fixed Income Indices.

**Figure 15. EM Sovereign IG vs. EM Corporate IG**



Source: Citi Research, Citi Fixed Income Indices.

**Figure 16. EM Corporate High Yield vs. EM Sovereign HY**



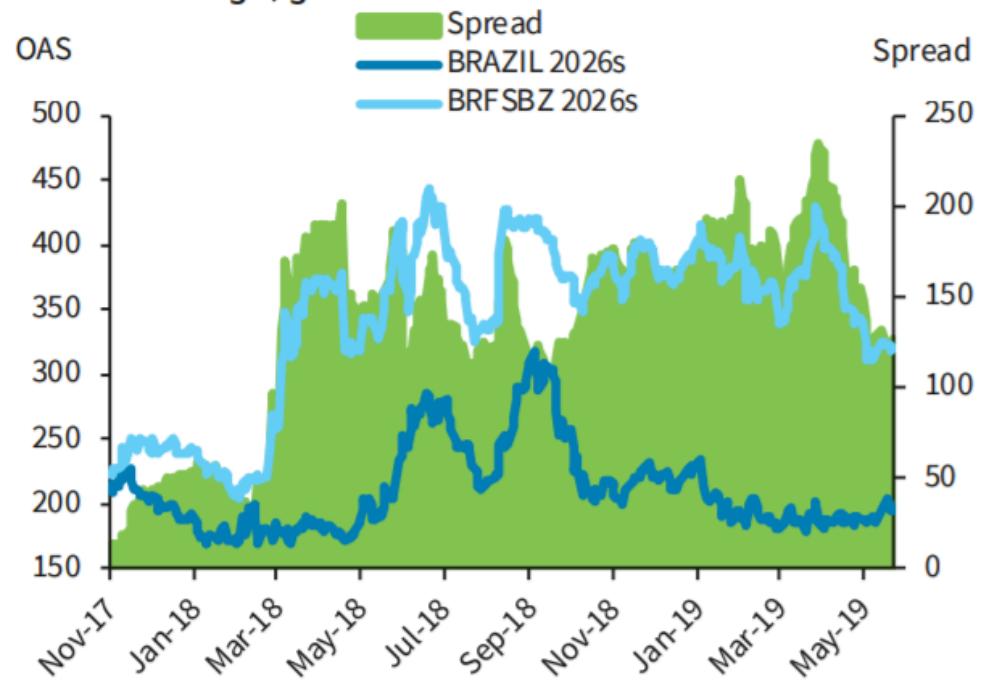
Source: Citi Research, Citi Fixed Income Indices.

#### Swap into BRFSBZ 2026s from BRAZIL 2026s

Andrew De Luca, BCI, US

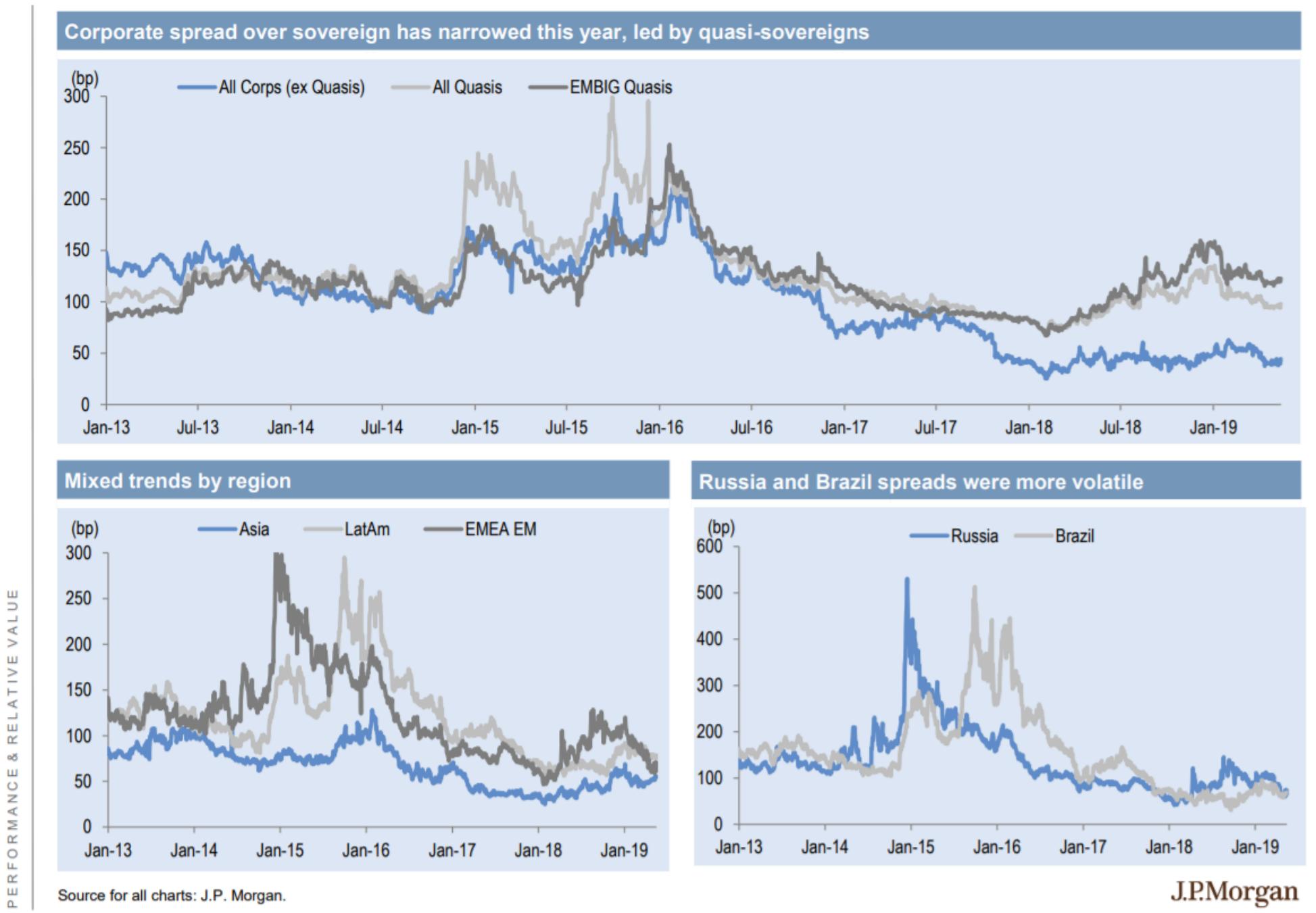
- BRFSBZ has compressed by 50bp year to date versus the sovereign (125bp back currently), but we think there is room for further spread outperformance, given our constructive view on fundamentals. This will be driven by higher poultry prices, lower feedstock costs in Brazil, and recently implemented processed product price hikes.
- In addition, we recently noted that African Swine Fever in China has the potential to significantly affect that country's hog supply. This should have a two-fold effect on BRF: 1) it could drive better pricing dynamics and demand scenarios for alternative animal-based protein, particularly in North and South America; and 2) lead to lower feedstock costs (see *Americas Agribusiness: China's growing swine fever outbreak is set to benefit the U.S. and Brazil*, 11 April 2019). Management remains focused on regaining its investment grade ratings and reducing net leverage to 1.5-2.0x.

We think there is room for further spread outperformance to the sovereign, given our constructive view on BRFSBZ



Source: Bloomberg, Barclays Research

# Corporate spread over sovereign has been compressing in 2019 led by quasis



28

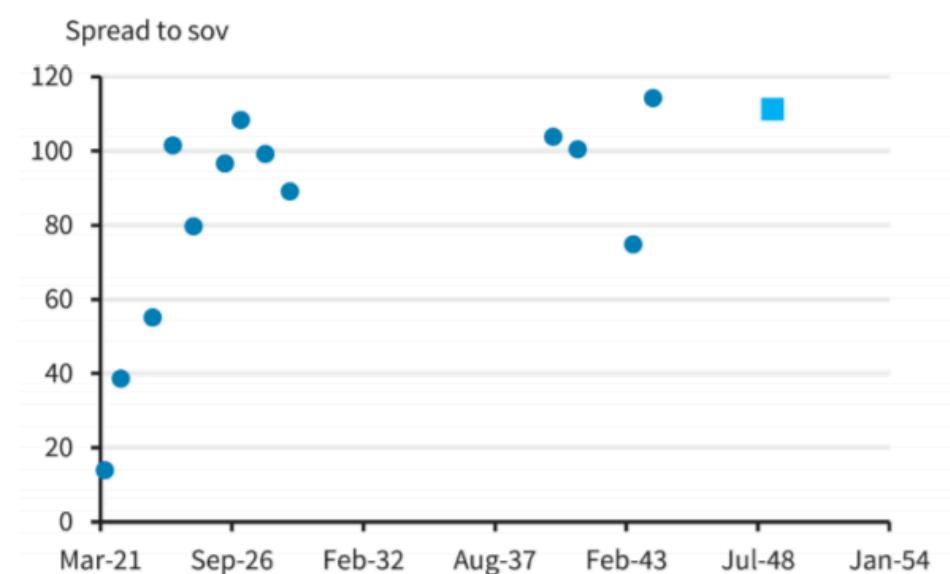
Source: Bloomberg, Barclays Research

## Swap into PETBRA 2049s from BRAZIL 2047s

- PETBRA 2049s are trading 120bp back of the sovereign, or the widest amongst the complex. In this trade, investors maximize their spread to sovereign, but at a much lower cash price than other pairs with similar spread to sovereign (eg, PETBRA 2026s).
- We also have a preference for PETBRA long bonds, as the curve flags as steep at 110bp (versus 40bp for PEMEX). As we have demonstrated previously, 10s/30s curves tend to flatten as spreads tighten (*EM Corporate Credit Strategy: The curve's sweet spots*, 4 May 2018).
- We think that PETBRA spreads will tighten over the next six months, reflecting: 1) our expectation that pension reform will pass in 2019, leading to a 20-30bp tightening of Brazil sovereign spreads; and 2) a significant improvement in leverage at the credit, driven by organic cash flow and asset sales.

Andrew De Luca, BCI, US

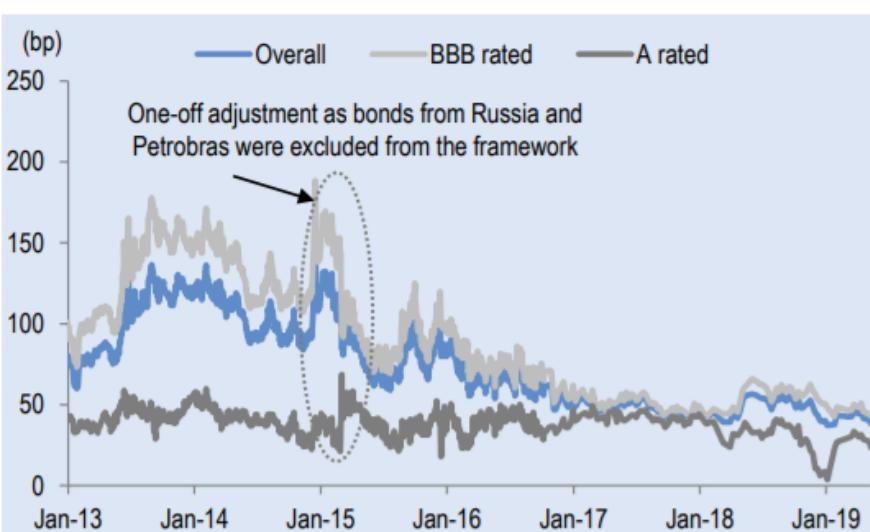
PETBRA 2049s trade widest to the sov, while offering a lower cash price than other pairs with similar spread to the sov



Source: Barclays Research

# EM HG spread pickup to US HG has been range-bound

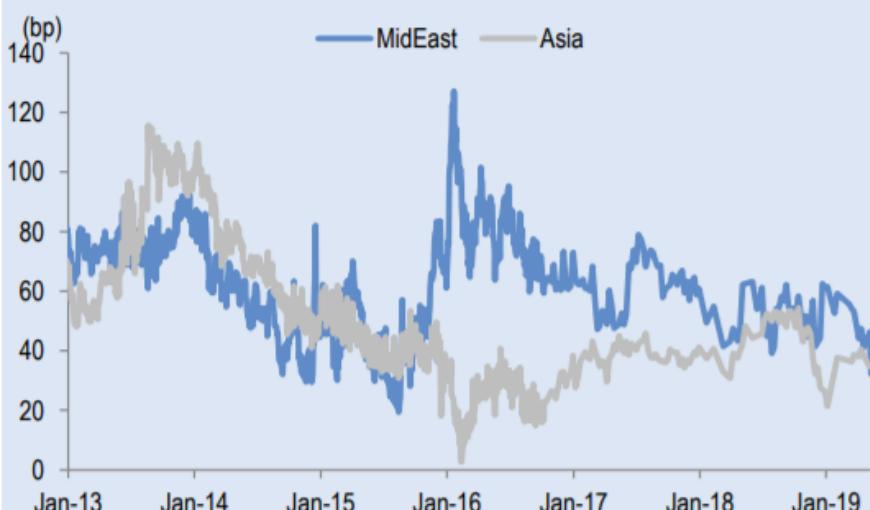
## As EM vs US HG differential has been more volatile



## Excluding Russia and Brazil shows less volatility



## Asia and Middle East spread to US HG off the tights



## CEEA and Latam remain on tighter side but smaller sample



Source for all charts: J.P. Morgan. Note: all charts exclude metals & mining and energy.

J.P.Morgan

29

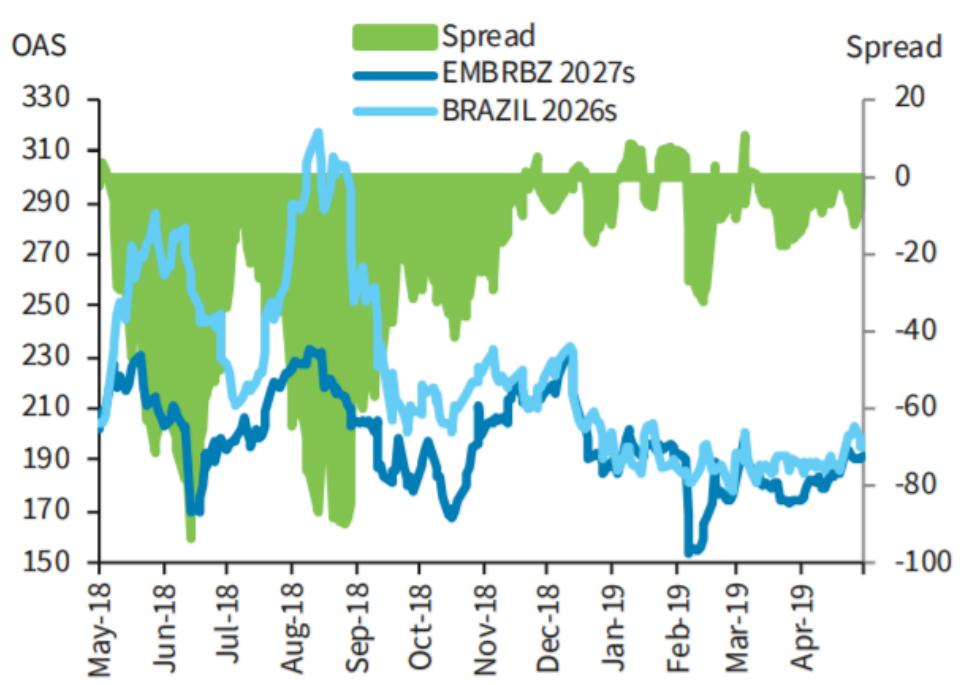
91

## Swap into EMBRBZ 2027s from BRAZIL 2026s

Petr Grishchenko, BCI, US

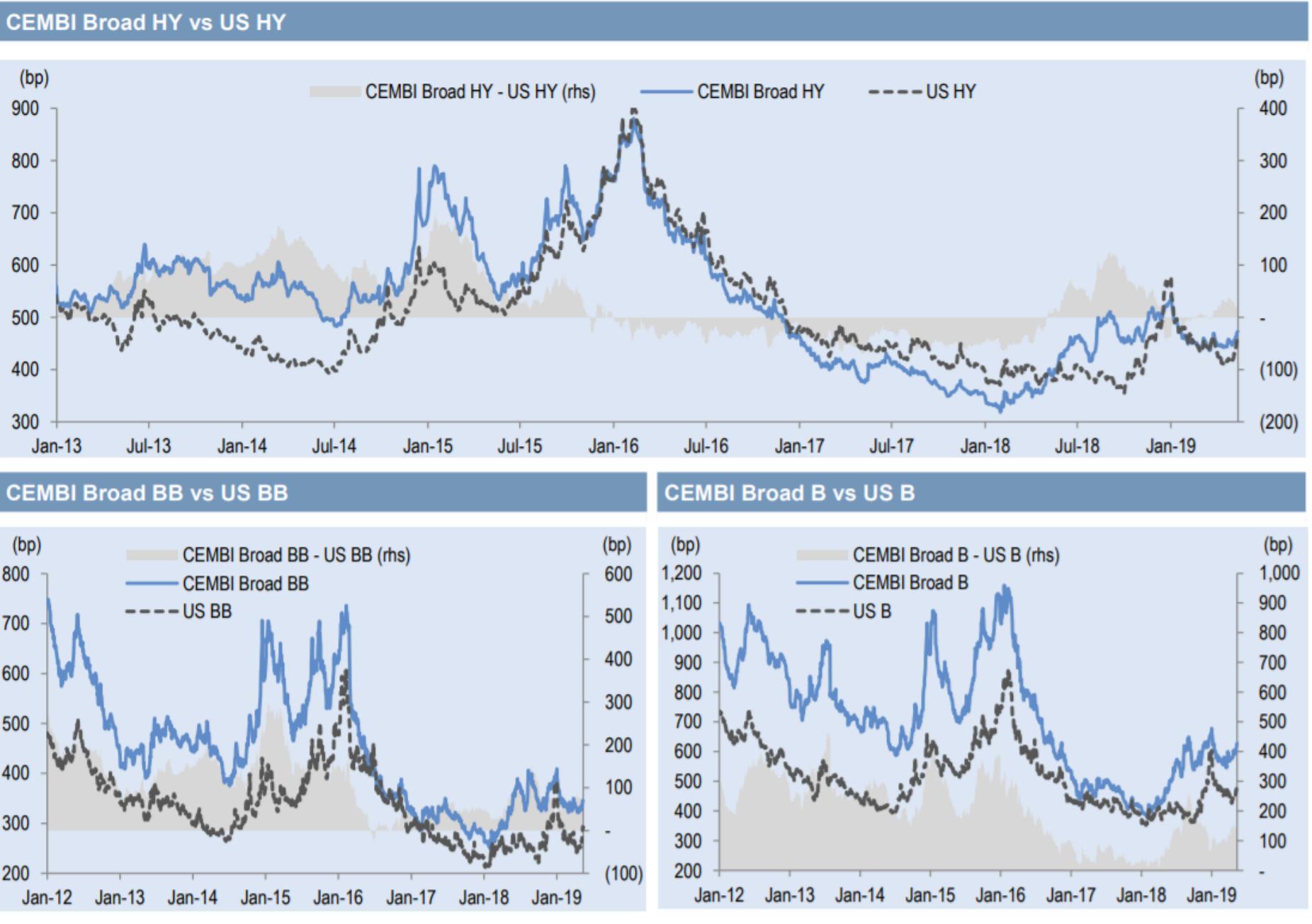
- While EMBRBZ 2027s spreads have compressed to 190bp, from 225bp at the beginning of the year, bonds now trade flat to BRAZIL 2026s (versus an LTM average differential of 25bp inside). While fundamentals continue to deteriorate as the company goes through a transition period (1Q19 revenues and EBITDA declined 14.3% y/y and 46% y/y, respectively) valuations should not come under meaningful pressure, given that we expect significant credit implications for EMBRBZ if the JV with Boeing (BA) closes by YE19.
- EMBRBZ 2027s still trade 110bp wide of BA 2.8% 2027s (in line with its six-month average differential). We believe that if the transaction is consummated by YE19 and the Embraer bonds travel to the JV, the relationship could compress to as tight as 50bp. While Embraer is likely to demonstrate weak operating results in 2019, these expectations have already been communicated by the company and, hence, should not affect the likelihood of the Boeing transaction closing. The companies announced last week that the joint venture will be named Boeing Brasil-Commercial.

EMBRBZ 2027s trade flat to the sovereign, versus an LTM average differential of trading 25bp inside



Source: Barclays Research

## EM HY spread at a small pick-up to US HY – expect volatility to continue



Source for all charts: J.P. Morgan.

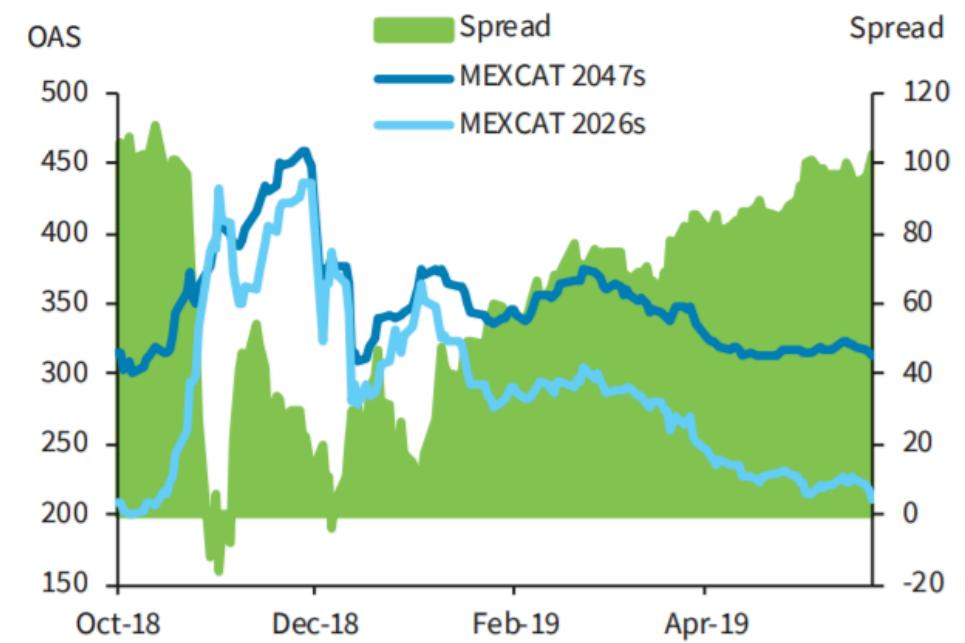
J.P.Morgan

### Swap into MEXCAT 2047s from MEX 2048s

Petr Grishchenko, BCI, US

- After the amended tender and consent solicitation, the yield on MEXCAT 2047s looks attractive and offers potential material upside, assuming annual amortization payments from the principal accumulation account (PAA) (see *MEXCAT – The sweeter end*, 21 December 2018, for more information).
- MEXCAT offers over 100bp in spread to the sovereign in the long end, compared with only c.55bp in the front end.
- The acceptance of the consent solicitation also removes a significant overhang related to credit fundamentals and headline risks. MEXCAT (Overweight) agreed to create a PAA, proposing to contribute USD200mn annually allocated pro rata based on the principal amount outstanding of each bond. We believe amortization payments are highly likely, but in the worst case, the deposited funds simply become part of the collateral until maturity, substantially reducing refinancing risks. We do not think that MEXCAT's spread levels are yet reflective of the meaningful improvement in protective covenants.

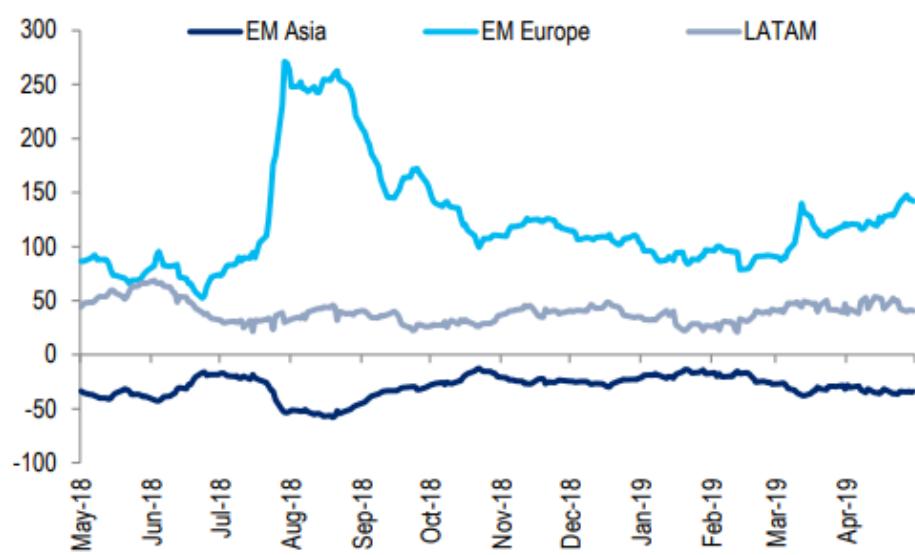
The MEXCAT curve has steepened 95bp YTD, and now trades in line with pre-referendum levels



Source: Barclays Research

# Corporate Spread Snapshot

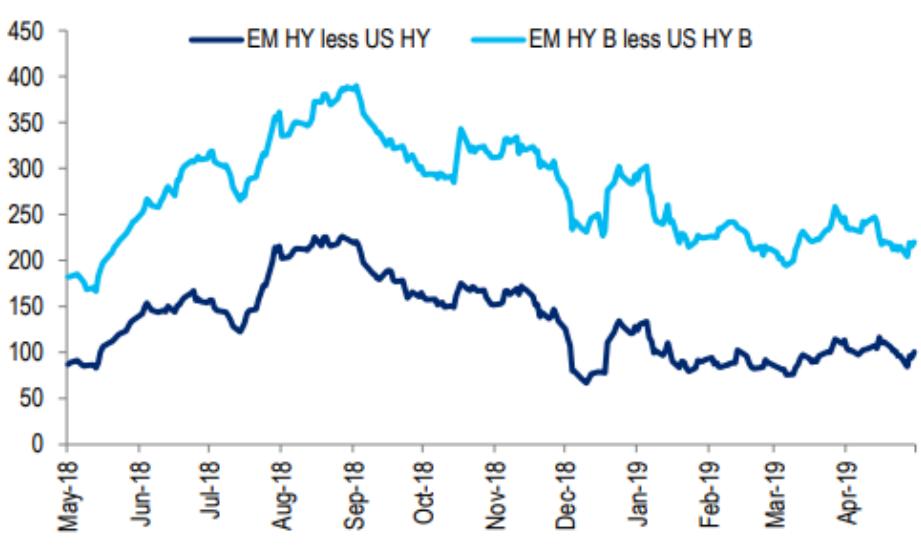
Figure 29. Regional Relative Spread vs. EM Corp



Source: Citi Research

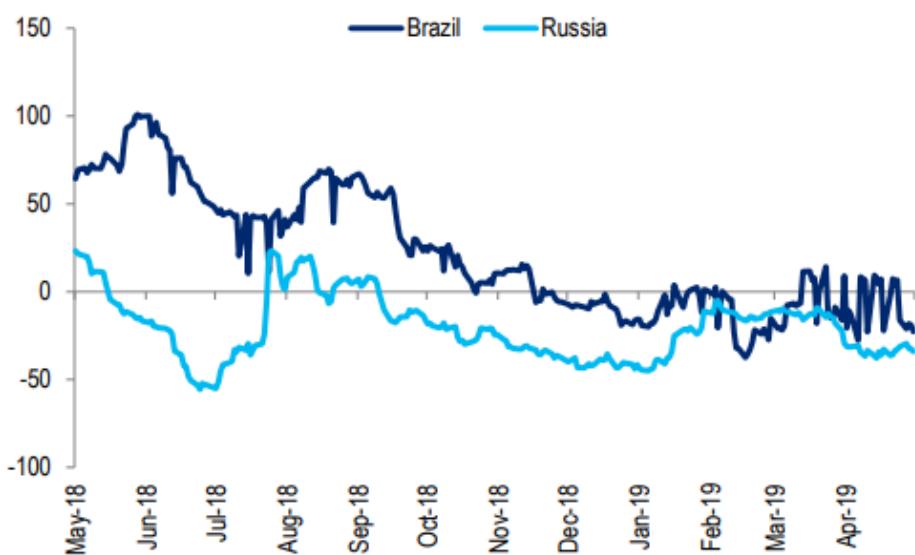
Figure 30. EM Corp vs. US HY and EM Corp vs. US HY B Rated

Figure 30. EM Corp vs. US HY and EM Corp vs. US HY B Rated



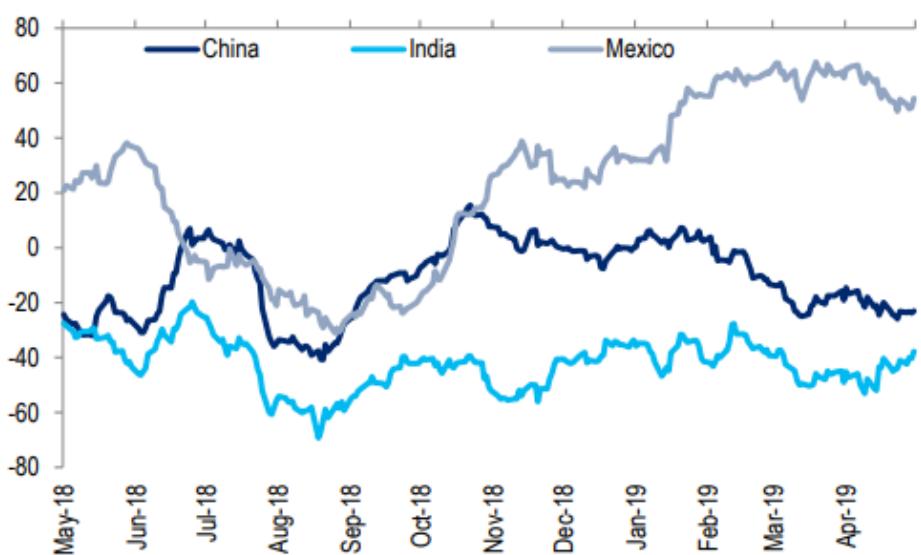
Source: Citi Research

Figure 31. Russia and Brazil Corp, Relative Spread to EM Corp



Source: Citi Research

Figure 32. China, India and Mexico Corp, Relative Spread to EM Corp



Source: Citi Research

## Long-short funds may be looking for dips to buy among US IT stocks

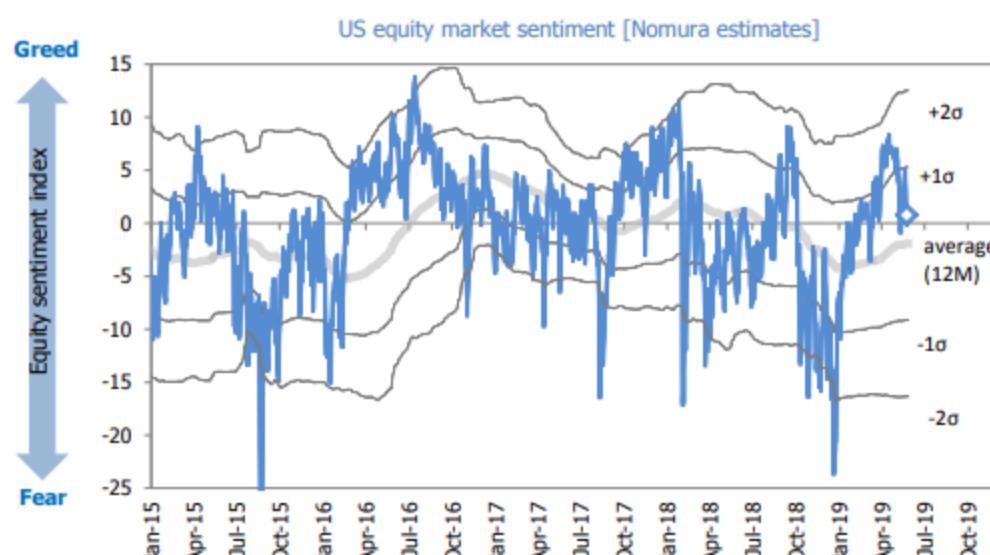
HFs on US equity, Asian equity, DM bond, CNH

**US equity (1): CTAs and global macro hedge funds still tentatively selling stocks as they feel out the market**

US stock markets were closed for the Memorial Day holiday yesterday. Among major hedge funds, global macro hedge funds are leaning short US equities and looking for opportunities to go further in that direction. **It also looks likely to us that CTAs will go back to closing out long positions in NASDAQ 100 futures and S&P 500 futures starting today.** Although opinions on how the US-China standoff might end have been swinging back and forth between optimism and pessimism from day to day, overall US stock market sentiment has been on a gradual downtrend.

Fig. 1: US equity market sentiment index since 2015 [Nomura estimates]

US equity sentiment is currently at neutral level.



Note: The equity sentiment index is calculated by the Nomura Macro and Quant Strategy teams, based on a series of relevant market data. Source: Bloomberg, Nomura

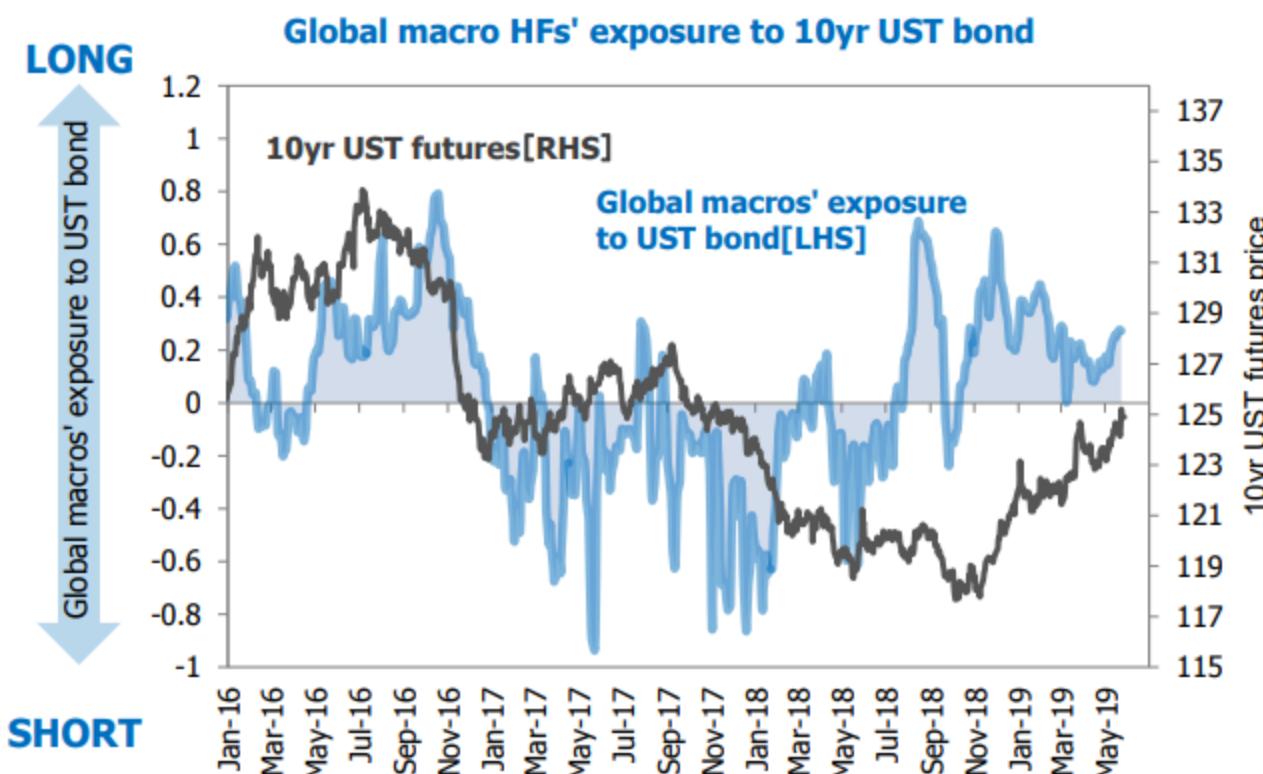
The selling of equities in Hong Kong and South Korea seems to be taking on a life of its own now, which we assume indicates that market participants are increasingly uncertain about China's economic prospects. On top of that, we see a risk that the announcement of China's PMI late this week will become another catalyst for selling.

### DM rates: Fast money still bullish on government bonds other than Italy's

The US bond market—like the stock market—was closed for the holiday yesterday. Among fast-money traders, **global macro hedge funds are still generally bullish on DM government bonds**, and are building up long positions in USTs, Bunds, and JGBs, among others. Most notably, global macro hedge funds have stepped up their net buying of USTs and Bunds since the end of last week. Fundamentals investors are still expecting rates to fall.

**Fig. 8: Global macro hedge funds exposure to 10yr UST [Nomura estimates]**

Global macro HFs retain bullish stance on UST.

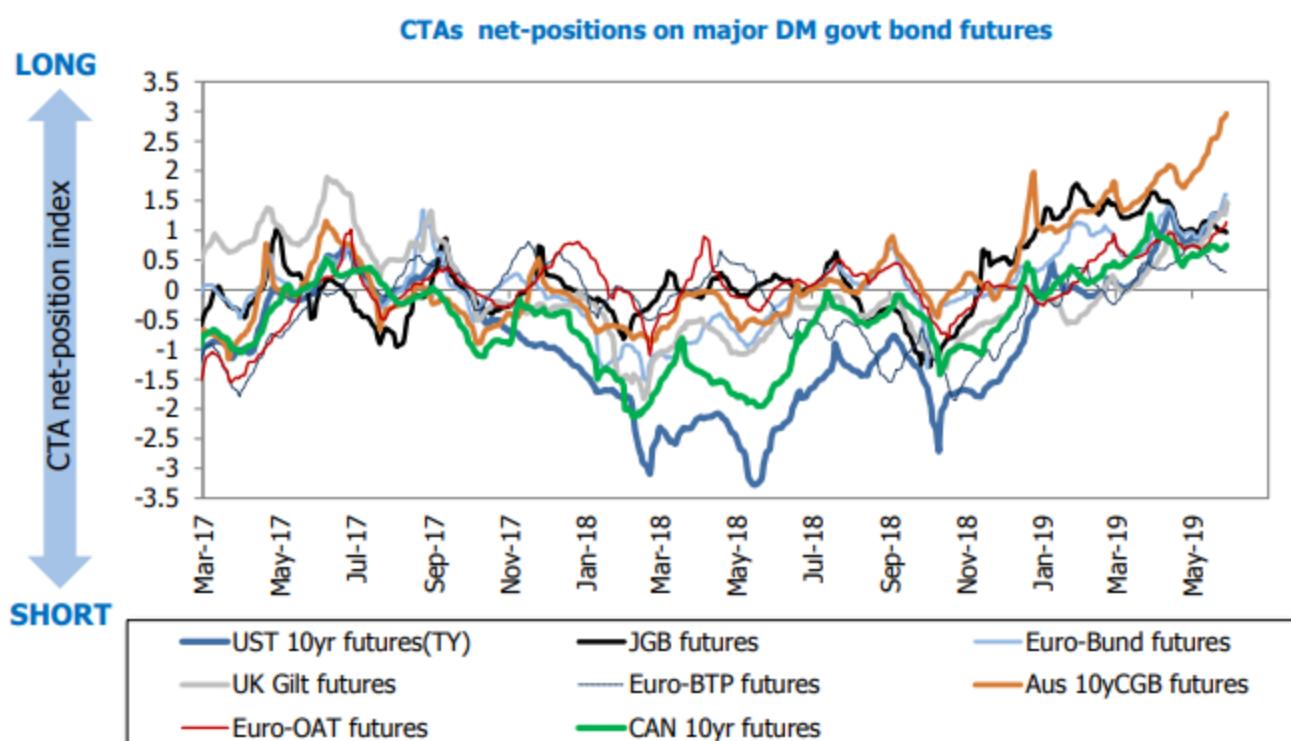


Note: Macros' exposure is estimated by Nomura Macro and Quant Strategy's multi-factor model, not actual data. Source: Nomura

**CTAs as well are still inclined to buy DM government debt.** While the pace at which long positions are accumulating varies, it appears that UST futures (TY) and Bund futures (Euro Bund) are under systematic buying pressure. The sole exception here is Italy, where CTAs have gone back to closing out long positions in Italian government bond futures (BTP). While Italy's particular political situation probably has something to do with this, it does seem that CTAs are making it a priority for now to unwind long positions.

**Fig. 9: CTA position on major DM govt bond futures [Nomura estimates]**

CTAs have added longs further on major DM govt bond futures excluding BTP futures.



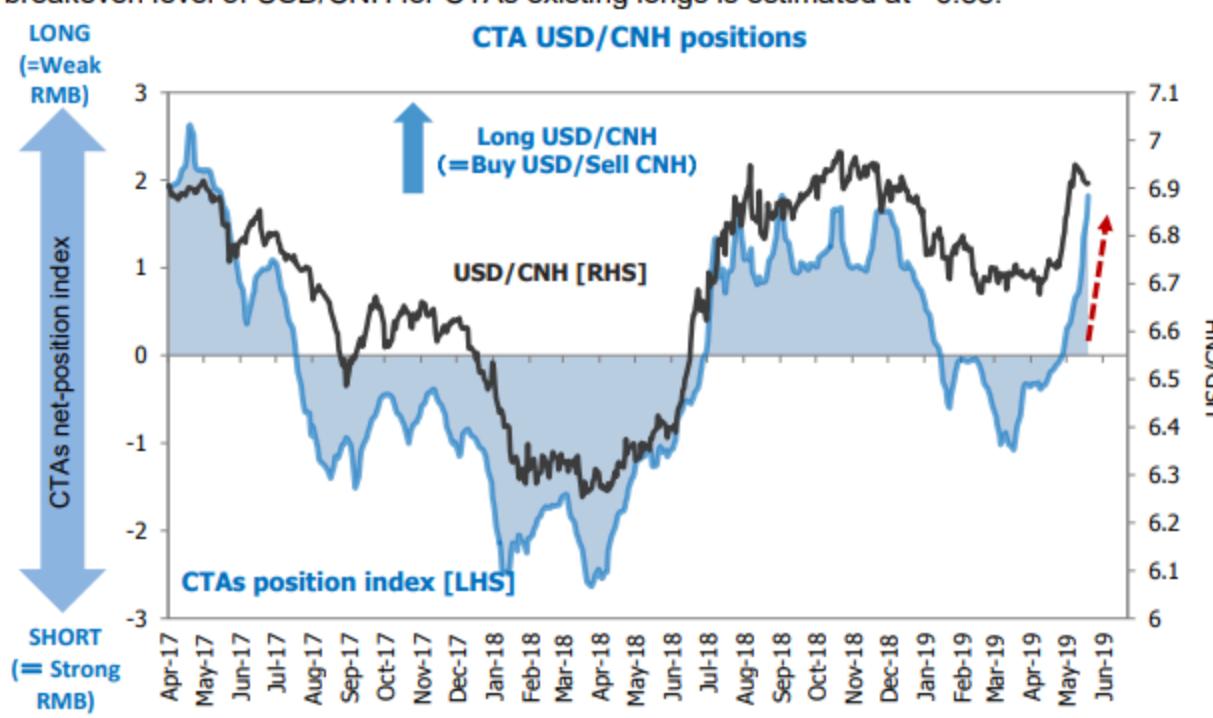
Note: CTAs' positions are estimated by Nomura Macro and Quant Strategy's CTAs tracking model, not actual data. Source: Nomura

## FX: 6.88 looks like a trigger level for CTA positions in USD/CNH

In FX markets, CTAs' positions were little changed yesterday. Upward momentum in USD/CNH has stalled, in part due to the effort by Chinese authorities to keep the renminbi from falling too far. That said, CTAs are not undoing their USD/CNH long positions to any extent worth mentioning. **We estimate that the break-even line for CTAs' existing aggregate net long position in USD/CNH is in the vicinity of 6.88.** We will therefore be watching to see whether a line of support materializes at this level.

**Fig. 10: CTA position on USD/CNH [Nomura estimates]**

A breakeven level of USD/CNH for CTAs existing longs is estimated at ~6.88.



Note: CTAs' positions are estimated by Nomura Macro and Quant Strategy's CTAs tracking model, not actual data. Source: Nomura



### Global Cross-asset Hedging Screen – Buy puts on SMI, AS51, EURUSD, and HYG US ETF:

- Despite the increasing risk of an end-of-cycle sell-off, many implied vol levels are low across asset classes, creating multiple avenues for investors to hedge. The table below shows the payout of 25d puts (or calls) on a range of cross-asset underlyings during the largest sell-offs since 2008 (based off current pricing).
- Broadly speaking, the sell-offs from 2008 to 2015 saw quite a consistent performance of hedges across asset classes but the most recent sell-off in Q4 2018 showed more divergence between underlying performances, particularly in FX space where several FX pair hedges did not work. However, based off the screen, several underlyings stand out as attractive hedges currently.
- In Equity space, **SMI index** has the lowest absolute implied vol and percentile level and has quite a consistent payout history on sell-offs; **AS51 index** also looks attractive given it performed the best during the recent sell-off and spot has seen a recent bounce post elections creating better entry levels for hedges.
- In FX space, **EURUSD** had the best payout among FX hedges in 2018, the lowest vol percentile among FX pairs (bar USDCNH) and UBS Investment Research Macro Strategy team is starting to see more downside risks in the short-term ([It's not happening for the EUR](#), Bhanu Baweja, 24<sup>th</sup> May 2019);
- In rates space, TLT and HYG both look attractive from a historical payout perspective and while TLT implied vol percentiles are lower, **HYG US** looks more attractive from a spot perspective given TLT has already rallied significantly.

Asset	Underlying	Spot 5y %ile	3m ATM(F) IV	IV 3y %ile	3m 25Delta Put / Call			Aug08 to Dec08		Jul11 to Nov11		Nov15 to Mar16		Sep18 to Dec18	
					%Strike	%Prem	%Move Required to Breakeven	Max Drawdown / Spike	Option Net Payout Ratio	Max Drawdown / Spike	Option Net Payout Ratio	Max Drawdown / Spike	Option Net Payout Ratio	Max Drawdown / Spike	Option Net Payout Ratio
Equities	SMI	99%	12.1%	36%	95.4%	1.10%	-5.7%	-29.9%	22.0x	-23.3%	16.0x	-16.9%	10.1x	-10.7%	4.5x
	HSCEI	42%	18.8%	36%	92.2%	1.66%	-9.5%	-60.2%	30.6x	-37.1%	16.6x	-29.3%	11.9x	-9.9%	-0.1x
	DAX	67%	14.9%	43%	94.5%	1.38%	-6.9%	-37.6%	22.1x	-32.1%	18.2x	-23.1%	11.7x	-16.5%	7.0x
	NKY	72%	16.0%	43%	94.2%	1.46%	-7.3%	-46.7%	27.0x	-17.4%	6.9x	-25.3%	12.4x	-21.1%	9.5x
	SXSE	52%	14.2%	44%	94.2%	1.34%	-7.2%	-37.1%	22.3x	-30.6%	17.5x	-23.6%	12.2x	-14.9%	5.7x
	UKX	69%	12.3%	46%	94.4%	1.15%	-6.8%	-32.9%	22.7x	-18.3%	10.0x	-13.8%	6.1x	-12.7%	5.2x
	AS51	100%	12.1%	54%	95.3%	1.07%	-5.8%	-34.7%	27.1x	-17.0%	10.5x	-10.4%	4.3x	-13.5%	7.2x
	RTY	76%	17.9%	73%	93.9%	1.67%	-7.8%	-48.9%	24.6x	-29.0%	12.7x	-20.8%	7.8x	-27.2%	11.6x
	SPX	93%	14.9%	82%	94.5%	1.43%	-6.9%	-42.4%	24.7x	-18.8%	8.3x	-13.3%	4.5x	-19.8%	9.0x
	KOSPI2	51%	14.7%	85%	94.9%	1.31%	-6.4%	-39.1%	24.9x	-25.1%	14.3x	-11.3%	3.8x	-14.0%	5.8x
FX	NDX	92%	19.9%	87%	93.2%	1.90%	-8.7%	-47.2%	20.3x	-16.1%	3.9x	-16.3%	4.0x	-22.9%	7.5x
	EURUSD	36%	5.2%	1%	98.9%	0.43%	-1.5%	-20.1%	42.6x	-9.4%	18.0x	-4.9%	5.9x	-4.9%	7.4x
	EURJPY	17%	7.0%	5%	97.4%	0.69%	-3.3%	-31.5%	41.1x	-14.0%	15.7x	-8.5%	7.9x	-5.9%	3.2x
	USDKRW	93%	6.8%	7%	102.4%	0.59%	+2.9%	+45.2%	78.1x	+13.7%	18.1x	+9.4%	10.9x	+3.9%	0.4x
	USDJPY	27%	6.5%	7%	96.9%	0.63%	-3.8%	-16.1%	19.6x	-6.7%	4.7x	-9.3%	8.9x	-4.9%	0.8x
	AUDUSD	1%	7.7%	10%	97.6%	0.69%	-3.1%	-35.3%	46.7x	-13.5%	15.1x	-6.5%	4.9x	-4.9%	1.9x
	GBPJPY	10%	9.1%	12%	96.3%	0.89%	-4.6%	-35.5%	34.5x	-10.2%	6.2x	-17.1%	13.9x	-6.9%	1.9x
	EURCHF	52%	4.6%	12%	98.2%	0.48%	-2.3%	-11.6%	19.6x	-16.5%	29.7x	-2.3%	1.0x	-2.0%	-0.6x
Rates	GBPUSD	12%	7.8%	23%	97.7%	0.74%	-3.1%	-25.4%	30.2x	-7.8%	5.7x	-10.1%	9.5x	-5.9%	3.8x
	USDCNH	95%	4.9%	38%	102.1%	0.47%	+2.5%	-	-	+2.5%	-0.1x	+5.9%	7.1x	+2.9%	-1.0x
	TLT US	79%	9.2%	11%	103.6%	0.73%	+4.3%	+21.2%	23.1x	+32.2%	38.2x	+13.0%	11.9x	+8.6%	5.7x
Commod.	HYG US	32%	7.0%	52%	96.5%	0.63%	-4.1%	-31.7%	43.6x	-11.7%	12.0x	-11.7%	11.9x	-7.9%	5.9x
	GLD US	65%	8.7%	1%	103.9%	0.70%	+4.7%	+23.0%	26.2x	+27.4%	32.4x	+18.5%	19.7x	+8.2%	5.1x
	GDX US	36%	22.9%	15%	109.8%	1.68%	+11.5%	+62.3%	30.3x	+24.0%	7.4x	+55.5%	26.2x	+20.0%	5.1x
	USO US	49%	31.5%	72%	90.5%	2.89%	-12.4%	-60.9%	16.8x	-23.6%	3.9x	-47.9%	12.3x	-42.2%	10.3x

#### • Trades Ideas:

- Buy SMI 3M 25d / 95.35% puts are indicatively offered at 1.14% (ref: 9730)
- Buy AS51 3M 25d / 95.2% puts are indicatively offered at 1.10% (ref: 6493)
- Buy EURUSD 3M 25d / 98.93% puts are indicatively offered at 0.43% (ref: 1.12)
- Buy HYG US 3M 25d / 96.35% puts are indicatively offered at 0.68% (ref: 85.655)

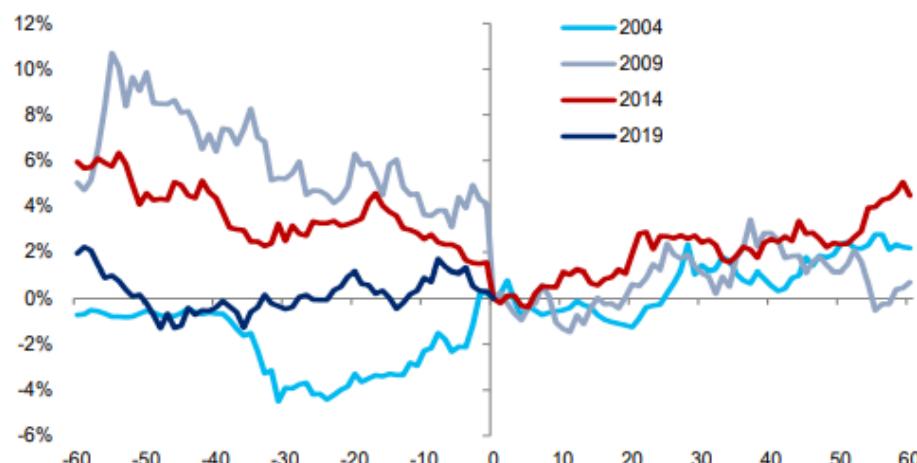
**Figure 19. Foreign interest in Egypt T-bills and bonds recovered**



Source: Ministry of Finance, Citi Research

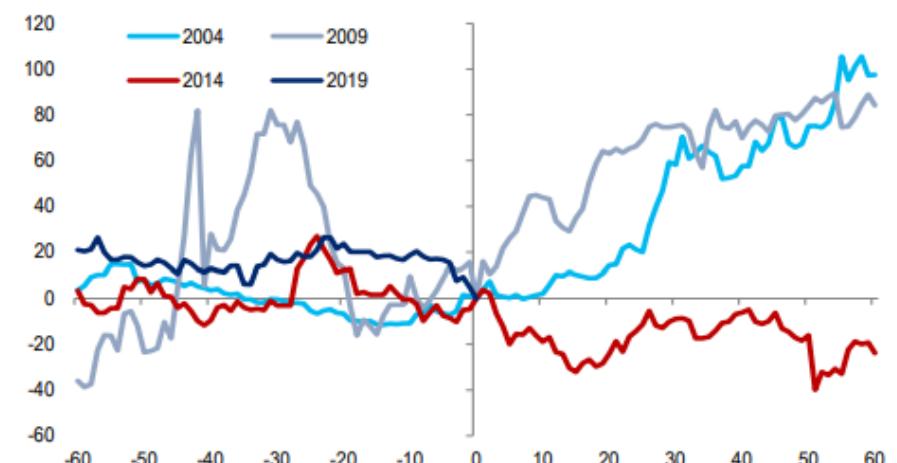
**India rates have pushed lower across bonds and OIS, but follow through may be contingent.** Risk of a significant fiscal expansion is getting priced out, pushing yields lower across bonds and OIS on higher likelihood of policy continuity. But any follow through price action in yields is contingent on fundamentals. Expectations of easier liquidity conditions and likely further monetary policy easing, amidst weak growth indicators and low inflation, shall continue to shape a bias for lower yields in India. But a sustained rally in bonds remains contingent on 1) liquidity conditions easing quickly, and 2) foreign portfolio demand for bonds picking up. Without these rallies may be short lived given the overwhelming gross bond issuance. 10y bond yield may struggle to break below 7.15% without a catalyst.

**Figure 24. India: Performance of USDINR 1m NDF around General Election Results**



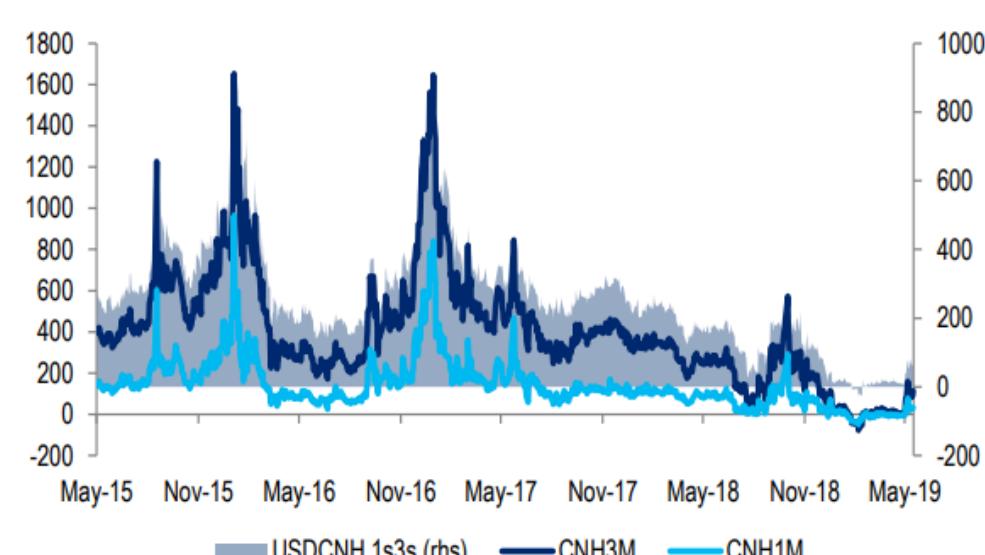
Source: Bloomberg, Citi Research Note: Horizontal axis is the days from result date

**Figure 25. India: Change in 10y benchmark bond yield (bp) around General Election Results**



Source: Bloomberg, Citi Research

**Figure 22. China: USDCNH 1m\*3m could spike**



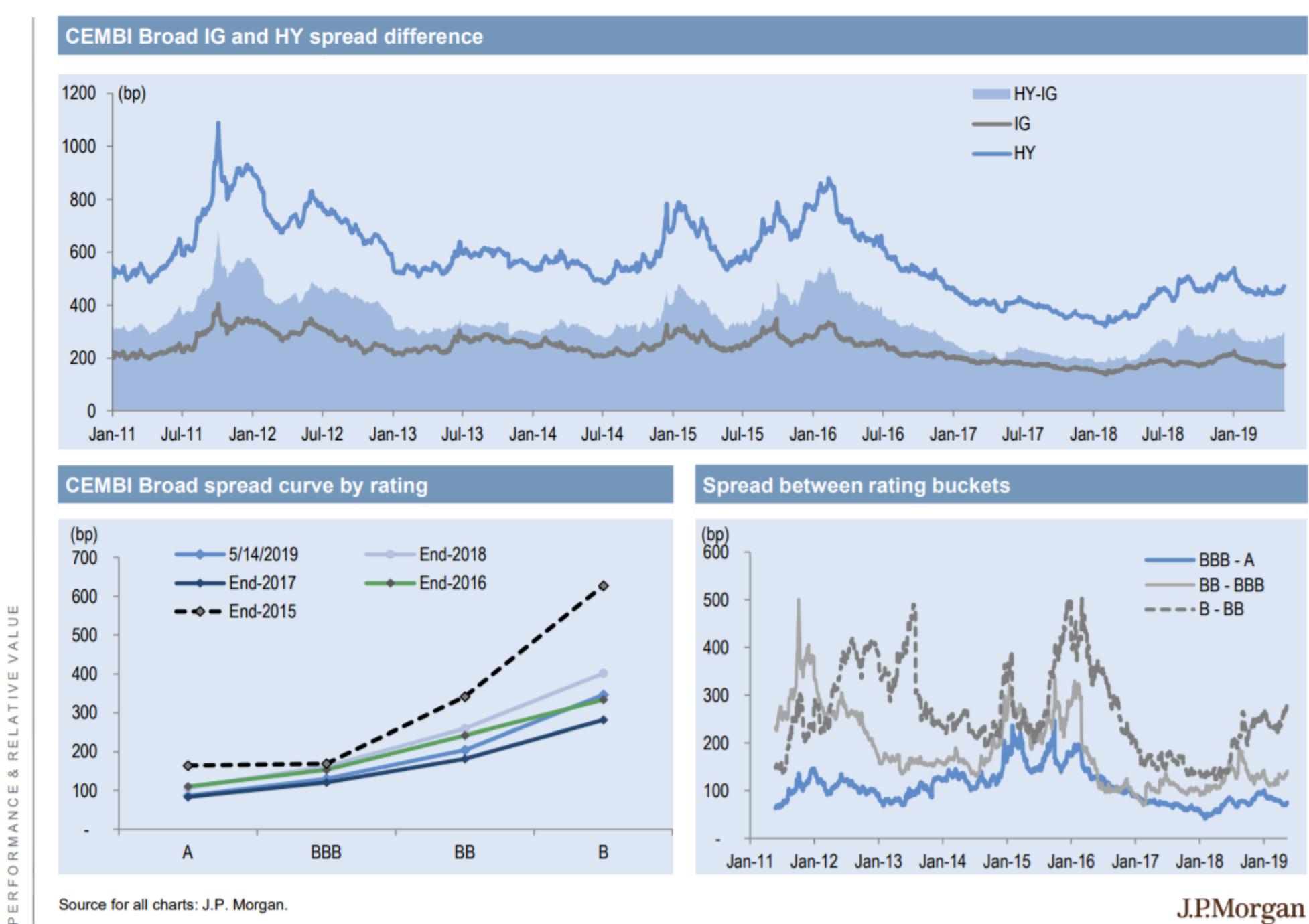
Source: Bloomberg, Citi Research

**Figure 23. China: May month to date net financing via corporate and local government bonds have been slightly negative**

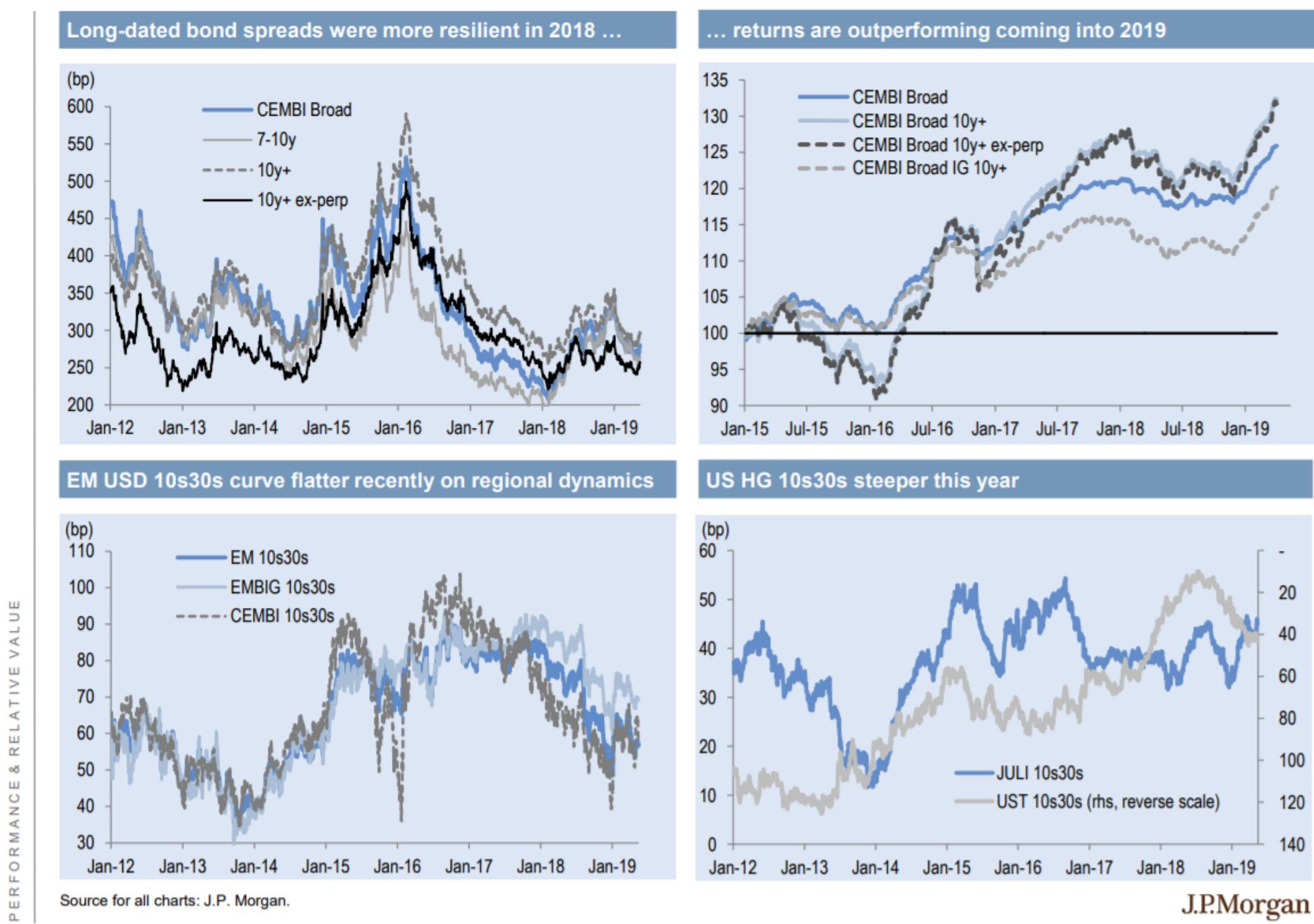


Source: Wind, Citi Research

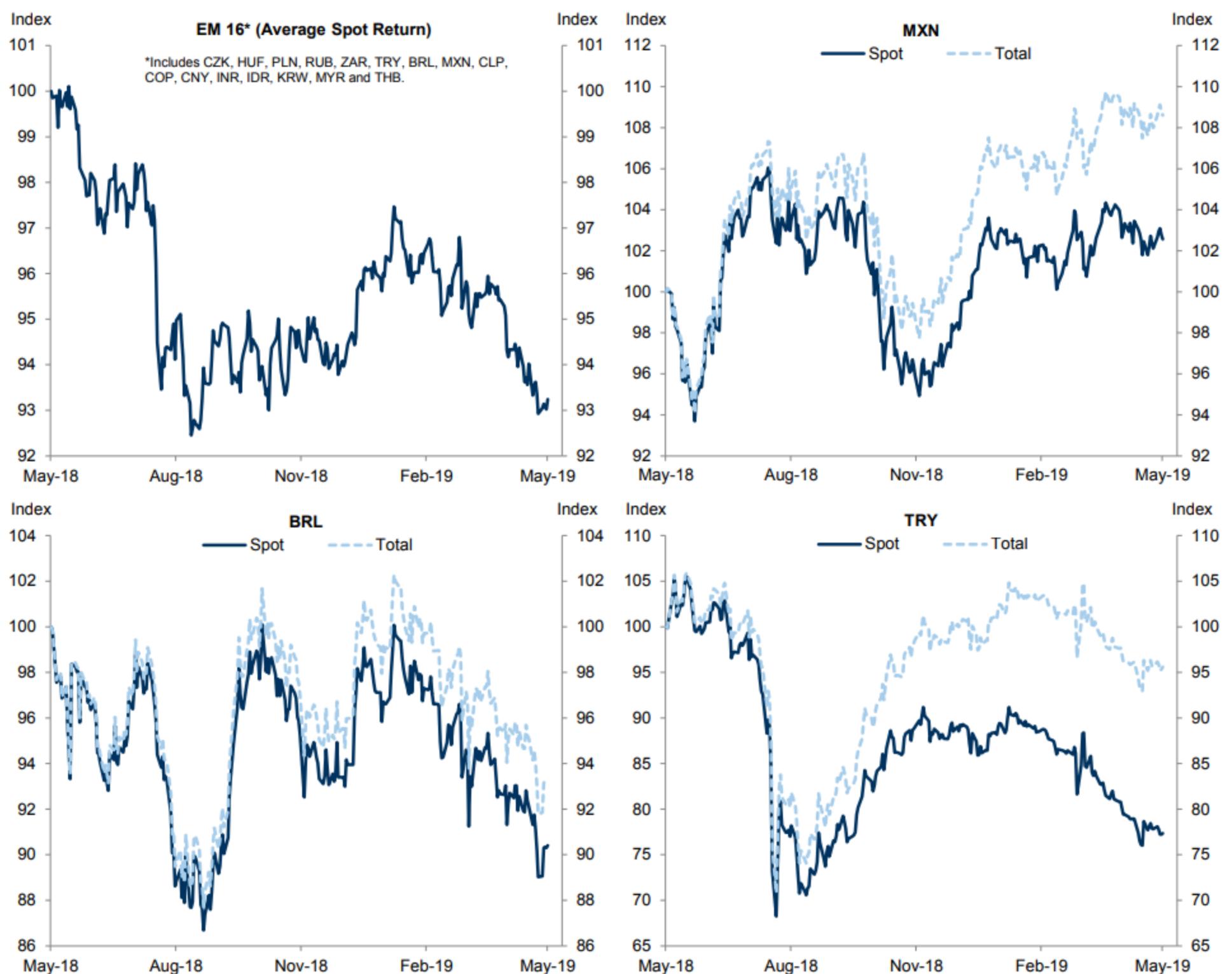
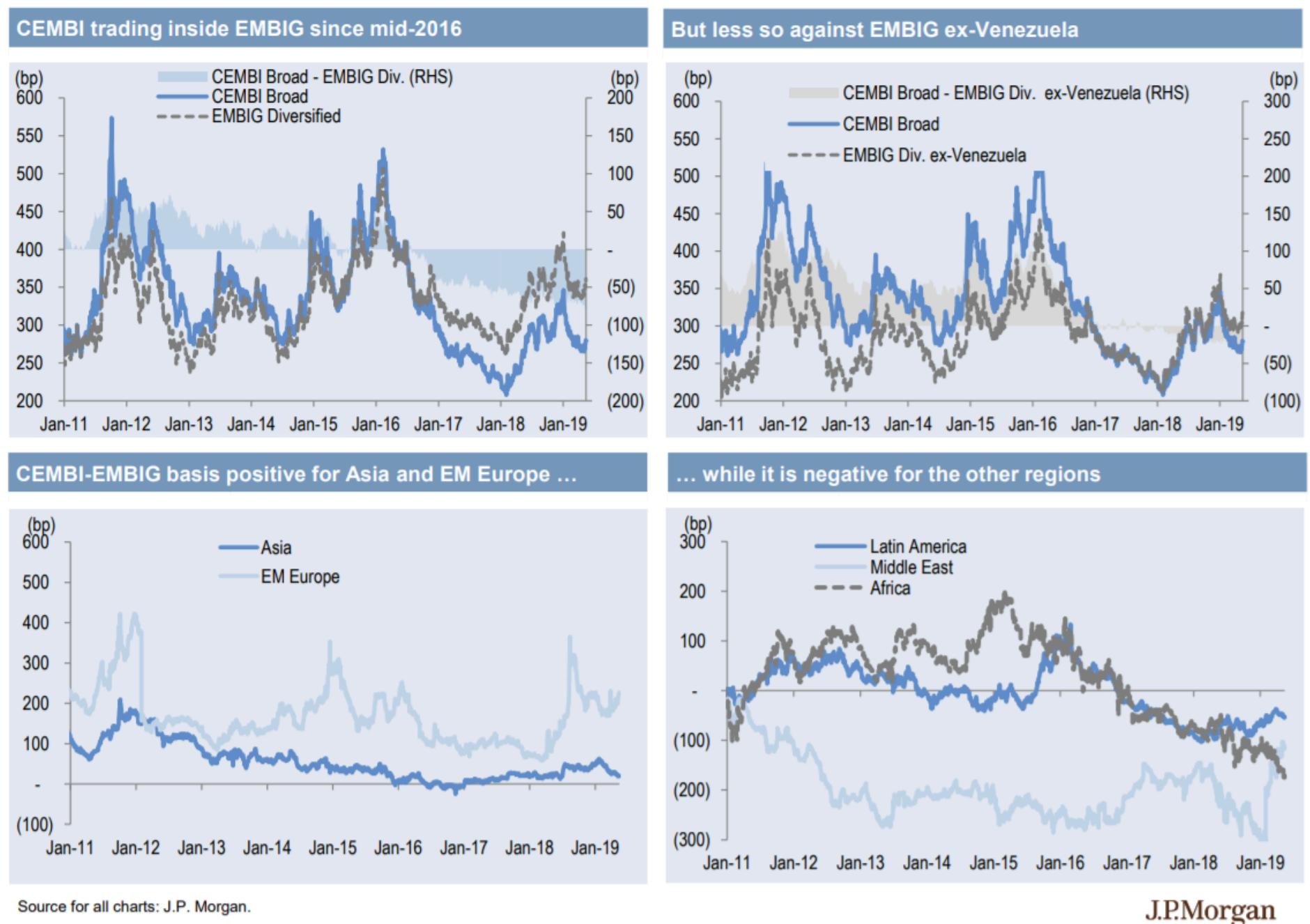
## Rating curve steepening in HY recently

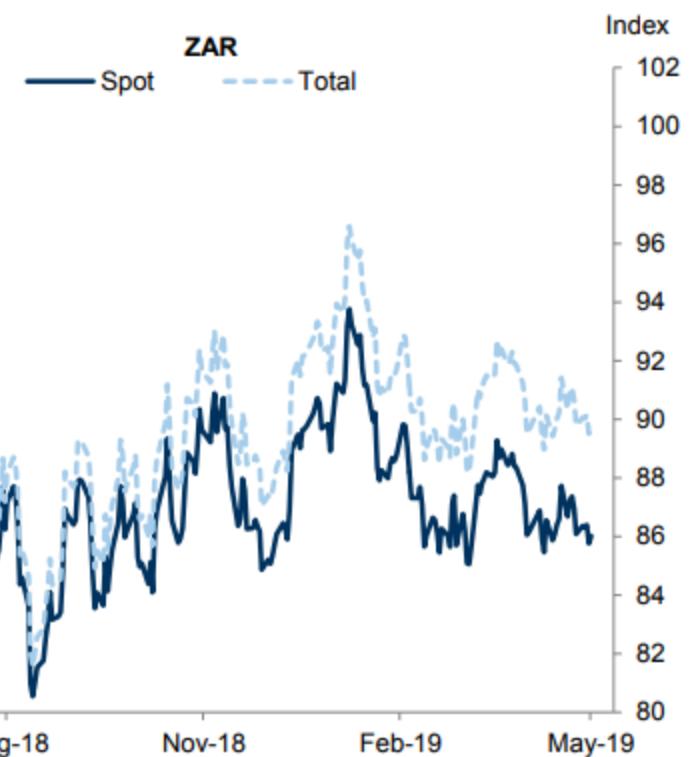
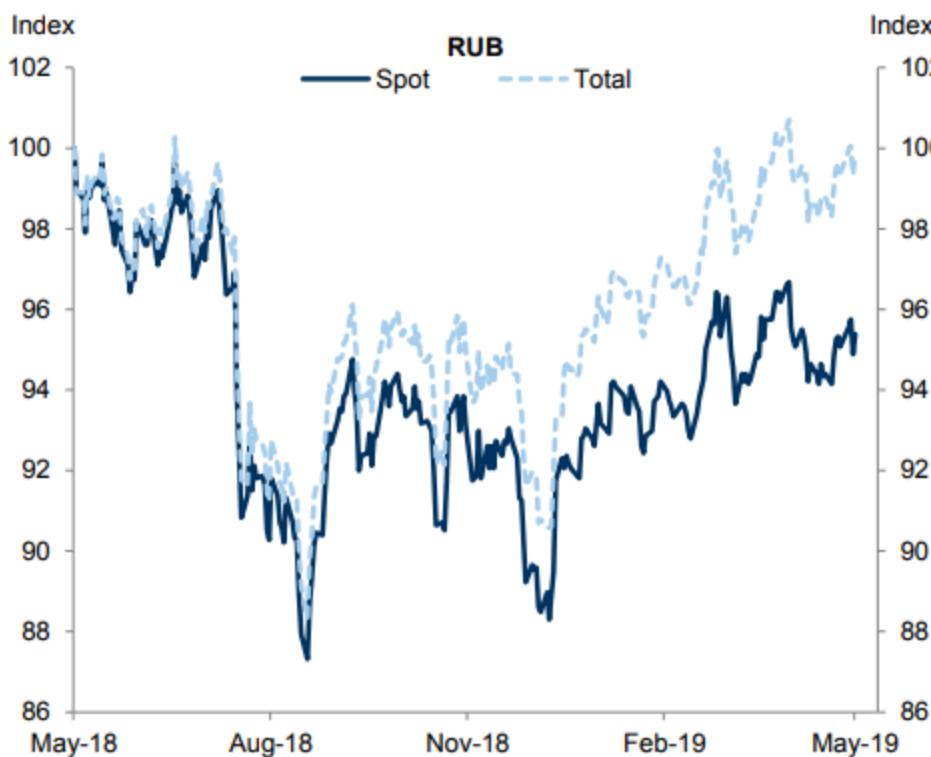


Long-dated bond returns outperforming after resilient spread performance in 2018



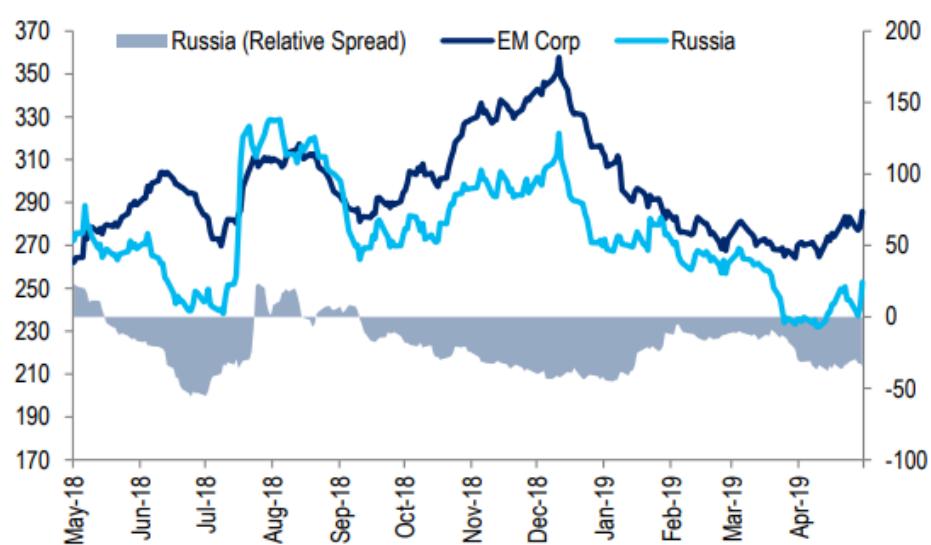
CEMBI spread remains significantly inside EMBIG but less so excluding Venezuela;  
GCC inclusion narrowing the basis





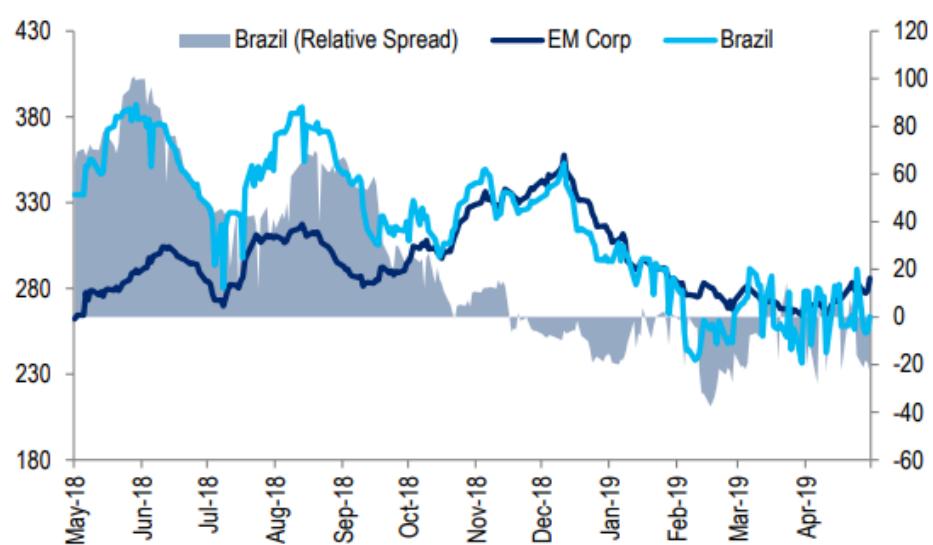
Source: Bloomberg, Goldman Sachs Global Investment Research

**Figure 33. Russia Corp Relative Performance**



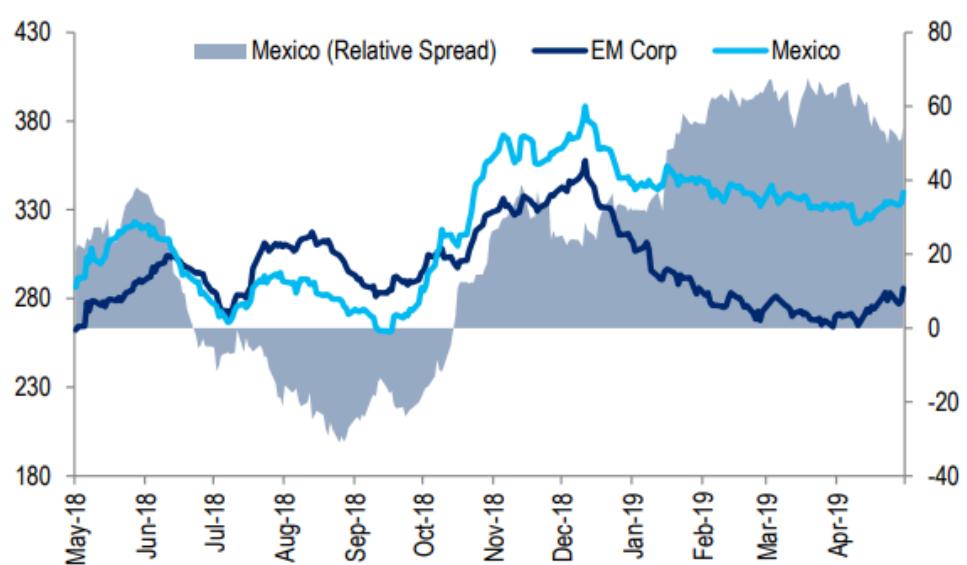
Source: Citi Research

**Figure 34. Brazil Corp Relative Performance**



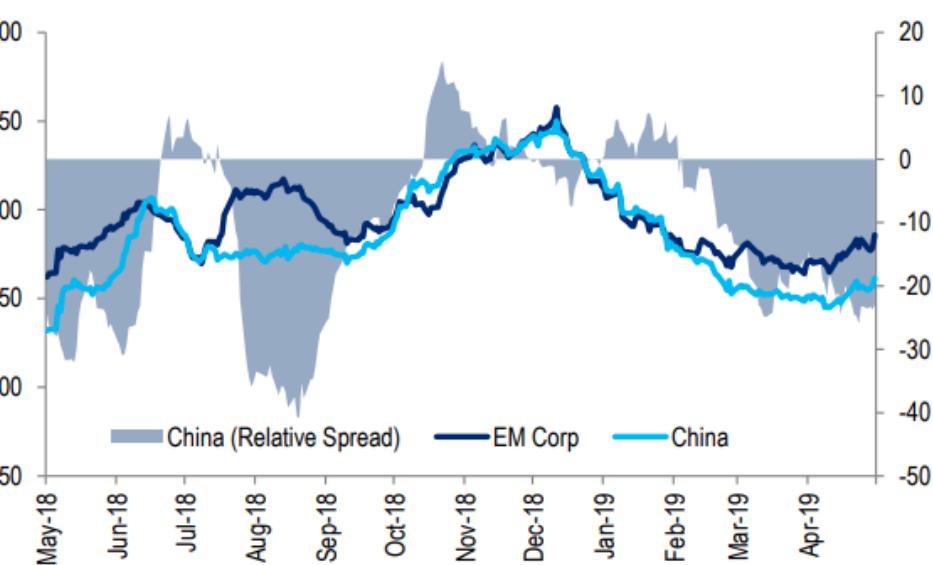
Source: Citi Research

**Figure 35. Mexico Corp Relative Performance**



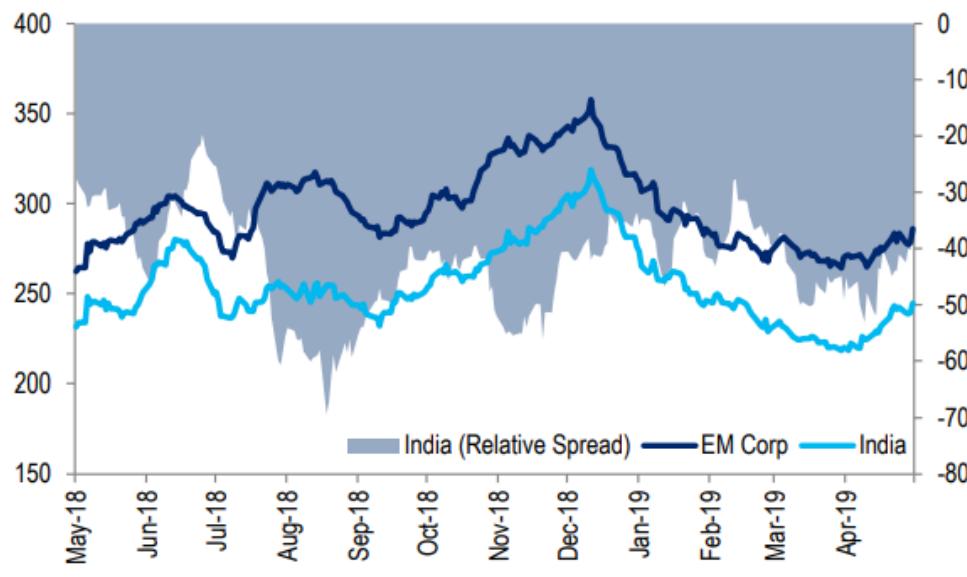
Source: Citi Research

**Figure 36. China Corp Relative Performance**



Source: Citi Research

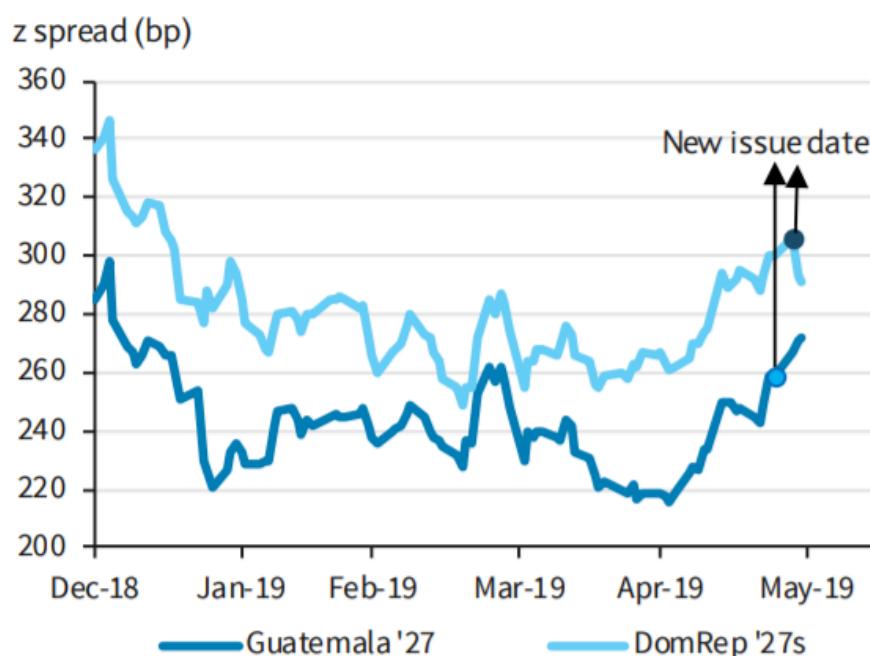
**Figure 37. India Corp Relative Performance**



Source: Citi Research

FIGURE 1

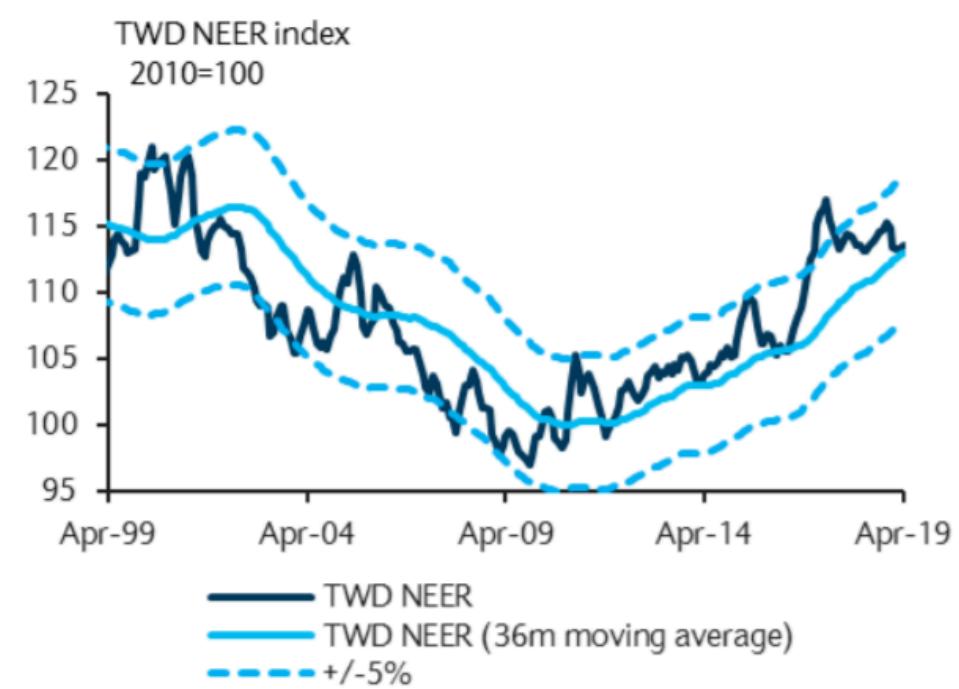
We recommend buying Guatemala 2027s/2050s after recent supply-related weakness in the credit



Source: Bloomberg, Barclays Research

FIGURE 2

CBC is less likely to intervene given stable NEER

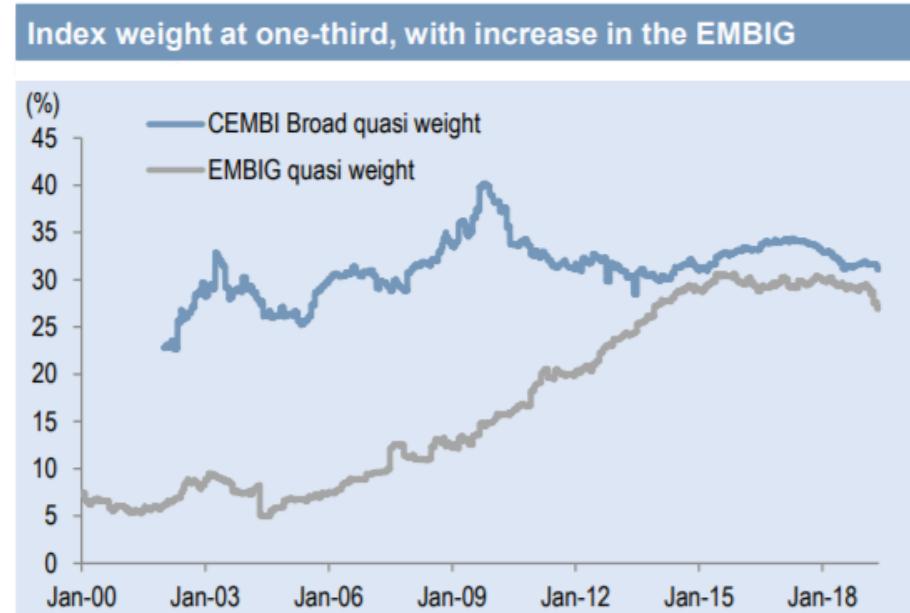


Source: Haver Analytics, Barclays Research

30 May 2019

2

Quasi-sovereigns account for almost half of the EM corporate external bond market



### Breakdown of EM quasi-sovereign external bonds by government ownership and index inclusion

(US\$ bn)	100% owned quasis			Other quasis (majority owned)			Quasi-sovereign total			Quasi weight		
	EMBIG	Off index	Total	CEMBI	Off index	Total	Index	Off index	Total	Index	Off index	Total
Asia	117	131	248	150	164	314	267	295	562	23%	25%	47%
EM Europe	29	10	39	27	48	75	56	58	113	23%	24%	47%
Latam	115	53	168	66	7	73	181	61	242	33%	11%	44%
ME&A	14	20	35	45	58	103	59	78	137	23%	30%	53%
<b>Total EM</b>	<b>275</b>	<b>214</b>	<b>490</b>	<b>293</b>	<b>272</b>	<b>565</b>	<b>568</b>	<b>487</b>	<b>1055</b>	<b>25%</b>	<b>22%</b>	<b>47%</b>

Source for all charts: J.P. Morgan. As of May 15, 2019.

J.P.Morgan

# BRL, MXN, ARS, CLP

Chart 157: BofAML Weekly indexed BRL flow

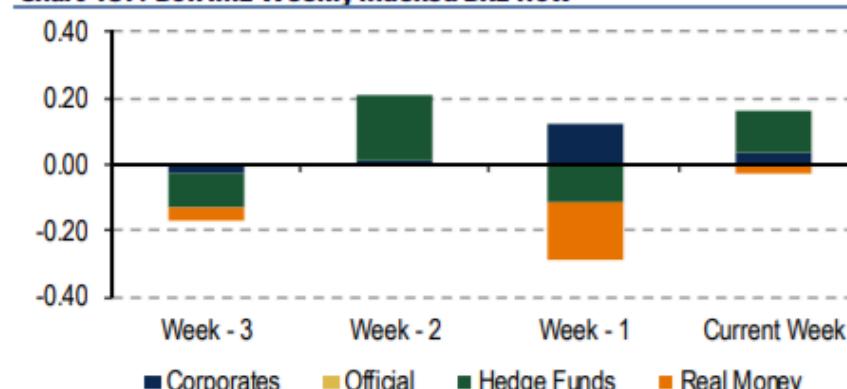
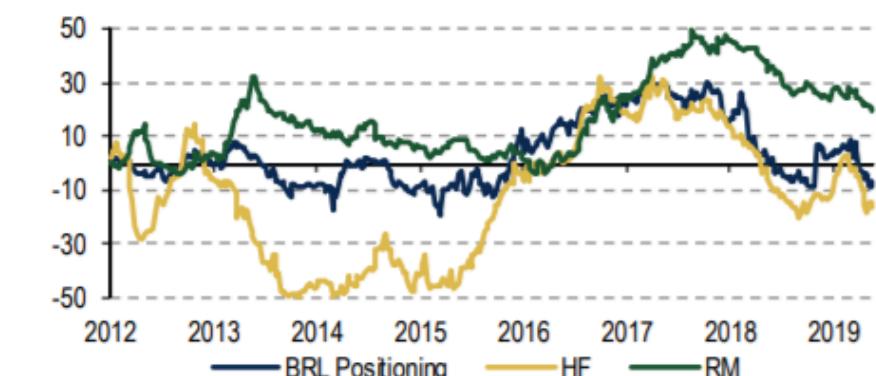


Chart 158: BRL Positioning



Source: BofA Merrill Lynch Global Research, Bloomberg

Chart 159: BofAML Weekly indexed MXN flow

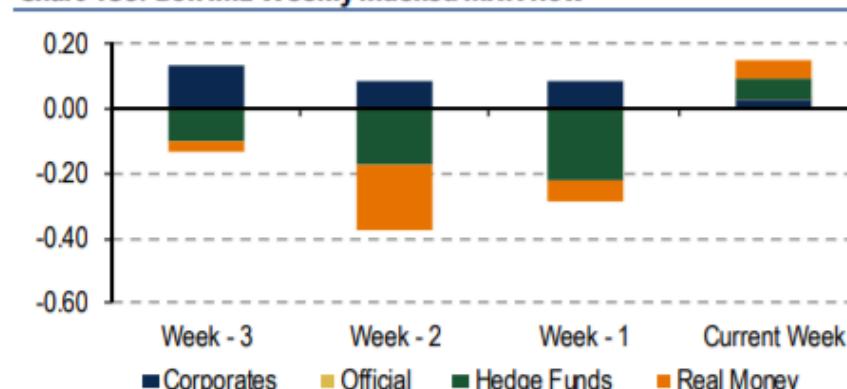
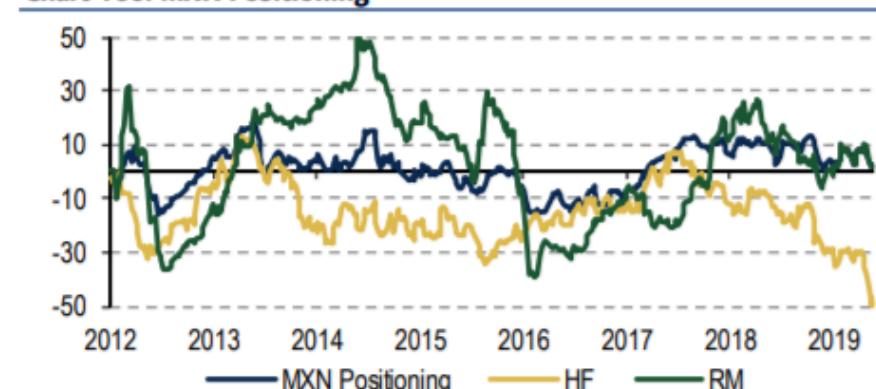


Chart 160: MXN Positioning



Source: BofA Merrill Lynch Global Research, Bloomberg

Chart 161: BofAML Weekly indexed ARS flow

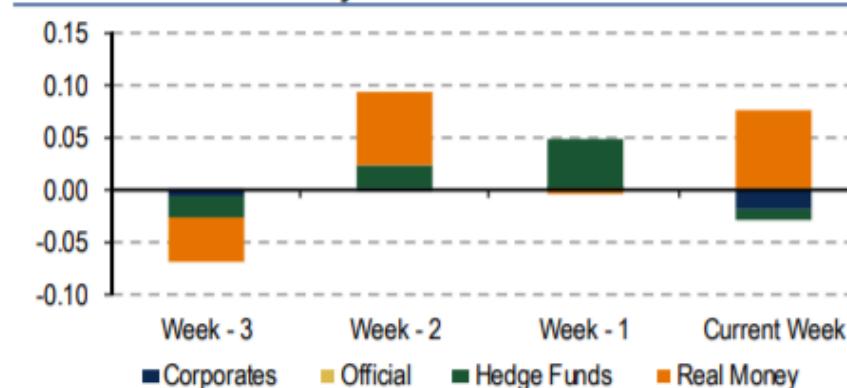
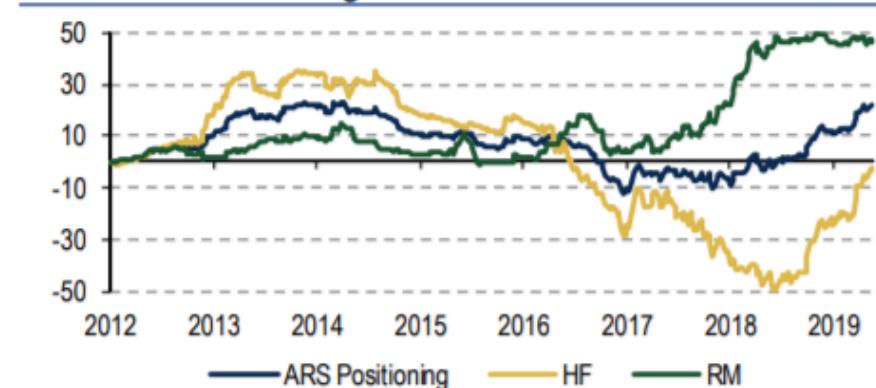


Chart 162: ARS Positioning



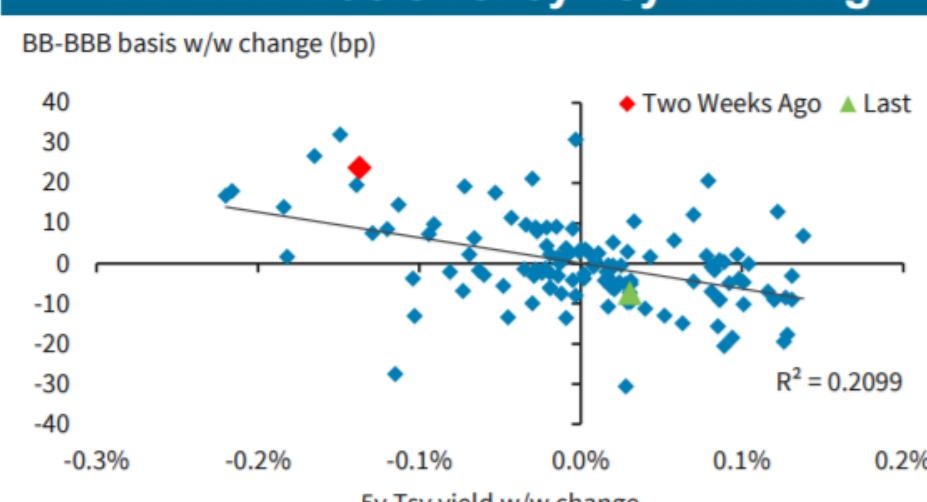
Source: BofA Merrill Lynch Global Research, Bloomberg

In particular, BBs lagged BBBs, due to rates movement and the macro-driven sell-off; at current index level, BBs look more attractive

BB Underperformed BBBs and CCCs

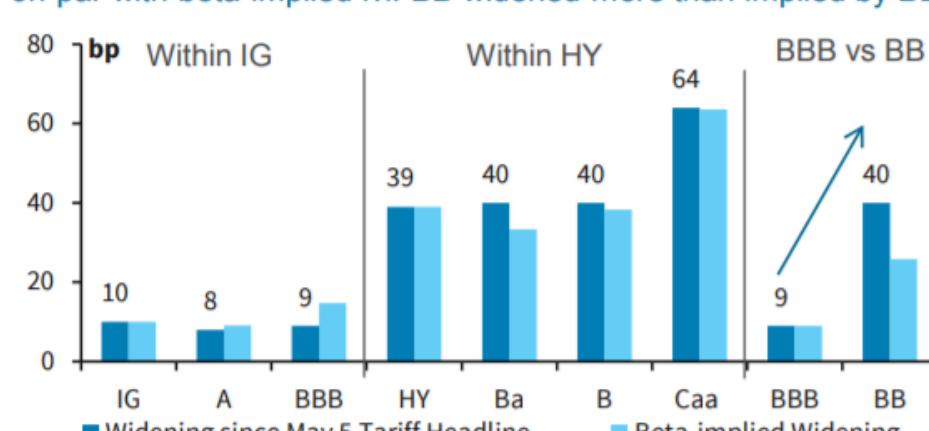


BB-BBB Basis vs. 5y Tsy w/w Chg

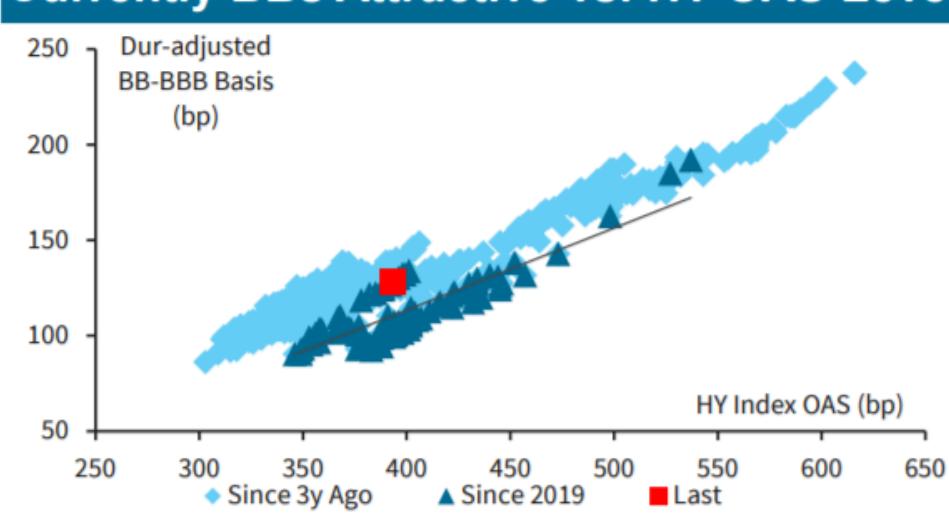


Widening Since May 5 vs. Beta-Implied

Higher-quality widened more than implied; higher-beta widened less or on-par with beta-implied lvl. BB widened more than implied by BBB



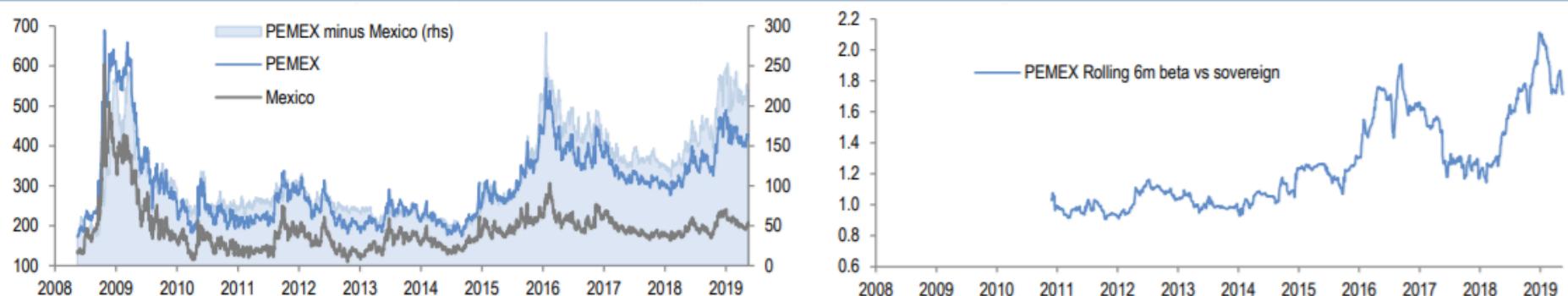
Currently BBs Attractive vs. HY OAS Level



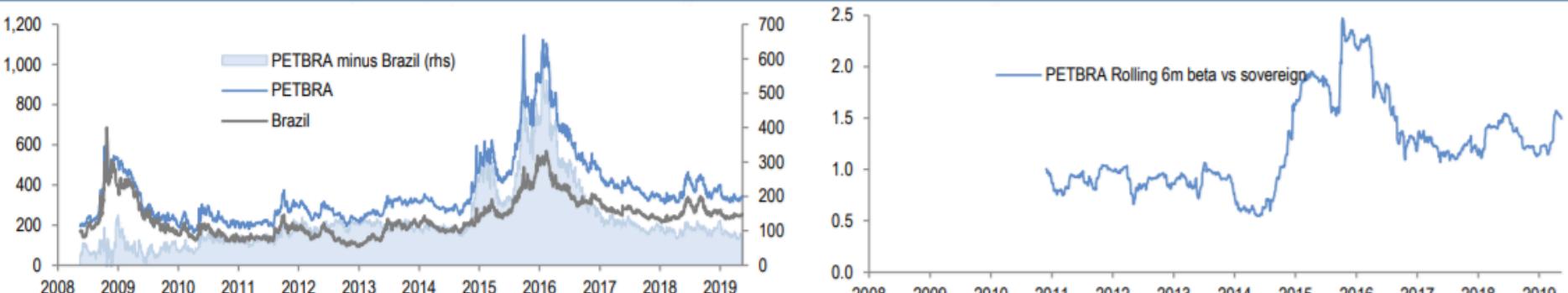
Source for all charts: Bloomberg Barclays Indices, Barclays Research

## Quasi-sovereign spread over sovereign

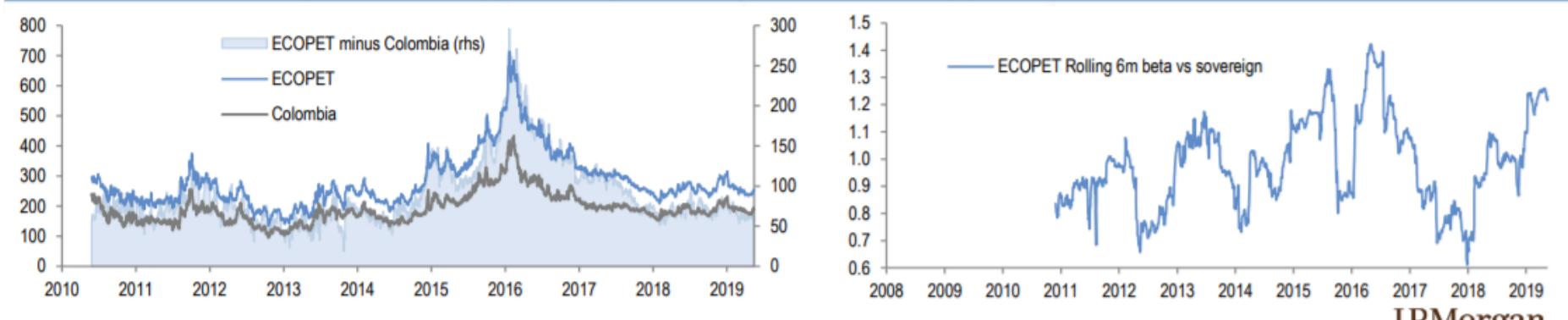
**PEMEX vs. Mexico: Historical spreads, spread versus sovereign, and beta versus sovereign**



**PETBRA vs. Brazil: Historical spreads, spread versus sovereign, and beta versus sovereign**



**ECOPET vs. Colombia: Historical spreads, spread versus sovereign, and beta versus sovereign**

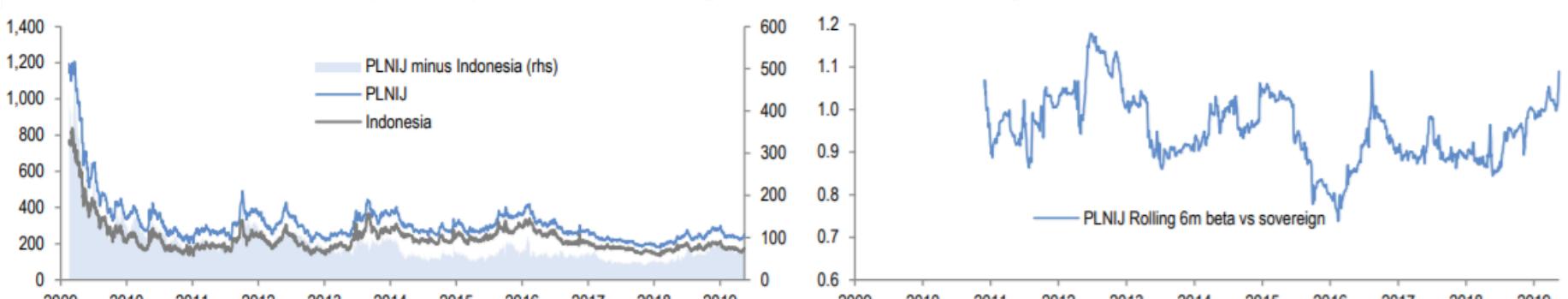


Source for all charts: J.P. Morgan, Bloomberg.

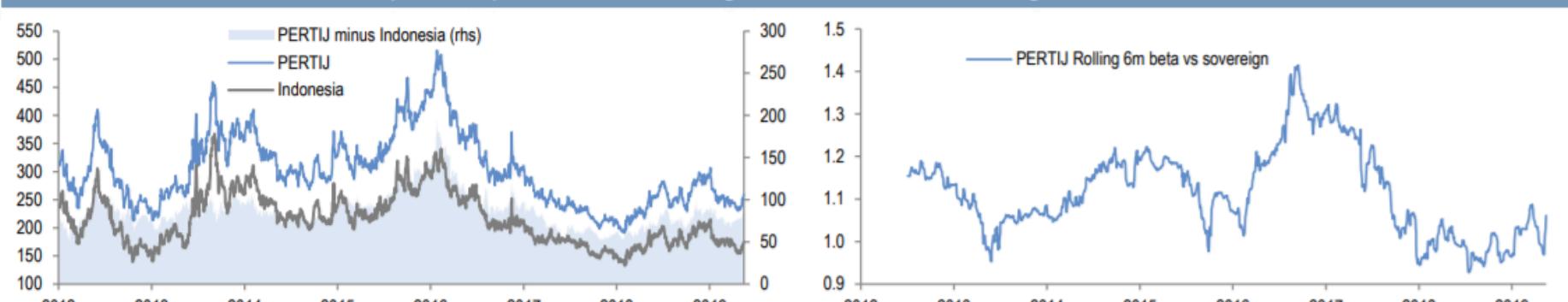
J.P.Morgan

## Quasi-sovereign spread over sovereign

**PLNIJ vs. Indonesia: Historical spreads, spread versus sovereign, and beta versus sovereign**



**PERTIJ vs. Indonesia : Historical spreads, spread versus sovereign, and beta versus sovereign**



**QTELQD vs. Qatar: Historical spreads, spread versus sovereign, and beta versus sovereign**

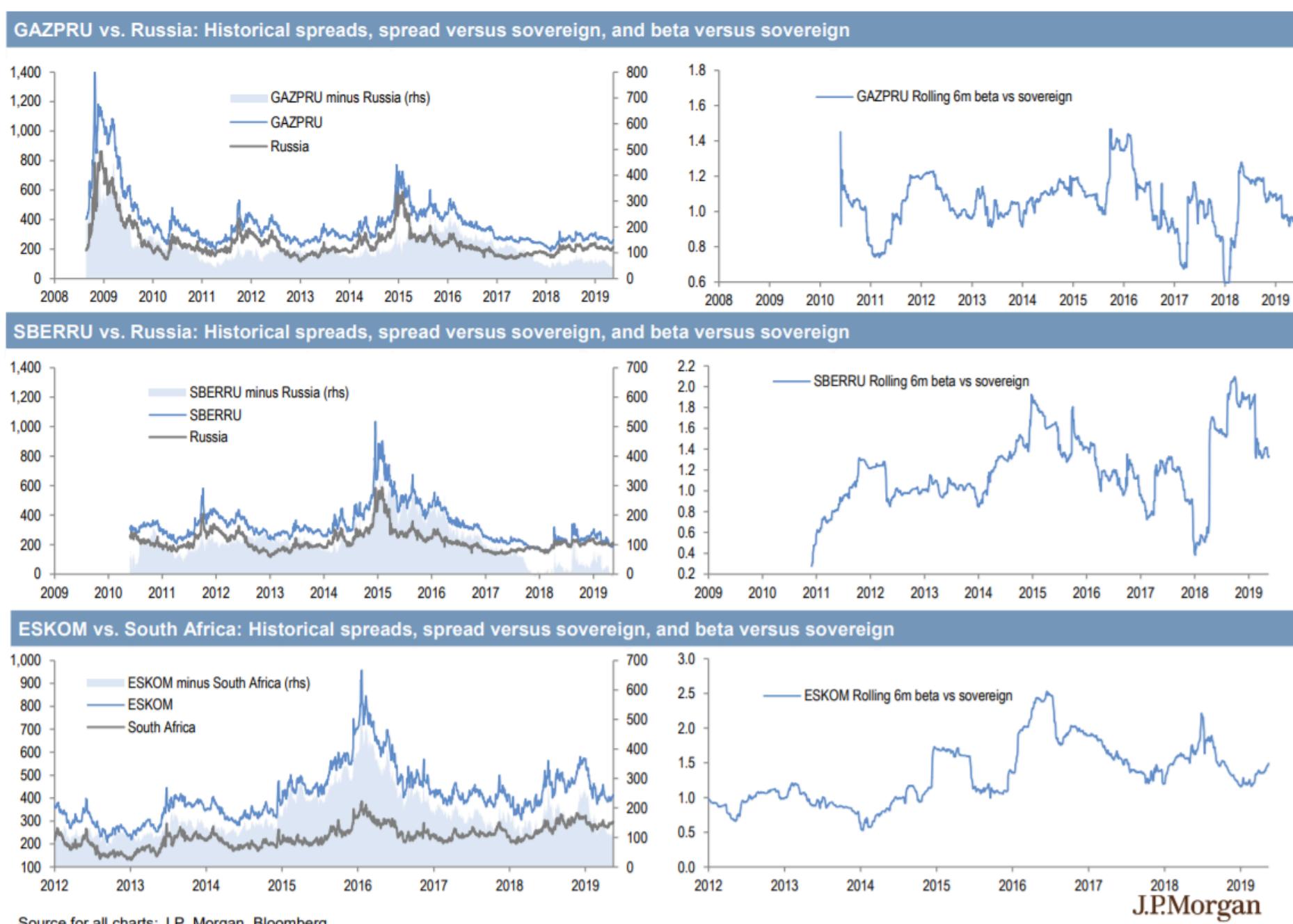


Source for all charts: J.P. Morgan, Bloomberg.

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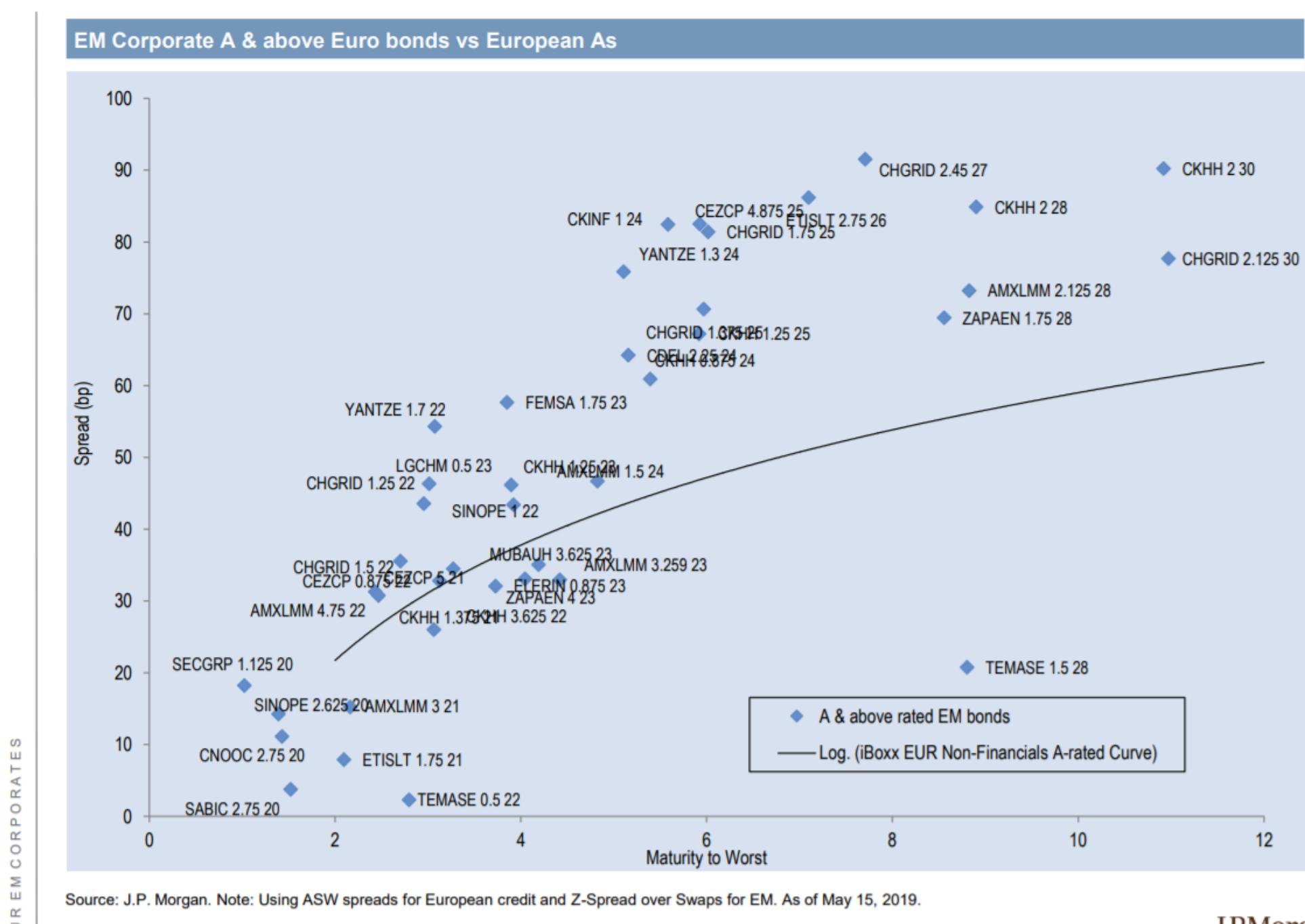
## Quasi-sovereign spread over sovereign



105

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Single A and higher rated EUR EM corps offer some value vs European comps



# EUR BBBs offer pickup vs European credit but host a number of idiosyncratic stories

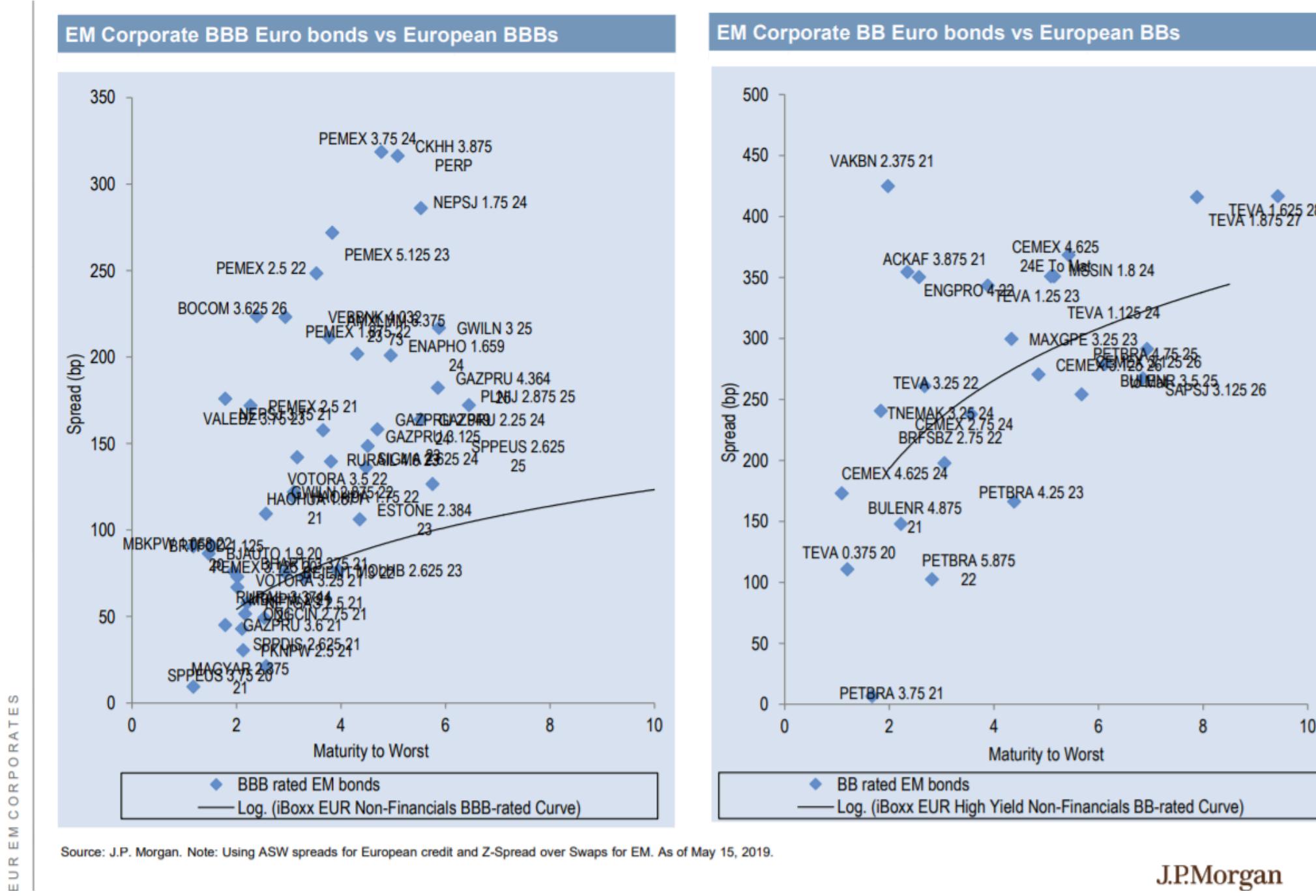


Figure 38. Russia – Turkey Relative Spread

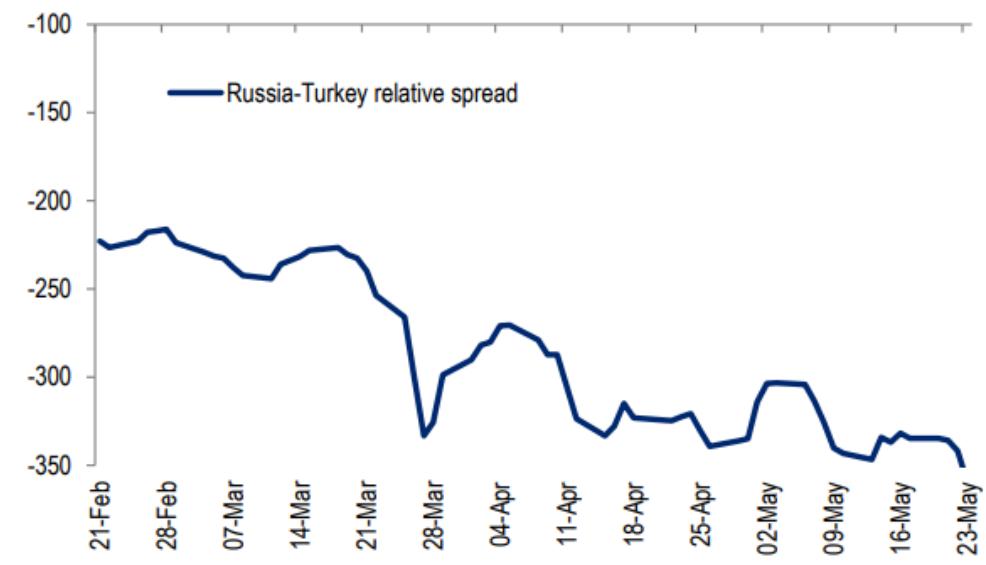


Figure 39. Turkey – Brazil Relative Spread

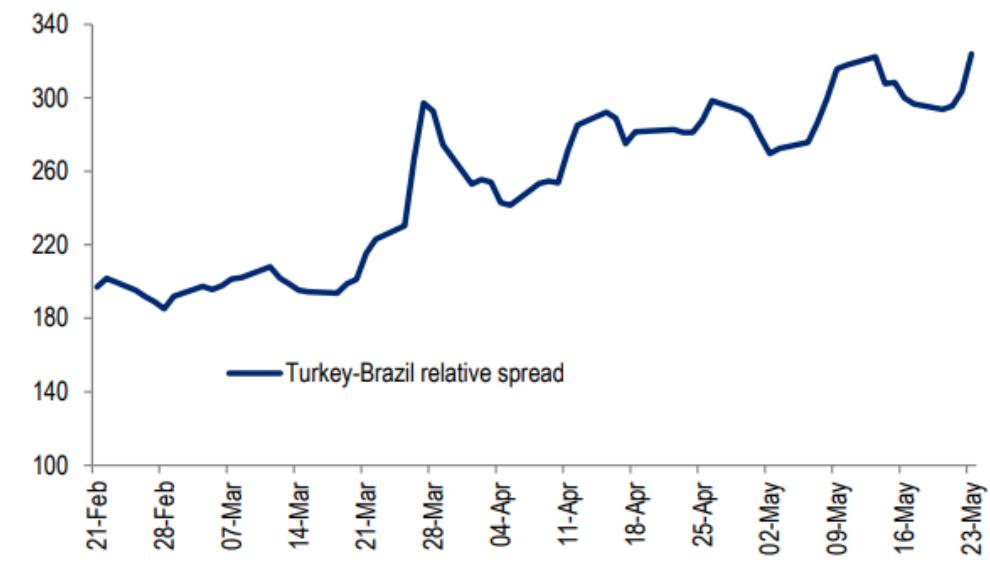


Figure 40. Turkey – South Africa Relative Spread

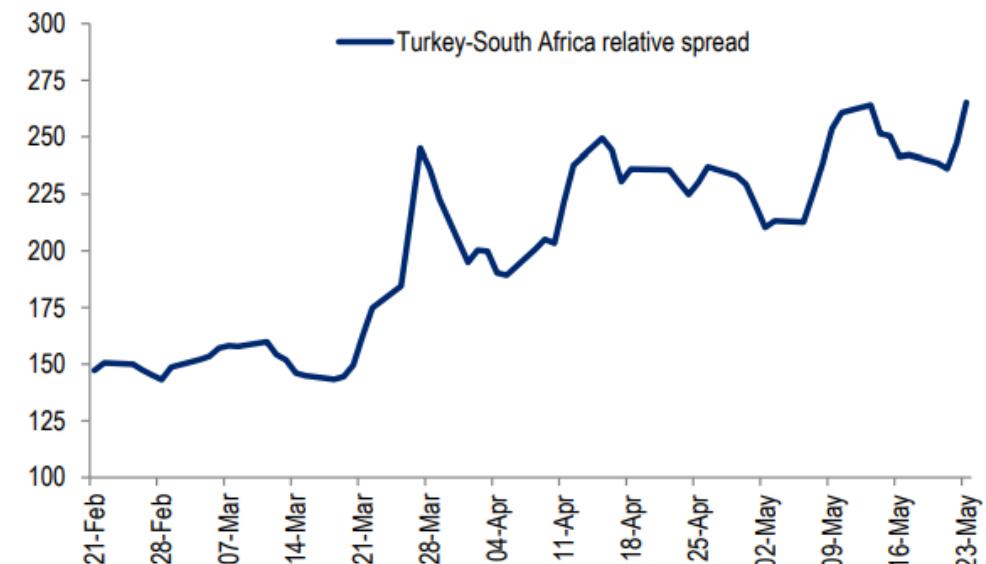
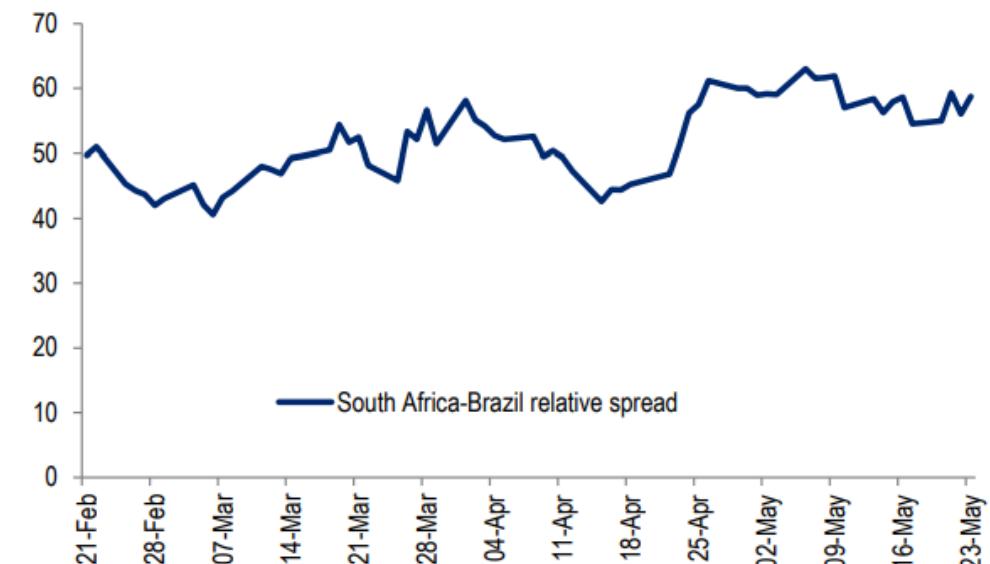
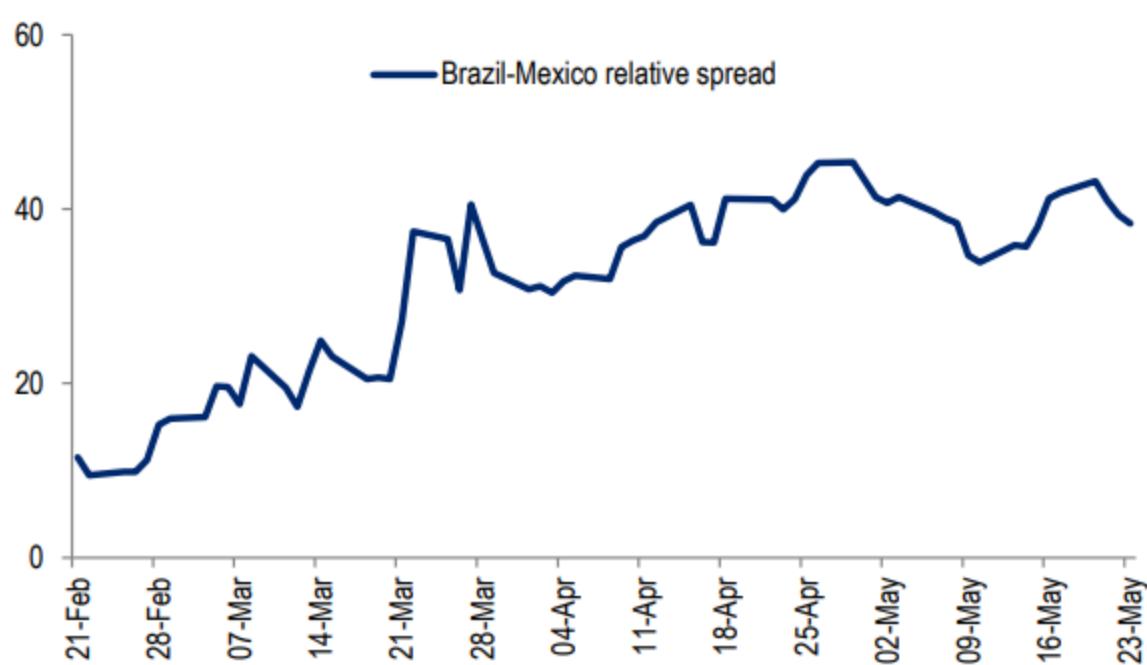


Figure 41. South Africa – Brazil Relative Spread



**Figure 42. Brazil – Mexico Relative Spread**



Source: Citi Research, Citi Fixed Income Indices

\*Note: spreads are aggregated values of the country sub-components of our Citi EM Sov Bond Index.

## The new paradigm between corporates and sovereigns

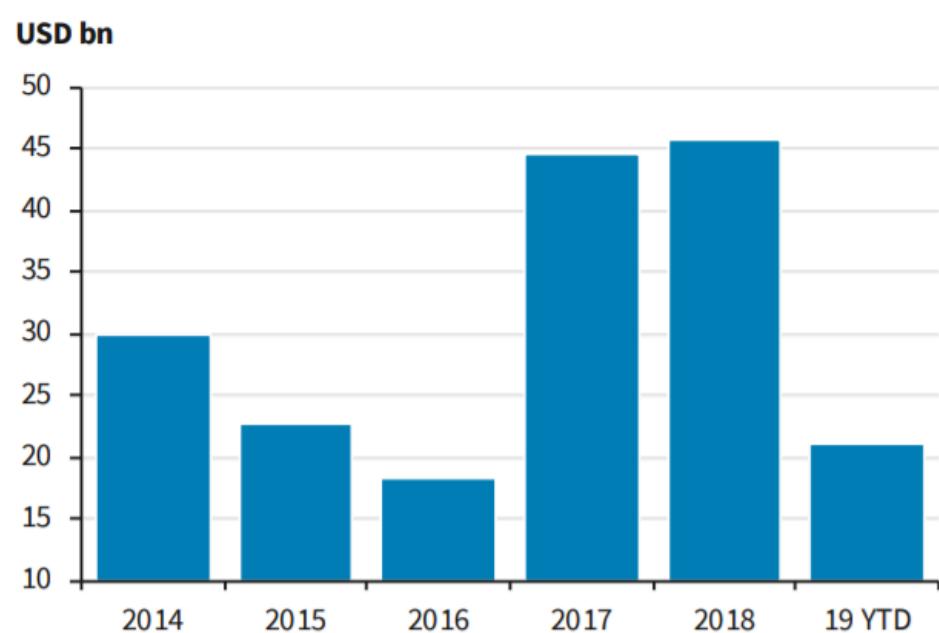
Since 2016, EM corporates have gradually compressed toward their sovereigns to historical tights. During the recent wave of volatility, in which sovereigns widened by about 20bp since April, corporates remained broadly stable. We think there is a confluence of factors that justify these outperformances in EEMEA/LatAm:

1. **Corporates are issuing less, unlike sovereigns:** In 2014, there was \$160bn more corporate debt than sovereign eurobond debt in EEMEA/LatAm. Now, sovereign paper dwarfs corporate paper by \$122bn. We believe that factors limiting corporate issuance, such as local funding in LatAm or higher cash flows in EEMEA, will remain.
2. **Fundamentals:** Corporates have recovered quickly from the worst of the commodity rout in 2015/2016. Absent a sharp drop in commodity prices, we believe that fundamentals will remain solid. Sovereign indebtedness in EEMEA and LatAm has risen and many countries are facing growth challenges, although aggregate rating downgrade pressure should be limited, in our view.
3. **Ownership structure:** ETFs are playing a growing role in sovereign performance, and recent outflows have supported the corporate versus sovereign compression. At the same time, EMBI funds, with larger AuM, have increased their exposure to corporates. In a sell-off, we expect sovereigns to underperform, due to ETF selling, but mutual fund outflows could prove negative for corporates held by EMBI funds.

In the medium term, we believe that this new paradigm will remain, and see room for more compression. However, lower commodity prices and mutual fund outflows are key risks for corporates, and the asset class could underperform in either scenario. Against this backdrop, we present our corporates versus sovereign ideas, selecting issuers that could weather sovereign volatility, while reducing exposure to those that seem vulnerable.

FIGURE 6

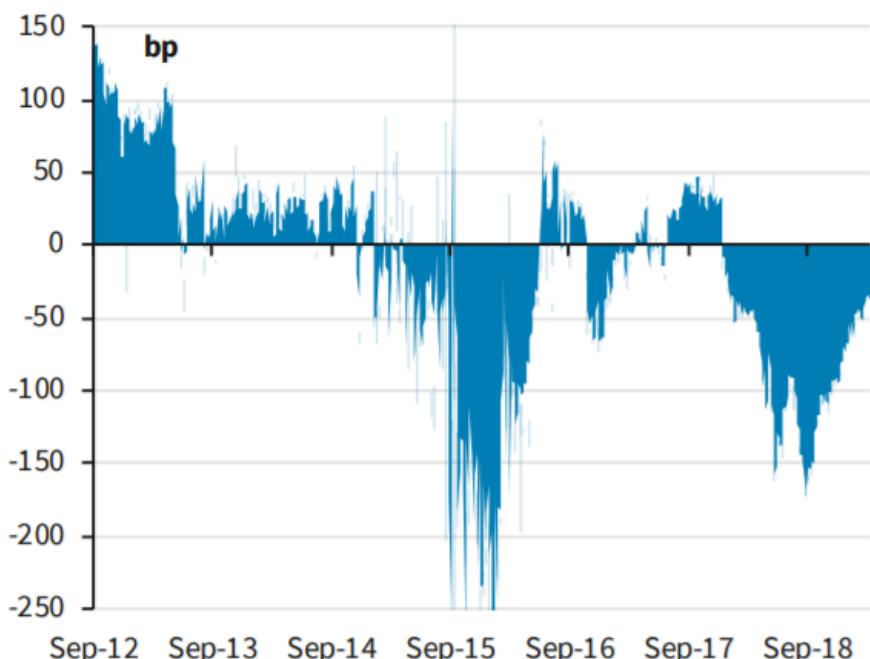
We expect the increase in LatAm corporate local issuance recorded in 2017 and 2018 to continue this year ...



Note: Available data on Bloomberg only. Issuance is any currency except G10.  
Source: Barclays Research, Bloomberg

FIGURE 7

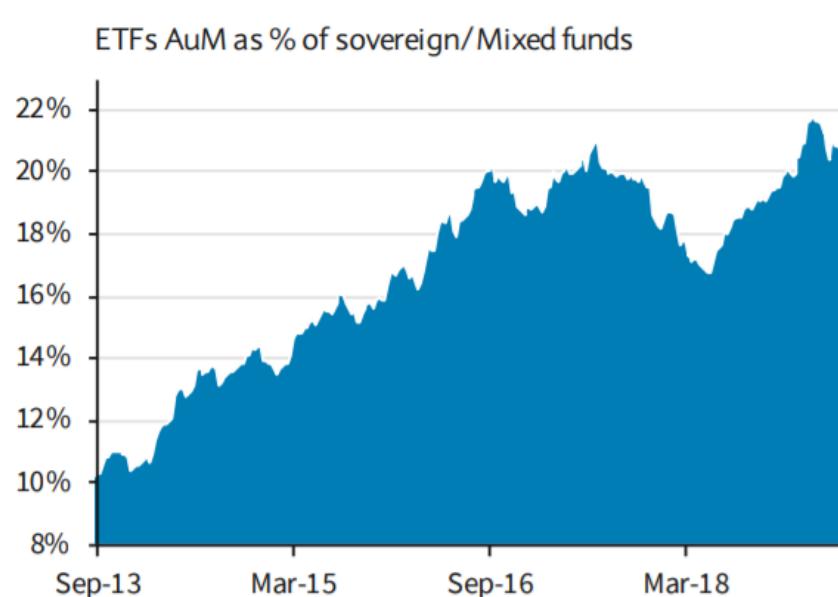
... supported by cheaper funding in the local markets; for Brazilian issuers, refinancing in BRL is 40bp cheaper than in USD for a 5y tenor



Note: 5y Brazil USD sovereign debt swapped to BRL. Source: Barclays Research

FIGURE 18

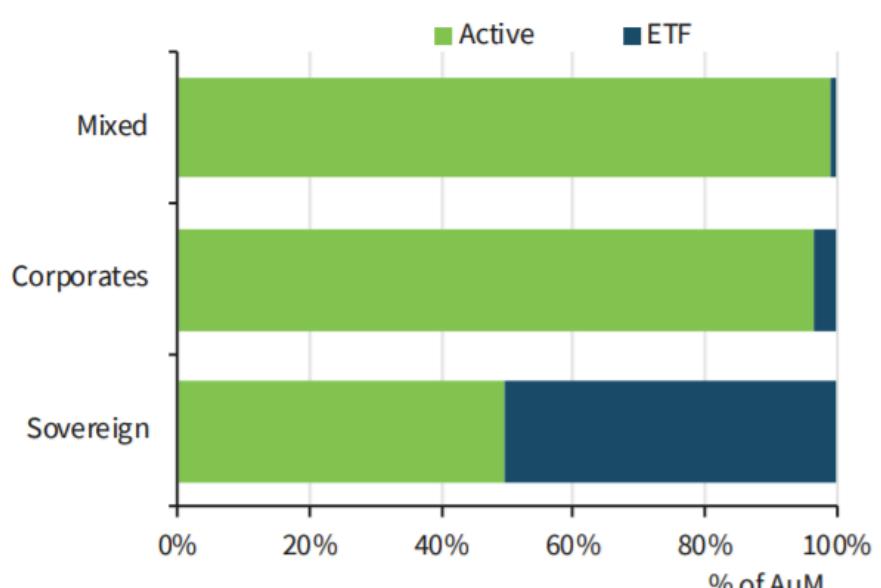
Based on EPFR, ETFs now represent 20% of the AuM of sovereign/mixed funds, with \$37bn AuM



Note: EPFR breaks down flows into Sovereign, mixed and corporate funds.  
Source: EPFR, Barclays Research

FIGURE 19

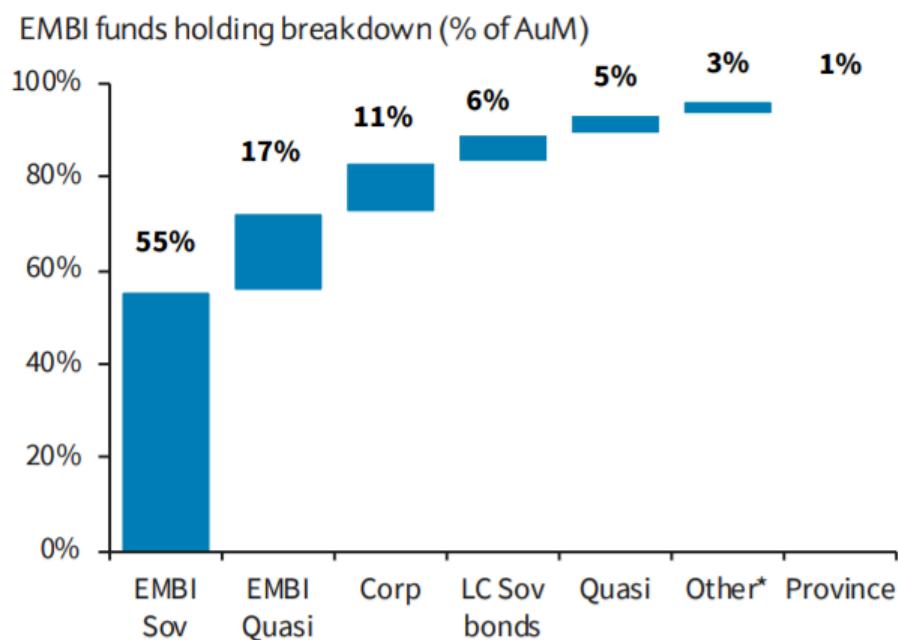
ETFs are large in the sovereign universe, negligible for corporates and mixed funds



Note: Data as of May 22<sup>nd</sup>. Source: EPFR, Barclays Research

FIGURE 20

We estimate that EMBI funds have 16% of their AuM in non-EMBI eligible corp/quasis, in addition to 17% in 100% state-owned quasis

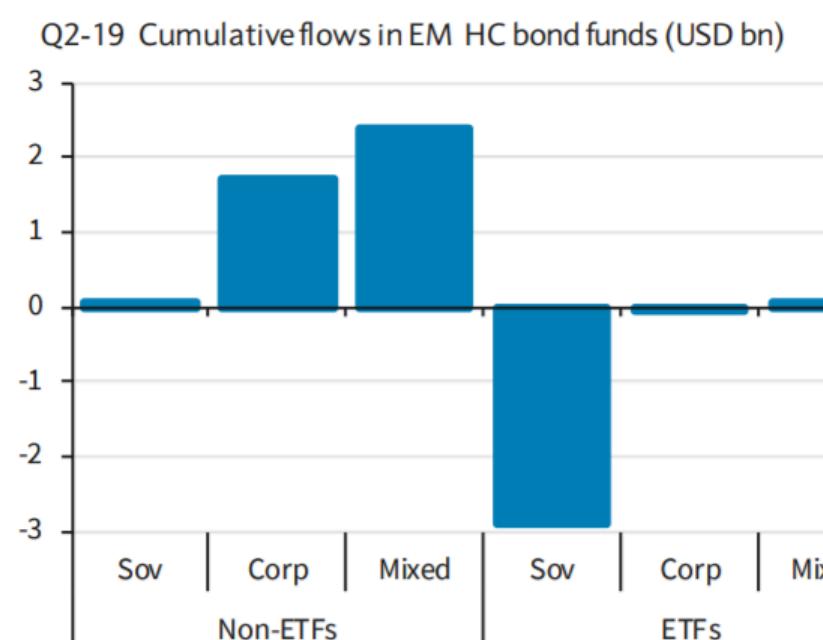


Note: Sample of 20 actively managed EM funds totaling \$40bn AuM. \*Other denotes Cash, US/treasury and currencies. Source: Barclays Research

28 May 2019

FIGURE 21

In Q2 19, sovereign ETFs faced outflows of c.8% their AuM, while non-ETF corps and mixed funds collected inflows

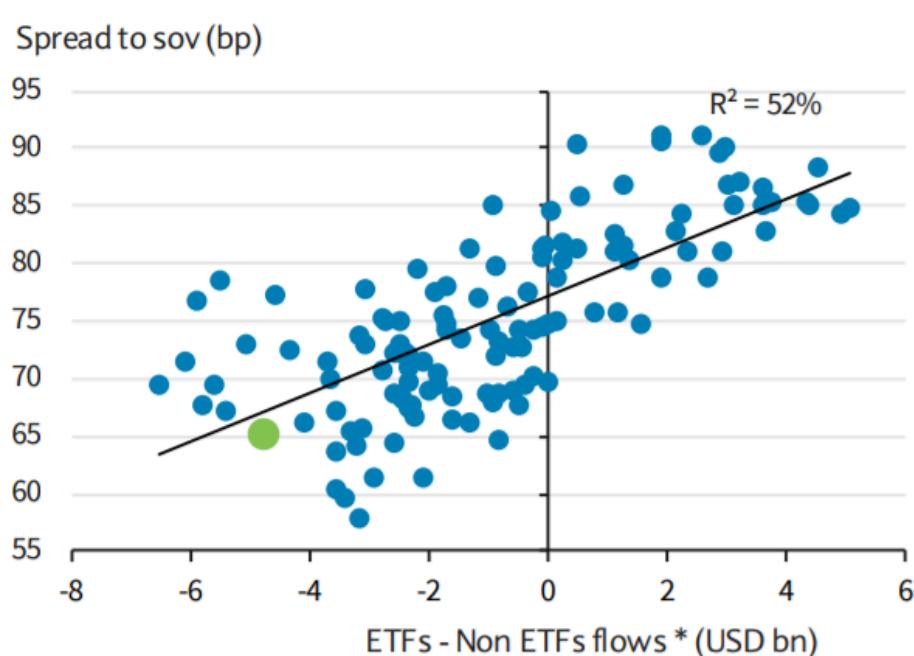


Note: Data as of May 22<sup>nd</sup>. Source: EPFR, Barclays Research

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FIGURE 22

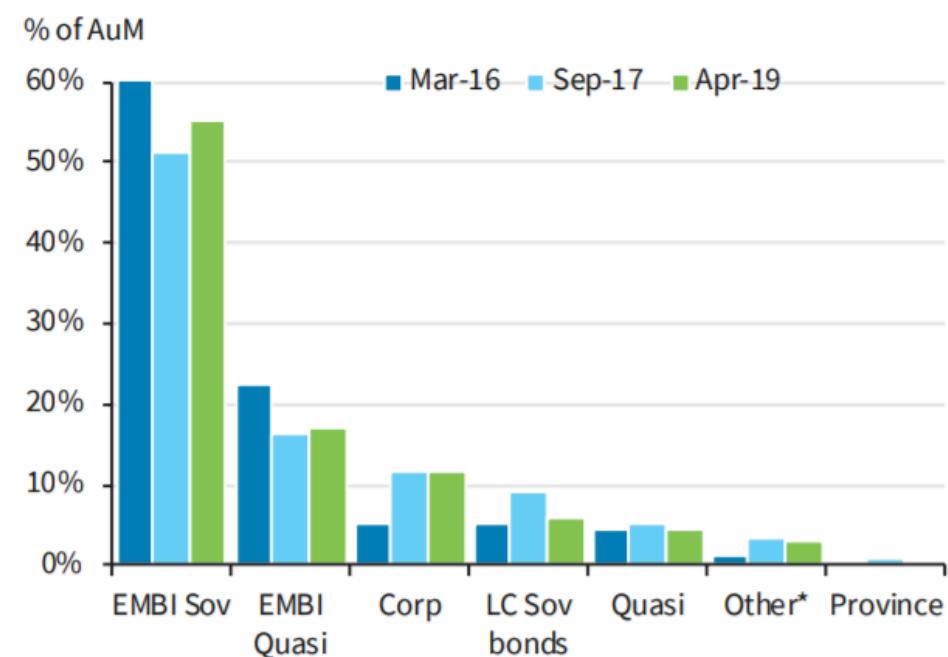
ETFs facing more outflows than actively managed funds coincide with corporates outperforming sovereign



Note: ETFs – Non-ETFs flows denote the cumulative rolling 4 weeks flows into EM Hard Currency bonds tracked by EPFR of ETFs funds minus actively managed funds. Weekly data since Jan 2017. Source: EPFR, Barclays Research:

FIGURE 23

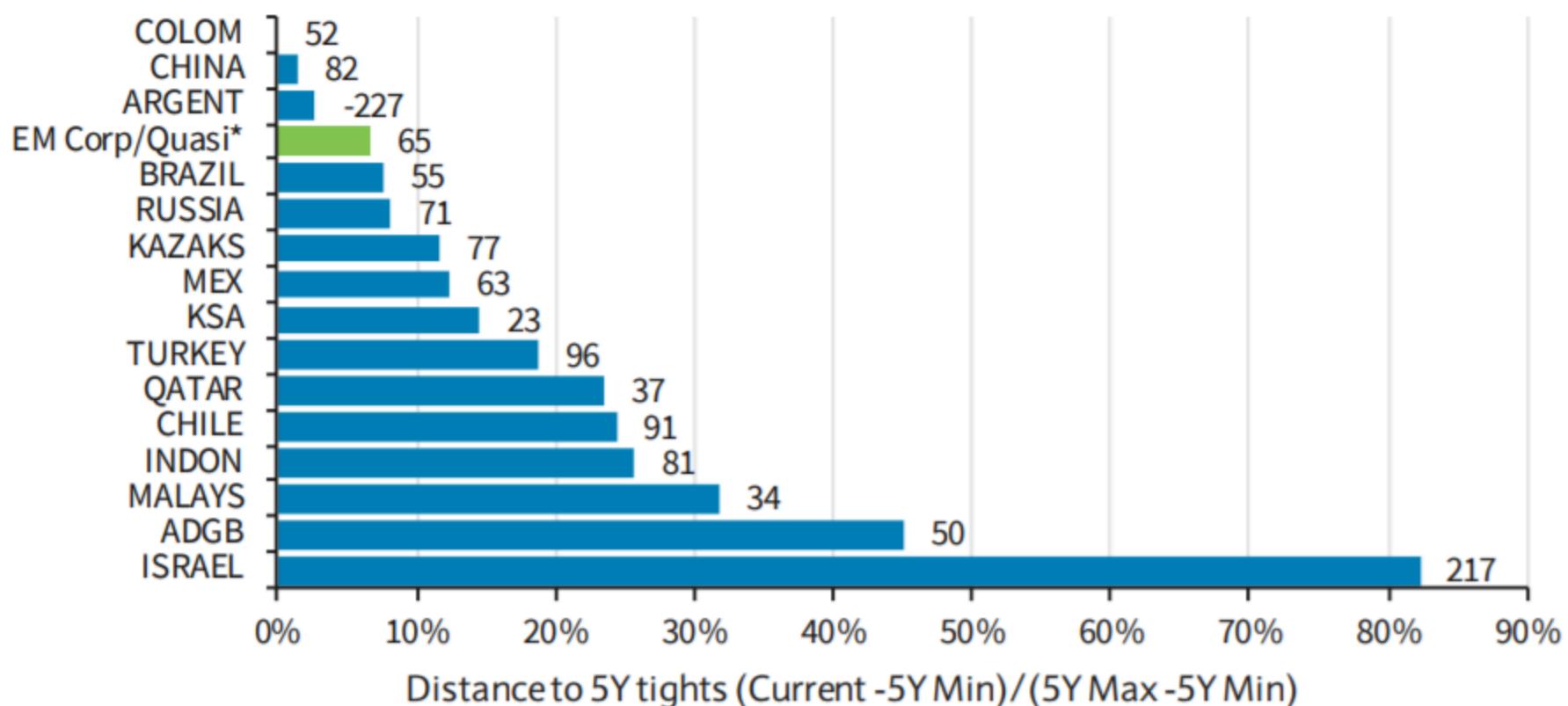
EMBI funds tend to reduce their exposure to off-benchmark issuers during risk-off periods (March 2016) and increase it during periods of risk-on (September 2017)



Note: Sample of 20 actively managed EM funds totaling \$40bn AuM. \*Other denotes Cash, US/treasury and currencies. Source: Barclays Research

FIGURE 3

Spread to sovereign by country in a 5y range: Outside of Israel and Abu Dhabi corporates, EEMEA/LatAm corporates trade on the tight end of the range relative to their sovereign

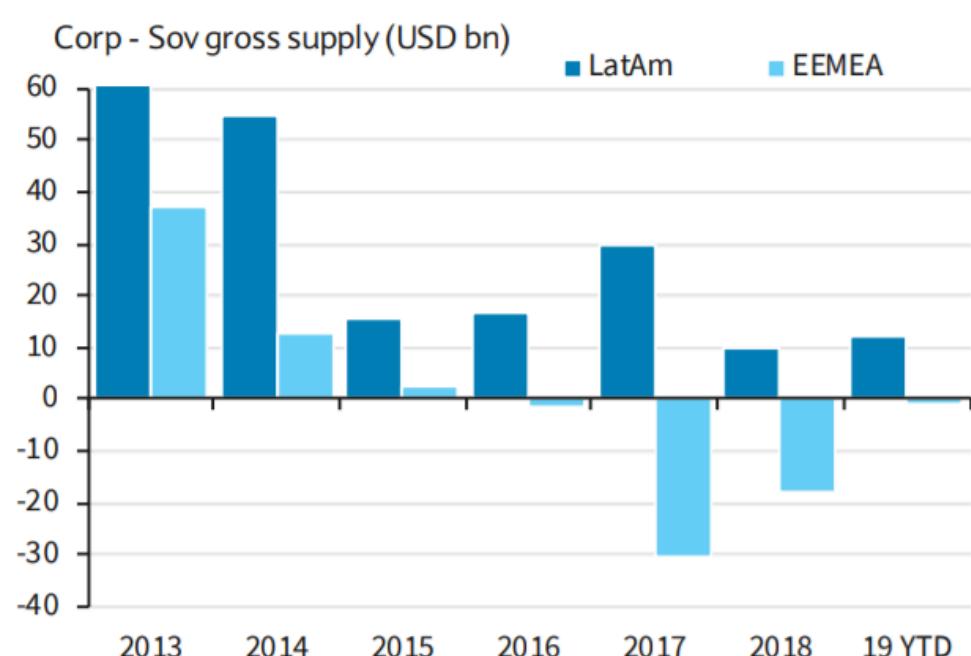


Note: Data based on 800 bonds in EM corporates with maturity-matched sovereign bond. Data as of May 21.

Source: Barclays Research

FIGURE 4

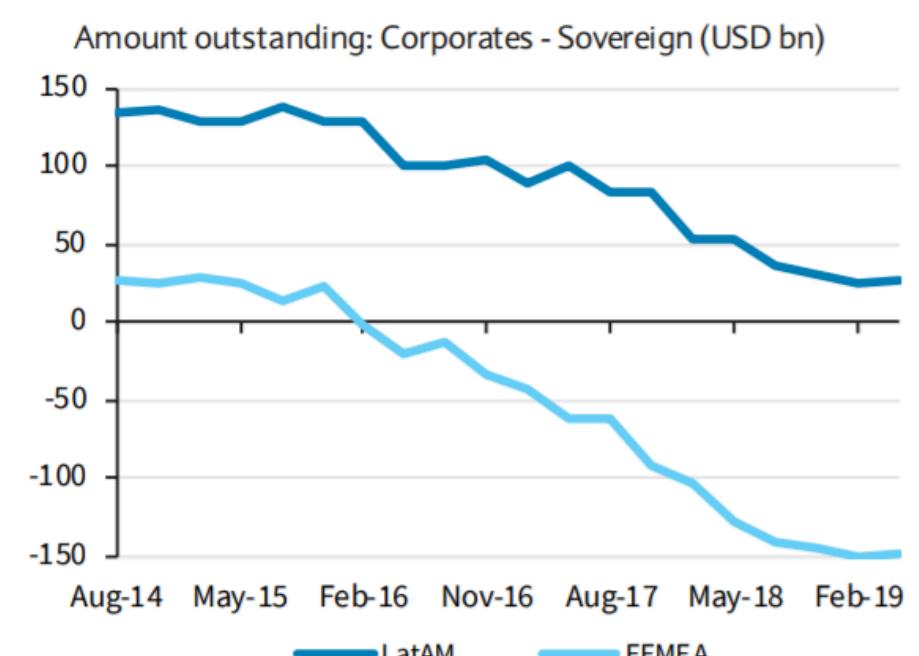
Over the years, issuance has grown faster in sovereigns than corporates



Source: BondRadar, Barclays Research

FIGURE 5

In 2014, there was \$160bn more EEMEA/LatAm corporate debt than sovereign, versus -\$122bn now



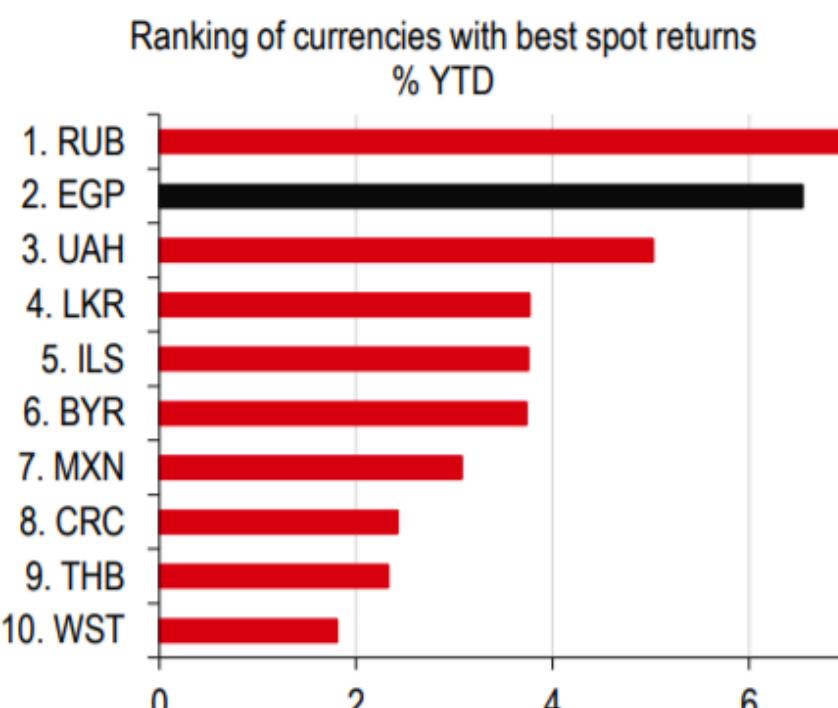
Note: Using the amount outstanding from the Bloomberg Barclays indices as a proxy. Source: Barclays Research

## Top of the world

After holding steady for eight straight months, the Egyptian Pound (EGP) has been on the rise, gaining by close to 6% against the USD since the start of the year. Bloomberg data show that this means the EGP, as of May 27<sup>th</sup>, was the second best performing spot currency against the US dollar in 2019. Adjusted for carry, the Egyptian Pound has had the highest total return in the world, delivering close to 3ppt more than the Russian Ruble and twice as much as the Mexican Peso, in second and third place respectively (see charts 3 and 4).

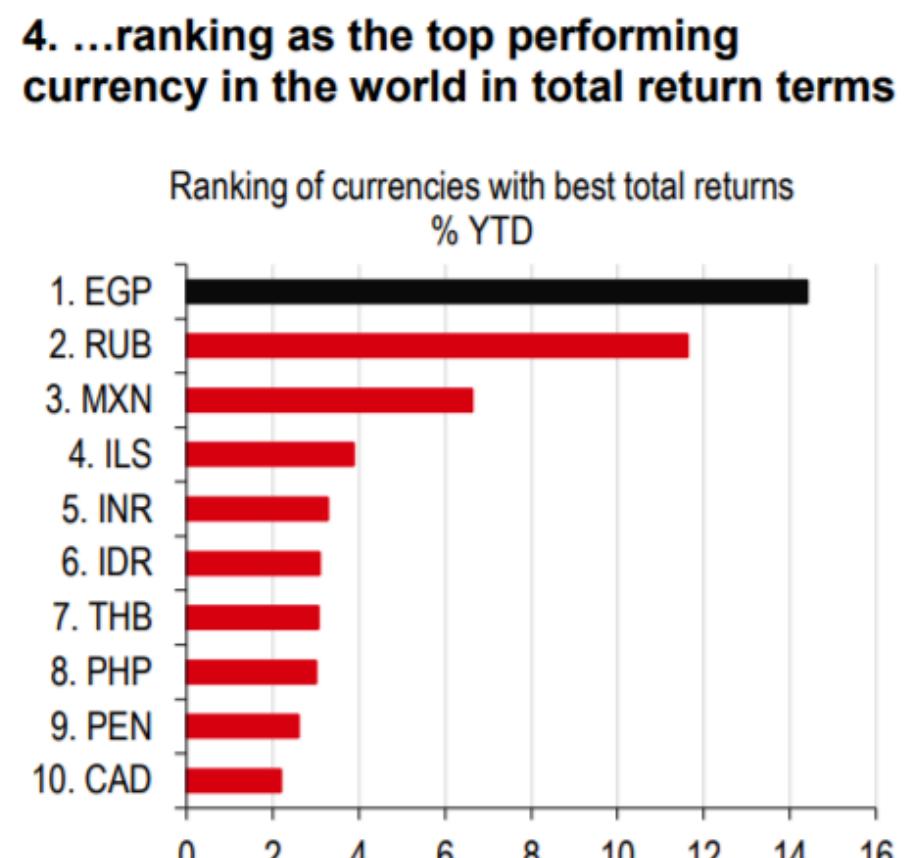
In trade-weighted terms, the gains have also been marked, with our calculations showing EGP up 11% y-o-y as of April 2019. Adjusted for inflation differentials, our estimate of the real effective exchange rate (REER) points to a real gain of 20% y-o-y, and 43% since the currency devalued in late 2016 as part of the IMF-anchored economic reform programme (see chart 2).

### 3. The EGP has outperformed against the USD...



Source: Bloomberg

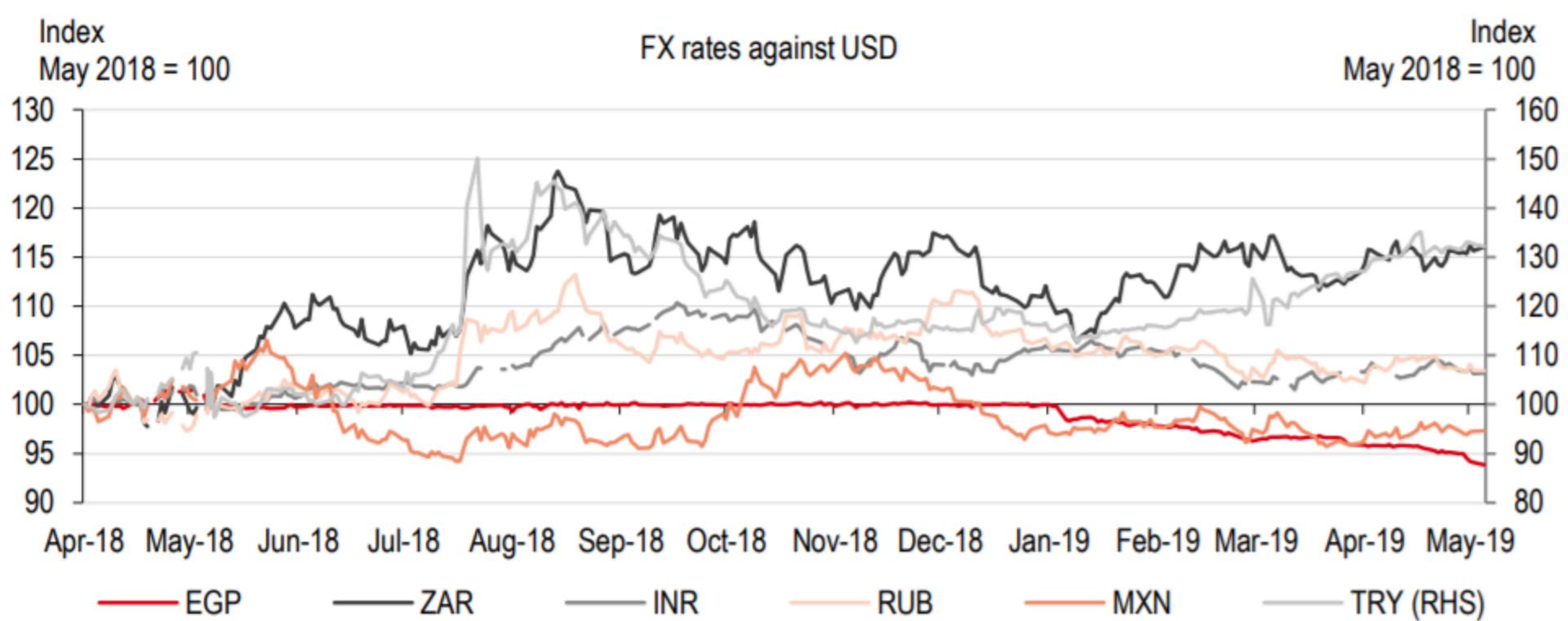
Note: As of May 27th



Source: Bloomberg

Note: As of May 27th

### 13. Despite reform, EGP has remained a lot less volatile than its EM peers



Source: Bloomberg, HSBC

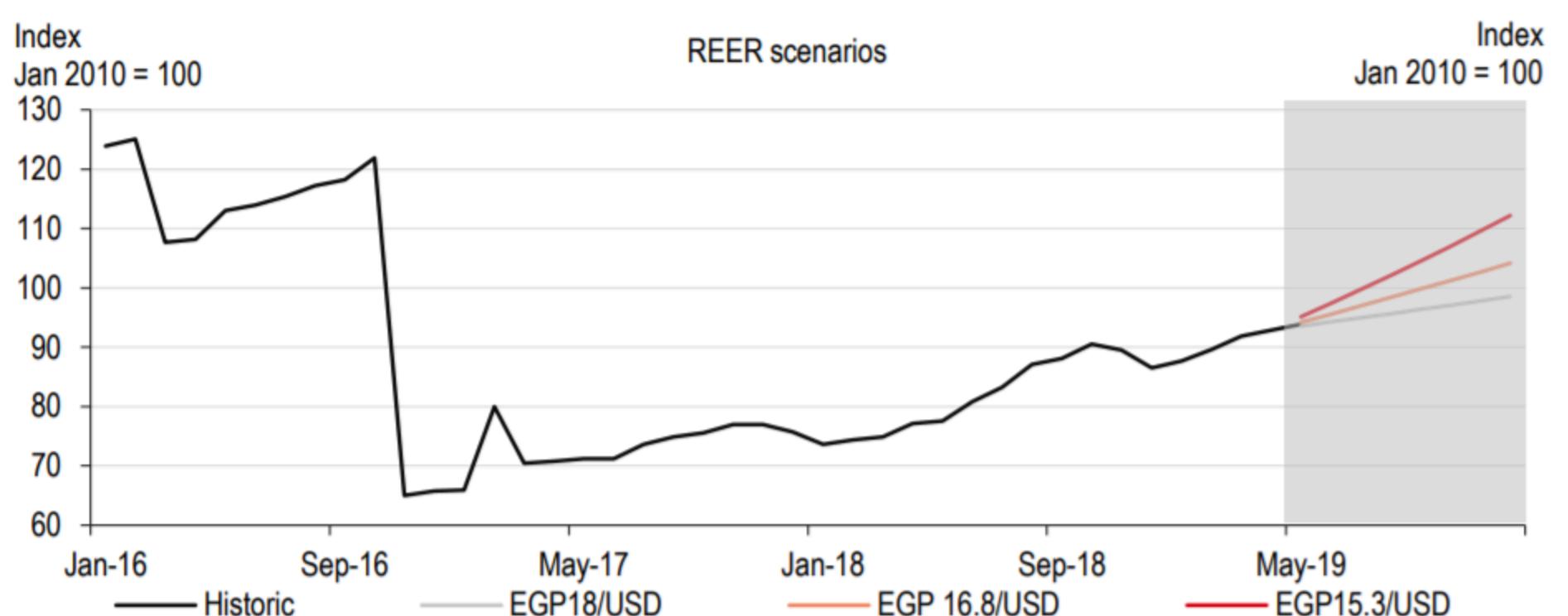
## It's not the downside that's the real risk

With the new FX regime in its infancy and the authorities offering only limited guidance on regime reform, the risk that we have misread the outlook for EGP is clear, particularly given the volatility of capital flows that have driven its recent performance. The strength of the trend we've seen so far this year also makes it particularly difficult to pinpoint the timing of a turn.

The short-term nature of the capital flows that have driven the currency stronger adds to those concerns, with foreigners able to rapidly exit the market. This could come from a change in risk sentiment, or because there is evidence that an overvalued currency may have pushed rebalancing into reverse. Alternatively, capital could exit as investors choose to book profit, much as they did when the currency last touched 16 against the dollar in early 2017.

In such an environment, the downward pressure on EGP would intensify, with the risk that the adjustment is disruptive and more marked than our base case scenario. Indeed, the early 2017 reversal saw EGP fall 15% against the dollar in a matter of days, with the interbank market struggling to manage such large scale redemptions of short-term capital positions.

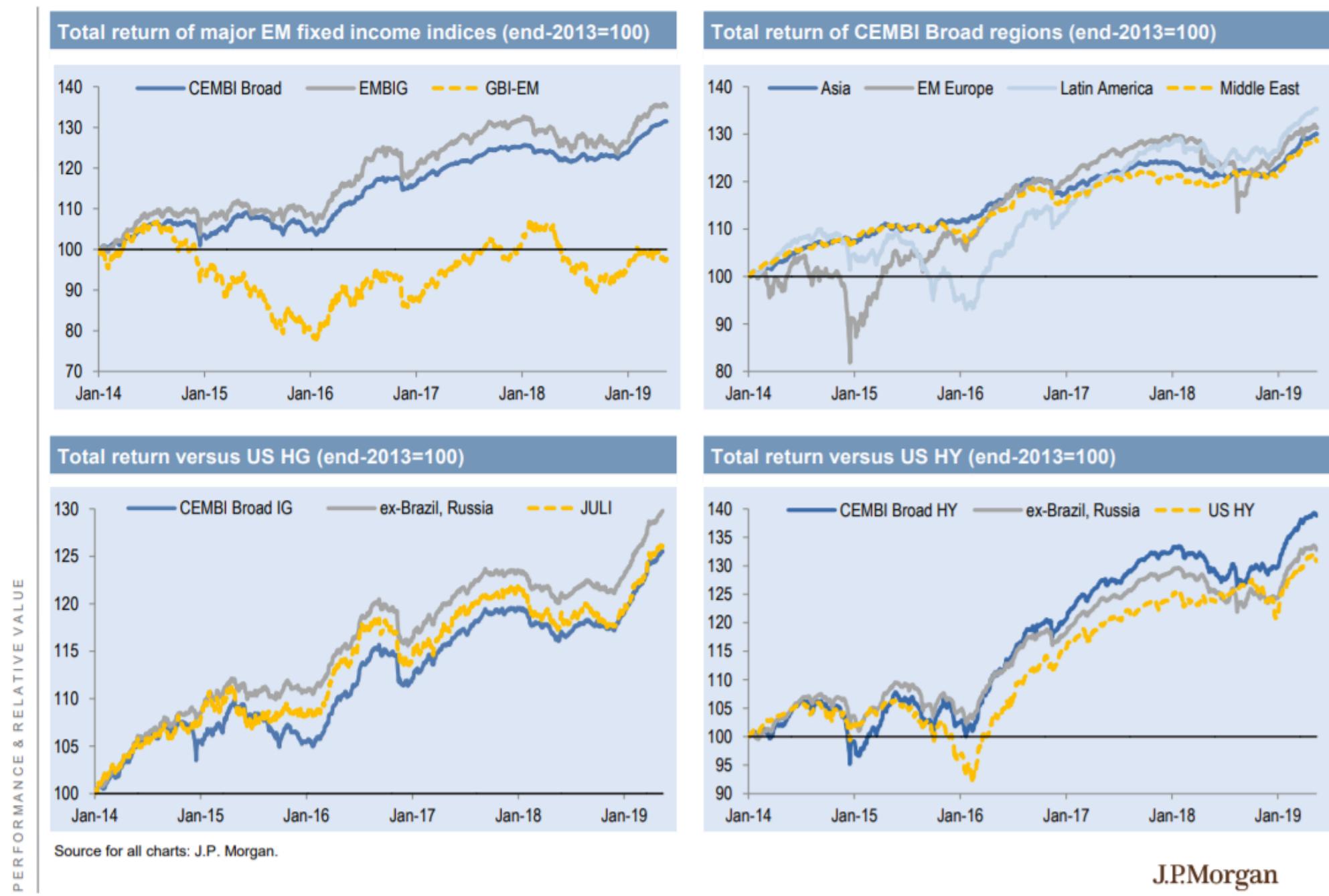
#### 14. Hard gains can be easily lost



Source: HSBC

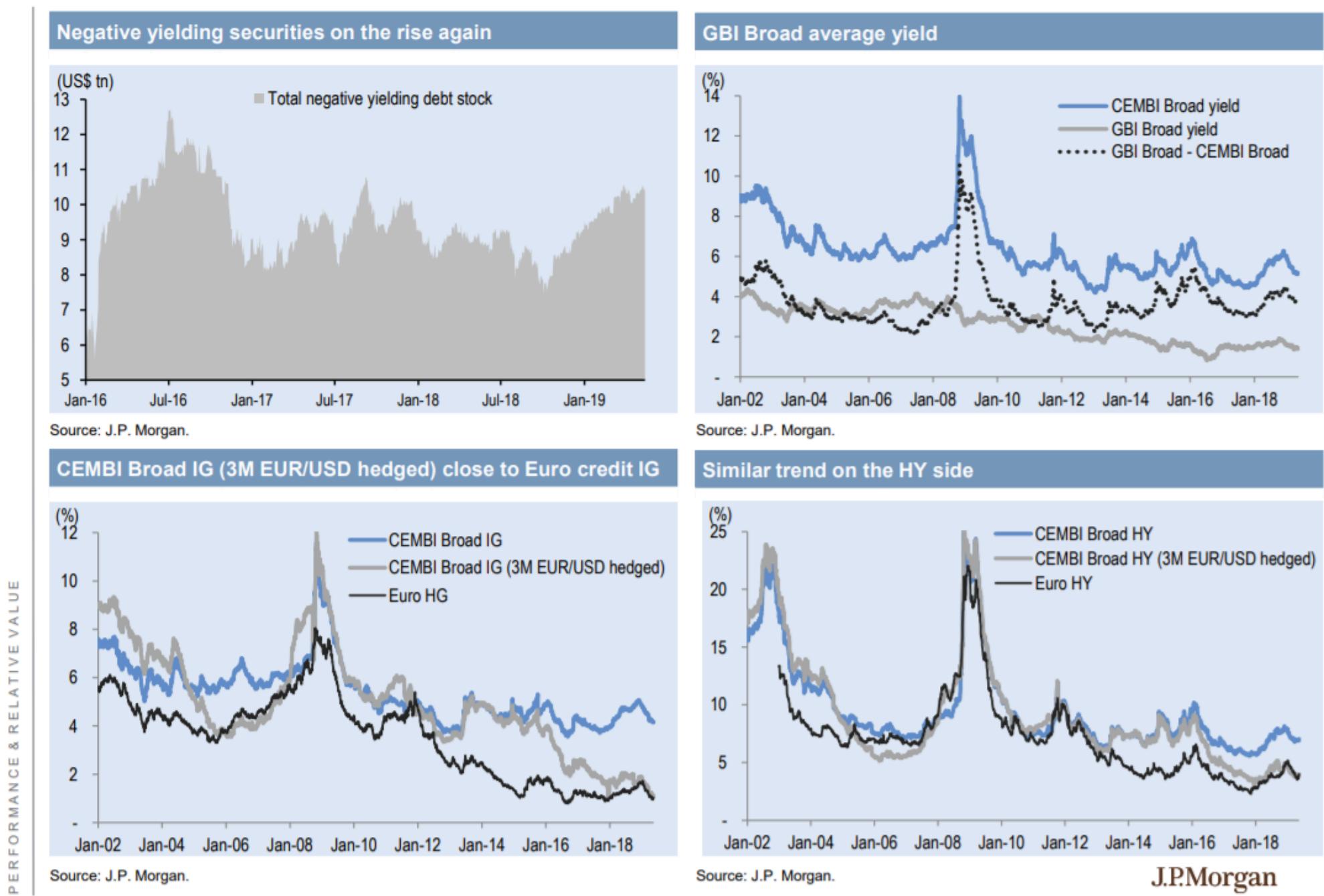
Note: REER is CPI-adjusted and trade weighted for Egypt's top 20 trading partners. Future values based on simplified scenarios, incorporating HSBC forecasts and estimates of inflation and exchange rates for relevant countries

## EM corporate returns have been less volatile than other EM asset classes



8

Relative attractiveness getting compressed due to hedging costs, but negative yielding securities rising again

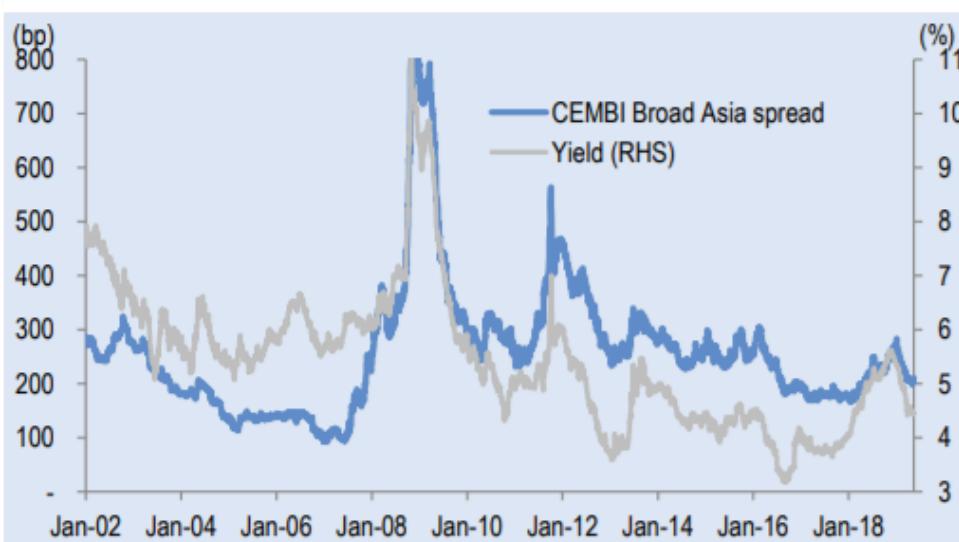


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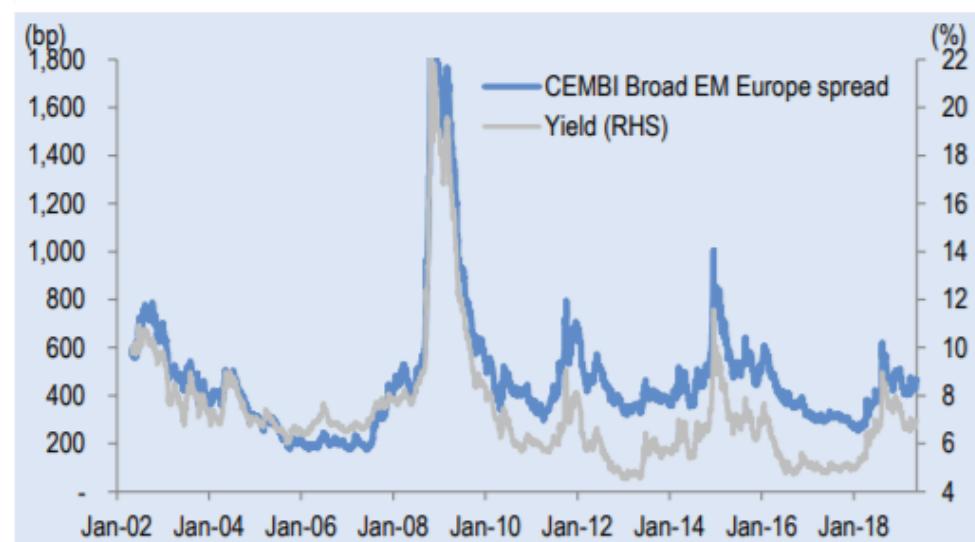
71

# Higher beta regions starting to decompress

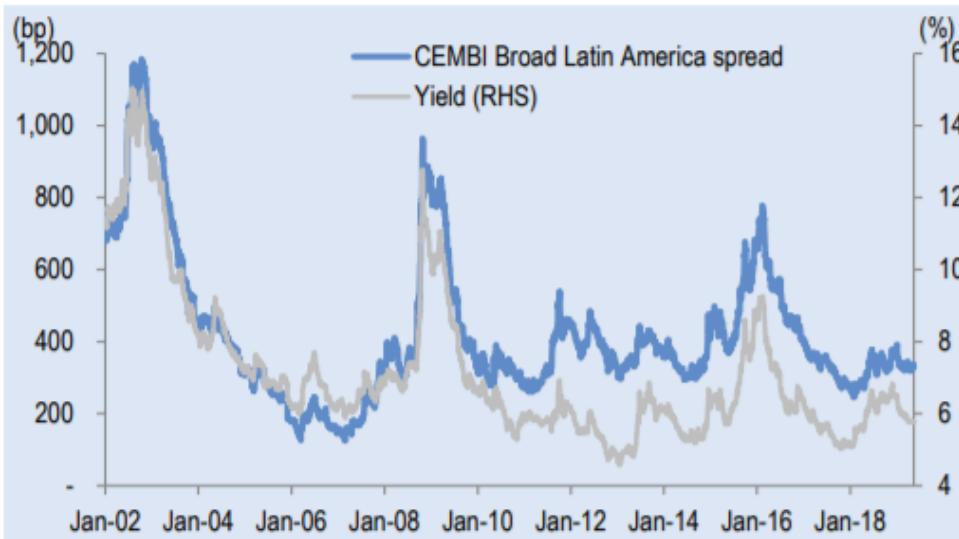
**CEMBI Broad Asia spread and yield**



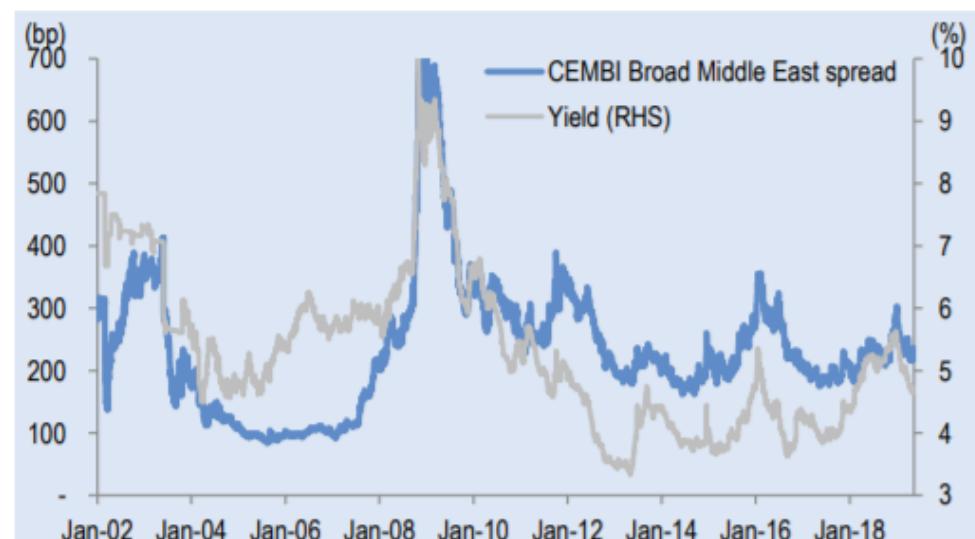
**CEMBI Broad EM Europe spread and yield**



**CEMBI Broad Latam spread and yield**



**CEMBI Broad Middle East spread and yield**

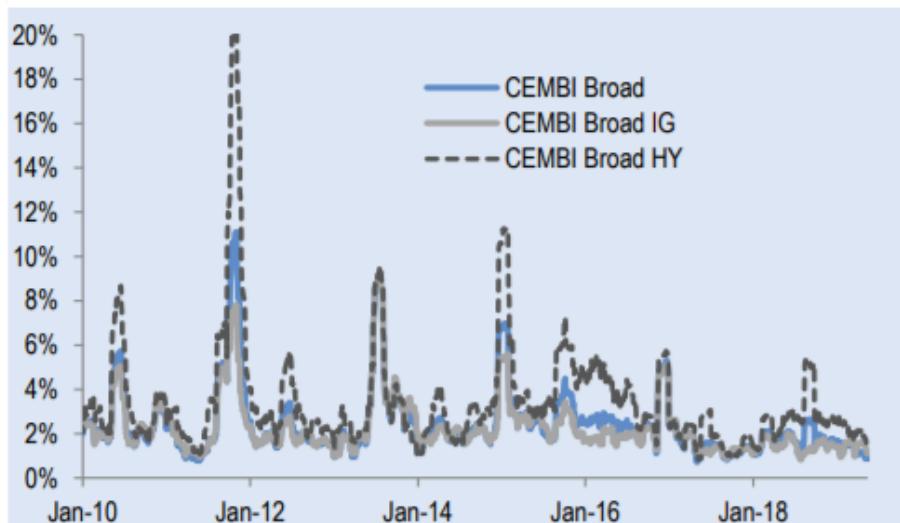


Source for all charts: J.P. Morgan.

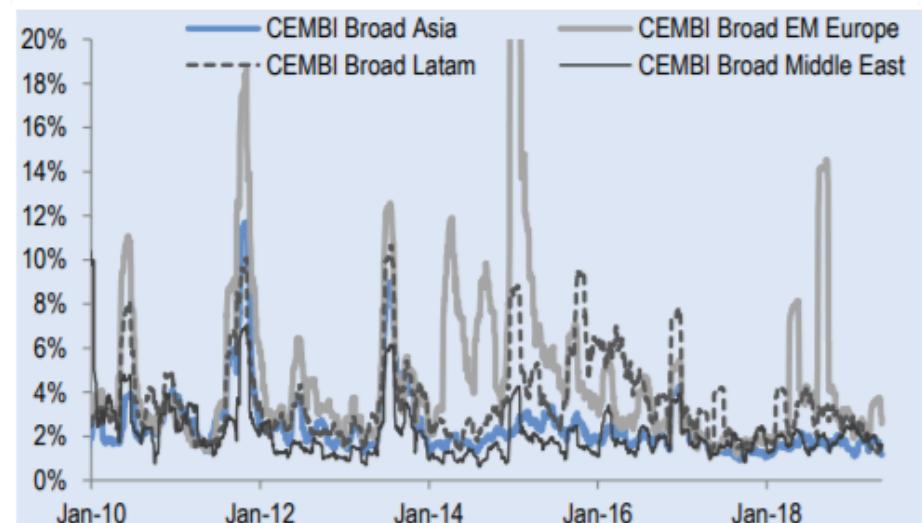
J.P.Morgan

Price return volatility has been coming down overall, though still elevated for EM Europe

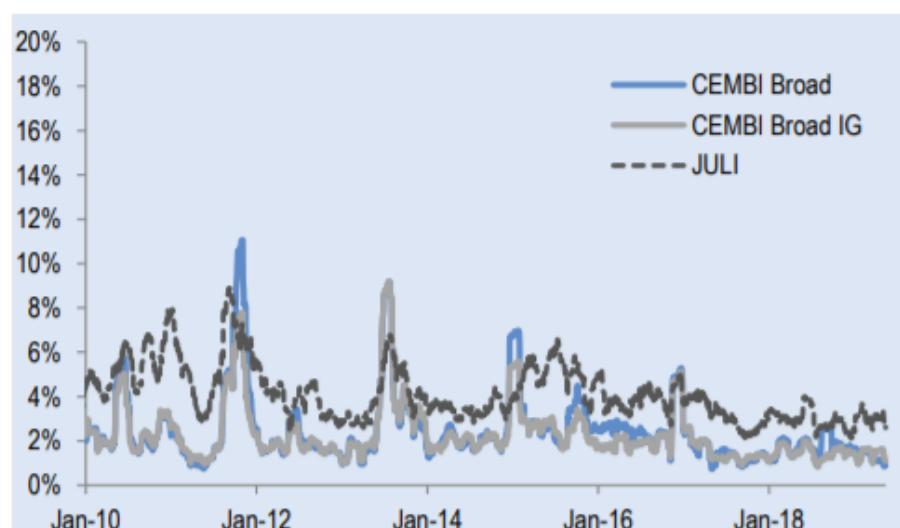
CEMBI Broad price return volatility by rating



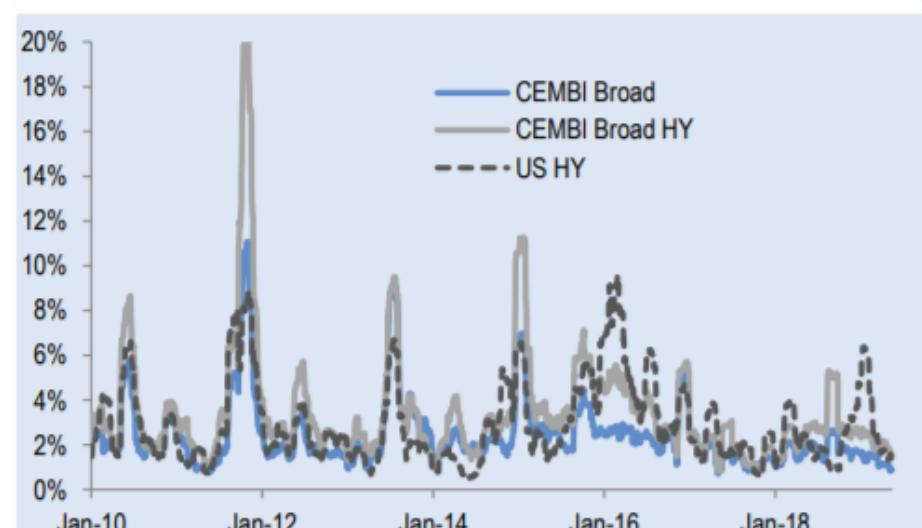
CEMBI Broad regional price return volatility



CEMBI IG price volatility has mostly been lower than US HG



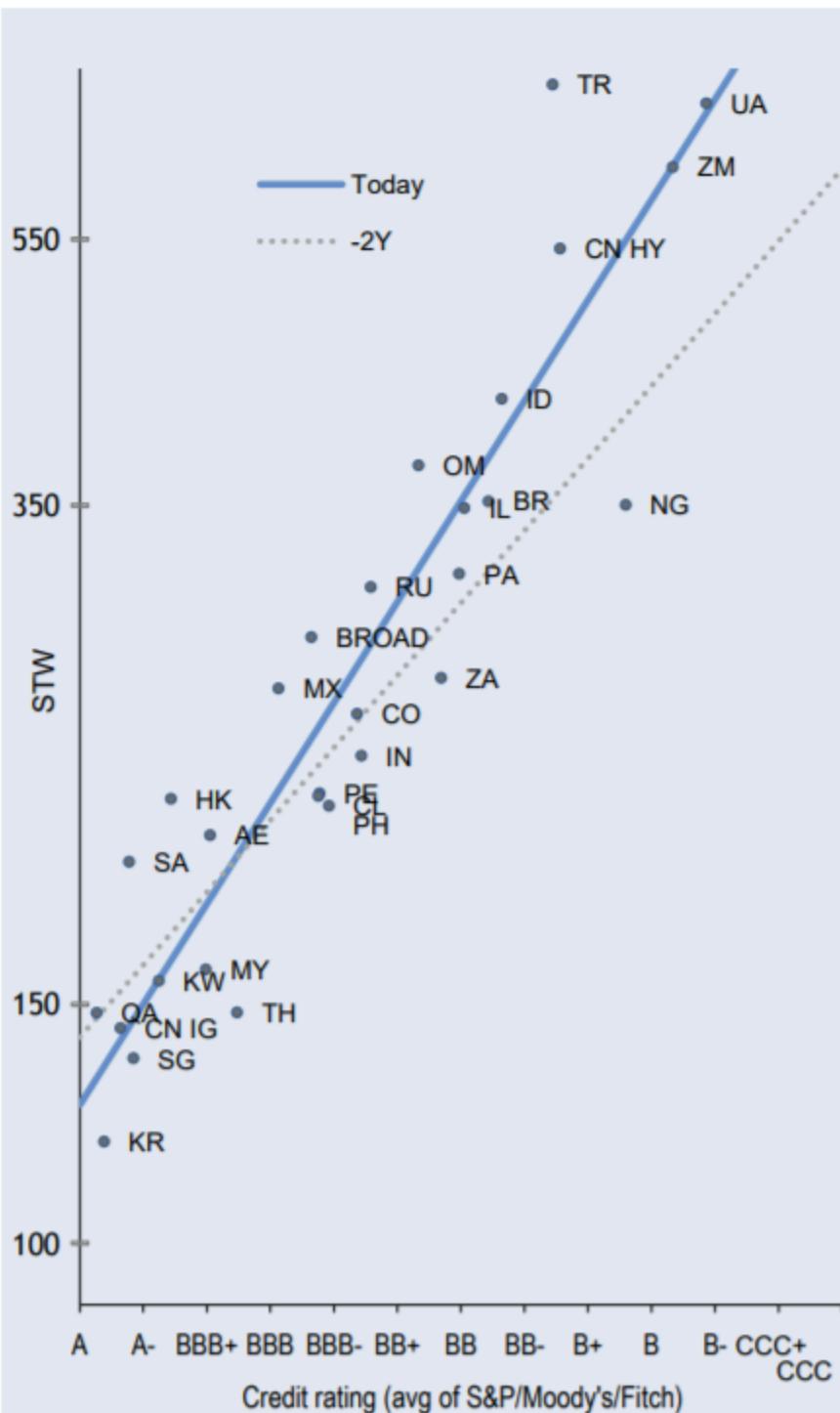
More mixed in HY, with some pickup recently



Source for all figures: J.P. Morgan. Price return volatility based on the standard deviation of 30-day rolling daily change.

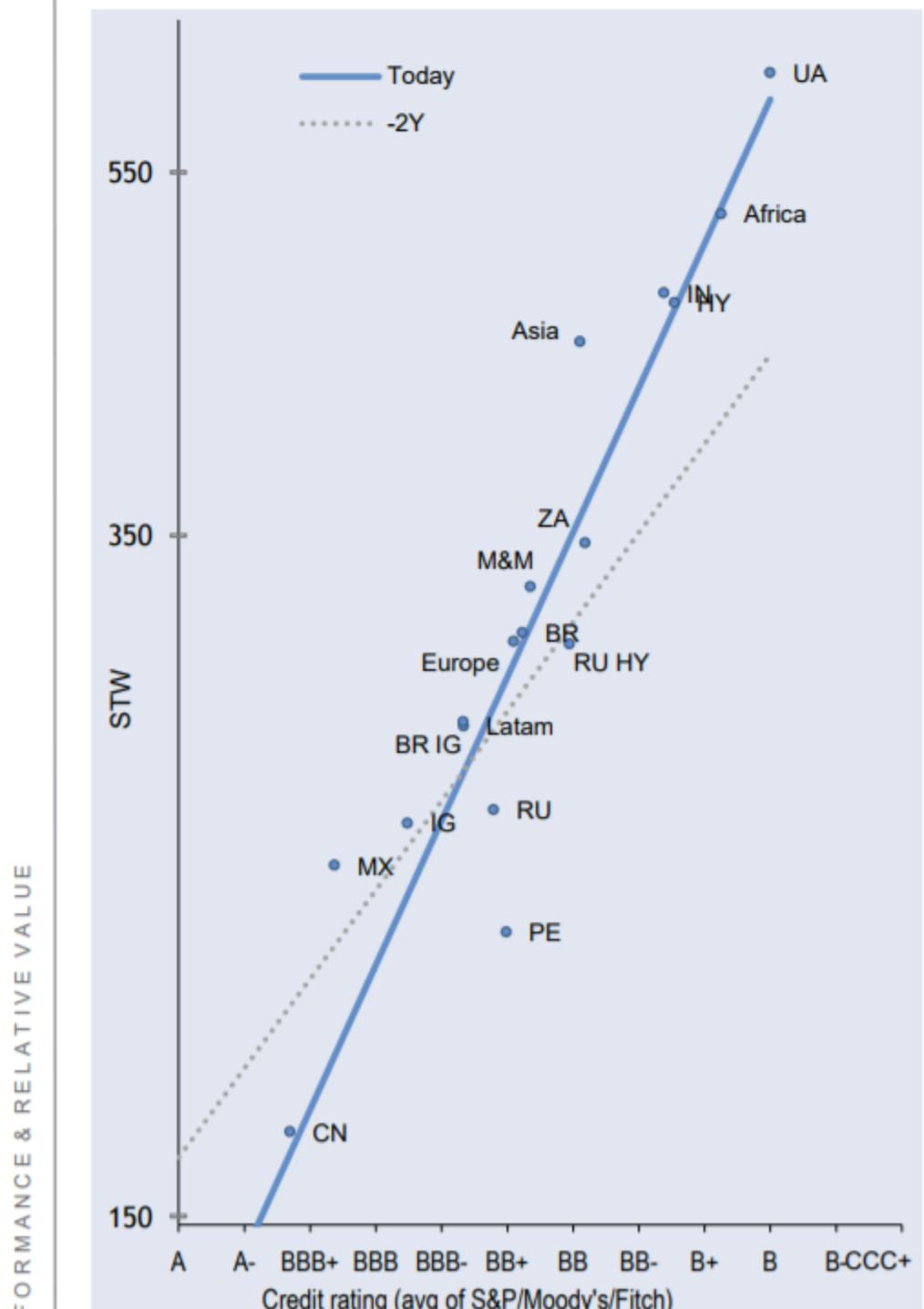
J.P.Morgan

## CEMBI Broad country spread versus ratings



J.P.Morgan

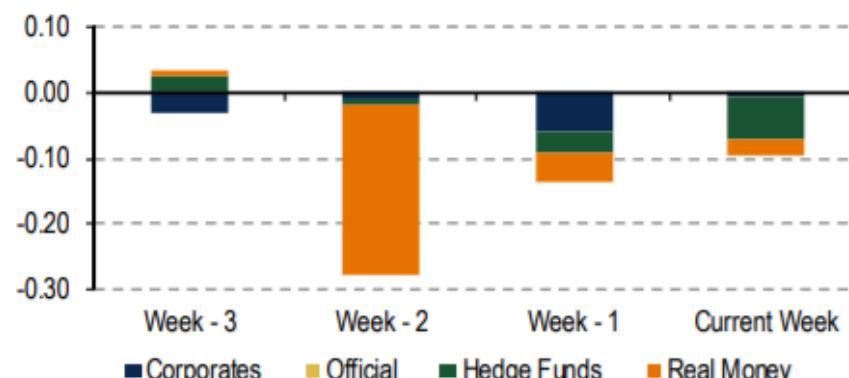
## CEMBI metals & mining rating vs spread



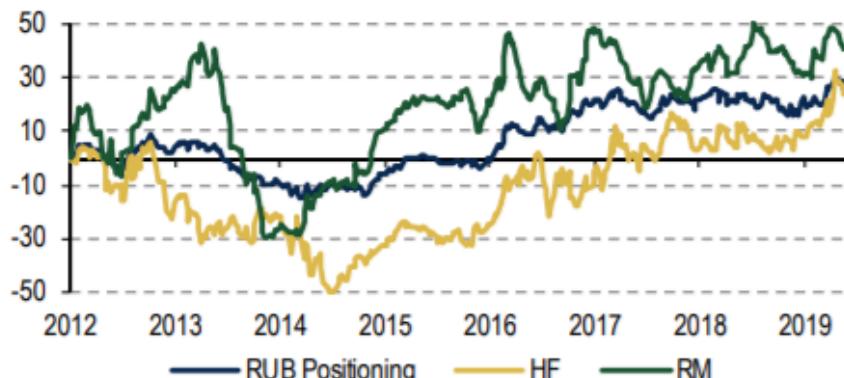
Source (both charts): J.P. Morgan, log scale; As of May 14, 2019.

# RUB, TRY, ZAR, PLN

**Chart 141: BofAML Weekly indexed RUB flow**

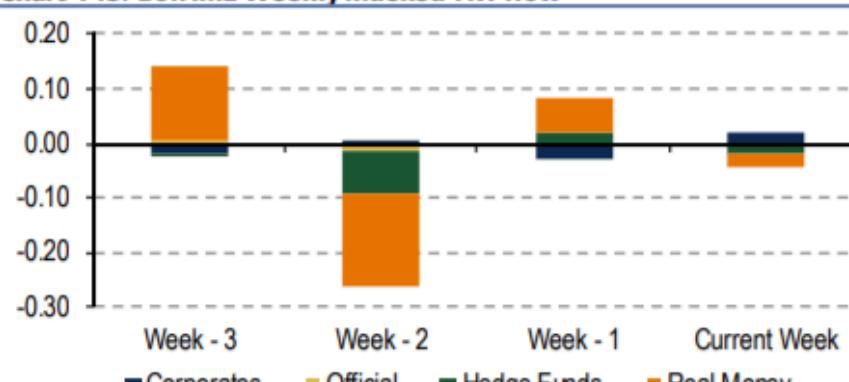


**Chart 142: RUB Positioning**

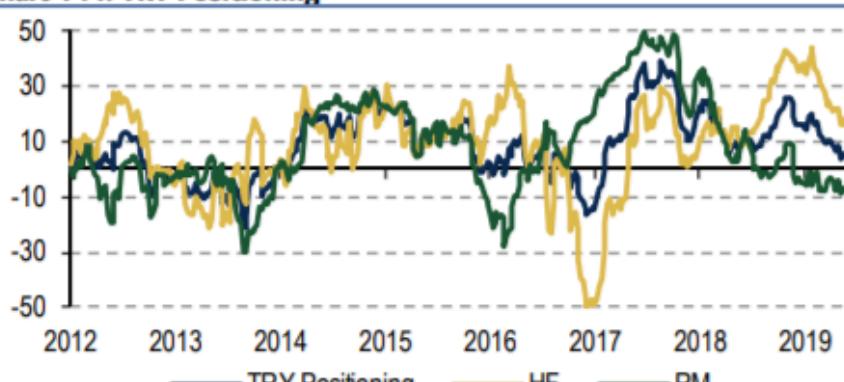


Source: BofA Merrill Lynch Global Research, Bloomberg

**Chart 143: BofAML Weekly indexed TRY flow**

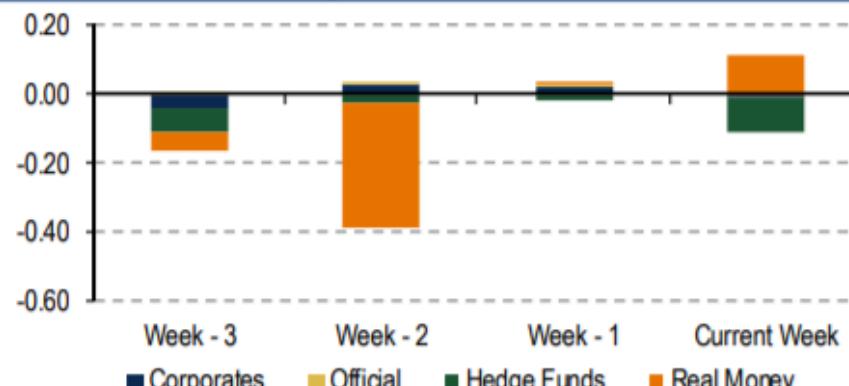


**Chart 144: TRY Positioning**

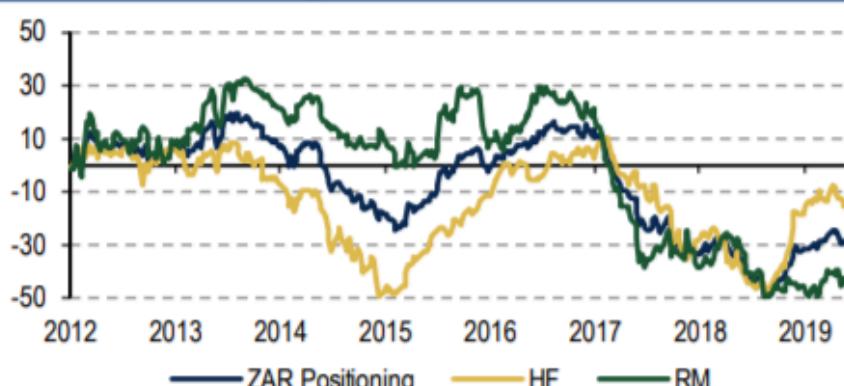


Source: BofA Merrill Lynch Global Research, Bloomberg

**Chart 145: BofAML Weekly indexed ZAR flow**



**Chart 146: ZAR Positioning**



Source: BofA Merrill Lynch Global Research, Bloomberg

**FIGURE 41**

New and existing dislocations in EEMEA

Relationship	New Dislocations				Conclusion	
	Spread History (Z-Spread)			Z-Score		
	6mo Chart	Min	Now	Max		
BATELC \$2020 - BHRAIN \$2020		-5	75	75	3.5	BATELC \$2020 is CHEAP to BHRAIN \$2020
ISCTR \$2021 - VAKBN \$2021		-36	-36	47	2.9	ISCTR \$2021 is RICH to VAKBN \$2021
MUMTAK \$2021 - BHRAIN \$2020		29	144	144	2.8	MUMTAK \$2021 is CHEAP to BHRAIN \$2020
GARAN \$2023 - TCZIRA \$2022		-112	-112	-14	2.8	GARAN \$2023 is RICH to TCZIRA \$2022
GARAN \$2022 - TCZIRA \$2022		-143	-143	-55	2.6	GARAN \$2022 is RICH to TCZIRA \$2022
TCZIRA \$2022 - YKBNK \$2022		-38	80	80	2.5	TCZIRA \$2022 is CHEAP to YKBNK \$2022
MOROC \$2022 - ROMANI \$2024		-30	-30	28	2.5	MOROC \$2022 is RICH to ROMANI \$2024
FINBN \$2022 - TCZIRA \$2022		-200	-200	-74	2.4	FINBN \$2022 is RICH to TCZIRA \$2022
BHRAIN \$2020 - DUGB \$2020		81	81	201	2.4	BHRAIN \$2020 is RICH to DUGB \$2020
ROMGB €2021 - TURKEY €2021		-446	-431	-230	2.3	ROMGB €2021 is RICH to TURKEY €2021
RUSSIA \$2043 - TURKEY \$2043		-261	-261	-153	2.3	RUSSIA \$2043 is RICH to TURKEY \$2043
BHRAIN \$2023 - CROATI \$2023		114	192	192	2.3	BHRAIN \$2023 is CHEAP to CROATI \$2023
RUSSIA \$2042 - TURKEY \$2043		-262	-262	-154	2.2	RUSSIA \$2042 is RICH to TURKEY \$2043
BELRUS \$2027 - BHRAIN \$2026		24	32	99	2.2	BELRUS \$2027 is RICH to BHRAIN \$2026
TEVA \$2022 - ISRAEL \$2022		159	303	304	2.2	TEVA \$2022 is CHEAP to ISRAEL \$2022

**Existing Dislocations**

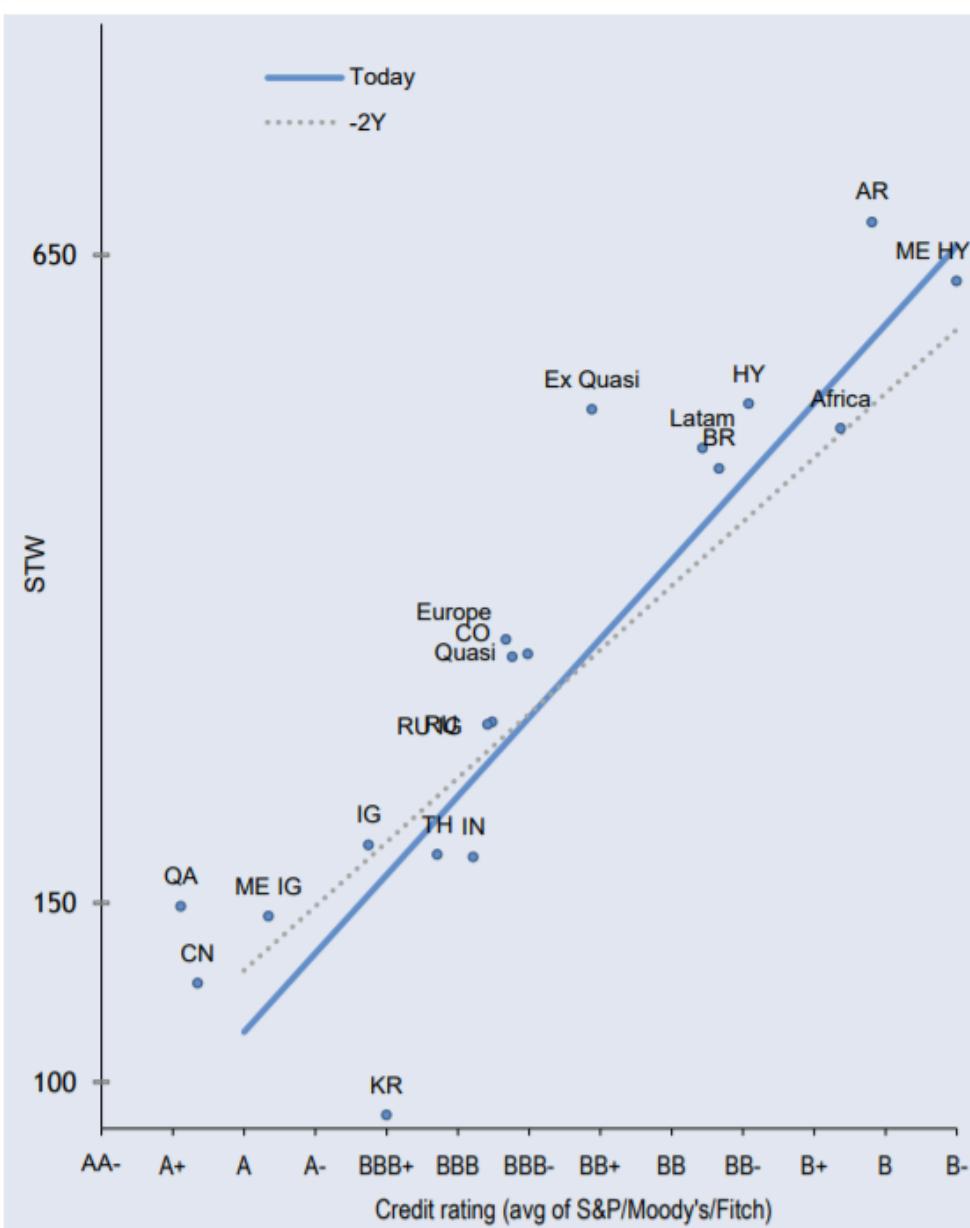
Relationship	Existing Dislocations				Conclusion	
	Spread History (Z-Spread)					
1y Chart	Min	Now	Max			
EXCRTU \$2023 - GARAN \$2023		12	66	66	3.6	EXCRTU \$2023 is CHEAP to GARAN \$2023
NLMKRU \$2023 - VIP \$2022		14	14	79	3.5	NLMKRU \$2023 is RICH to VIP \$2022
NLMKRU \$2023 - RURAIL \$2024		13	13	38	3.1	NLMKRU \$2023 is RICH to RURAIL \$2024
ISCTR \$2022 sub - VAKBN \$2022 sub		-54	-54	144	2.9	ISCTR \$2022 sub is RICH to VAKBN \$2022 sub
GHANA \$2023 - ZAMBIN \$2022		-1353	-1353	-546	2.9	GHANA \$2023 is RICH to ZAMBIN \$2022

Note: Dislocation defined as a spread differential between a pair of bonds more than 1.5 standard deviations from the 6mo median (modified z-score; see highlighted column). Existing dislocations denotes a spread differential with a z-score above 1.5x at least over the past two weeks.

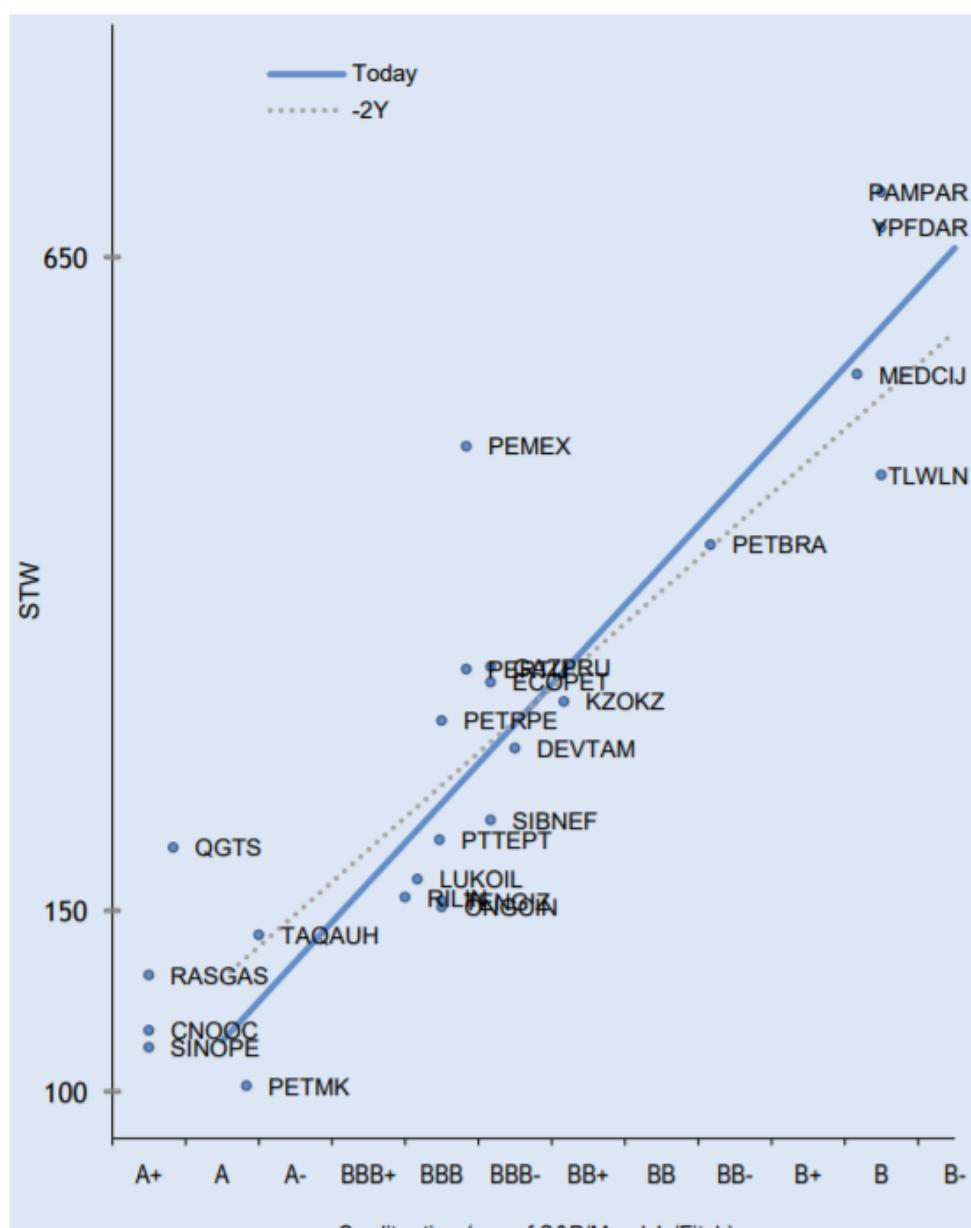
Source: Barclays Research

# CEMBI oil & gas relative value

## CEMBI oil & gas relative value – by segment



## CEMBI oil & gas relative value – by issuer

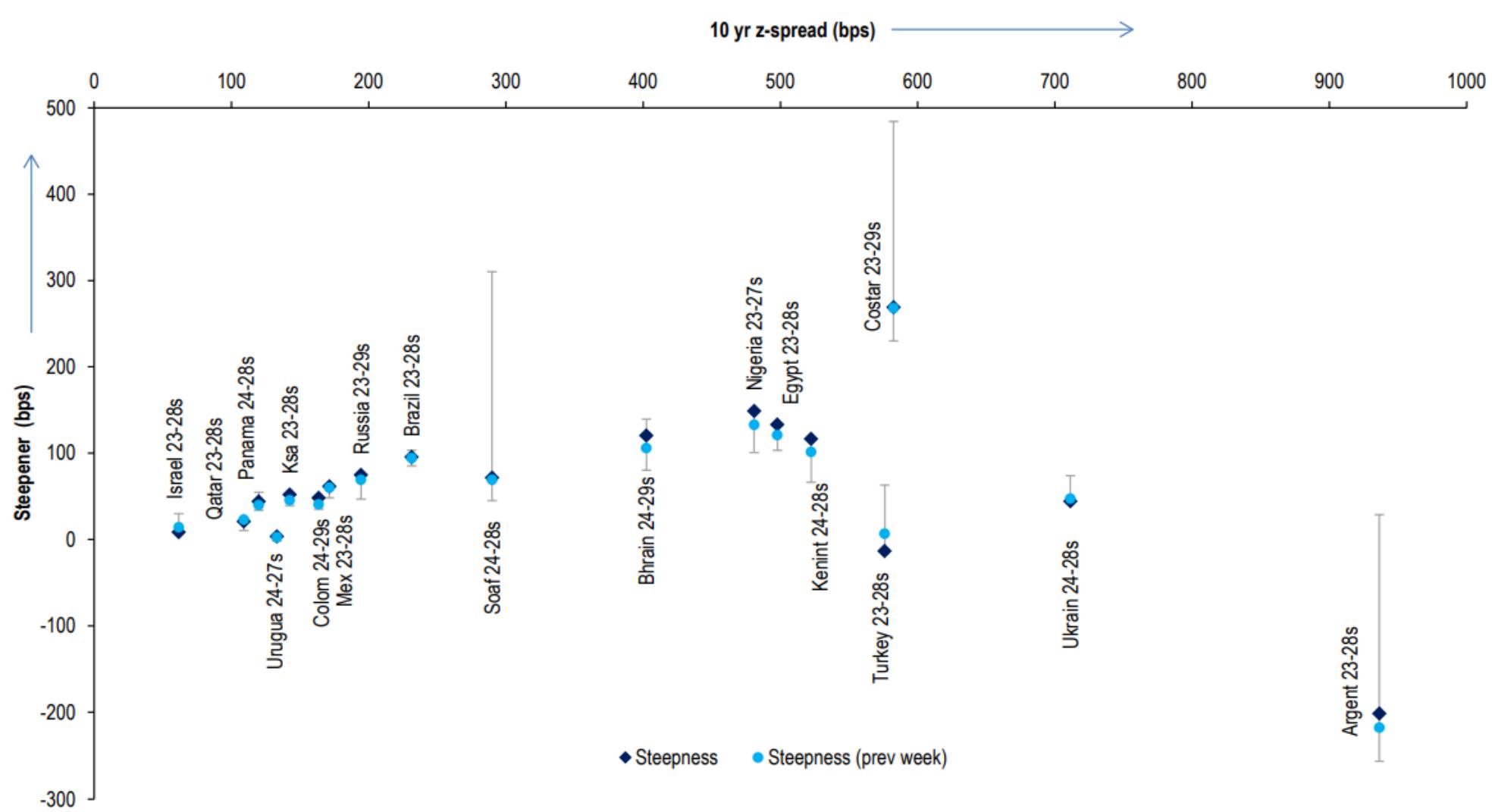


Source (both charts): J.P. Morgan, log scale; As of May 14, 2019

J.P.Morgan

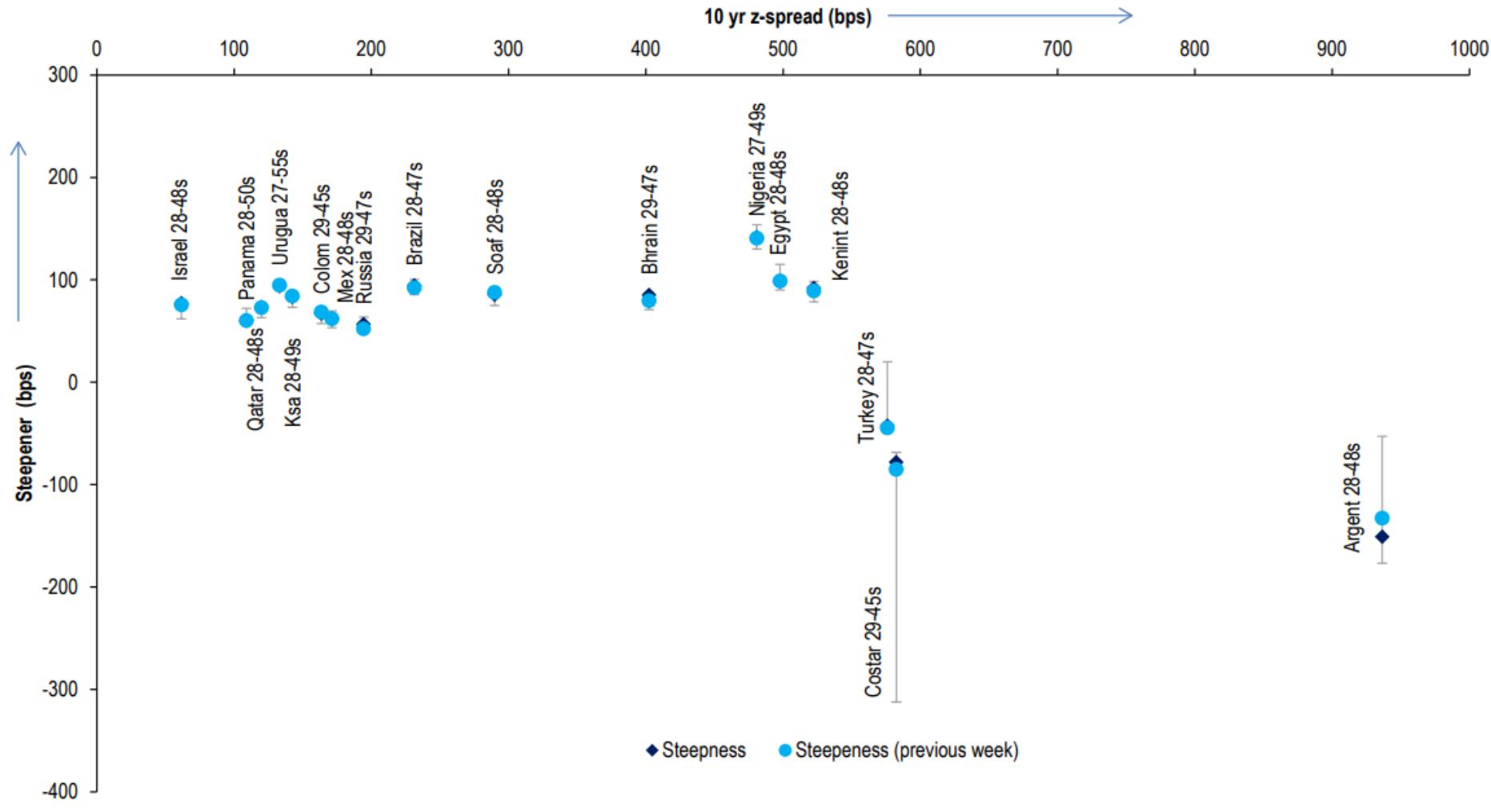
## Sovereign Curve Moves Snapshot

Figure 43. 5-10s z-spread levels with 3m range



Source: Citi Research, Bloomberg.

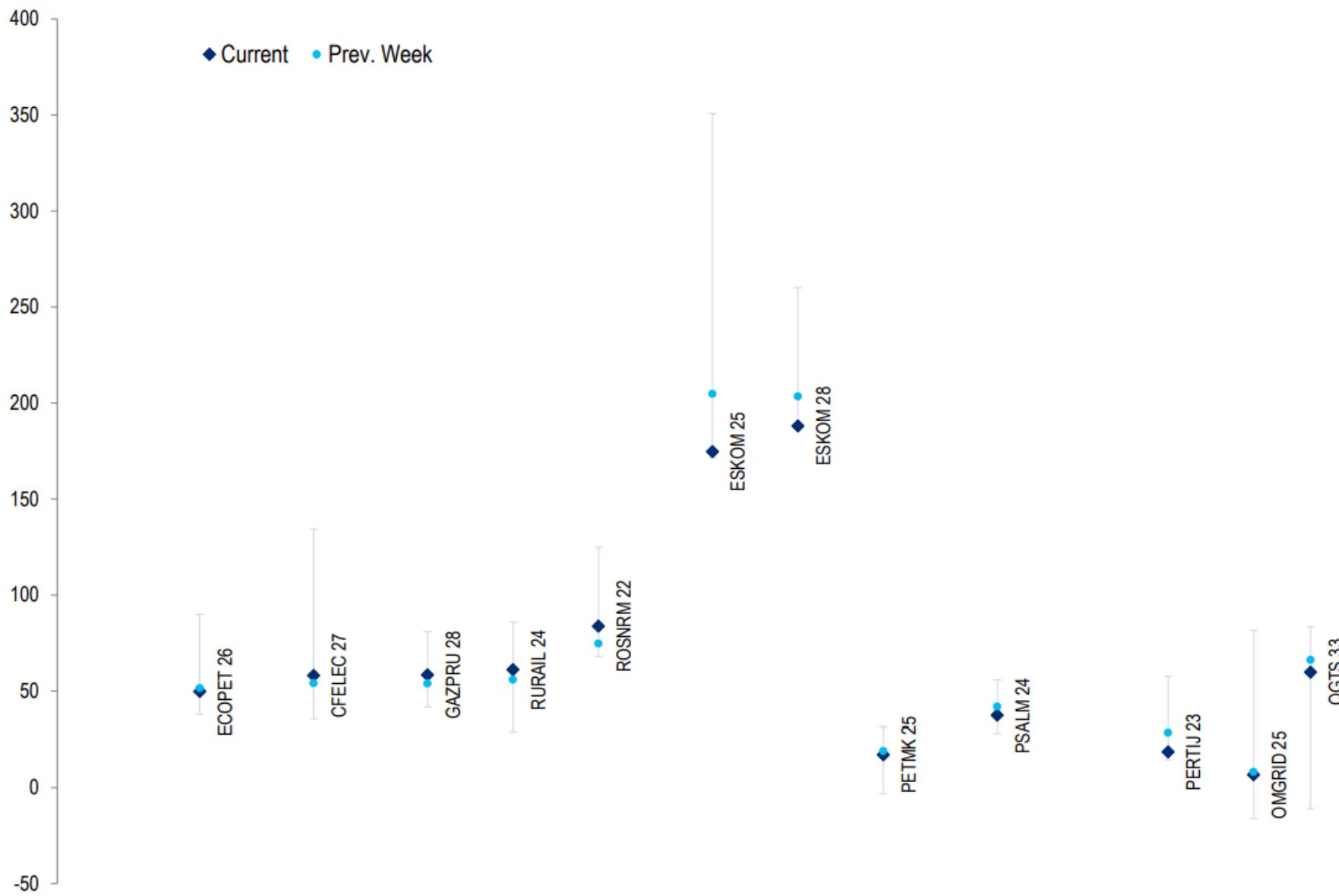
Figure 44. 10-30s z-spread levels with 3m range



Source: Citi Research, Bloomberg.

## Quasi Sovereign vs. Sovereign Monitor

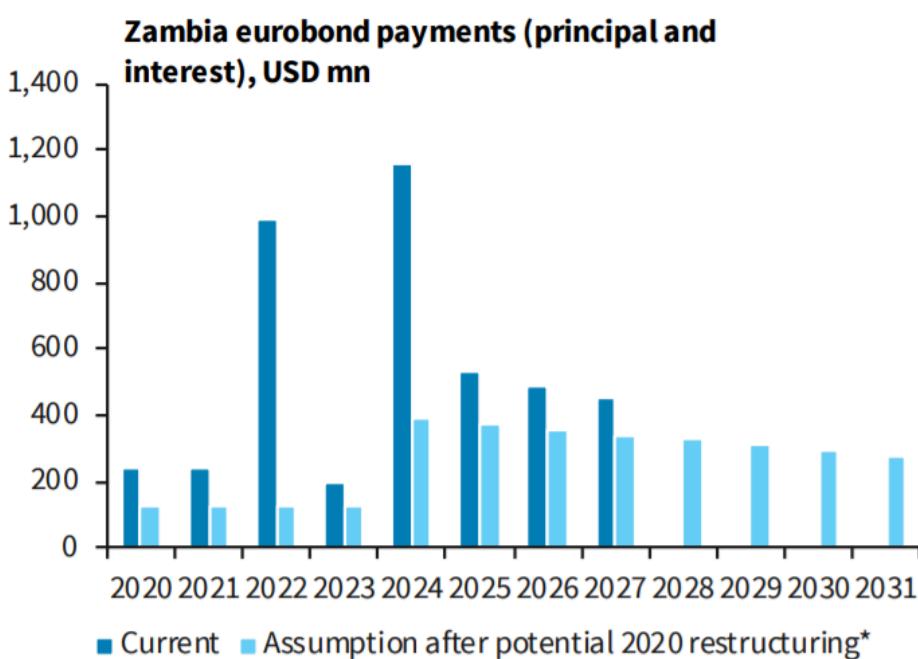
Figure 45. Quasi Sovereign Spread over Sovereign (with 1 Year trading range)



Source: Citi Research, Bloomberg. Nearest matching sovereign maturity chosen for spread calculations.

FIGURE 5

Current and illustration of potential post-restructuring eurobond debt service in a 2020 default scenario



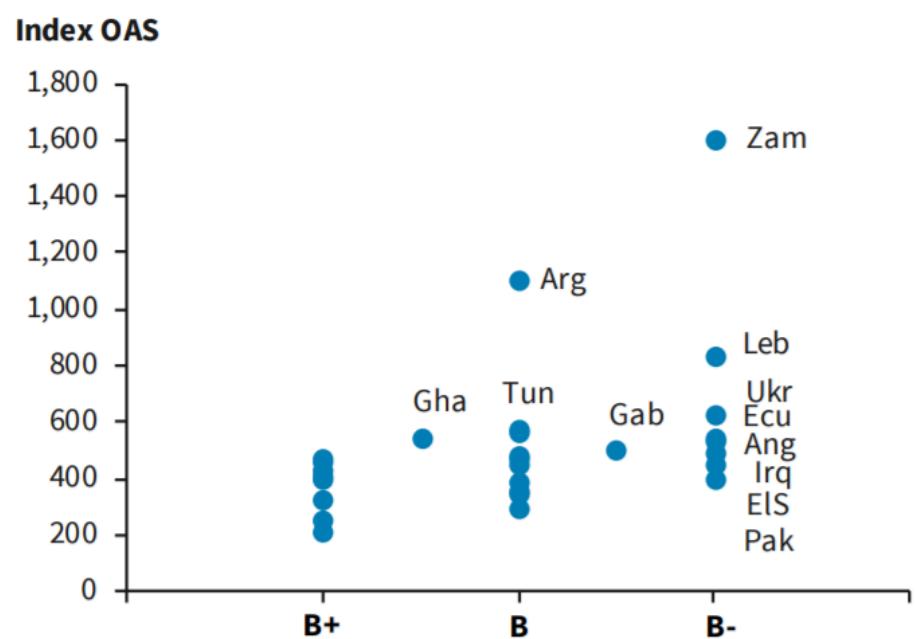
Note: \* as described in our scenario 1a above. Source: Barclays Research

28 May 2019

6

FIGURE 6

Zambia's aggregate spreads are currently c.600-800bp wide to other global EM sovereigns in the B/B- bucket



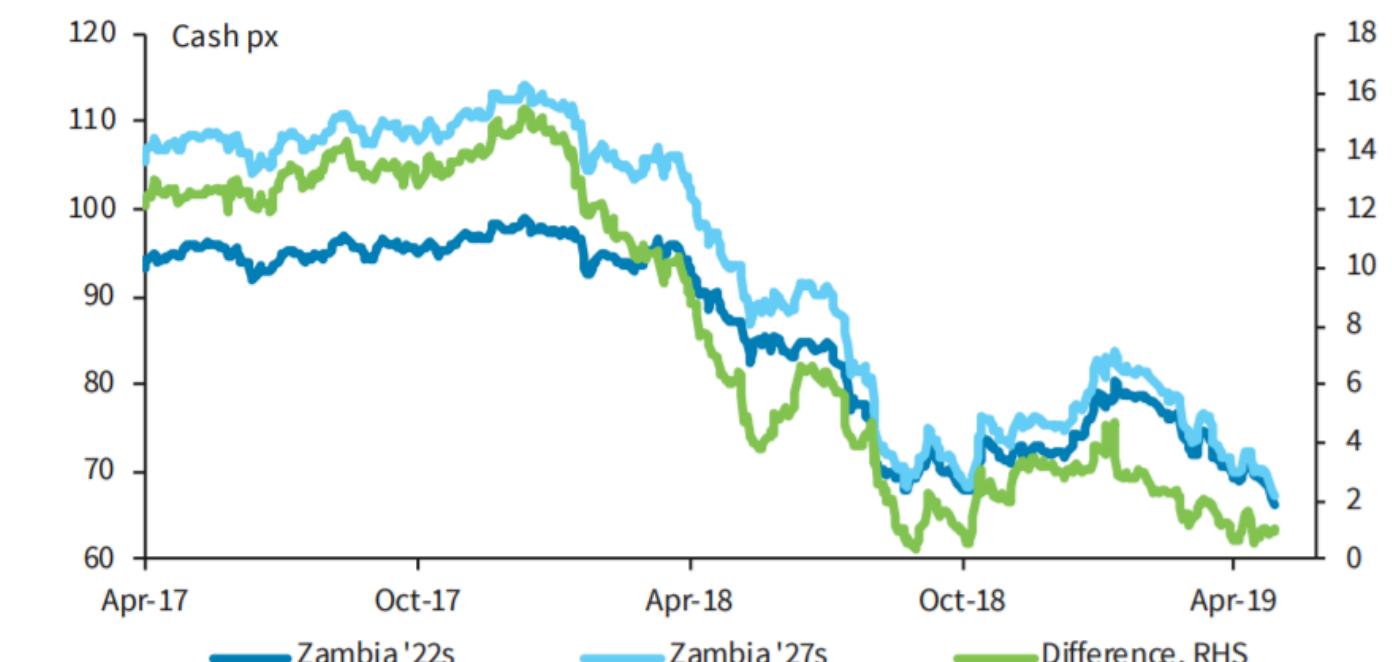
Source: Bloomberg, Barclays Research

### Switch from '22s into '27s

More granularly, we think that the high-coupon '27s offer the best risk/reward profile on the curve and recommend a switch from the low-coupon '22s. In the optimistic scenario Zambia '27s are likely to outperform Zambia '22s in cash price terms – we note that even in earlier 2019, Zambia '27s traded with a 5 point price differential to Zambia '22s. Meanwhile, any period of “muddling through” should produce higher total returns over time for Zambia '27s, given the higher coupon/current yield. And in the default scenarios, the downside on both bonds seems roughly equal, given the similar cash prices.

FIGURE 7

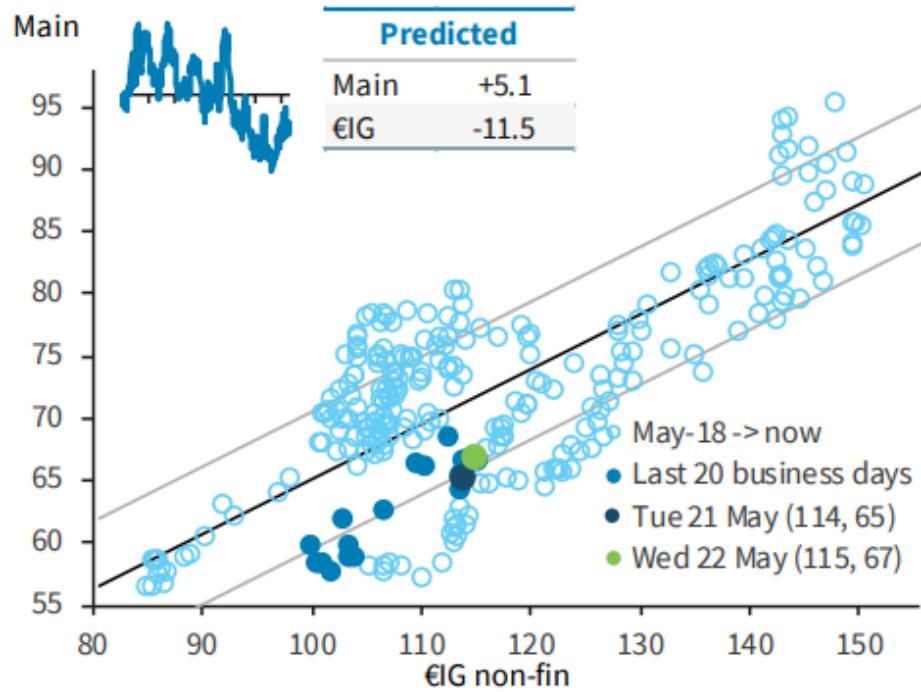
Cash price convergence on the curve has led to '27s having a better risk/reward profile than '22s, in our view



Source: Bloomberg, Barclays Research

FIGURE 1

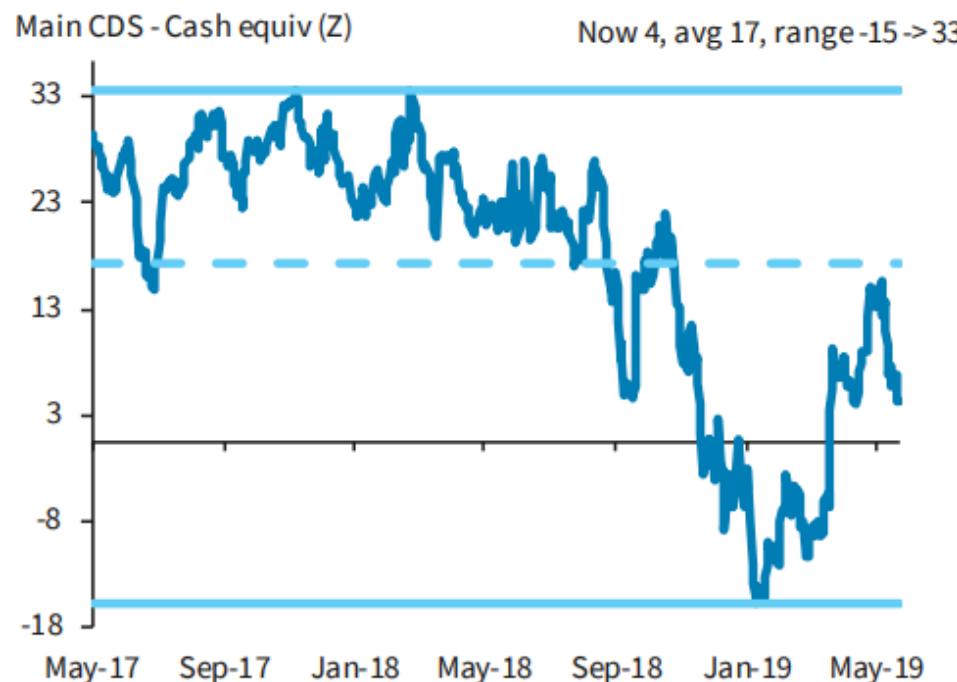
iTraxx Main marginally tight vs €IG non-fin cash after having underperformed from very tight levels...



Source: Barclays Research

FIGURE 2

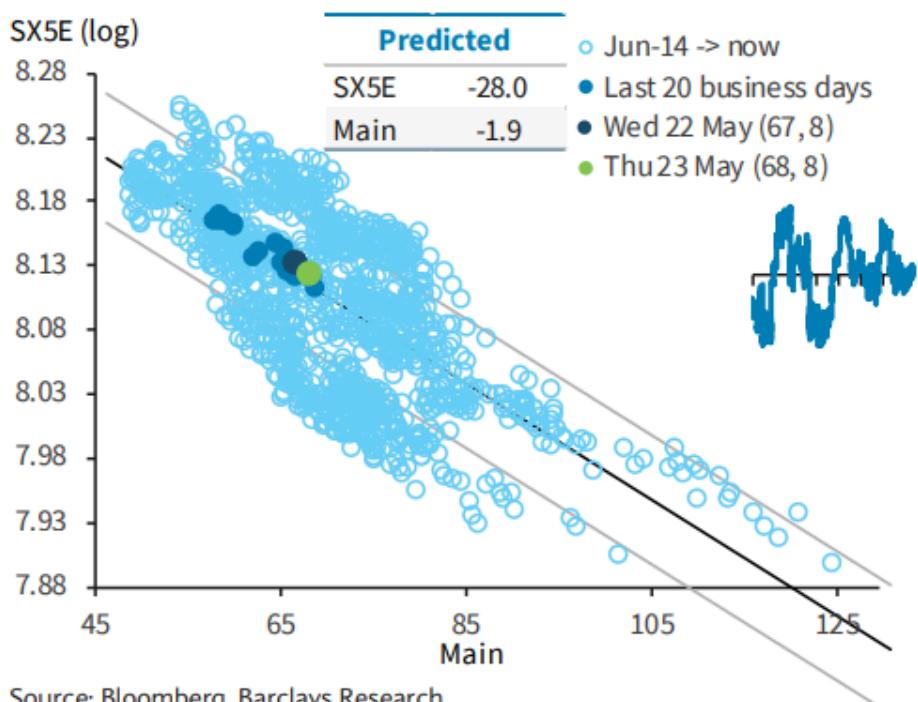
... with maturity and constituent-matched CDS-cash basis having rebounded from being negative



Note: We define a constituent-matched CDS-cash basis by identifying the bond of each constituent nearest to 5yrs and identifying the maturity-matched CDS, aggregating this across constituents and time. Source: Barclays Research

FIGURE 3

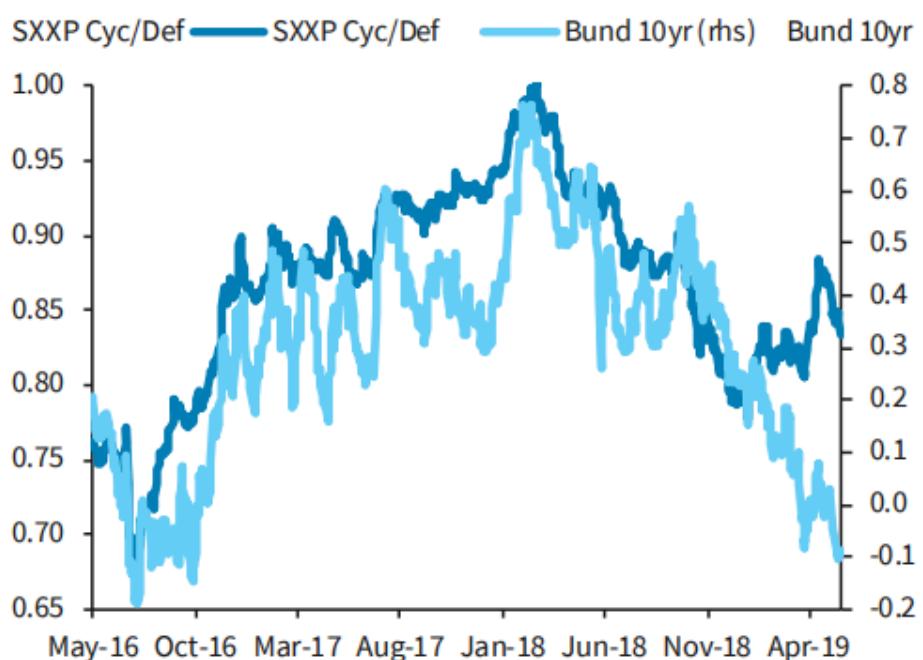
iTraxx Main is in line with SX5E on a 5yr horizon



Source: Bloomberg, Barclays Research

FIGURE 4

SXXP cyclical/defensives ratio disconnected from Bunds

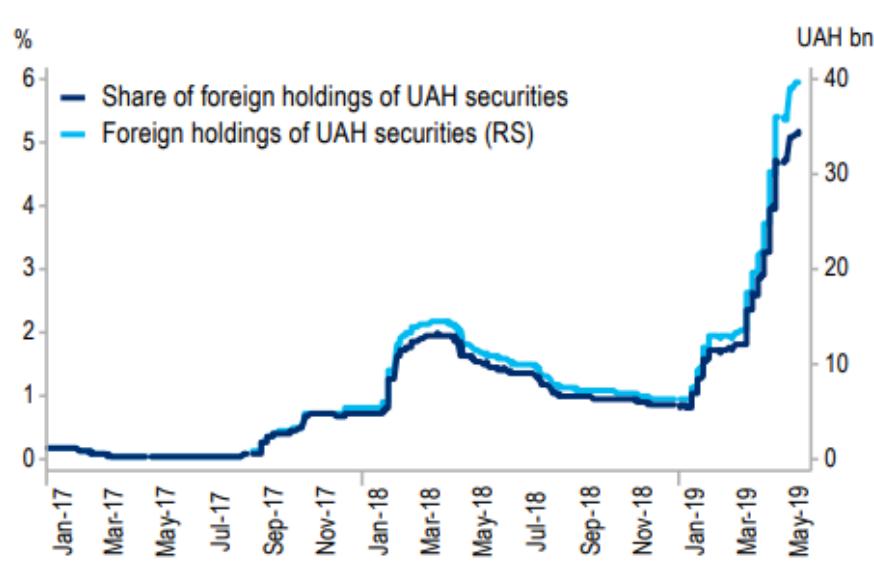


Source: Bloomberg, Barclays Research

Emerging Markets Strategy Weekly  
 24 May 2019

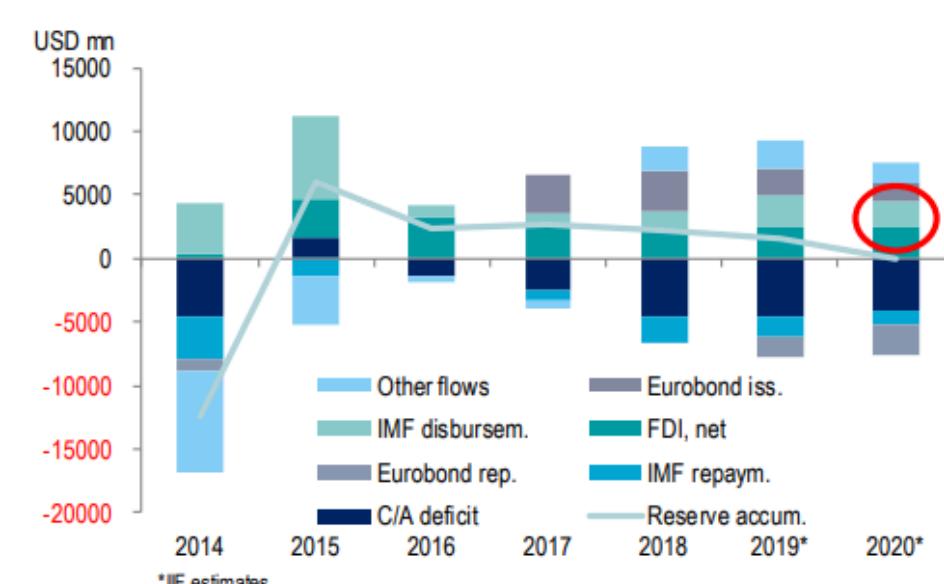
Citi Research

Figure 14. Foreign investors have poured USD 1.3bn YTD



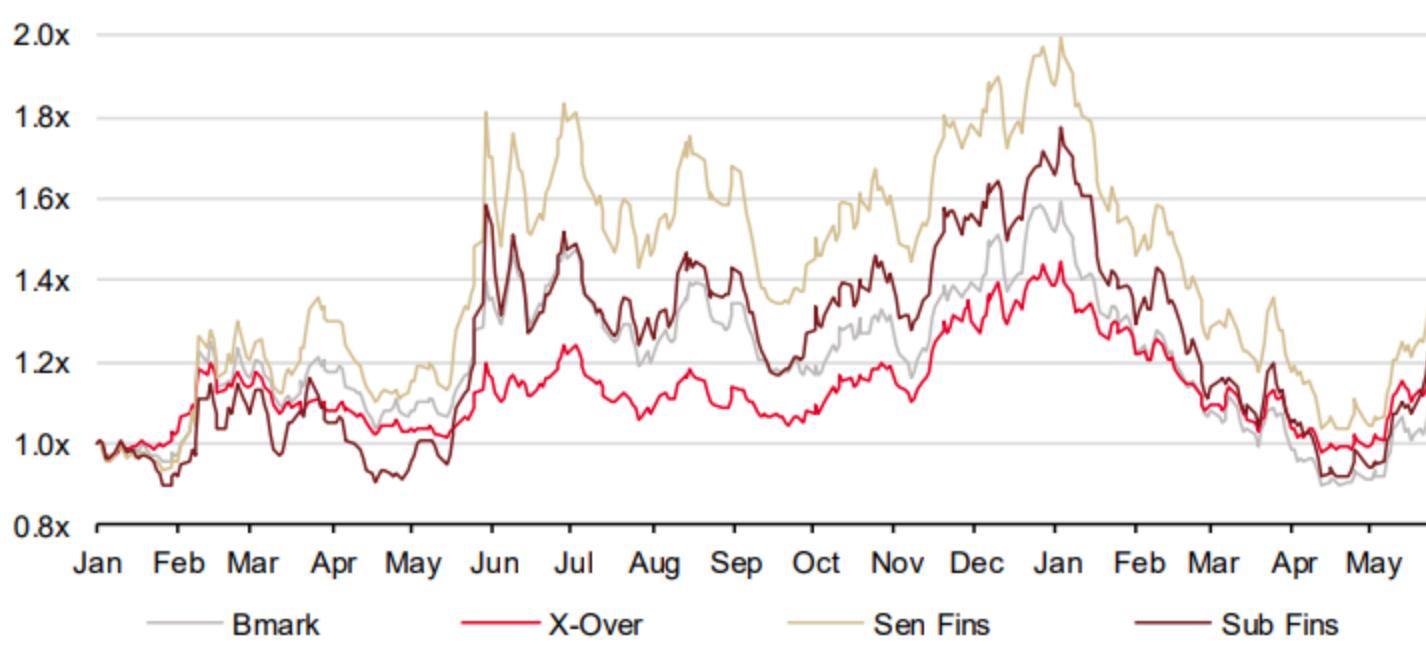
Source: Haver, Citi Research

Figure 15. Ukraine needs IMF or more portfolio inflows to cover its external financing needs in 2020

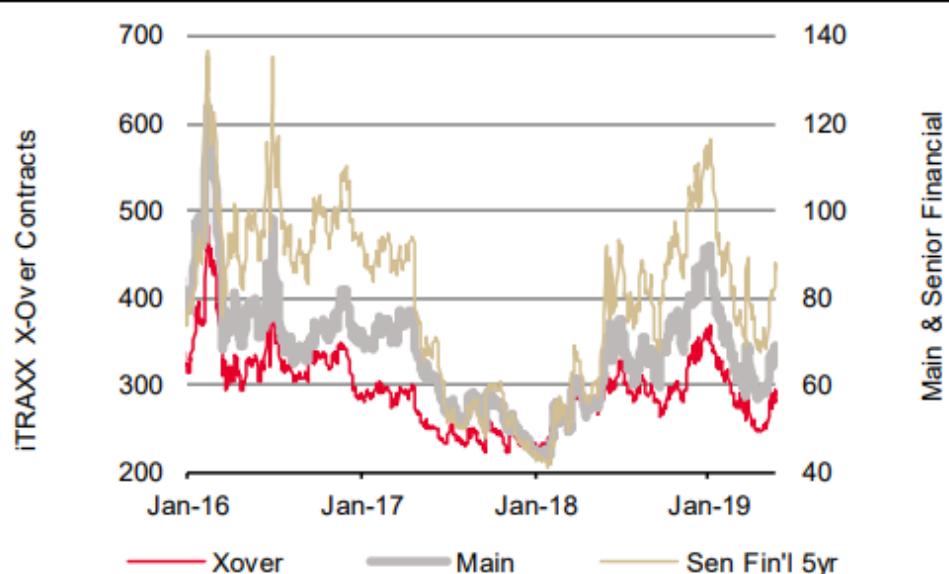


Source: IIF, Citi Research

## Relative performance



## iTraxx indices

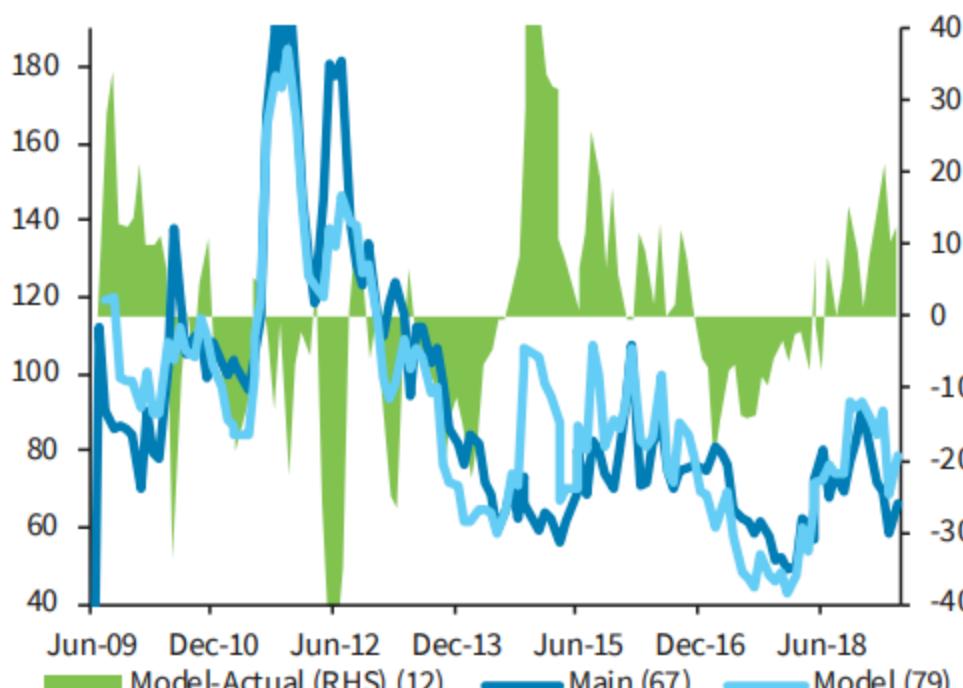


## CDX indices



**FIGURE 5**

iTraxx Main is tight in our sentiment-based model



Note: We explain Main using V2X, the ZEW survey for expectations of future economic growth in the eurozone, the EC economic sentiment indicator and a dummy variable to indicate pre-CSPP (March 2016). Source: Barclays Research

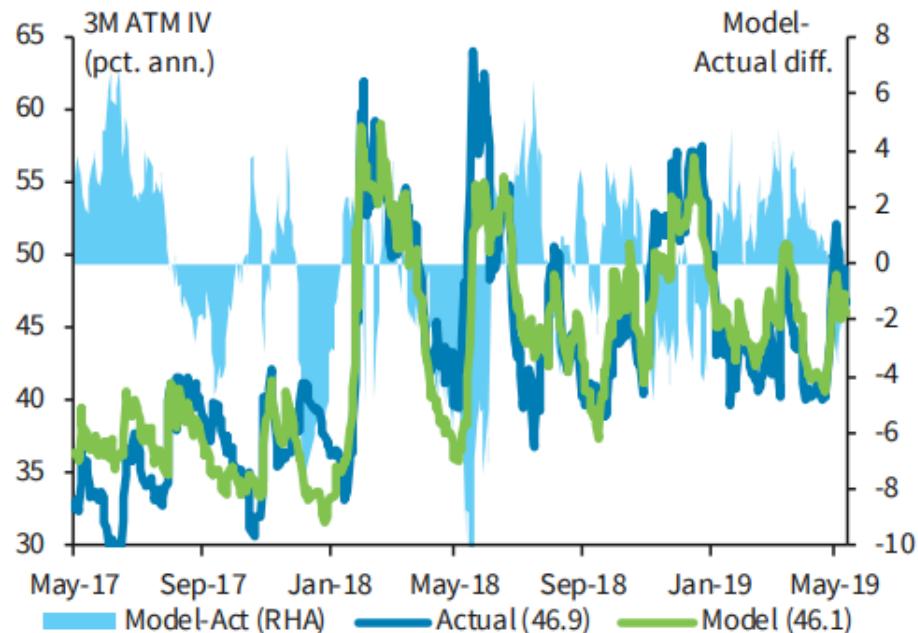
**FIGURE 6**

Investors have added long-risk positions in iTraxx Main over the year, but have de-risked lately



FIGURE 7

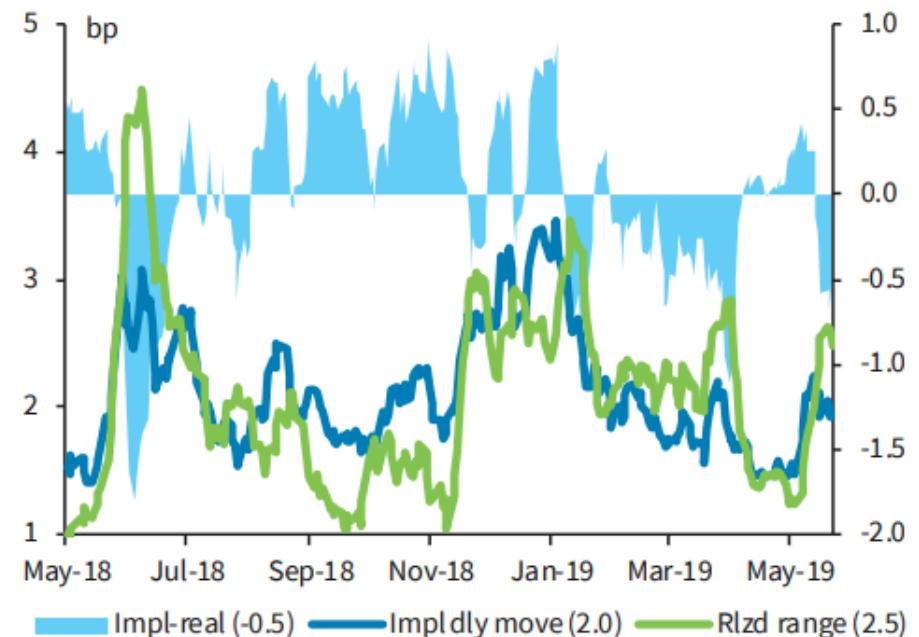
iTraxx Main 3mth ATM implied volatility is roughly in line with our model



Note: We explain 3mth ATM implied volatility of Main using Main spot, intraday realized volatility and 3mth SX5E ATM volatility and its recent change. Source: Barclays Research

FIGURE 8

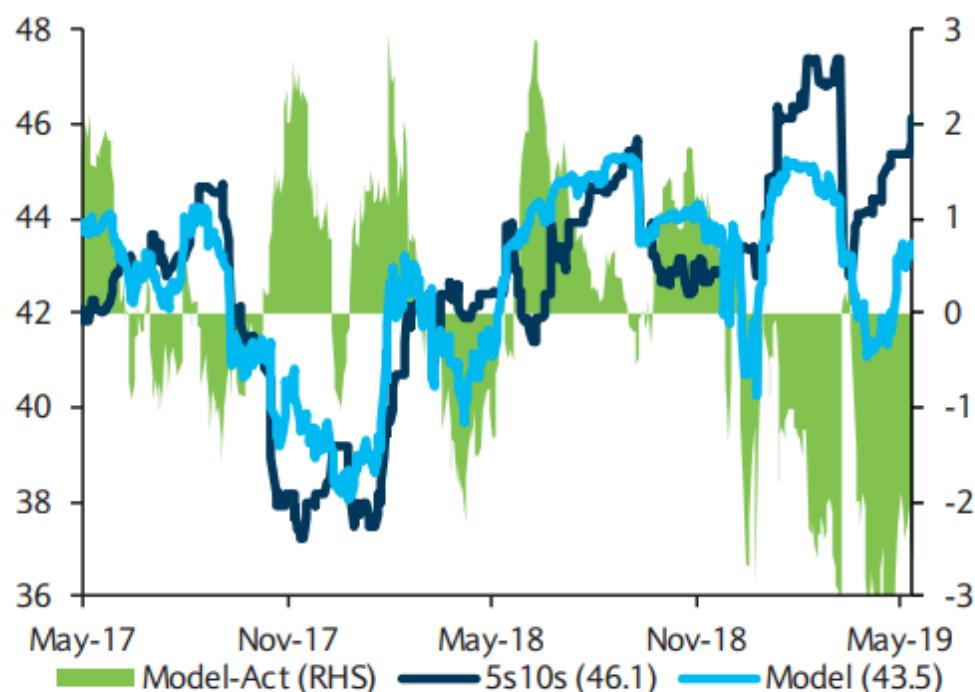
iTraxx Main options are implying that Main will move 2bp each day for the next 3 months



Note: We compare the 2wk rolling average of intraday highs-lows to the implied daily move required for a buyer of delta-hedged 3mth ATM spot straddles to break even. Source: Barclays Research

FIGURE 9

Main 5s10s are 2.5bp too steep in our model...



Note: We explain Main 5s10s using: A polynomial form of Main spot, 3mth ATM implied vol of Main and time to next roll. Source: Barclays Research

FIGURE 10

... and 5s10s DV01-neutral steepeners is the 'carry' trade with the worst entry point vs history, with selling protection forward the highest-ranking on a 1yr horizon

	5yr Long	5s10s DV01 Stpn	5s10s forward	3s5s DV01 Fltn	3s5s forward
Expected return	132	79	26	21	63
Pctiles					
1yr	45%	32%	70%	64%	51%
5yr	73%	47%	66%	87%	90%

Note: P&L, in bp on a 1yr horizon of longest-maturity notional assuming unchanged CDS-curves. Source: Barclays Research

# CNH, KRW, INR, SGD

Chart 125: BofAML Weekly indexed CNH flow

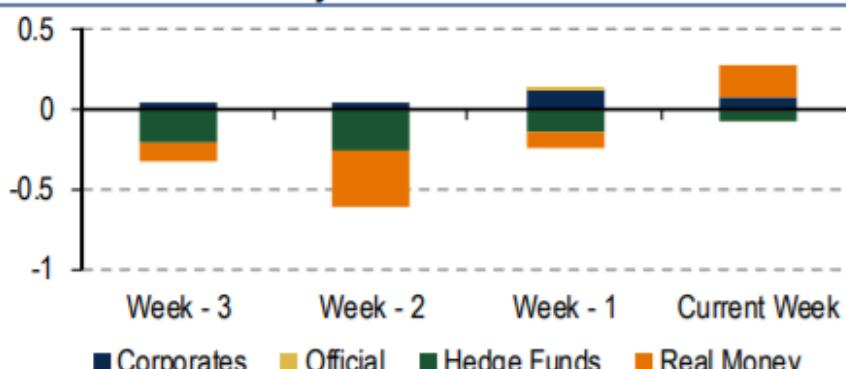
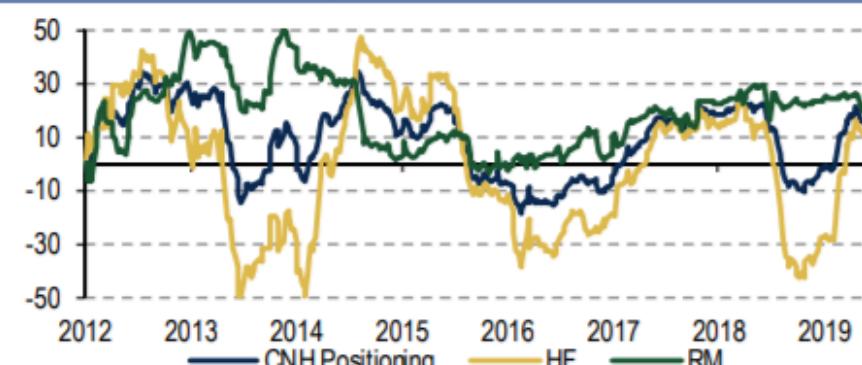


Chart 126: CNH Positioning



Source: BofA Merrill Lynch Global Research, Bloomberg

Chart 127: BofAML Weekly indexed KRW flow

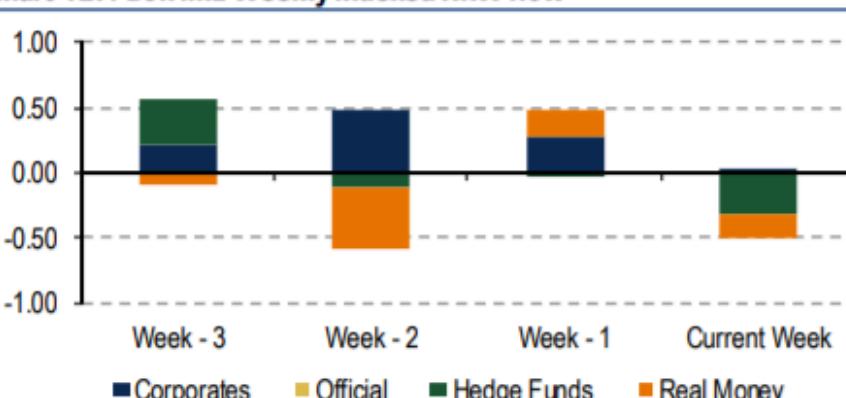
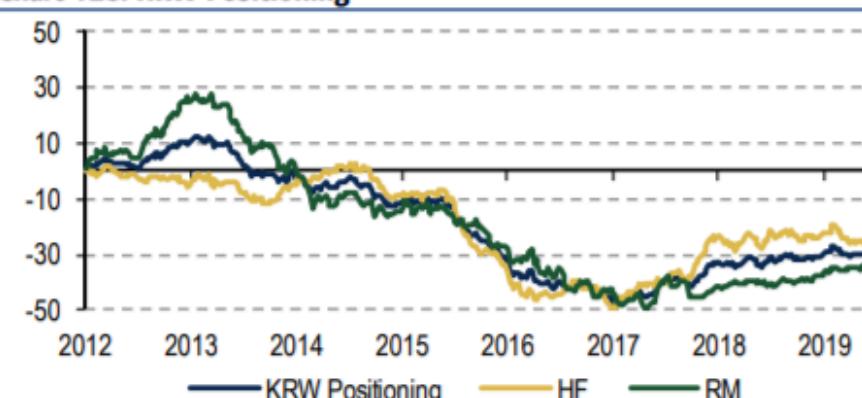


Chart 128: KRW Positioning



Source: BofA Merrill Lynch Global Research, Bloomberg

Chart 129: BofAML Weekly indexed INR flow

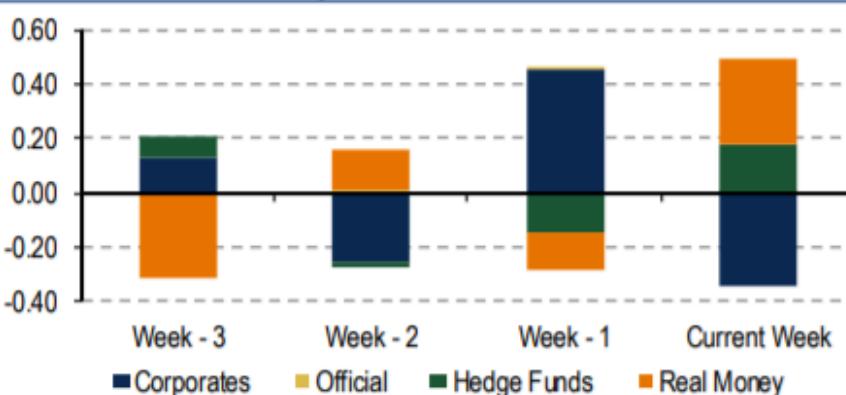
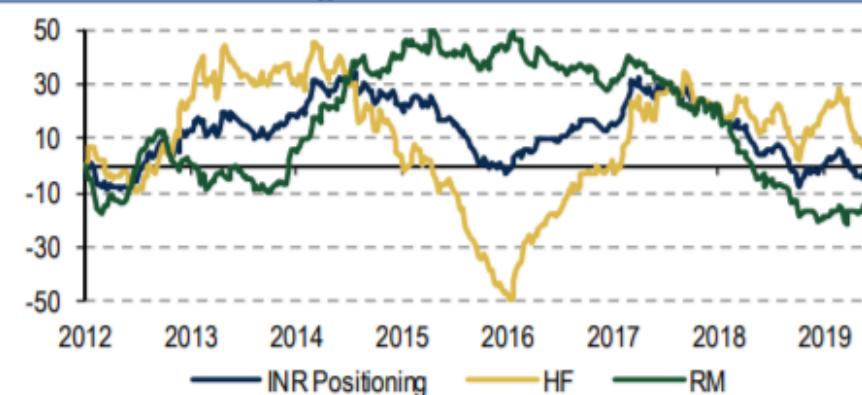


Chart 130: INR Positioning

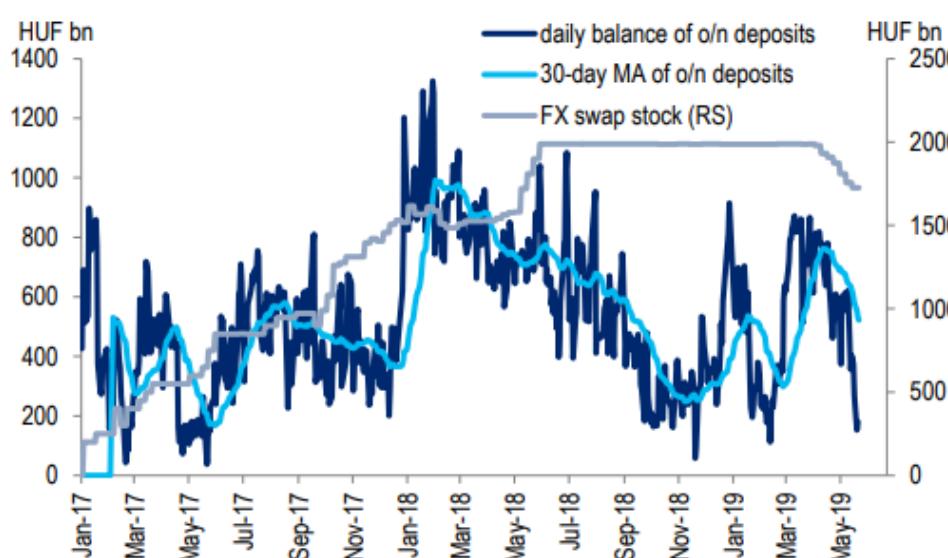


Source: BofA Merrill Lynch Global Research, Bloomberg

## Hungary

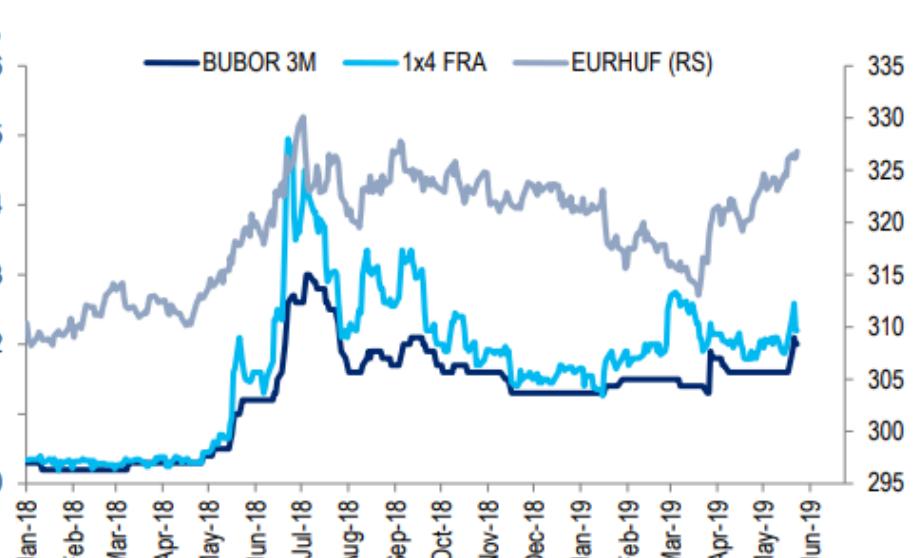
**NBH will remain dovish despite the recent spike in Bubor.** The National Bank of Hungary has recently paused its FX swap stock contraction after Monday's regular weekly auction. The sudden jump of Bubor from 0.16% on May 17 to 0.21% on May 21 may have prompted the central bank's decision to grind to a halt the tightening of FX swap liquidity. Although FX swap stock has been reduced by HUF 263.4bn since the March MPC meeting, the 30-day average of excess liquidity parked in the o/n deposits is still slightly above the 300-500bn target range for Q2. As 1x4 FRAs has pared 4bp since Wednesday, we have the impression that markets are reluctant to believe that monetary conditions will tighten further. We presume that another 10bp hike in o/n deposit rate is still on the cards at June MPC meeting, but the overall tone will remain dovish. Therefore, we are still biased to go short HUF at better levels following our [recent take profit](#).

Figure 26. Crowded-out excess liquidity is slightly above HUF 500bn



Source: Haver, Citi Research

Figure 27. HUF might continue to depreciate despite recent spike in Bubor

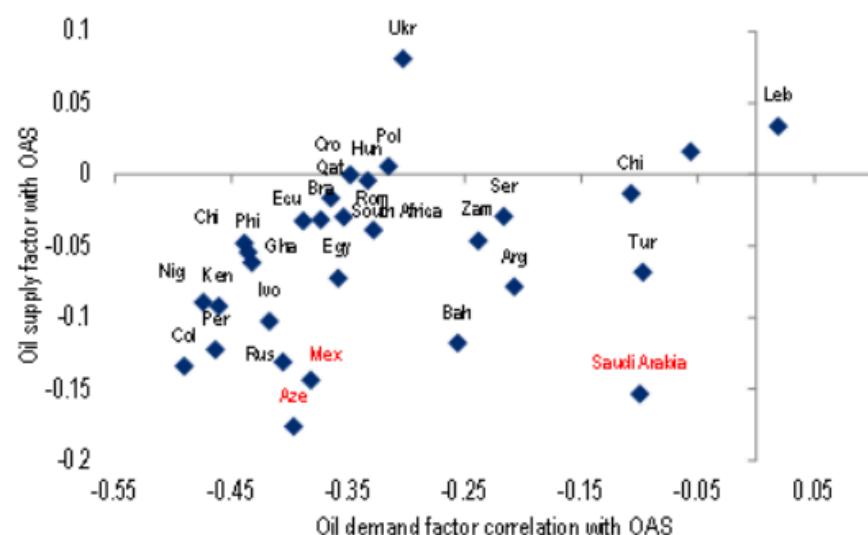


Source: Bloomberg, Citi Research

## CEEMEA Credit View: We like Oil Sovs, mixed on Financials

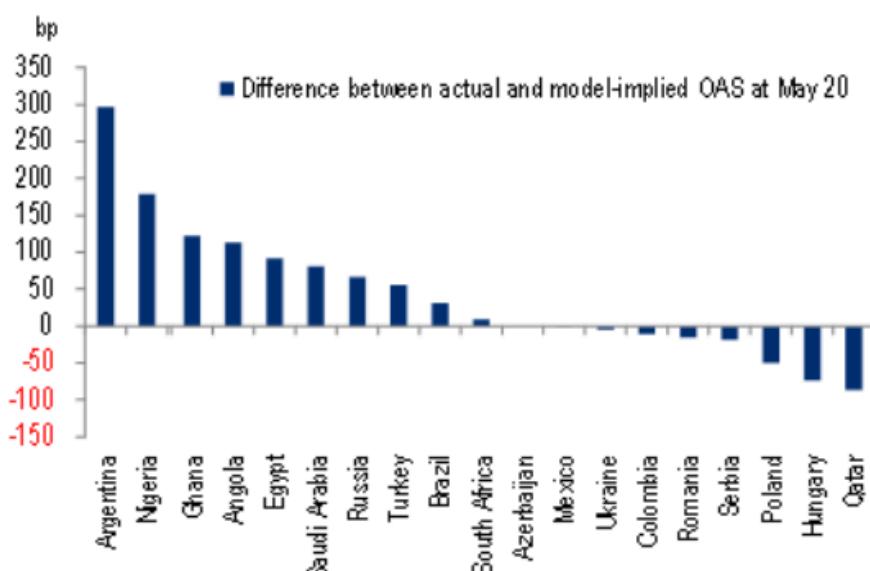
**Supporting environment for high quality oil sovereigns.** We believe current supply-driven oil environment is favorable for Saudi Arabia (Figure 36). Our commodity team expects physical tightening to push Brent towards USD 74/bbl by the end of the year, and Saudi sovereign has further room for compression according to our fair value spread model (Figure 37). Therefore, we are increasing Saudi Arabia exposure by 1% as an attractive place to park some of the risk in SSA-oil space. We are funding this position by reducing our OW exposure in Nigeria by 1%.

Figure 36. Saudi Arabia one of the most sensitive to supply-driven oil fluctuations



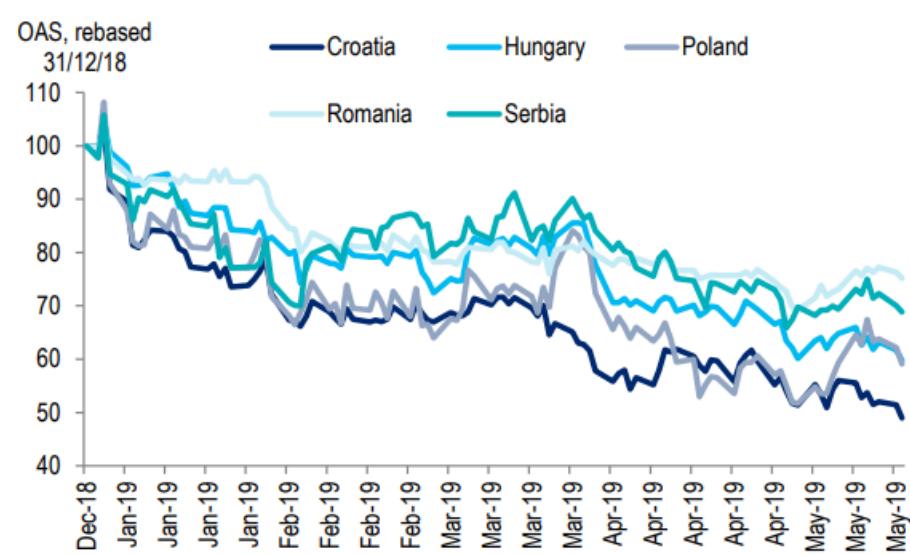
Source: Citi Research, Bloomberg

Figure 37. Nigeria, Ghana, Egypt and Saudi Arabia are among the cheapest sovereigns



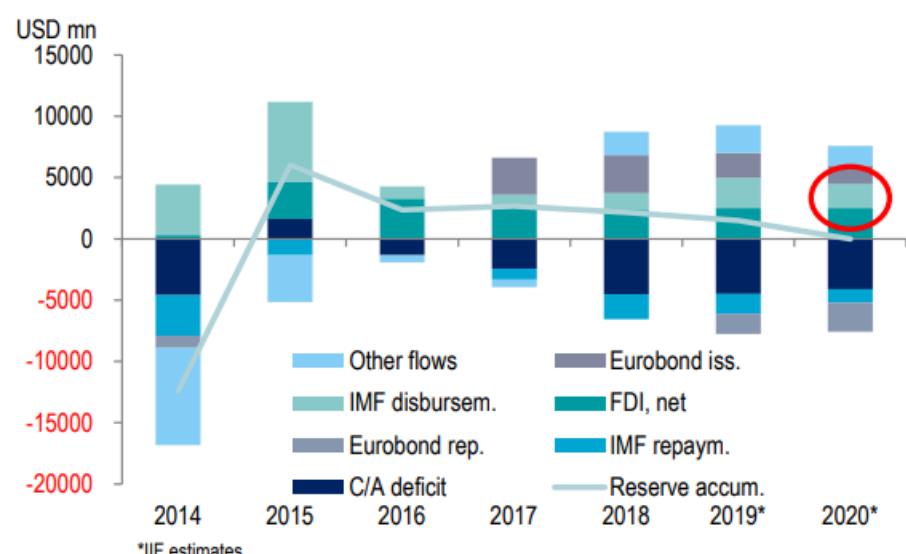
Source: Citi Research, Bloomberg

Figure 38. Poland has widened more than its peers



Source: Citi Research, Citi Velocity

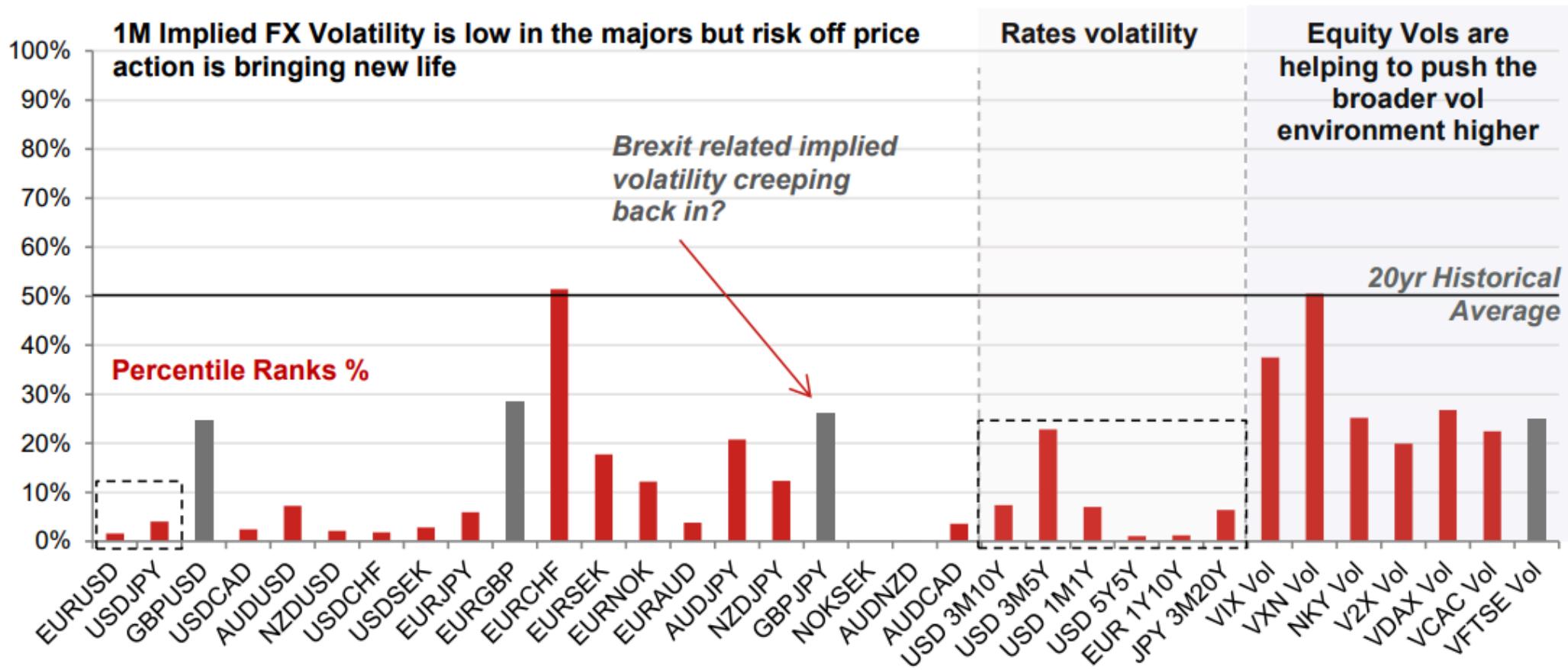
Figure 39. Ukraine high redemptions require the continuation of IMF support



Source: Citi Research, IIF

### 3. Low volatility

But low market volatility everywhere



Source: Nomura, Bloomberg

34

FIGURE 42

New and existing dislocations in Asia

Relationship	New Dislocations				Conclusion		
	6mo Chart	Min	Now	Max			
CITLTD \$2026 - SINOPE \$2026		37	37	48	2.2		CITLTD \$2026 is RICH to SINOPE \$2026
INDON \$2023 - PHILIP \$2025		33	59	64	1.9		INDON \$2023 is CHEAP to PHILIP \$2025
INDON \$2043 - PHILIP \$2042		83	109	114	1.4		INDON \$2043 is CHEAP to PHILIP \$2042
COSL \$2020 - KUNLEG \$2020		22	33	34	1.4		COSL \$2020 is CHEAP to KUNLEG \$2020
INDON \$2042 - PHILIP \$2042		95	117	119	1.4		INDON \$2042 is CHEAP to PHILIP \$2042
KUNLEG \$2025 - KUNLEG \$2020		32	54	54	1.3		KUNLEG \$2025 is CHEAP to KUNLEG \$2020
CITLTD \$2020 - SHENGY \$2020		9	17	20	1.3		CITLTD \$2020 is CHEAP to SHENGY \$2020
CITLTD \$2023 - COFCO \$2023		-1	6	23	1.2		CITLTD \$2023 is RICH to COFCO \$2023
COSL \$2025 - COSL \$2020		48	51	82	1.1		COSL \$2025 is RICH to COSL \$2020
PERTIJ \$2023 - INDON \$2023		16	22	49	1.1		PERTIJ \$2023 is RICH to INDON \$2023
INDON \$2025 - PHILIP \$2025		57	78	84	1.1		INDON \$2025 is CHEAP to PHILIP \$2025
PGASII \$2024 - INDON \$2023		66	66	102	1.1		PGASII \$2024 is RICH to INDON \$2023
MINMET \$2026 - MINMET \$2021		56	58	67	1.0		MINMET \$2026 is RICH to MINMET \$2021
MALAYS \$2025 - PHILIP \$2025		-13	19	28	0.9		MALAYS \$2025 is CHEAP to PHILIP \$2025
PERTIJ \$2022 - INDON \$2022		16	23	52	0.9		PERTIJ \$2022 is RICH to INDON \$2022
Existing Dislocations							
Relationship	1y Chart	Min	Now	Max	Z-Score	Difference Chart	Conclusion
INDON €2023 - INDON \$2023		-24	-24	23	2.6		INDON €2023 is RICH to INDON \$2023
INDON €2023 - INDON €2028		-64	-64	-33	2.5		INDON €2023 is RICH to INDON €2028
PETMK \$2020 - MALAYS \$2021		-8	-6	20	2.4		PETMK \$2020 is RICH to MALAYS \$2021
PLNIJ \$2020 - INDON \$2020		-2	8	49	2.3		PLNIJ \$2020 is RICH to INDON \$2020
COSL \$2025 - KUNLEG \$2025		30	30	62	2.1		COSL \$2025 is RICH to KUNLEG \$2025

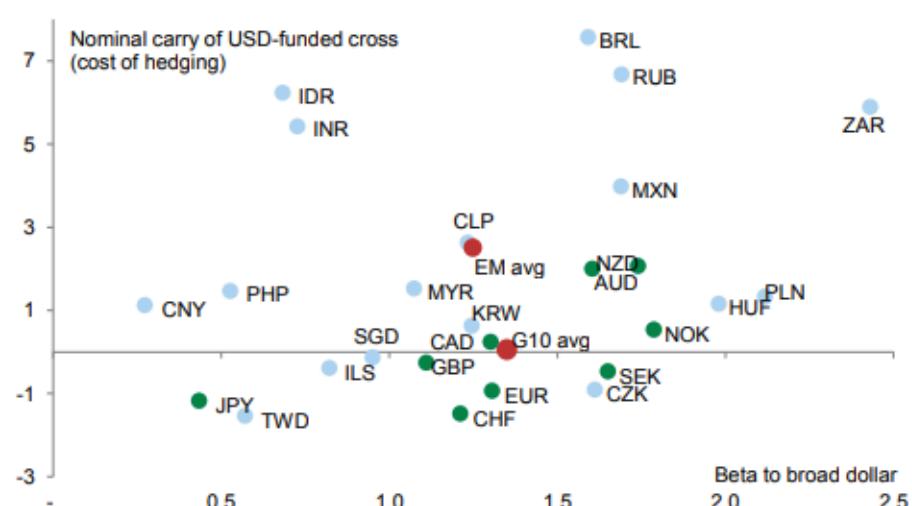
Note: Dislocation defined as a spread differential between a pair of bonds more than 1.5 standard deviations from the 6mo median (modified z-score; see highlighted column). Existing dislocations denotes a spread differential with a z-score above 1.5x at least over the past two weeks.

Source: Barclays Research

Similarly, Exhibit 9 shows the time series of portfolio returns from an equally weighted basket of EM and G10 currencies. The main observation here is that, while the EM portfolio has a larger positive drift in comparison to the DM portfolio, both portfolios experience very similar ups and downs over time, like the sell-offs of 2007-08 and 2014-15. Therefore, a lot of what is often thought of as "EM FX risk" is in fact "Dollar-risk".

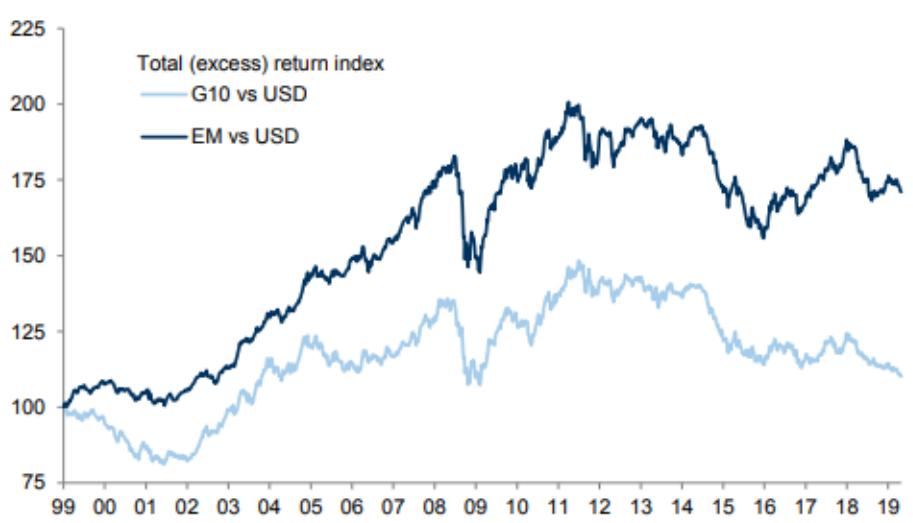
**That "Dollar risk" can be diversified away to a reasonable extent<sup>6</sup> by funding an EM FX investment through a more diversified basket of DM currencies; and that is likely to be a better way of capturing any genuine EM FX risk premium.**

**Exhibit 8: Not much relationship between carry and Dollar beta**  
Average carry and betas calculated over 2010-19 period

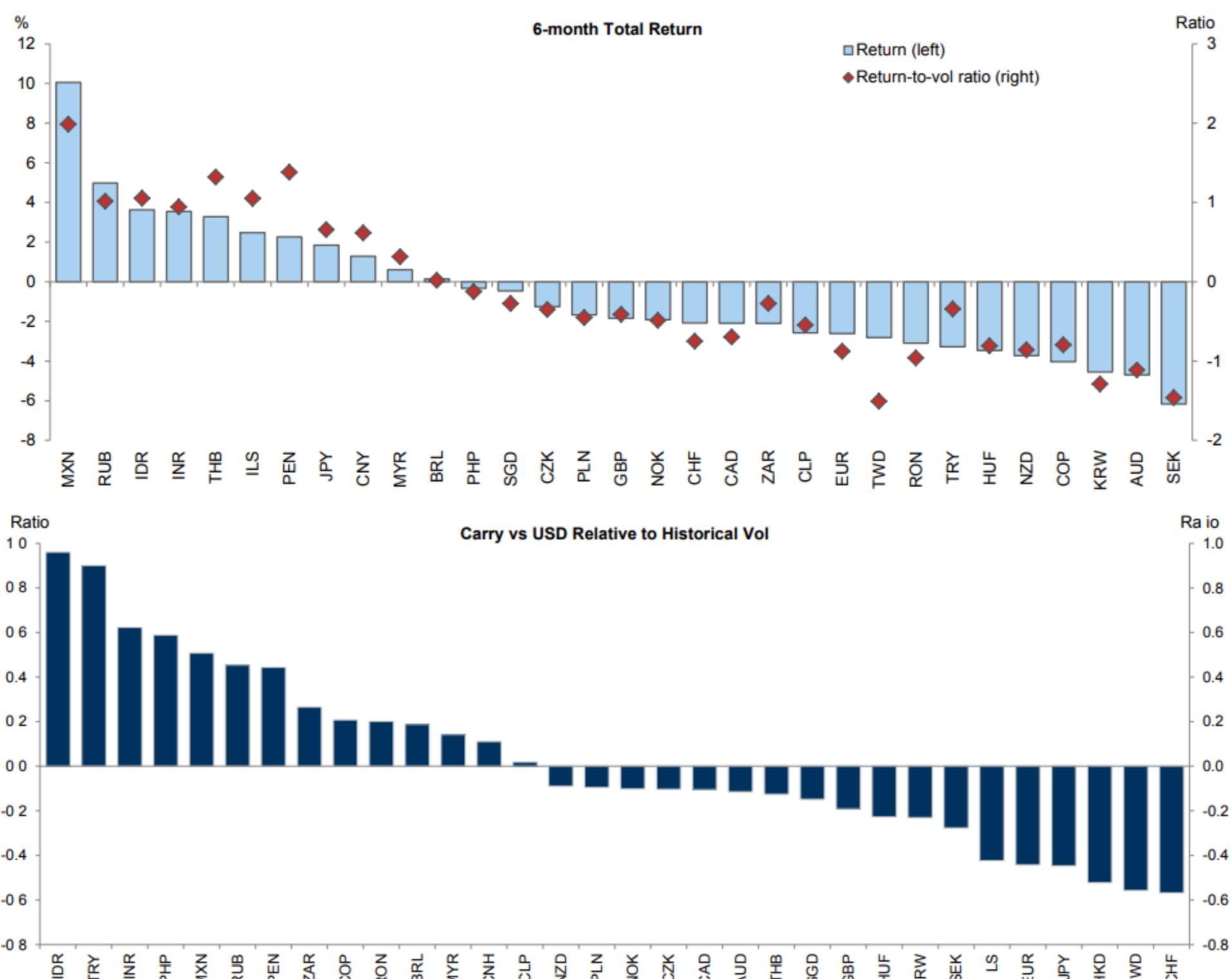


Source: Goldman Sachs, Goldman Sachs Global Investment Research

**Exhibit 9: Dollar-funded EM and G10 portfolios experience similar ups and downs over time**



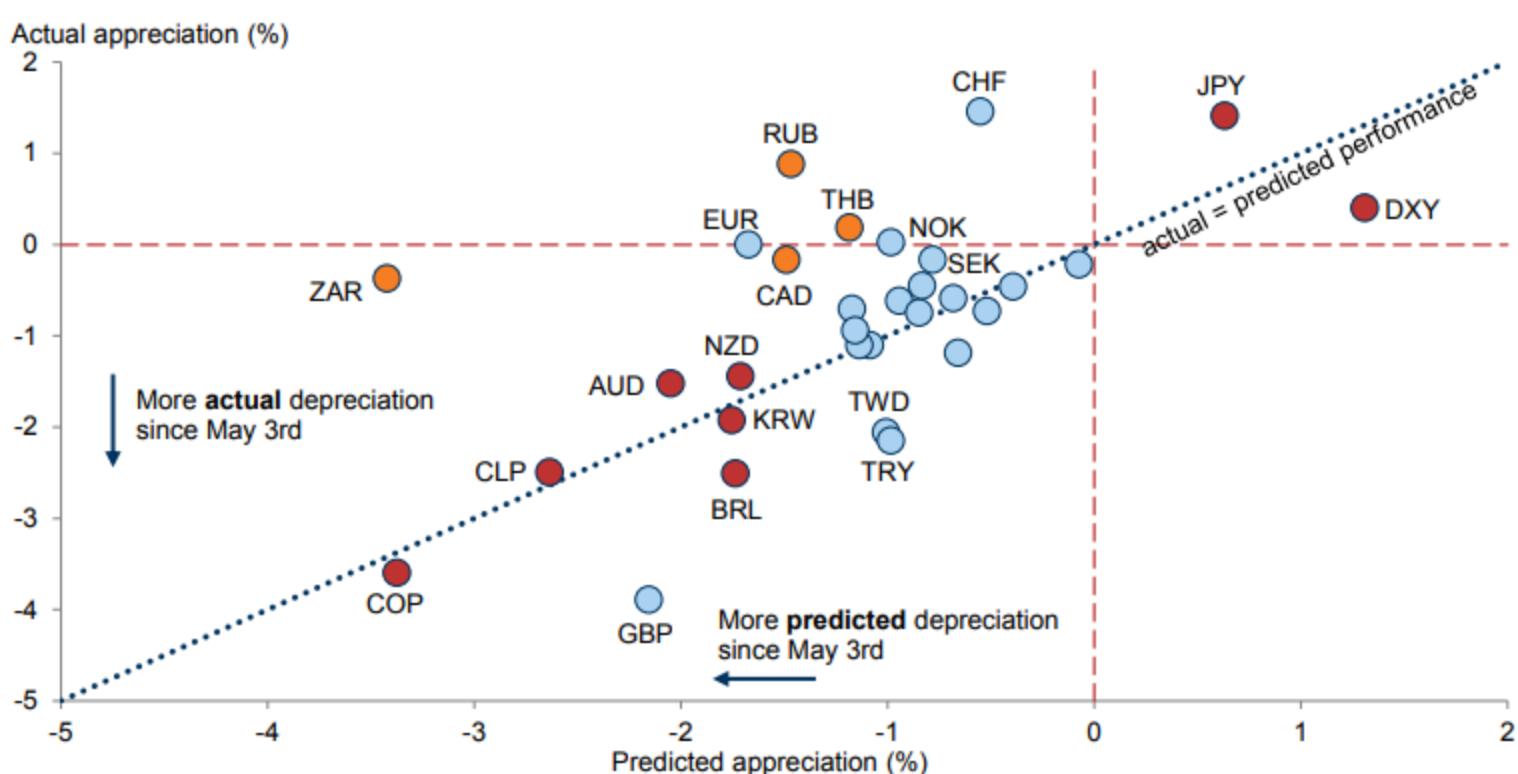
Source: Goldman Sachs, Goldman Sachs Global Investment Research



Source: Bloomberg, Goldman Sachs Global Investment Research

## Chart of the Week

If trade tensions escalate, watch 'the usual suspects' (in red) and the 'catch down stories' (in orange).



Note: Predicted and actual % appreciation since the renewal of trade tensions (May 3rd). Predictions are based on historical sensitivities to the S&P index, US 10y rate, copper price, CNY, and oil price. All crosses are considered vs. USD except SEK, NOK and CEE-4 (vs EUR) and the DXY index.

Source: Bloomberg, Goldman Sachs Global Investment Research

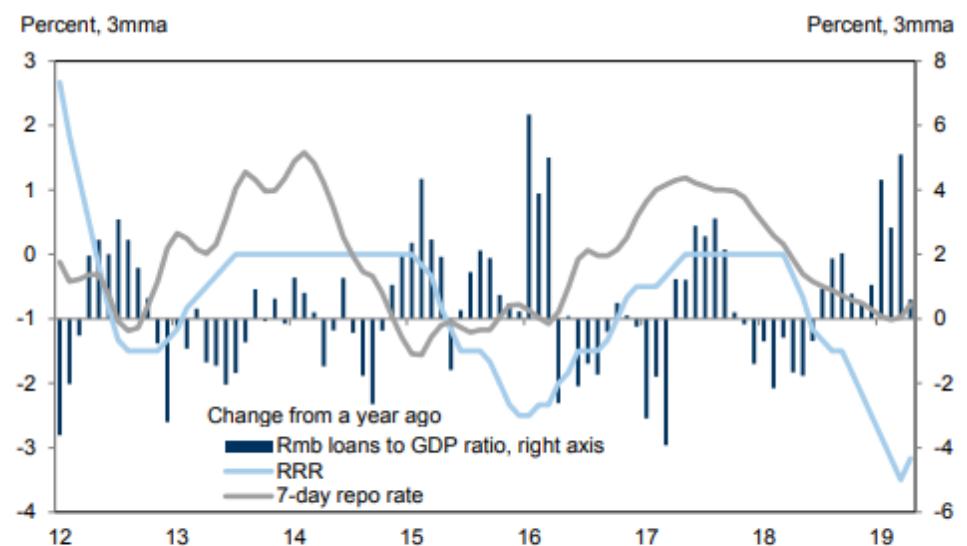
28 May 2019

9

Goldman Sachs

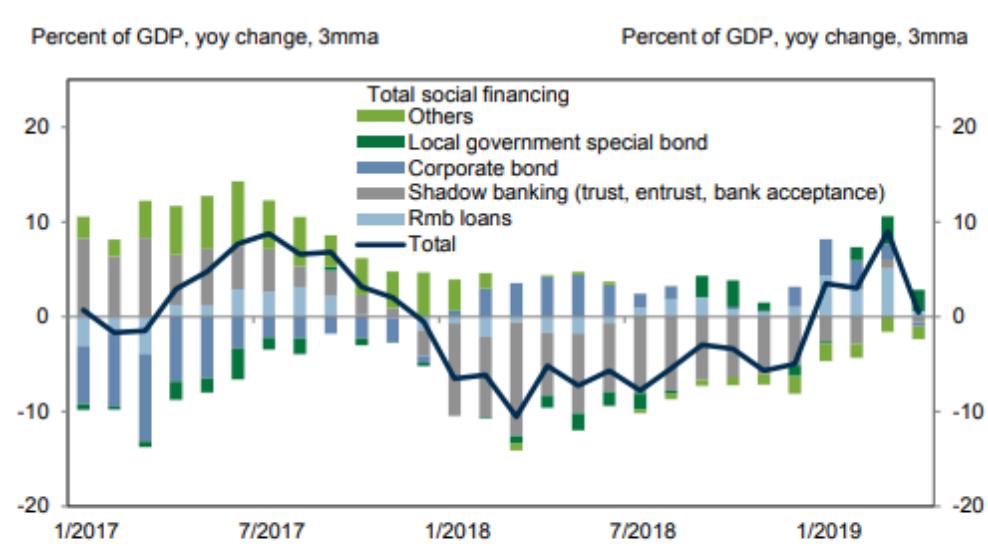
Asia Economics Analyst

**Exhibit 10: Pickup in bank loans accommodated by monetary policy easing**



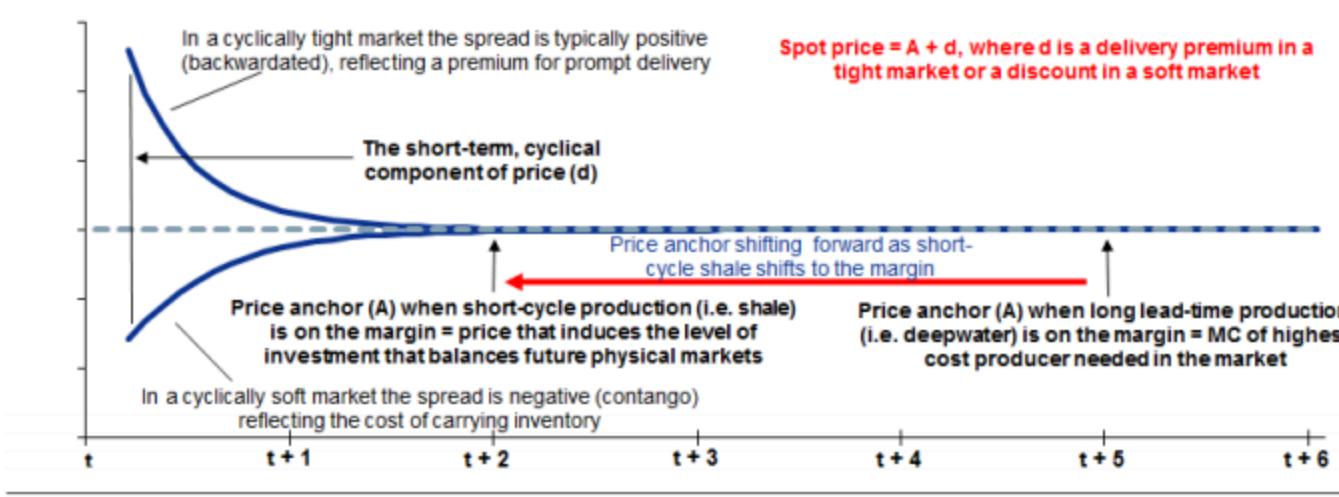
Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 11: An expansionary fiscal policy and accommodative monetary policy drove a gradual pickup in overall credit (April notwithstanding)**



Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 3: Curve shape is determined by the cyclical / micro trends, the level of long-dated contracts by the marginal cost of production and hence the macro trends**



Source: Goldman Sachs Global Investment Research

#### India Investment Grade

- India is continuing to outperform the remaining EM.
  - India's relative value and forward-looking income growth are above average compared with the EM.
  - India has performed 6.6% YTD, which is relatively strong for the category.
  - India is being perceived as both highly liquid and reliable by large institutions.
  - Liquidity remains good with \$10B averaging 0.4 and looking even better with liquidity increasing.
  - The curve is relatively flat with volatility duration increasing after increasing value, rates will be focusing around the EM.

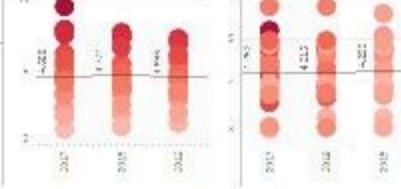
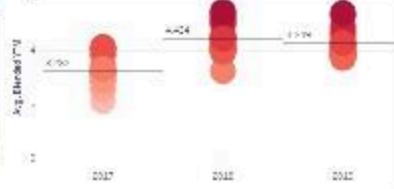
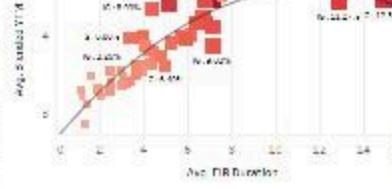
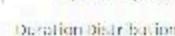
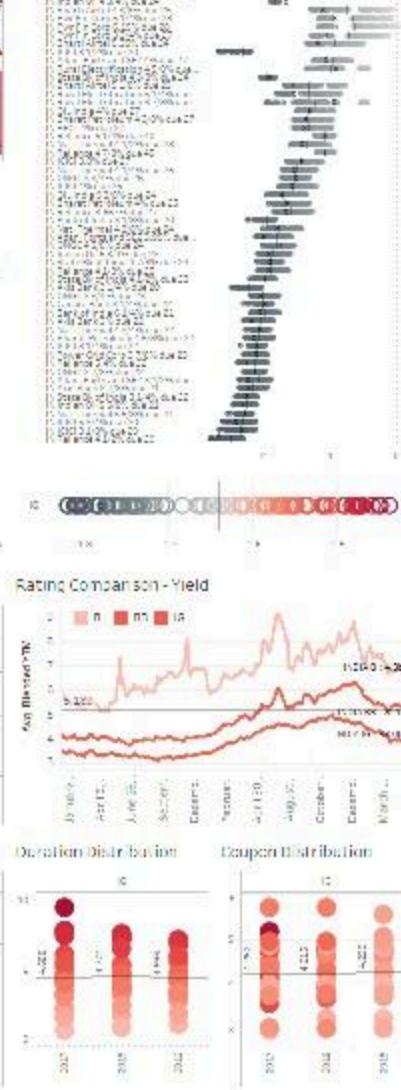
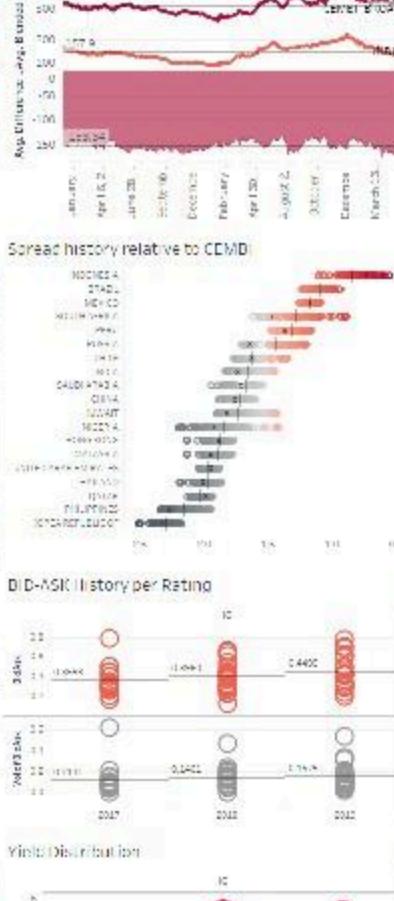
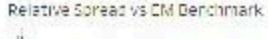
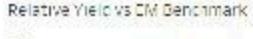
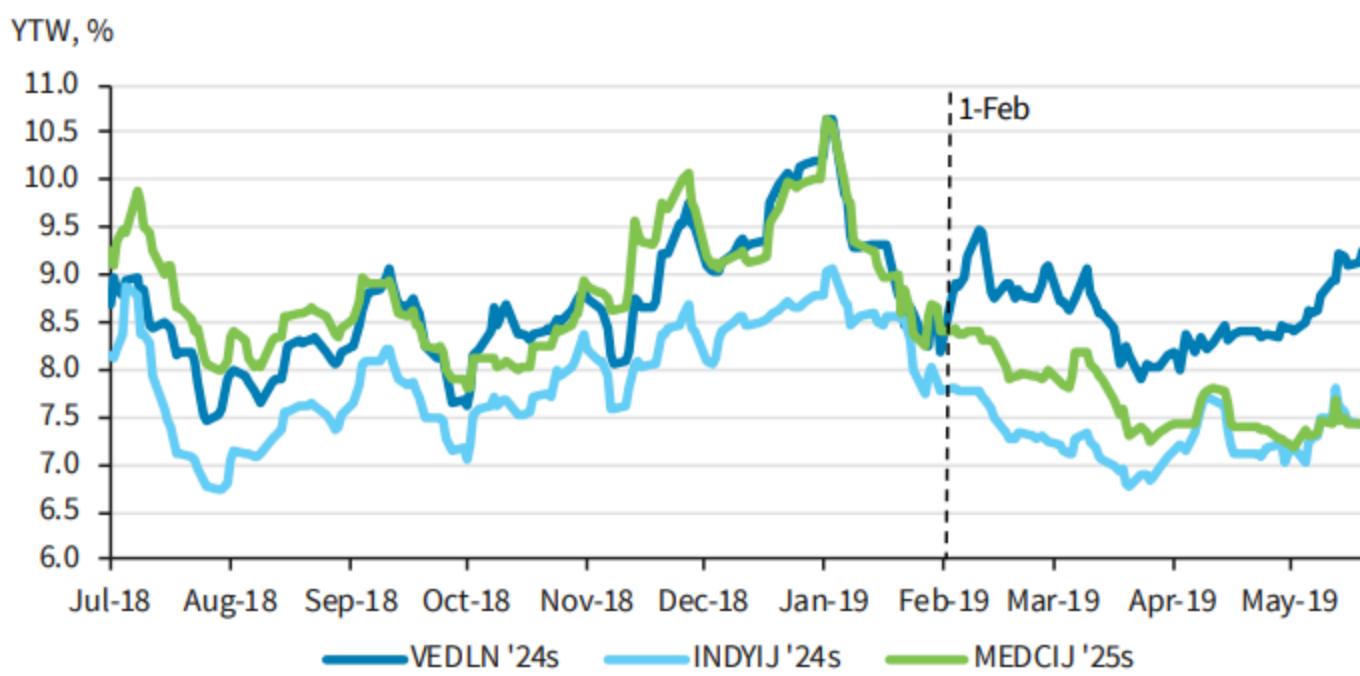


FIGURE 4

Vedanta '24s started to widen after disclosure of investment in ultimate parent



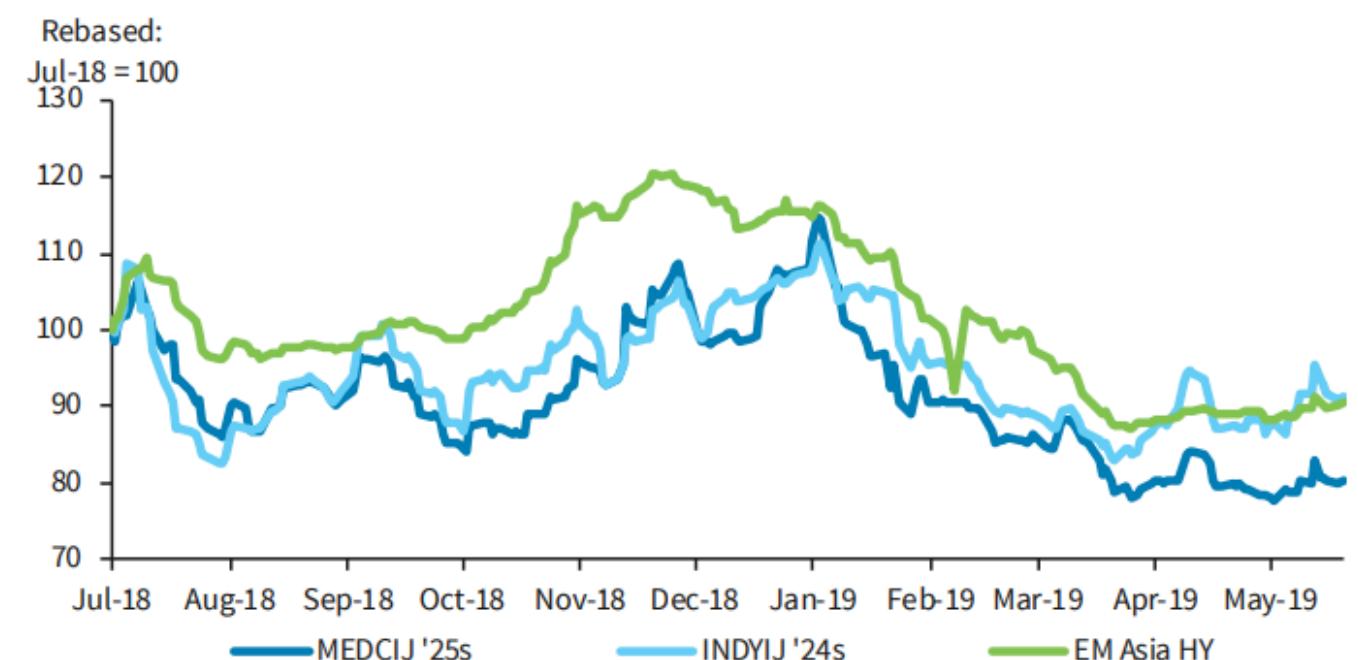
*Medco and Indika bonds show higher correlation to HY index than to oil and coal prices*

### Medco and Indika: Benchmark huggers

The Medco '25s and Indika '24s bond yields exhibit significant correlation to the EM Asia HY Corporate index (87% and 80%, respectively), especially compared with the Vedanta '24s (68%). Indeed, their bond yields are more correlated to the index than to their respective product benchmarks: Yields for Medco '25s are 47% inversely correlated to Brent crude while the Indika '24s yields show a 56% inverse correlation to the ICI4 coal benchmark.

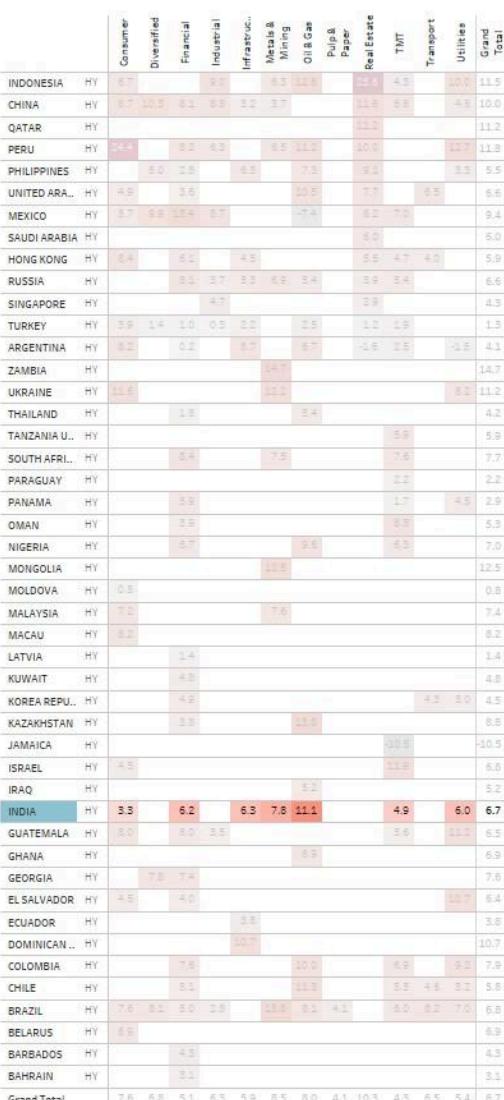
FIGURE 5

Medco and Indika's bond yields are highly correlated to benchmark



# India High Yield

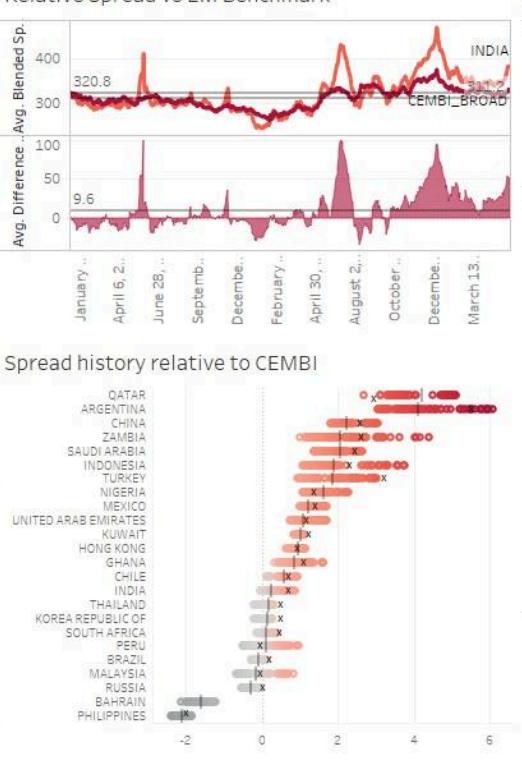
- \* India HY remains relatively Cheap to remaining EM
- \* India HY has performed 6.7% YTD, lagging many Asian economies
- \* Single B and Double B are trading at historical norms regarding yield difference
- \* Liquidity has improved with Bid-Ask ticking down. Price volatility is also muted
- \* The 3-Yr duration bucket still seems to offer interesting value, with issuers not pushing IPO out further
- \* Supply has been relatively constraint



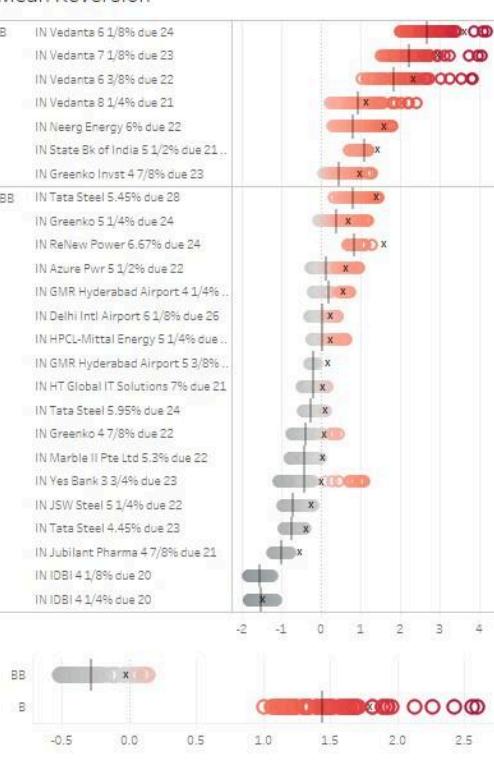
## Relative Yield vs EM Benchmark



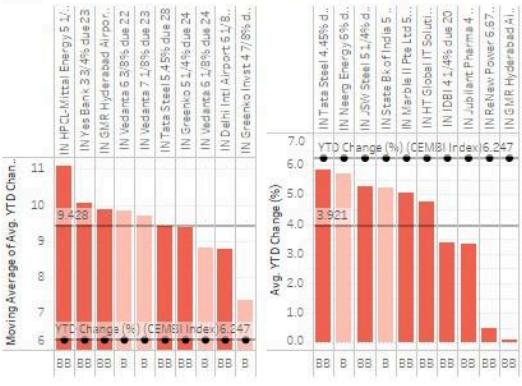
## Relative Spread vs EM Benchmark



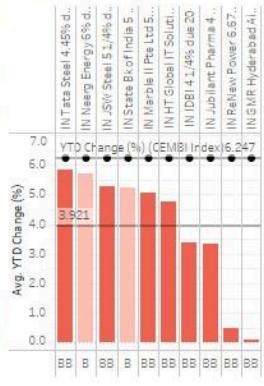
## Mean Reversion



## YTD Top 10



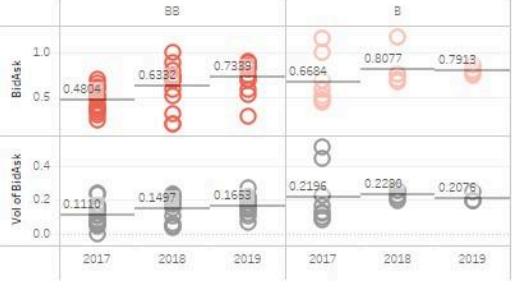
## YTD Bottom 10



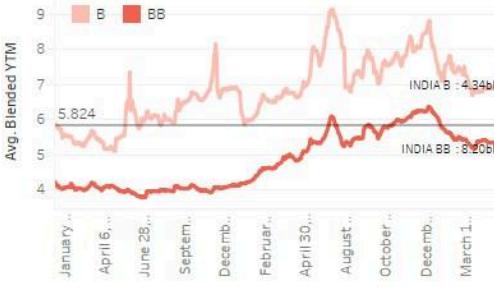
## BID-ASK History for Current Year



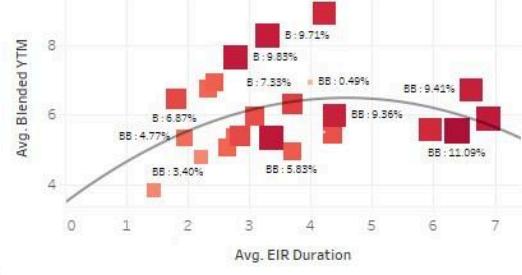
## BID-ASK History per Rating



## Rating Comparison - Yield



## HeatMap Curve



## Yield Distribution



## Duration Distribution



## Coupon Distribution

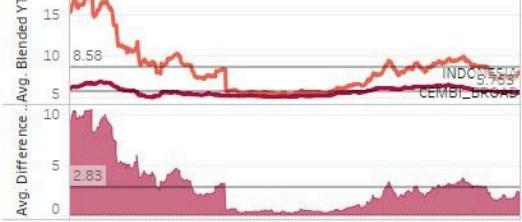


# Indonesian High Yield

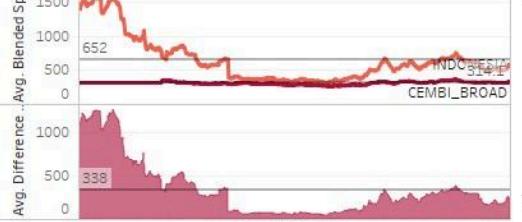
- \* Indon HY remains relatively Expensive to remaining EM
- \* Indon HY has performed all other major HY markets with YTD 11.5% with biggest outperformers in Real Estate of 25.6%
- \* Single B and Non Rated are trading relatively tighter than Double B, and as such we recommend moving up in quality
- \* Liquidity has improved with Bid-Ask ticking down
- \* Price volatility has picked up YTD
- \* Bonds have kept duration on average around 4 years
- \* Yields to Maturity on average are: BB: 6.6% & Single B 8%
- Indon High Yield remains a high Beta Sector



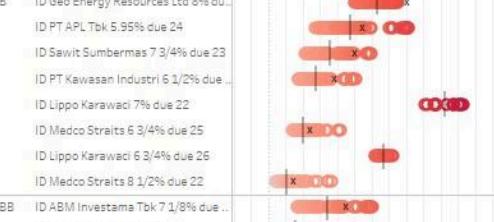
## Relative Yield vs EM Benchmark



## Relative Spread vs EM Benchmark



## Mean Reversion



## YTD Top 10



## YTD Bottom 10



## BID-ASK History for Current Year



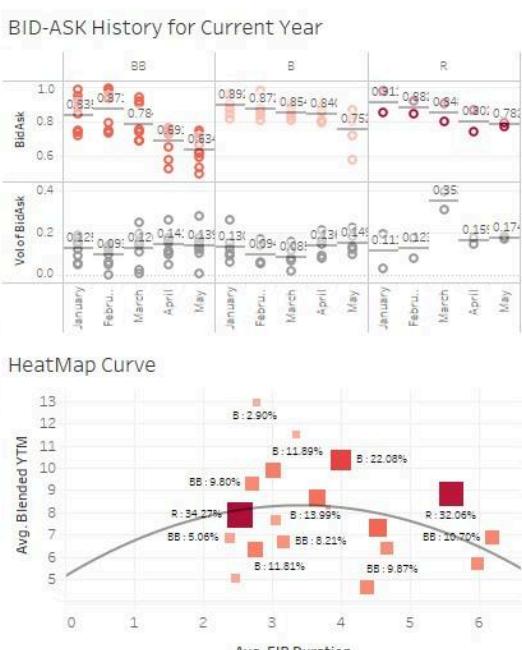
## BID-ASK History per Rating



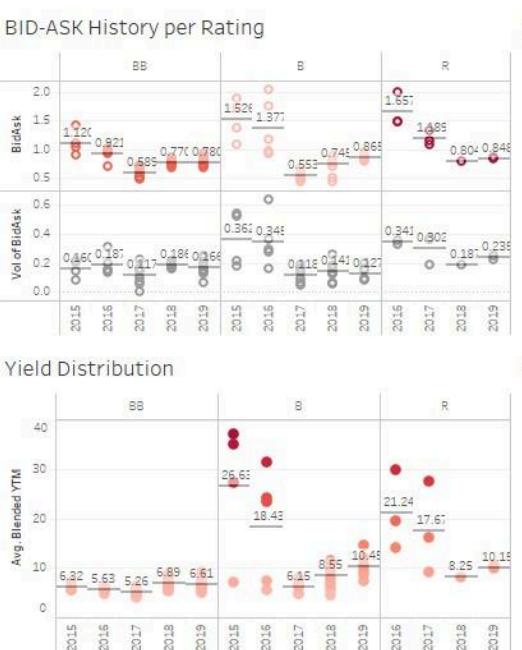
## Rating Comparison - Yield



## HeatMap Curve



## Yield Distribution



## Duration Distribution



## Coupon Distribution



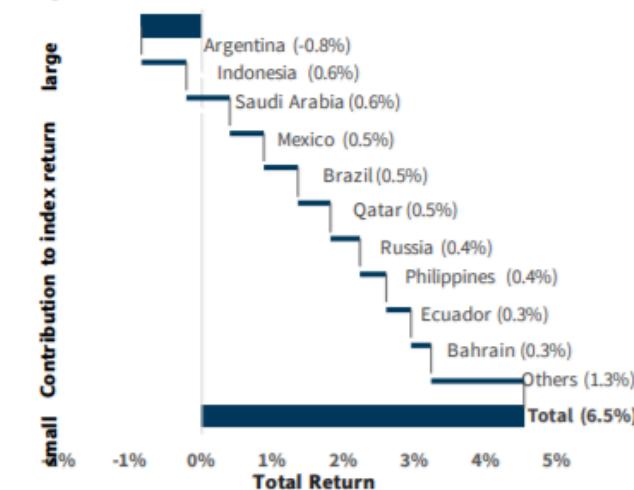
## EM SOVEREIGNS: PERFORMANCE

FIGURE 8  
Global EM USD sovereigns: spread history



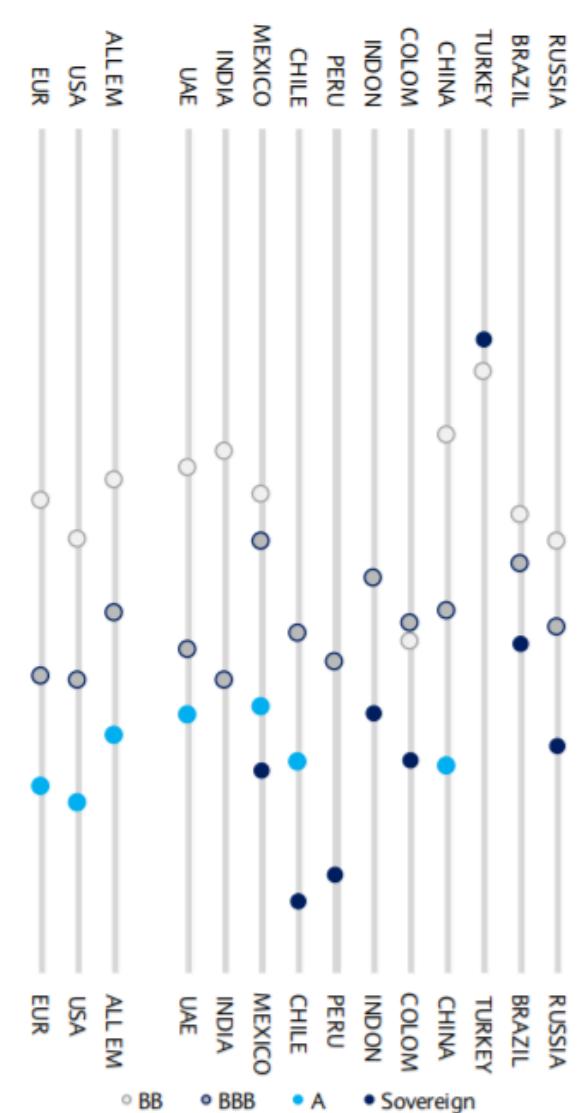
Note: Dark blue line is 3mma. Shaded area encompasses 3mma +/- 1 standard deviation. Source: Barclays Research

FIGURE 9  
Largest contributors/detractors to index 12m returns



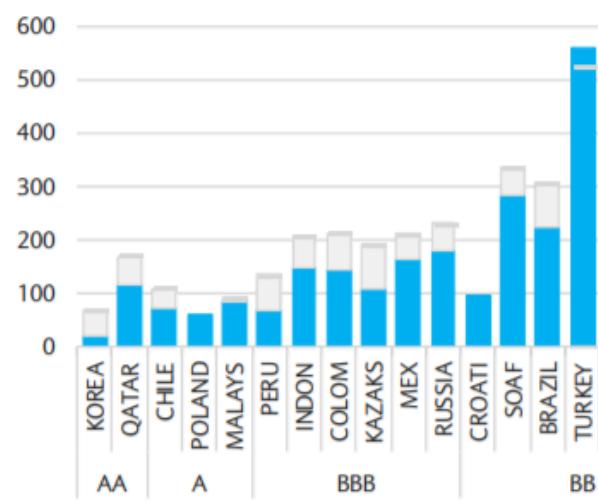
Note: Top 10 countries shown. Each bar and label represent that country's contribution to index returns (not the country return). Source: Barclays Research

FIGURE 10  
Corps, quasis, and sovereigns: average spreads today



Note: Scale is logarithmic as this allows easier visual comparison between ratings groups trading in different ranges. Source: Barclays Research

FIGURE 11  
Sovereign spread vs rating (10y in blue, 30y in grey)



Source: Barclays Research

FIGURE 12  
Sovereign bonds versus CDS basis

	BOND	CDS	BASIS	2Wk Δ	1Y HISTORY
BRAZIL	132	180	49	3	
MEXICO	107	121	14	-3	
RUSSIA	117	127	10	9	
TURKEY	569	519	-50	5	
INDONESIA	124	107	-17	-4	
PHILIPPINES	58	60	1	3	
S.AFRICA	212	194	-19	3	
CHILE	65	49	-16	-3	
COLOMBIA	111	113	2	-2	

Note: Basis is CDS minus cash spread. 5y CDS used. Source: Barclays Research

FIGURE 13

We separate sovereigns into low to high beta categories based on their current spreads: current spread, w/w and YTD changes, and one-year range of 10y benchmark bonds

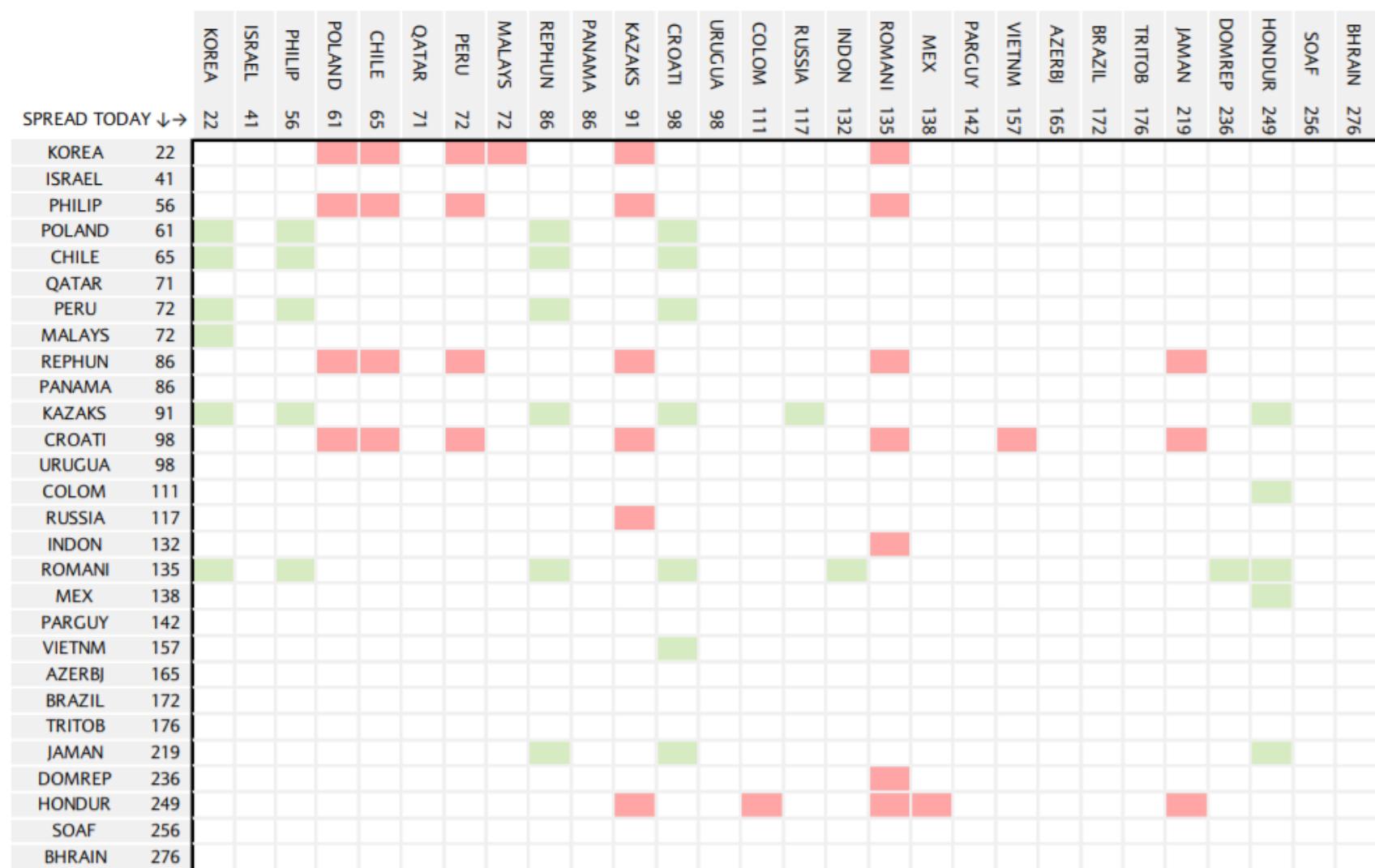
<b>LOW BETA</b>	S.KOREA	44	CHILE	67	ISRAEL	43	PHILIPPINES	62	QATAR	95	MALAYSIA	82	POLAND	66	<b>LOW BETA</b>
	W/W -8	43 73	YTD -27	W/W -1	YTD -32	W/W -3	YTD -31	W/W -9	YTD -47	W/W 0	YTD -11	W/W -3	YTD -19	W/W 10	YTD -22
	PERU	71	BOLIVIA	295	MEXICO	152	PANAMA	113	ROMANIA	134	URUGUAY	97	MOROCCO	99	
	W/W 0	53 113	YTD -24	W/W -15	YTD -110	W/W 1	YTD -34	W/W -3	YTD -36	W/W 12	YTD -32	W/W -13	YTD -34	W/W -21	YTD -61
<b>LOW MID BETA</b>	INDONESIA	146	HUNGARY	85	RUSSIA	175	TRINIDAD	230	COLOMBIA	137	GUATEMALA	252	PARAGUAY	175	<b>LOW MID BETA</b>
	W/W 5	118 199	YTD -38	W/W 3	YTD -38	W/W -7	YTD -43	W/W -2	YTD -69	W/W 8	YTD -42	W/W 6	YTD -30	W/W 160 238	YTD -44
	KAZAKHSTAN	106	VIETNAM	156	CROATIA	97	TURKEY	540	S.AFRICA	258	AZERBAIJAN	164	NAMIBIA	343	
	W/W 6	83 159	YTD -38	W/W -2	YTD -43	W/W 7	YTD -66	W/W 19	YTD +143	W/W -9	YTD -44	W/W -8	YTD -54	W/W 293 471	YTD -109
<b>HIGH MID BETA</b>	BRAZIL	197	DOMINICAN RI	278	JAMAICA	218	COSTA RICA	341	HONDURAS	248	BAHRAIN	362	LEBANON	830	<b>HIGH MID BETA</b>
	W/W 1	177 305	YTD -28	W/W 0	YTD -52	W/W -5	YTD -19	W/W -3	YTD -129	W/W 7	YTD -110	W/W -6	YTD -25	W/W 629 890	YTD +42
	IVORY COAST	382	ARGENTINA	1007	SRI LANKA	513	TUNISIA	578	PAKISTAN	456	SENEGAL	307	NIGERIA	476	
	W/W 1	322 487	YTD -73	W/W -6	YTD +101	W/W 11	YTD -26	W/W 0	YTD -71	W/W 17	YTD -89	W/W -1	YTD -117	W/W 383 580	YTD -84
<b>HIGH BETA</b>	ARMENIA	235	EGYPT	417	ETHIOPIA	396	KENYA	399	ELSALVADOR	420	UKRAINE	670	GABON	526	<b>HIGH BETA</b>
	W/W -9	234 366	YTD -113	W/W -5	YTD -80	W/W 0	YTD -95	W/W -9	YTD -169	W/W -7	YTD -50	W/W 12	YTD -122	W/W 465 670	YTD -114
	MONGOLIA	330	ANGOLA	514	ECUADOR	628	GHANA	510	ZAMBIA	1480					
	W/W -28	259 458	YTD -104	W/W 7	YTD -70	W/W 21	YTD -242	W/W -4	YTD -131	W/W 92	YTD +300				

Note: Top and bottom 10% of each category (for weekly and YTD spread changes) highlighted. In case of a tie, all tied issuers are highlighted. Small chart depicts LTM range. Source: Barclays Research

# EM LOW BETA SOVEREIGNS: CROSS-COUNTRY RELATIVE VALUE

FIGURE 14

10y benchmark bond performance matrix: low-beta sovereigns. Performance measured over past 12 months. Relationships more than 1.5 standard deviations from the 1y mean highlighted (green = cheap, red = rich, eg, green cell indicates that ticker in left column is cheap to ticker across top row).

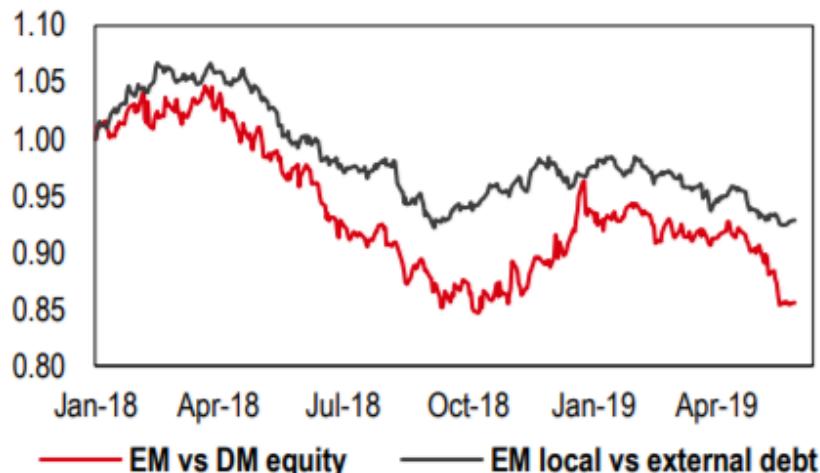


Note: Grey cells indicate lack of at least one year of data. Source: Barclays Research

# Multi-Asset Spotlight

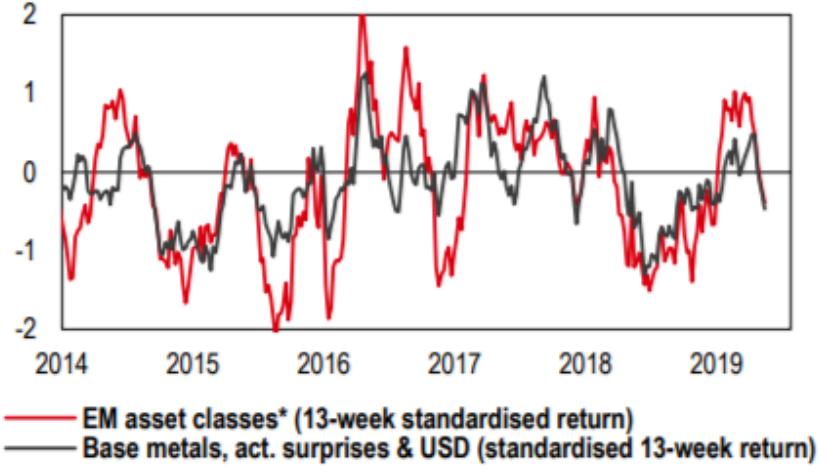
In February we thought emerging market assets were ripe for a breather ([EM – time for a breather](#), 18 Feb). Fast forward a few months, and EM assets currently appear to be almost entirely running out of air. But are EM assets more attractive now?

## 1. EM underperformance...



Source: HSBC, Bloomberg

## 2. ... in line with typical performance drivers

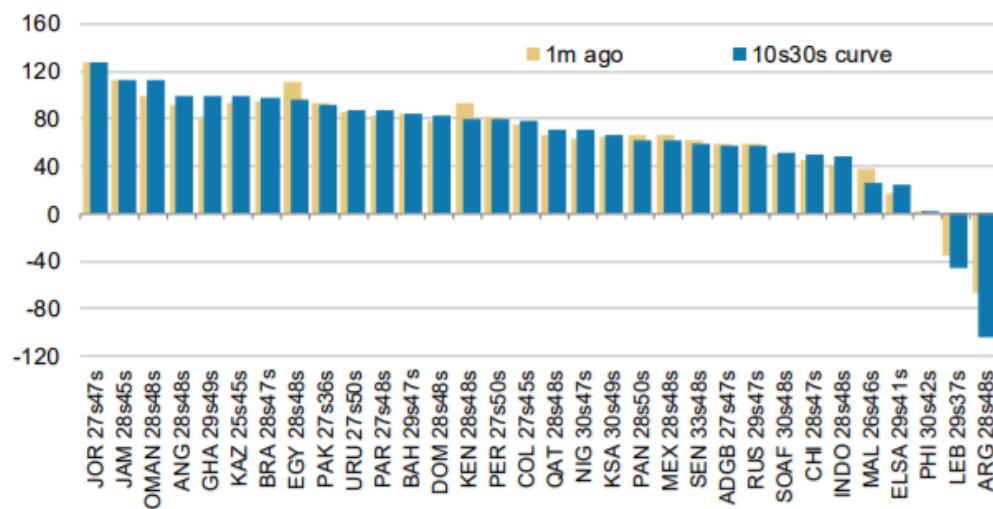
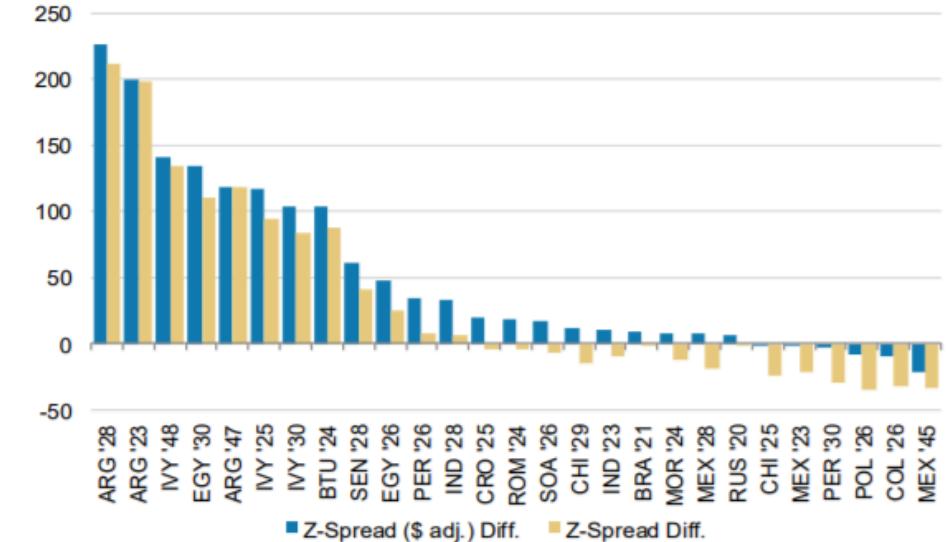


Source: HSBC, Bloomberg; \* EM equities, external and local debt

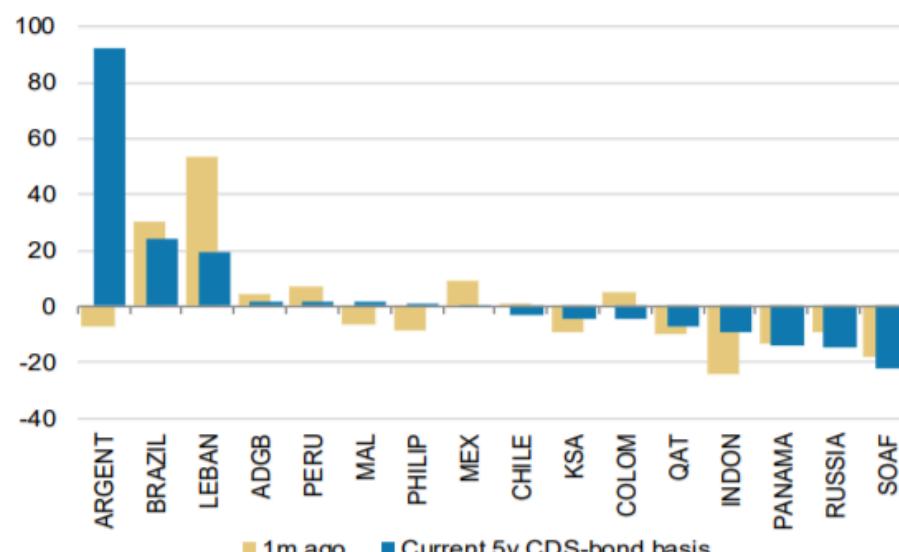
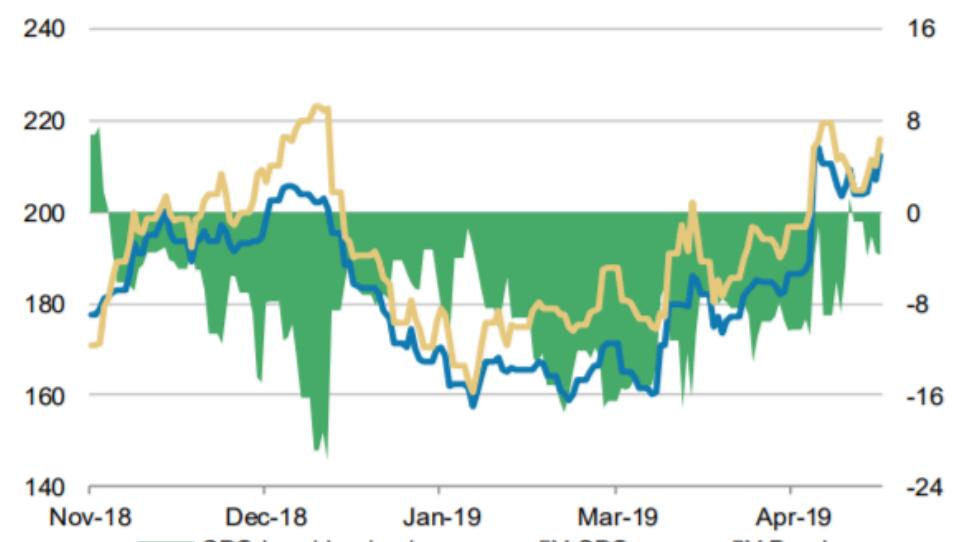
In our view, anything but a short-term rebound does not look likely. Instead we see further underperformance vs DM assets ahead, in line with our EM multi-asset ([EM Action](#), 10 Apr) and EM rates colleagues ([GEMS Investor](#), 10 Apr). Four things stand out:

1. While EM's underperformance may look stretched, it's actually pretty much in line with what typical EM performance drivers suggest (chart 2). Note we still see a slightly stronger USD, which would likely act as another constraint on any EM rebound ([Currency Outlook](#), 9 May).
2. Despite EM's poor performance this came against the background of only a short-term spike in volatilities, a theme we see more frequently occurring ([The Great Gatsby](#), 1 May). But, what if this happened again, triggered by, say, renewed trade tensions? Or even worse – what if we are wrong and volatilities do rise more sustainably? EM assets hardly seem like a good choice then.
3. Despite the setback in EM assets, valuations vs DM aren't sufficiently cheap yet, neither in the rates nor in the equities spaces (charts 3 and 4).

## Sovereign Credit – Finding Value in Steep Curves and CDS

**EM sovereign 10s30s credit curves (bp)**

**EUR vs. USD bond spread differentials (bp)**


CDS offers value in Brazil but less in South Africa, Russia


**CDS-bond basis history, bp**


Source: Bloomberg, Morgan Stanley Research

## Sovereign Credit – Hedging an EM Bond Portfolio with EM CDX

### Evaluating potential hedges to an EMBIG Div. portfolio

EMBIG Div Total Returns	1y Corr.	LT Corr.	1Y Beta	LT Beta
EM CDX TR	76%	75%	0.51	0.72
EMB ETF TR	94%	92%	1.22	1.24
US HY CDX TR	38%	48%	0.43	0.60
SPX Level	29%	36%	1.06	0.93
UST 7-10y TR	18%	20%	0.17	0.22
US HY TR	38%	62%	0.36	0.57
US IG TR	58%	46%	0.38	0.36

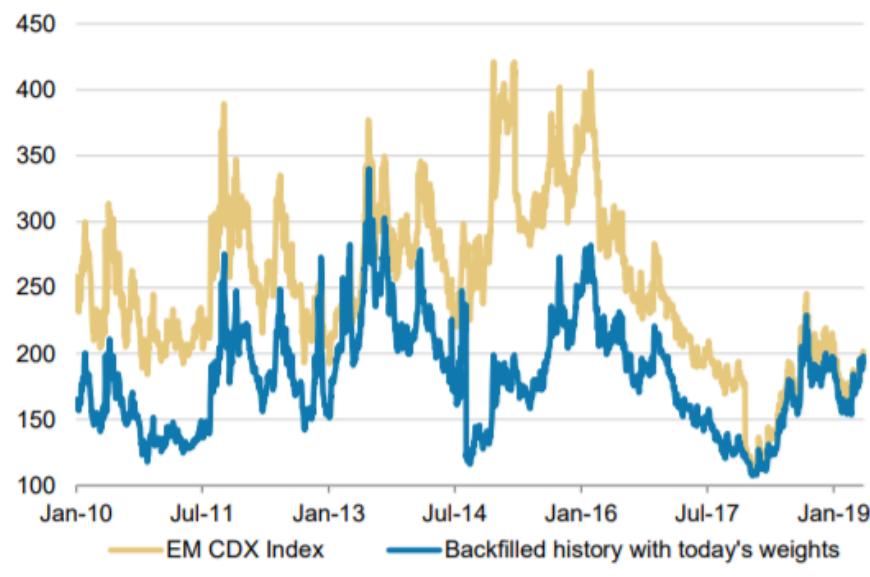
EMBIG Div Total Returns	1y Corr.	LT Corr.	1Y Beta	LT Beta
MXNUSD TR	68%	53%	1.59	1.06
BRLUSD TR	22%	42%	0.63	1.04
ZARUSD TR	55%	49%	1.77	1.34
TRYUSD TR	25%	36%	1.47	0.92
RUBUSD TR	44%	47%	1.18	1.28
BRLTRYRUB	40%	55%	1.03	1.06

EMBIG Div Spreads	1y Corr.	LT Corr.	1Y Beta	LT Beta
EMB ETF Spread	95%	76%	1.05	
EM CDX Spread	75%	76%	0.70	0.91
US HY CDX Spread	59%	66%	0.86	1.22
US HY Spread	62%	76%	1.08	1.13
US IG Spread	71%	67%	0.27	0.23

Source: Bloomberg, Morgan Stanley Research; US IG and HY are cash indices.

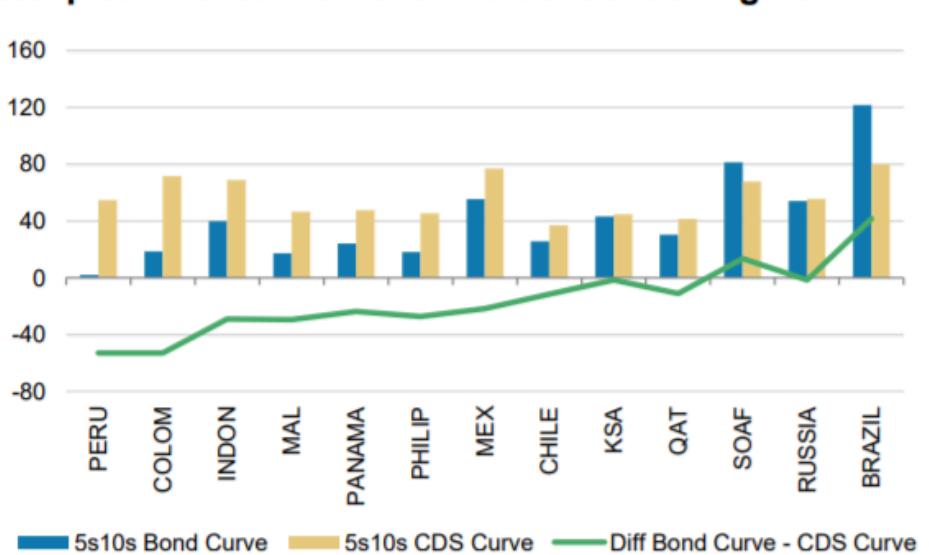
### Assessing valuations of the new EM CDX index



### Performance of various hedges during EMBIG Div. sell-offs



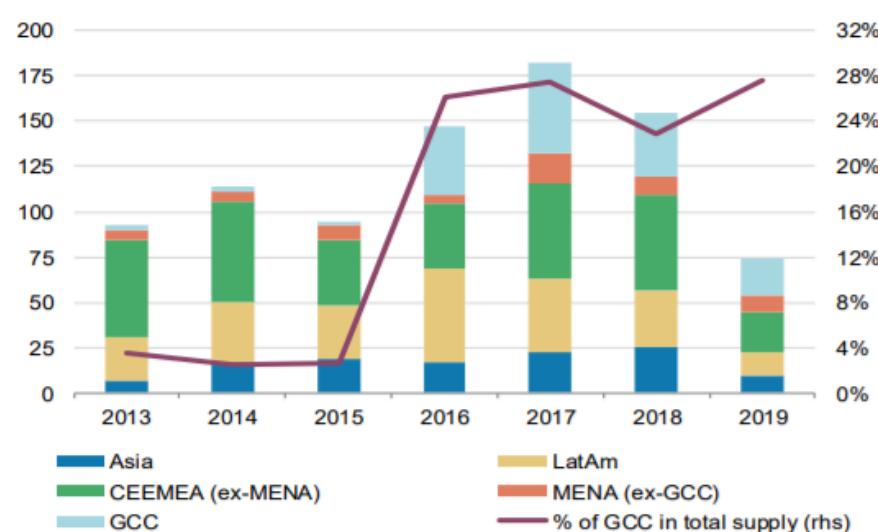
### Steep curves leaves front-end bonds looking rich



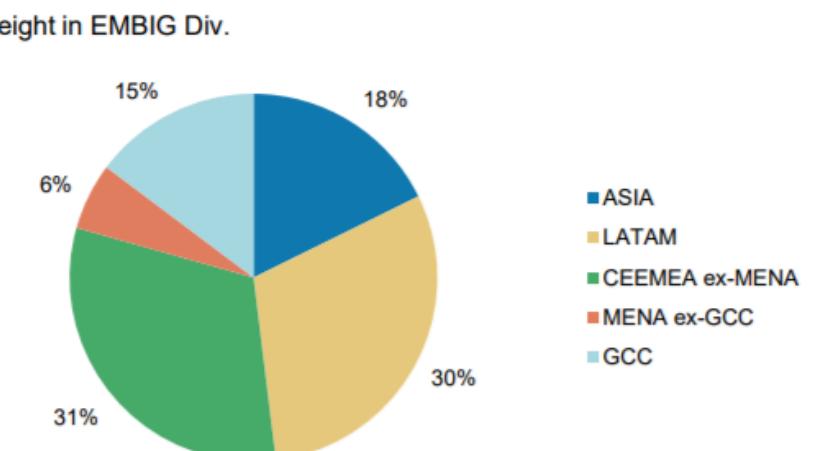
24

## Sovereign Credit – Gulf Bonds to Go Mainstream?

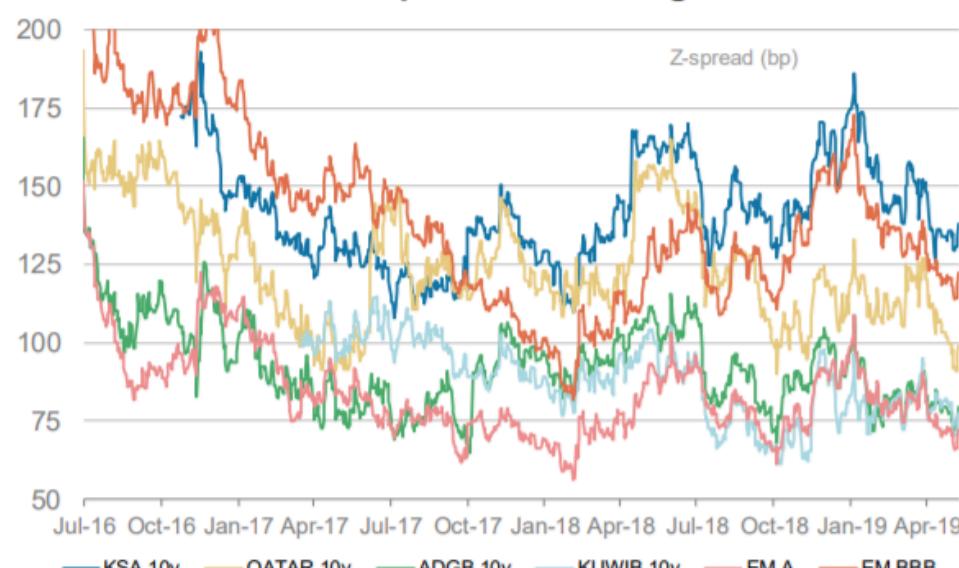
### Sovereign issuance from GCC significant versus history



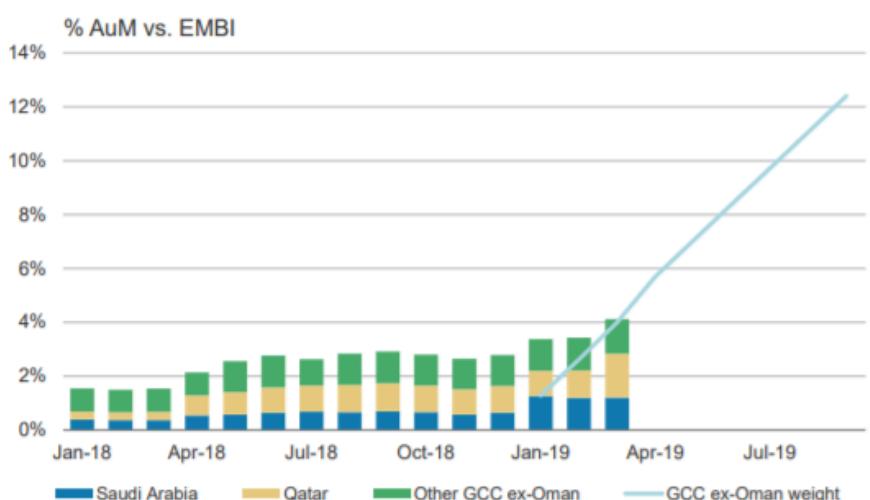
### MENA accounts for 21% in EMBIG Div.



### GCC credits trade cheap vs. their rating buckets



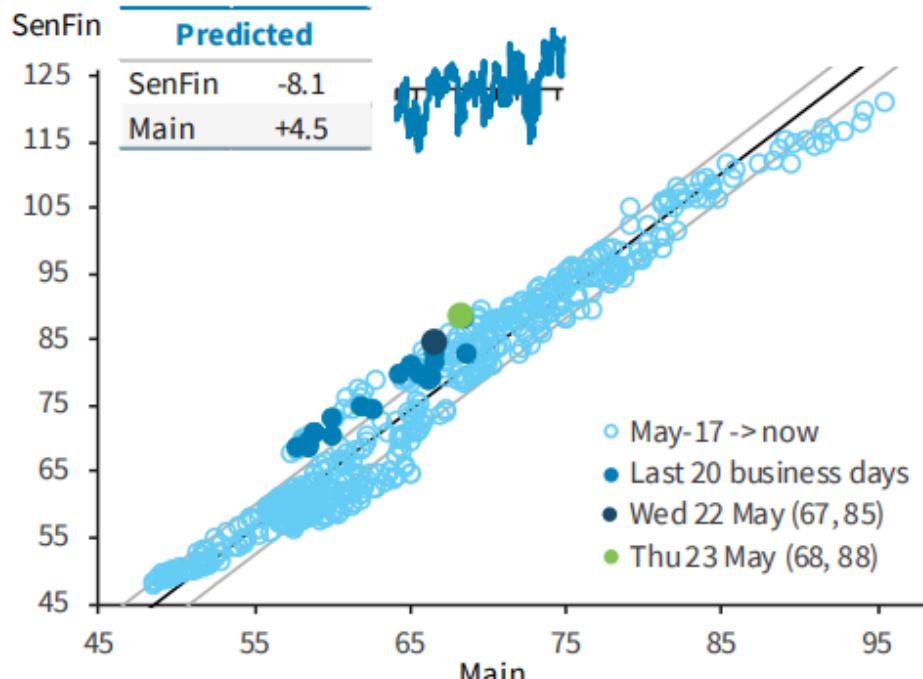
### EMBI-benchmarked investors would need to add significant GCC risk in the coming months



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FIGURE 13

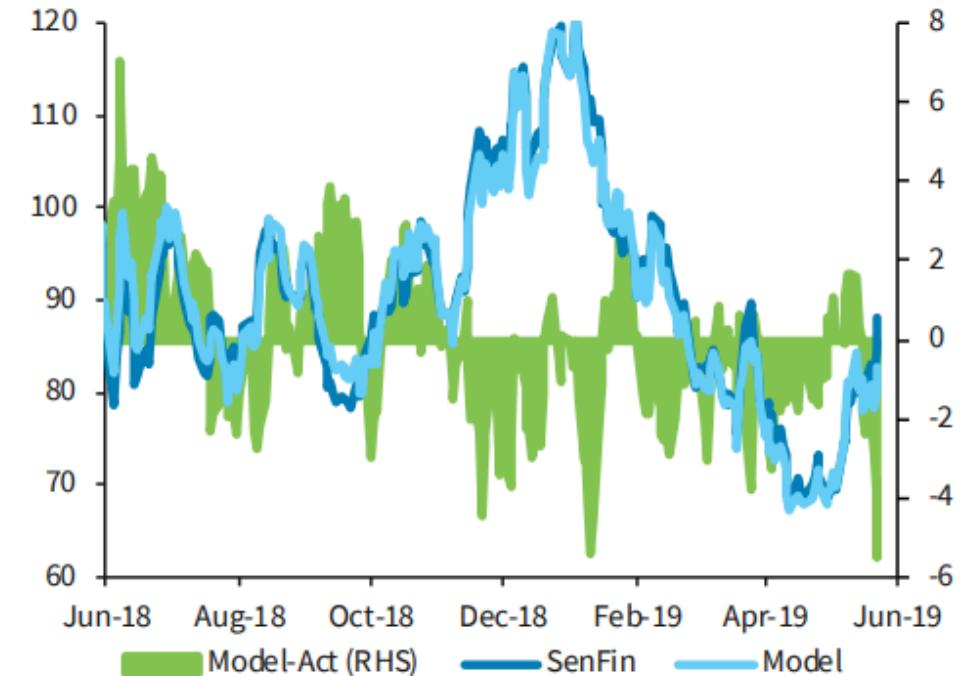
On a 2yr regression basis, SenFin looks 8bp wide vs Main...



Source: Barclays Research

FIGURE 14

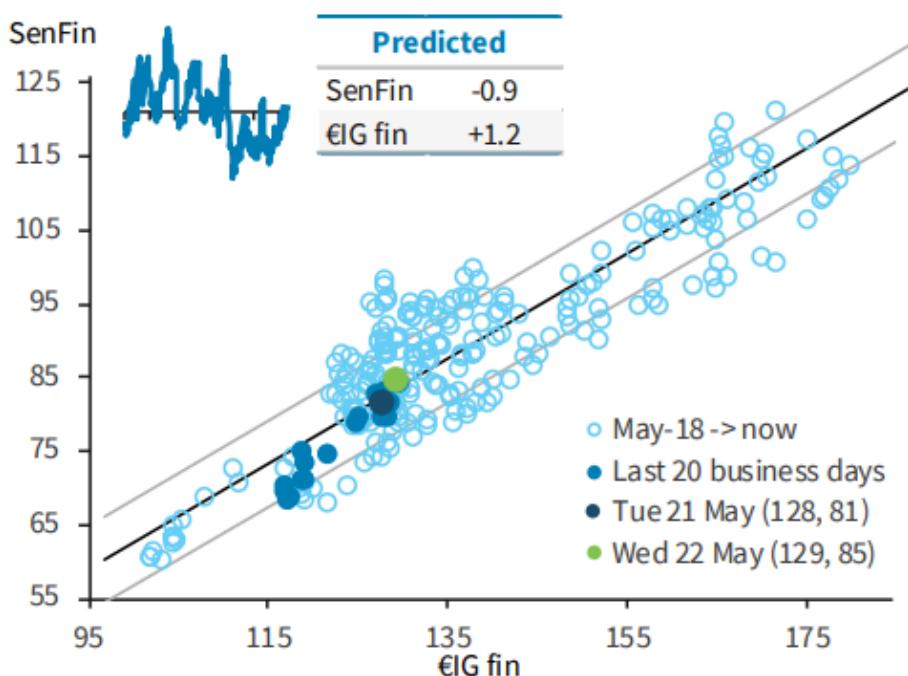
... and 5bp wide in a model using BTP-Bunds and EURGBP



Note: we model SenFin using Main, 5yr BTP-Bund and EURGBP, daily data for 1yr. Source: Barclays Research

FIGURE 15

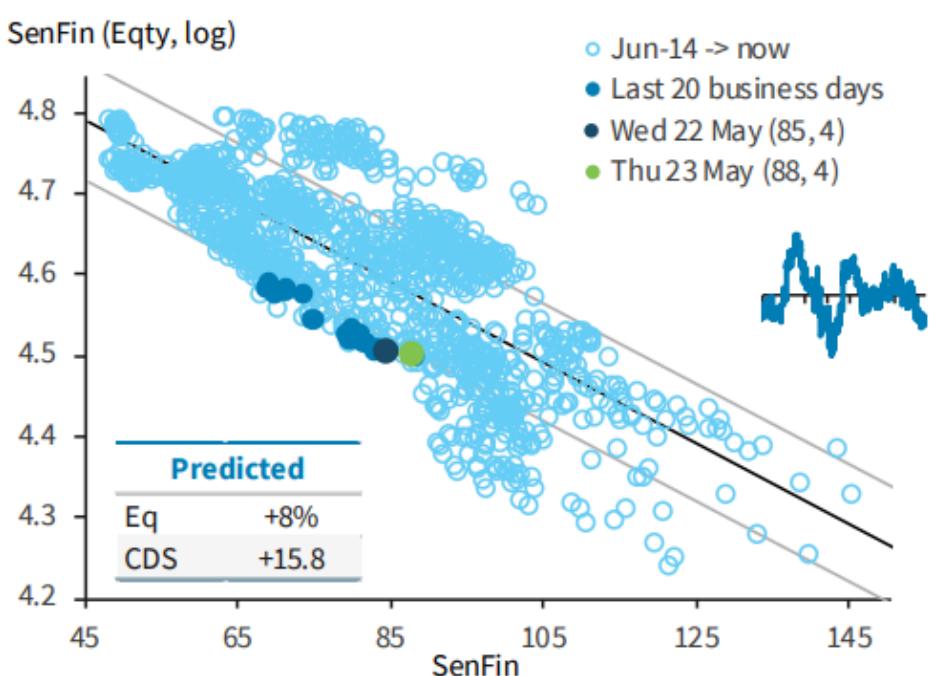
SenFin is in line with €IG Fins on a 12mth horizon



Source: Barclays Research

FIGURE 16

SenFin perennially tight vs matched equities



Note: "Matched equities" denote an equal-weighted total-return index for the constituents of the cited CDS index where equity is publicly traded.

Source: Barclays Research

FIGURE 17

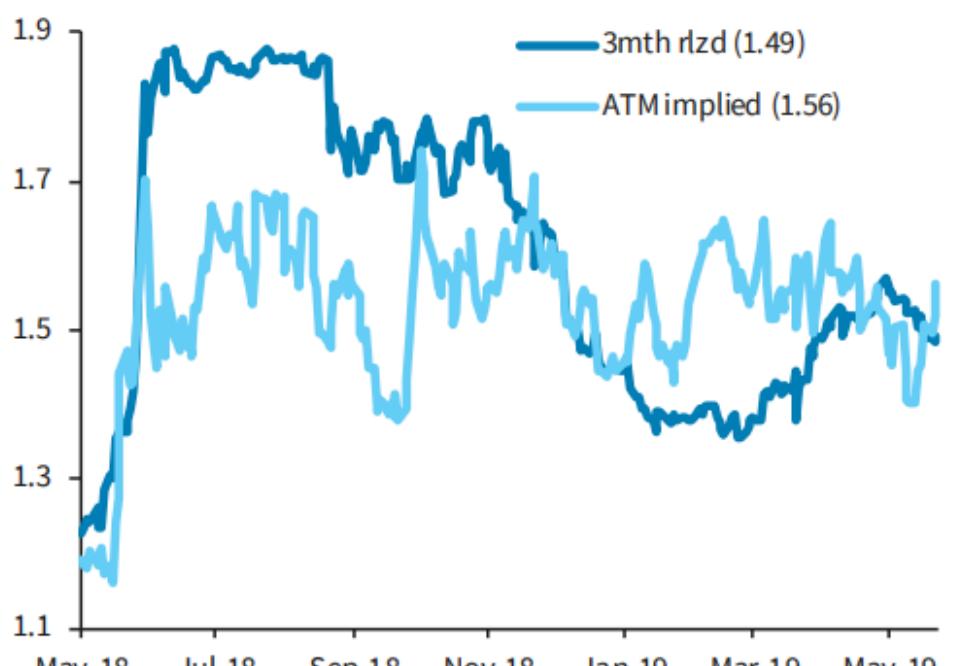
Investors remain roughly flat risk in SenFin, compared to previous structural shorts



Source: DTCC, Barclays Research

FIGURE 18

Implied beta of iTraxx SenFin vs Main options at 1.5x is in line with realized betas: SenFin options are fairly valued vs Main



Note: Implied beta is the break-even of a costless ATM spot straddle-vs-straddle trade, sized to be costless. Source: Barclays Research

FIGURE 19

iTraxx SubFin has decompressed vs SenFin in recent sessions...

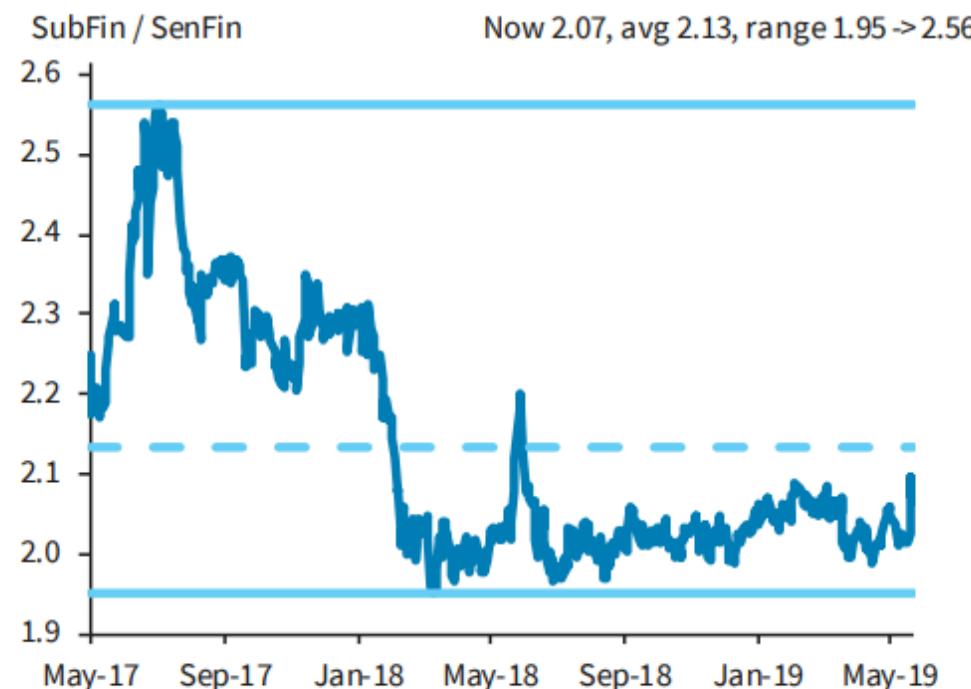
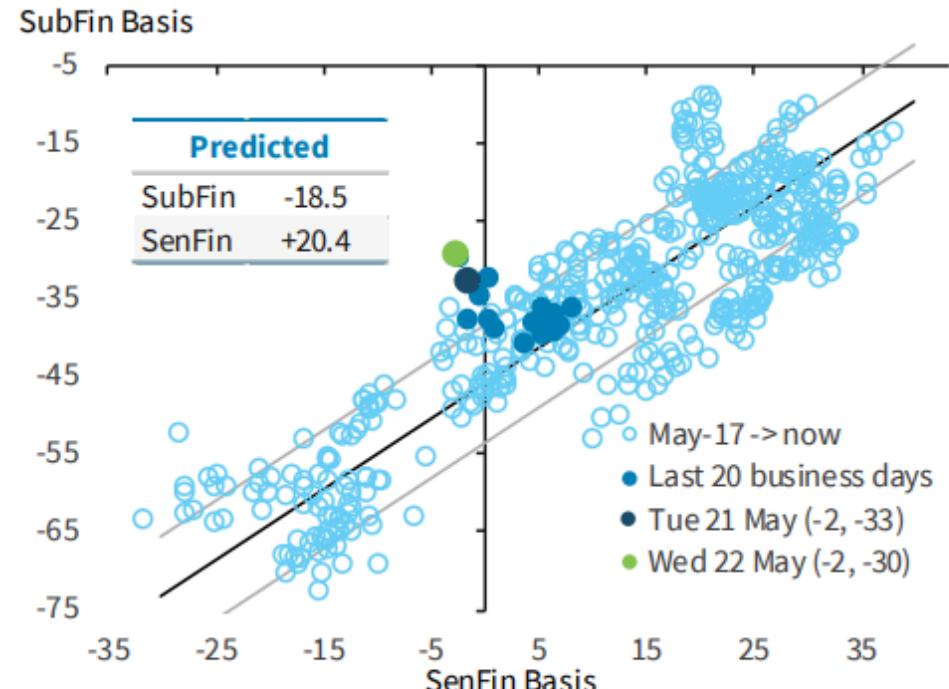


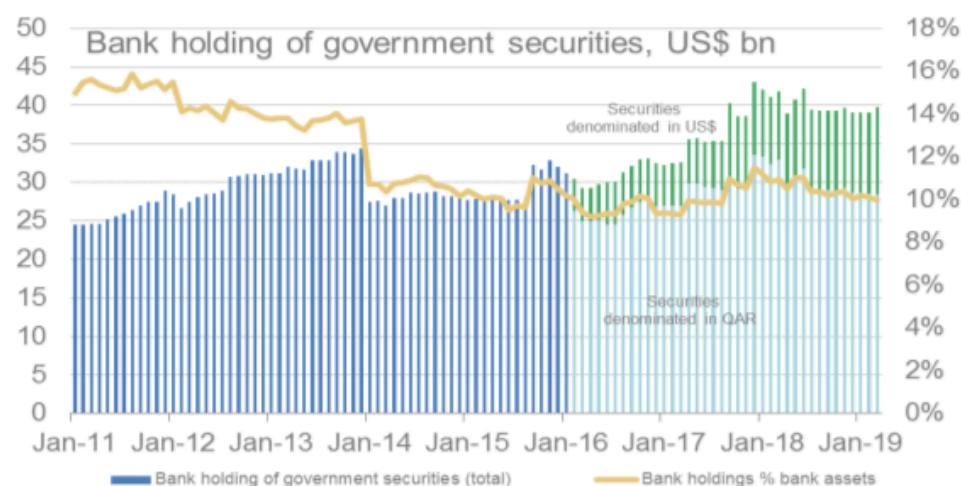
FIGURE 20

... and compared to cash, SubFin CDS could be 18bp tighter



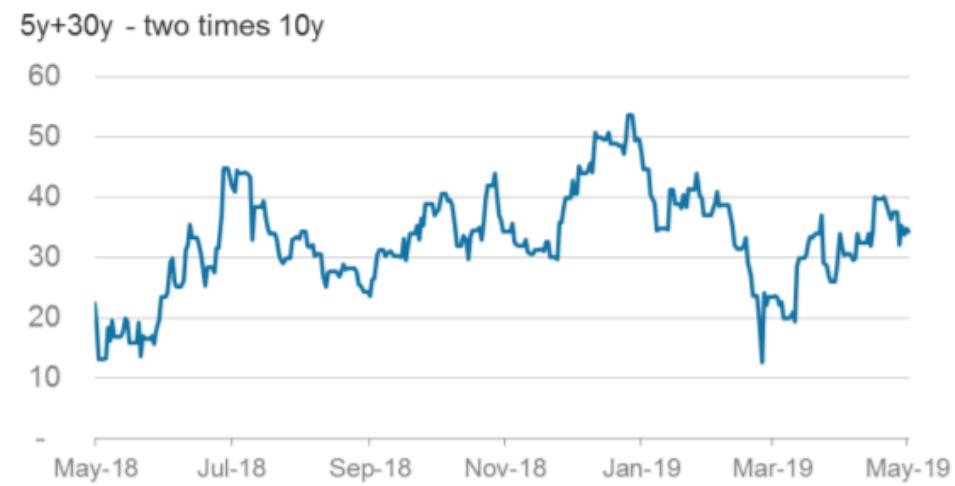
Note: We define a constituent-matched CDS-cash basis by identifying the bond of each constituent nearest to 5yrs and identifying the maturity-matched CDS, aggregating this across constituents and time. Source: Barclays Research

### Qatari banks holdings also have scope to go up



Source: Haver Analytics, Bloomberg, Morgan Stanley Research; Note: Fiscal deficit is calculated on a LTM basis.

### QATAR long end is attractive versus belly

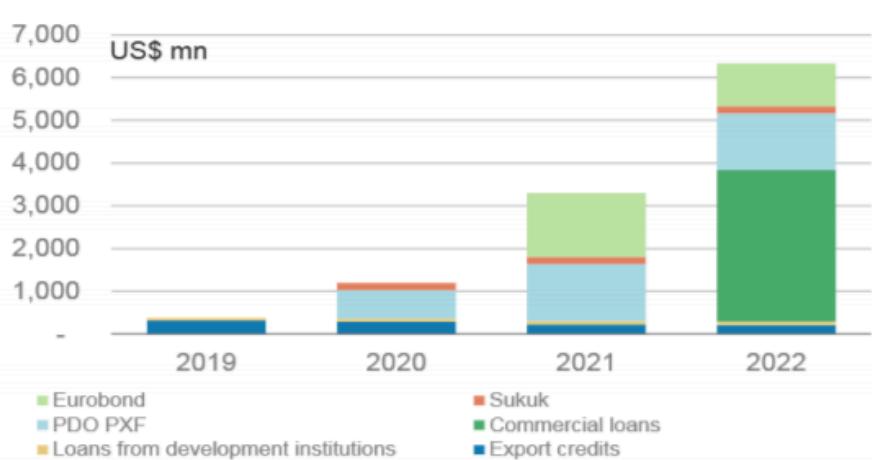


## Sovereign Credit – Oman: The Funding Conundrum

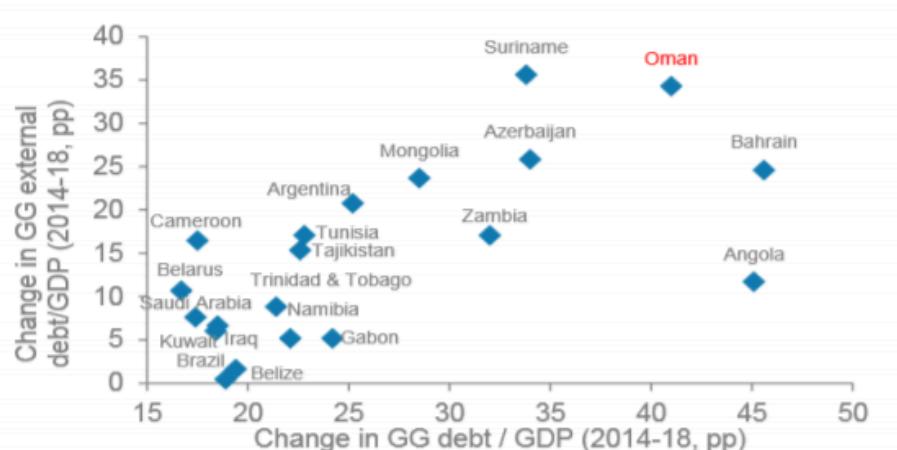
**Net FX reserves are much smaller than gross FX reserves in Oman**



**Refinancing needs to rise from 2021 onwards**



**One of the largest increase in leverage within the EMBI universe**

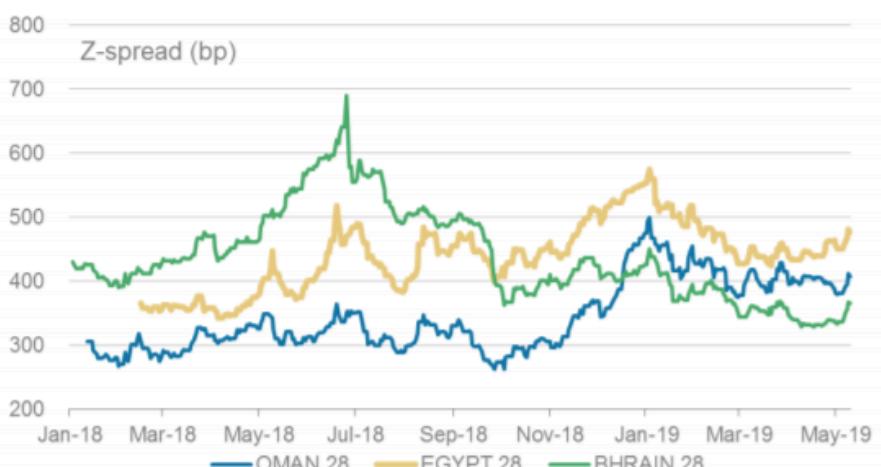


Source: Bond documents, CBO, Bloomberg, Moody's Morgan Stanley Research

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May 2019

**We expect the EGYPT-OMAN differential to compress**

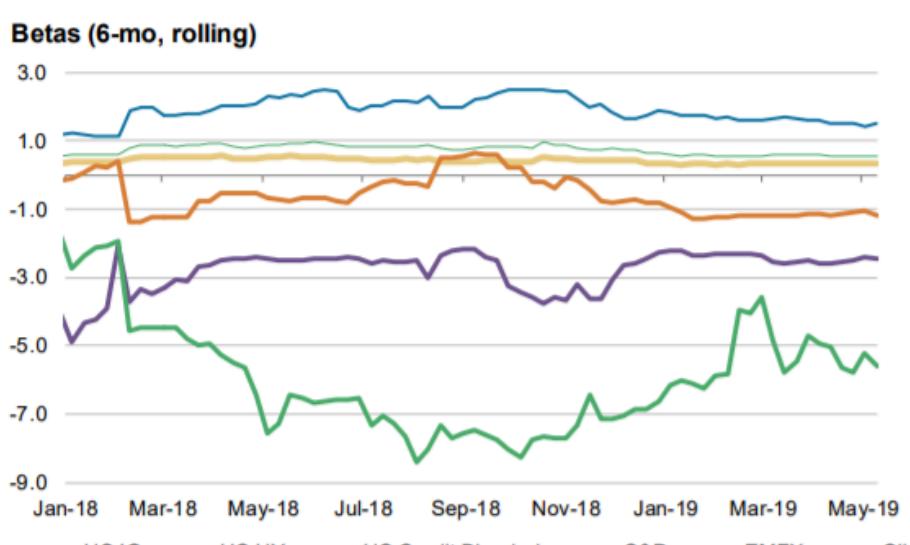


## Sovereign Credit – EM Sovereign Credit Starting to Lag US Credit Again

**EM sovereigns have started to lag US credit again...**

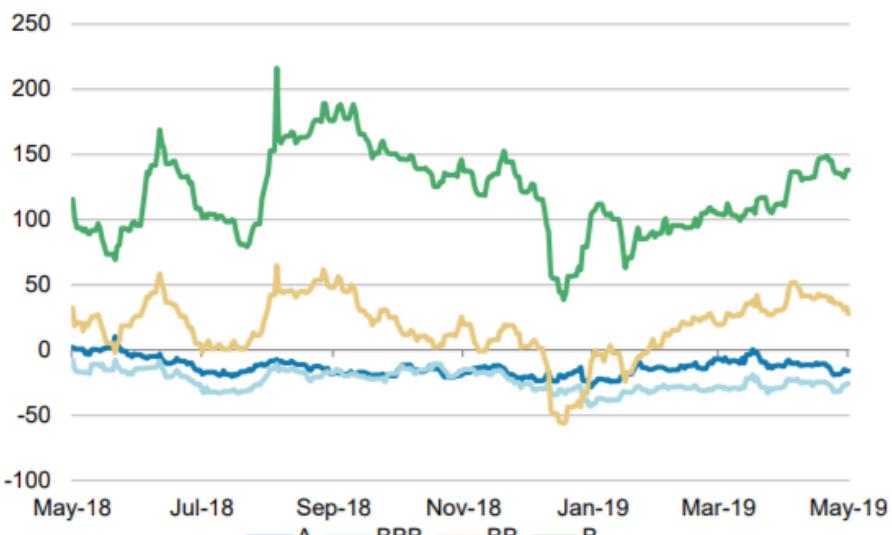


**Looking at betas of drivers of EM sovereign credit...**

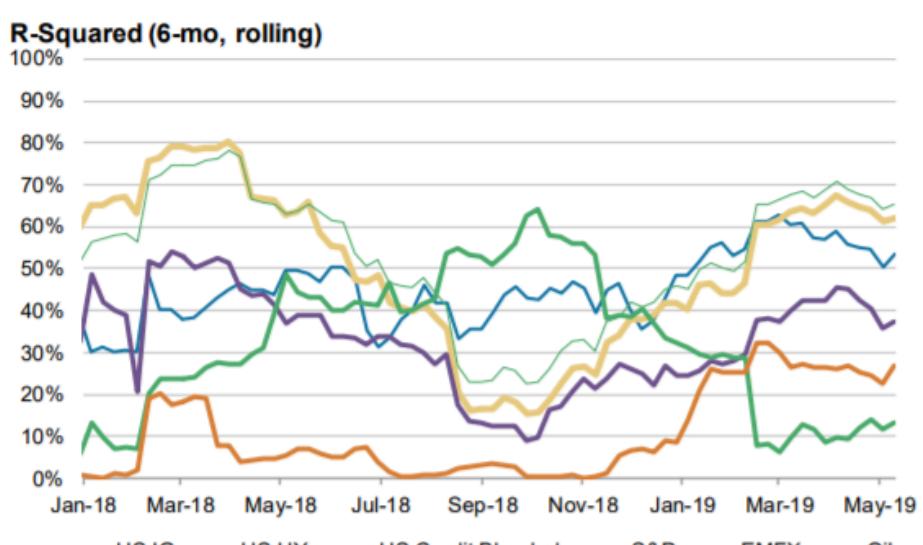


Source: Bloomberg, Datastream, Bond Radar, Morgan Stanley Research; US credit is a weighted average of US HY and IG to achieve the same rating as the EM index.

**...with EM cheapness driven by B and BB rated credits**

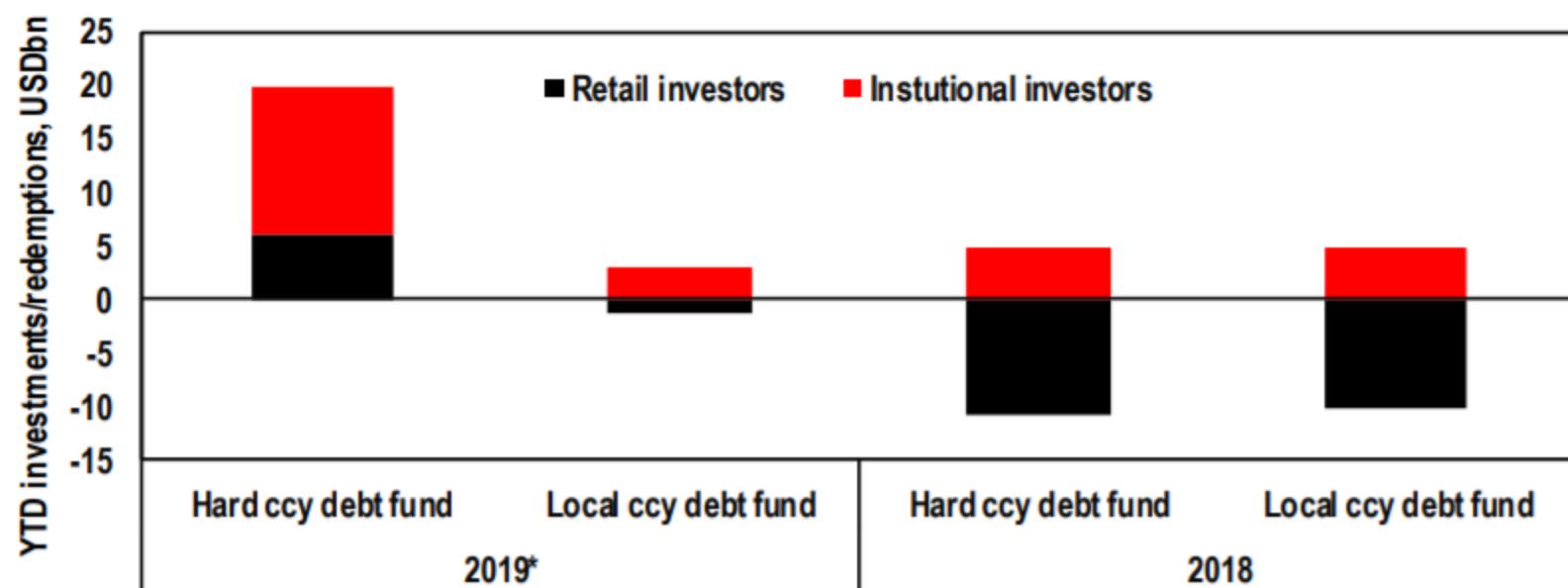


**...shows US credit gaining importance while EMFX fades**



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## Chart of the week: EM hard currency debt funds have remained the top pick among investors since the start of 2019



Source: EPFR Global, HSBC \*As of 29 May 2019

### Weekly trends in offshore bond holdings of EM local bonds

USDm	27-Feb	6-Mar	13-Mar	20-Mar	27-Mar	3-Apr	10-Apr	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May
KRW	479	574	-1,651	1,717	512	-1,075	-434	764	961	457	1,451	739	1,357	1,998
INR*	-551	-288	379	1,405	23	-589	-528	-275	-229	-357	-136	106	-192	501
IDR	-4	997	-206	-6	992	730	-79	170	-1,094	825	-324	112	-504	-238
LKR	-19	4	6	20	9	-11	-11	-38	2	-19	-62	-2	12	NA
THB*	-130	-59	14	68	-132	4	-270	-345	-103	-183	-263	429	439	99
HUF	29	-71	54	1	248	-72	-114	-144	87	-13	-63	-180	280	-29
ZAR*	141	-353	20	131	-33	470	129	294	-86	-286	-321	-193	60	19
MXN	-1,317	480	269	-701	181	-177	-220	-37	-575	-797	-300	-367	103	NA

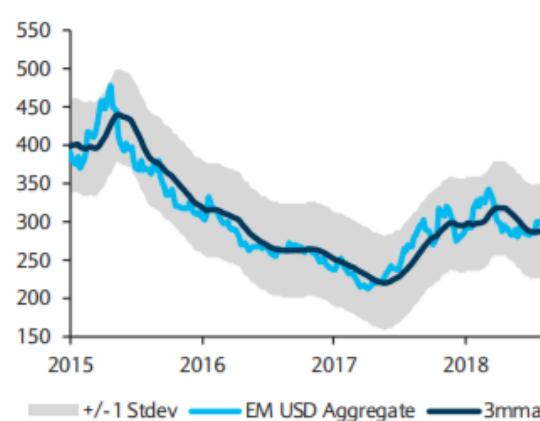
Source: Bloomberg, HSBC. \*Data include government and corporate flows.

NA – Flows data not released yet.



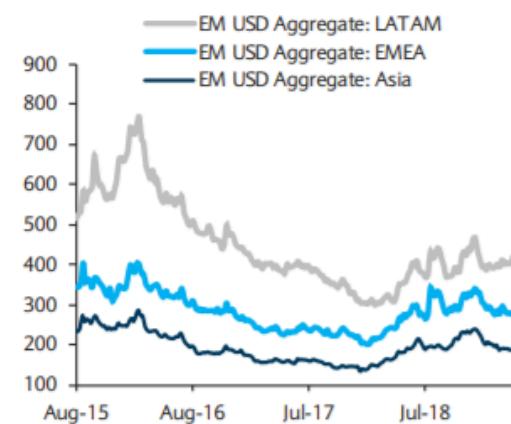
# EM CREDIT: PERFORMANCE IN A GLOBAL CONTEXT

FIGURE 1  
Global EM USD aggregate: spread history



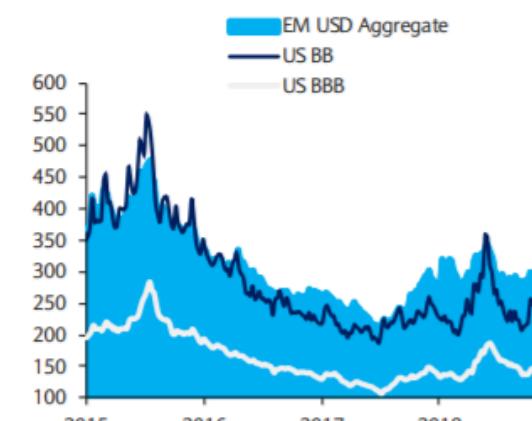
Note: Dark blue line is 3mma. Shaded area encompasses 3mma +/- 1 standard deviation. Source: Barclays Research

FIGURE 2  
Global EM USD aggregate by region



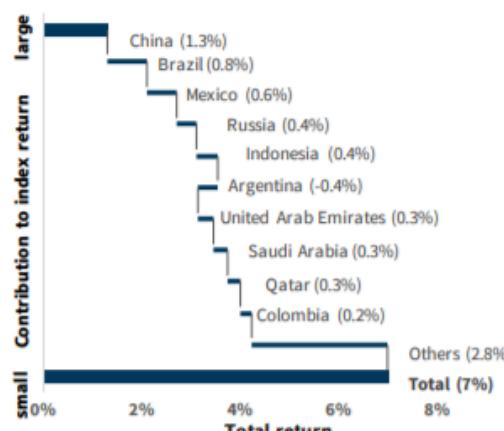
Source: Barclays Research

FIGURE 3  
Global EM USD Aggregate vs. US credit



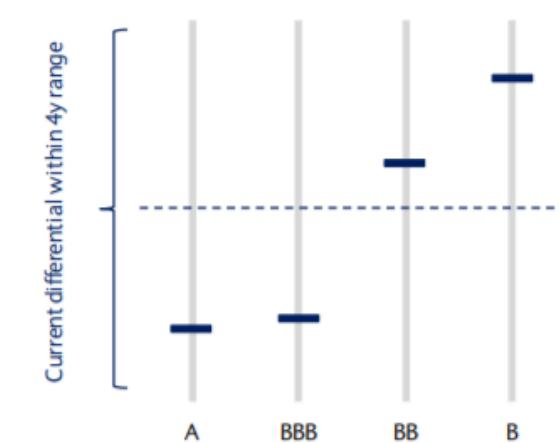
Source: Barclays Research

FIGURE 4  
Largest contributors/detractors to index 12m returns



Note: Top 10 countries shown. Each bar and label represent that country's contribution to index returns (not the country return).  
Source: Barclays Research

FIGURE 5  
Differentials vs. US credit by rating over past 4 years



Source: Barclays Research

FIGURE 6  
Total returns for global credit, ranked by YTD return

	1M	3M	6M	1Y	YTD
US HY	-0.5%	1.8%	6.2%	6.1%	8.1%
EM USD Agg	0.7%	2.3%	8.5%	6.9%	6.4%
EM USD Sov	0.5%	1.4%	9.1%	6.1%	6.4%
US IG	0.5%	3.6%	7.8%	7.0%	6.3%
EM USD Corp-Quasi	0.5%	2.6%	7.7%	7.2%	6.0%
EUR HY	-0.8%	1.7%	5.0%	2.7%	5.7%
EUR IG	-0.3%	1.7%	3.7%	2.9%	3.6%

Note: Best- and worst-performing asset class in each period highlighted. Source: Barclays Research

29 May 2019

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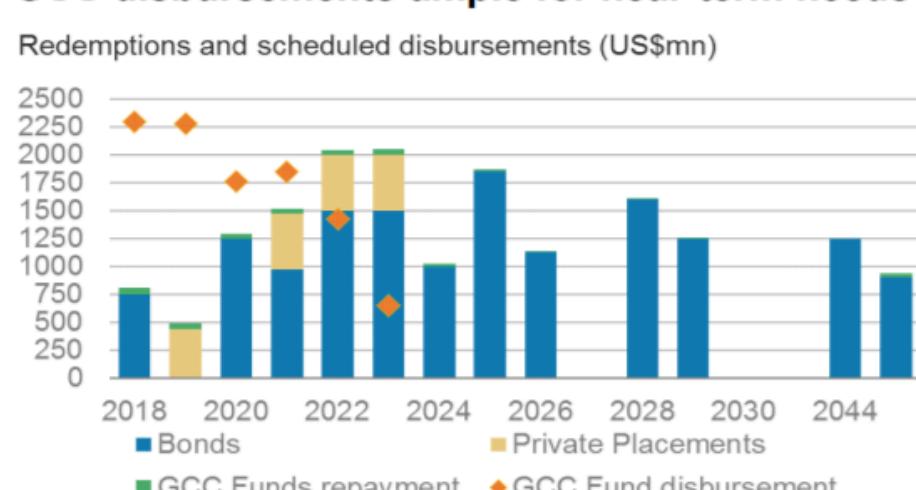
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## Sovereign Credit – Bahrain: Credit Story Has Turned Around

### FX reserves are now rising

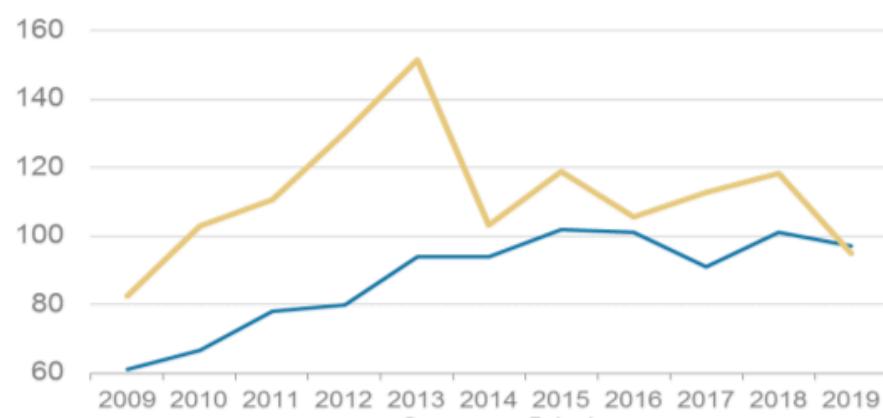


### GCC disbursements ample for near-term needs



### IMF now estimates Bahrain to have a lower breakeven oil price than Oman

Fiscal break-even oil price (US\$/bbl)



### BHRAIN spreads should be capped by JORDAN

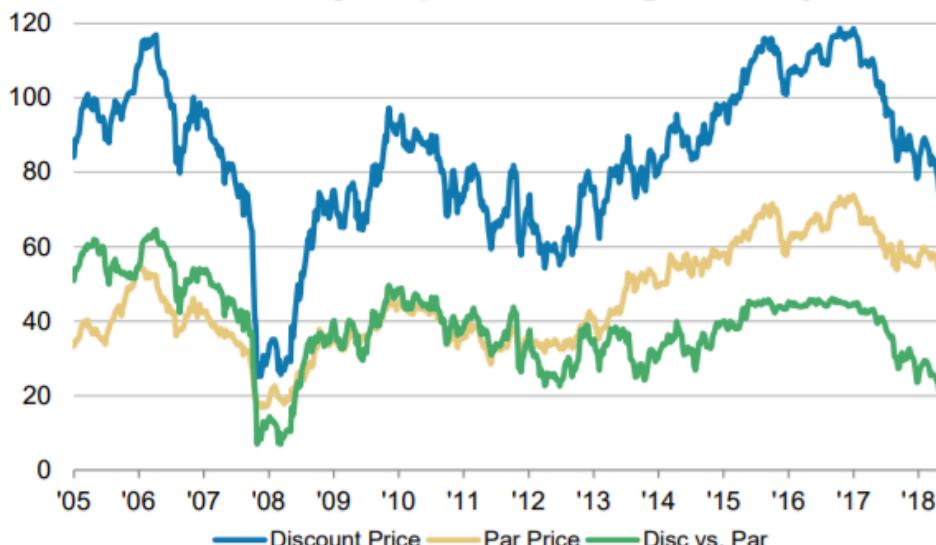


Source: IMF, Haver Analytics, bond documents, Bloomberg, Morgan Stanley Research

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## Sovereign Credit – Argentina: Scenario Analysis

Par bond has already outperformed significantly



Pricing in 50% probability of policy continuity leaves returns attractive

Bond	50%			20%			30%			Average	Price Return	Total Return
	Current	Continuity	Moderation	Reversal								
Glb 21	85.7	101.1	98.8	61.7	88.8	3.69%	8.84%					
Glb 22	80.0	98.5	95.5	59.5	86.2	7.80%	12.31%					
Glb 23	75.8	94.4	90.7	57.5	82.6	8.89%	12.80%					
Glb 26	77.9	100.9	95.1	56.1	86.3	10.79%	16.96%					
Glb 27	74.6	96.9	91.0	53.7	82.8	10.95%	16.86%					
Disc USD	77.9	102.5	94.9	52.4	85.9	10.36%	17.18%					
Glb 28N	71.5	90.2	84.8	51.9	77.6	8.51%	13.38%					
Glb 28	72.7	93.8	87.5	52.1	80.0	10.04%	16.25%					
Glb 36	71.5	89.7	84.2	52.4	77.4	8.33%	14.75%					
Par USD	55.1	65.0	61.3	34.0	54.9	-0.24%	4.12%					
Glb 46	72.4	89.8	85.7	52.4	77.8	7.37%	14.03%					
Glb 48	69.2	82.0	78.3	52.1	72.3	4.48%	9.71%					
Glb 117	69.7	83.2	79.5	52.6	73.3	5.23%	10.82%					

Total return projections by end-2019 – discount bond offers attractive risk/reward

Bond	Current			Policy Continuity			Policy Moderation			Policy Reversal					
	Price	Yield	Spread	Price	Yield	Spread	Total return	Price	Yield	Spread	Total return	Price	Yield	Spread	Total return
Glb 21	85.7	15.7	1343	101.1	6.0	365	23%	98.8	7.9	555	20%	61.7	50.4		-23%
Glb 22	80.0	14.9	1262	98.5	6.4	415	28%	95.5	8.0	575	24%	59.5	34.7		-21%
Glb 23	75.8	13.2	1089	94.4	6.7	445	28%	90.7	8.2	590	24%	57.5	25.7		-20%
Glb 26	77.9	12.3	997	100.9	7.3	495	36%	95.1	8.5	615	28%	56.1	20.1		-22%
Glb 27	74.6	12.0	963	96.9	7.4	505	36%	91.0	8.6	620	28%	53.7	19.1		-22%
Disc USD (old)	77.9	12.3	988	102.5	7.9	-	38%	94.9	9.1	-	29%	52.4	20.3		-26%
Glb 28N	71.5	11.1	864	90.2	7.5	510	31%	84.8	8.5	610	24%	51.9	17.1		-24%
Glb 28	72.7	11.5	909	93.8	7.6	520	35%	87.5	8.7	630	26%	52.1	17.7		-21%
Glb 36	71.5	10.8	824	89.7	8.3	570	32%	84.2	9.0	640	24%	52.4	15.0		-20%
Par USD	55.1	9.9	731	65.0	8.4	-	22%	61.3	9.0	-	16%	34.0	15.9		-34%
Glb 46	72.4	10.8	813	89.8	8.6	595	31%	85.7	9.1	640	25%	52.4	14.9		-21%
Glb 48	69.2	10.2	753	82.0	8.6	590	25%	78.3	9.0	633	20%	52.1	13.5		-22%
Glb 117	69.7	10.2	751	83.2	8.6	585	26%	79.5	9.0	625	21%	52.6	13.5		-21%

Source: Bloomberg, Morgan Stanley Research; Note that for the Par bond we assume it undershoots the eventual recovery rate in line with historical trading pattern.

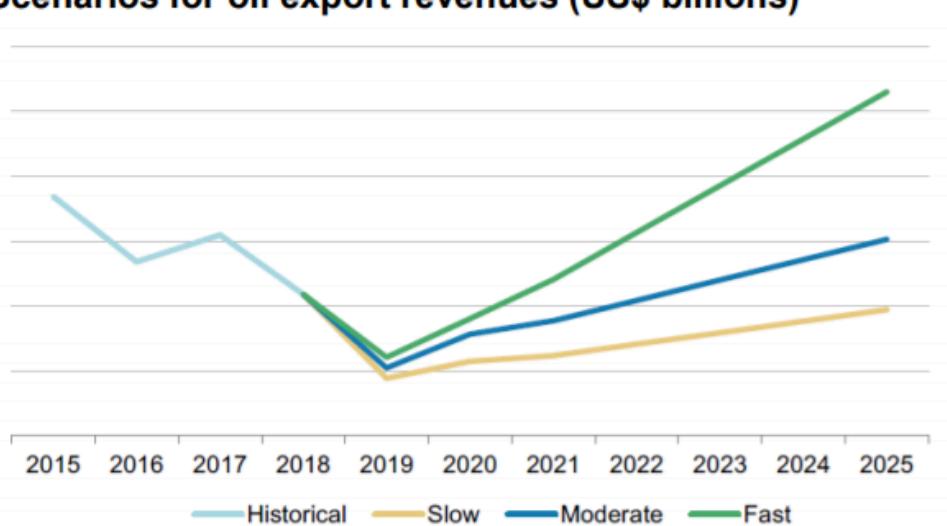
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## Sovereign Credit – Venezuela: Implications of Policy Change

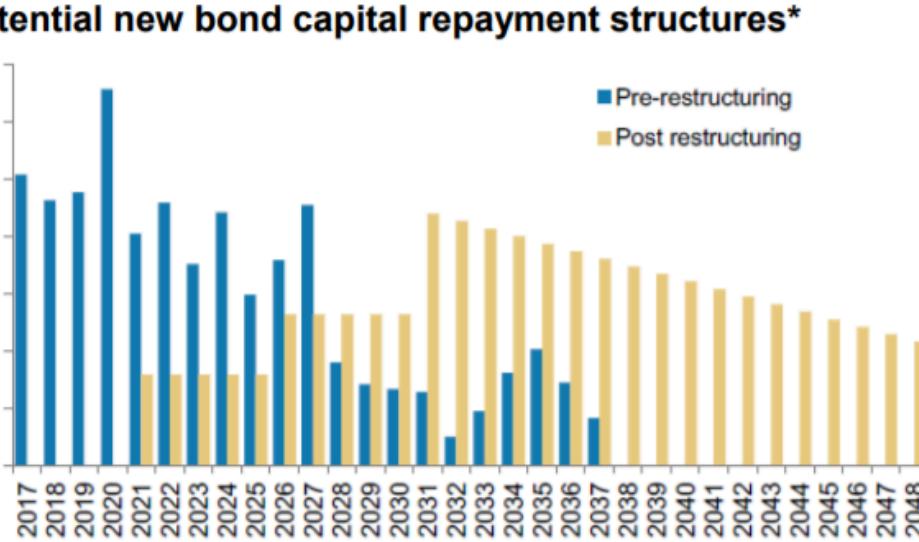
Scenarios for oil export revenues (US\$ billions)



Potential new bond capital repayment structures\*

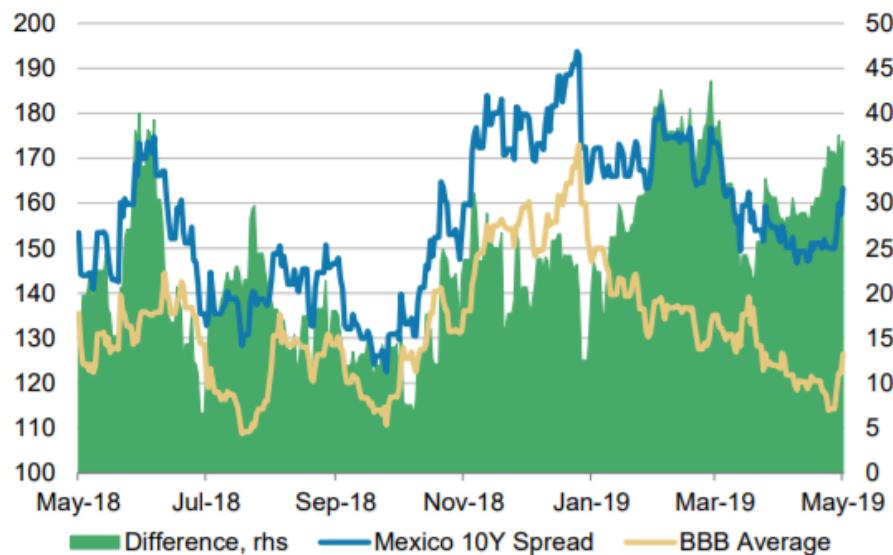
Setting out recovery scenarios and bond structures

Scenario	Slow Recovery	Moderate Recovery	Fast Recovery
Oil production (YoY increase, tbpd)	+100	+150	+300
2025 oil production (tbpd)	1,500	1,850	2,600
Oil price (Brent, \$ bbl)	55	65	75
GDP vs. export ratio	5.0	5.0	6.0
Imports per capita (YoY increase)	50	100	150
2025 GDP, US\$ billions	97	151	318
2025 Oil exports, US\$ billions	19	30	53
2025 Debt, US\$ billions	147	161	166
o/w IMF, US\$ billions	50	50	50
2025 Debt / GDP	151.5%	106.6%	52.2%
2025 Debt / CXR	655.0%	484.0%	296.0%
2021 Bond IR Payments (%CXR)	15%	15%	15%
Bond haircut	40%	25%	20%
Bond coupons (0-5y ; 5y-10y ; 10y+)	4 ; 7.5 ; 7.5	4.5 ; 7.5 ; 7.5	5.5 ; 7.5 ; 7.5
Bond sinkable payments	5% annual from T+10 to T+30	5% annual from T+10 to T+30	5% annual from T+10 to T+30
Bond price under 10% exit yield	38.7	49.8	56.2
Bond price under 12% exit yield	31.8	41.2	46.8
Bond price under 14% exit yield	26.6	34.6	39.7
Bond price under 16% exit yield	22.6	29.5	34.2
Bond price under 20% exit yield	17.0	22.4	26.4



## Sovereign Credit – Mexico: A Lot in the Price – MEXCAT Long-End Bonds Cheap

Sovereign not cheap enough to buy at 35bp vs. BBB

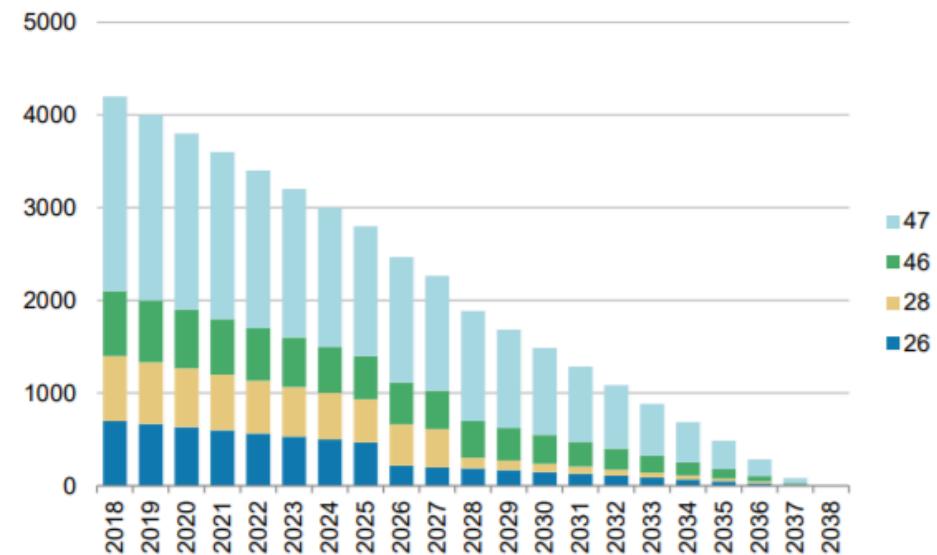


...lowers average life...

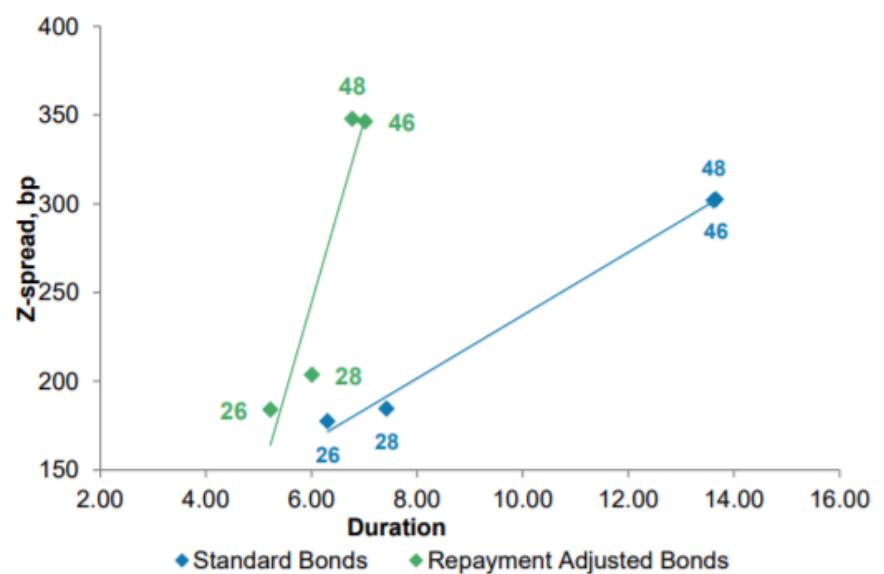
Bond	MEXCAT 4 1/4 10/31/26		MEXCAT 3 7/8 04/30/28	
Measure	Existing Bond	Adjusted	Existing Bond	Adjusted
Price	98.1	98.1	94.4	94.4
Yield	4.55	4.61	4.65	4.83
Spread	177	184	184	204
Duration	6.31	5.22	7.42	6.01
WAL	7.46	6.13	8.96	7.21
Maturity	2026	2026	2028	2028
Bond	MEXCAT 5 1/2 10/31/46		MEXCAT 5 1/2 07/31/47	
Measure	Existing Bond	Adjusted	Existing Bond	Adjusted
Price	94.3	94.3	94.4	94.4
Yield	5.92	6.31	5.91	6.33
Spread	302	346	302	348
Duration	13.66	7.02	13.62	6.77
WAL	27.46	10.31	28.21	10.06
Maturity	2046	2037	2047	2037

Source: Bloomberg, Morgan Stanley Research; Adjusted refers to bonds with pro-rated annual amortisations of US\$200 million.

MEXCAT bond repayment structure...



...and makes bonds look cheaper



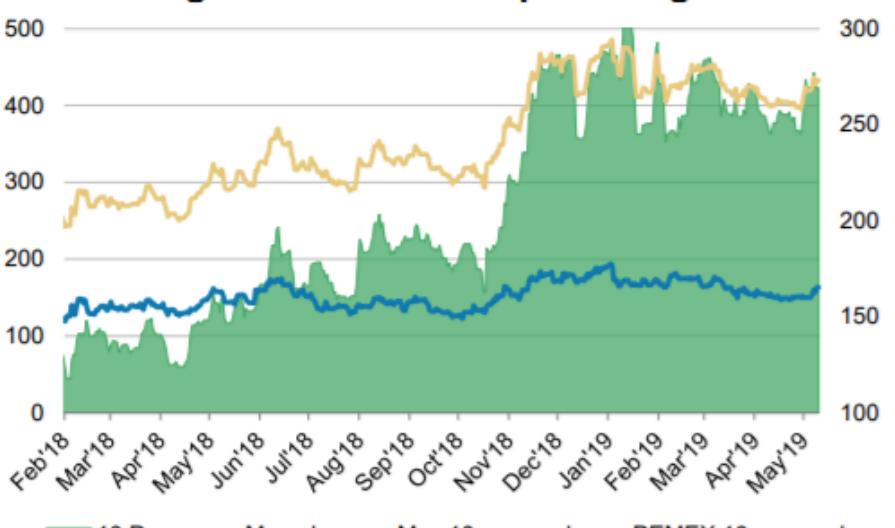
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## Sovereign Credit – Mexico: A Lot in the Price – Buy Pemex

Pemex funding needs remains high at US\$8.25 billion

Funding needs	MXN bn	USD bn
<b>Total</b>	240	12.00
Budgeted deficit	66	3.30
MS estimated additional needs	42	2.10
Amortisations	132	6.60
Established funding sources	MXN bn	USD bn
Government support	75	3.75
Capitalization included in budget	25	1.25
Tax relief (annual until 2024)	15	0.75
Cash out of pension notes	35	1.75
<b>Remaining funding needs</b>	<b>165</b>	<b>8.25</b>
Potential funding sources	MXN bn	USD bn
Rolling over 2019 amortizations	131.6	6.58
Bonded debt	101.38	5.07
Additional net debt	112.8	5.64
Potential new loans	140	7.00
Revolving credit lines	154.2	7.71
USD denominated	128	6.40
MXN denominated	26.2	1.31
Cash holdings	83.24	4.16
Fuel savings	32	1.60

Yet sovereign aid should see spreads tighten...



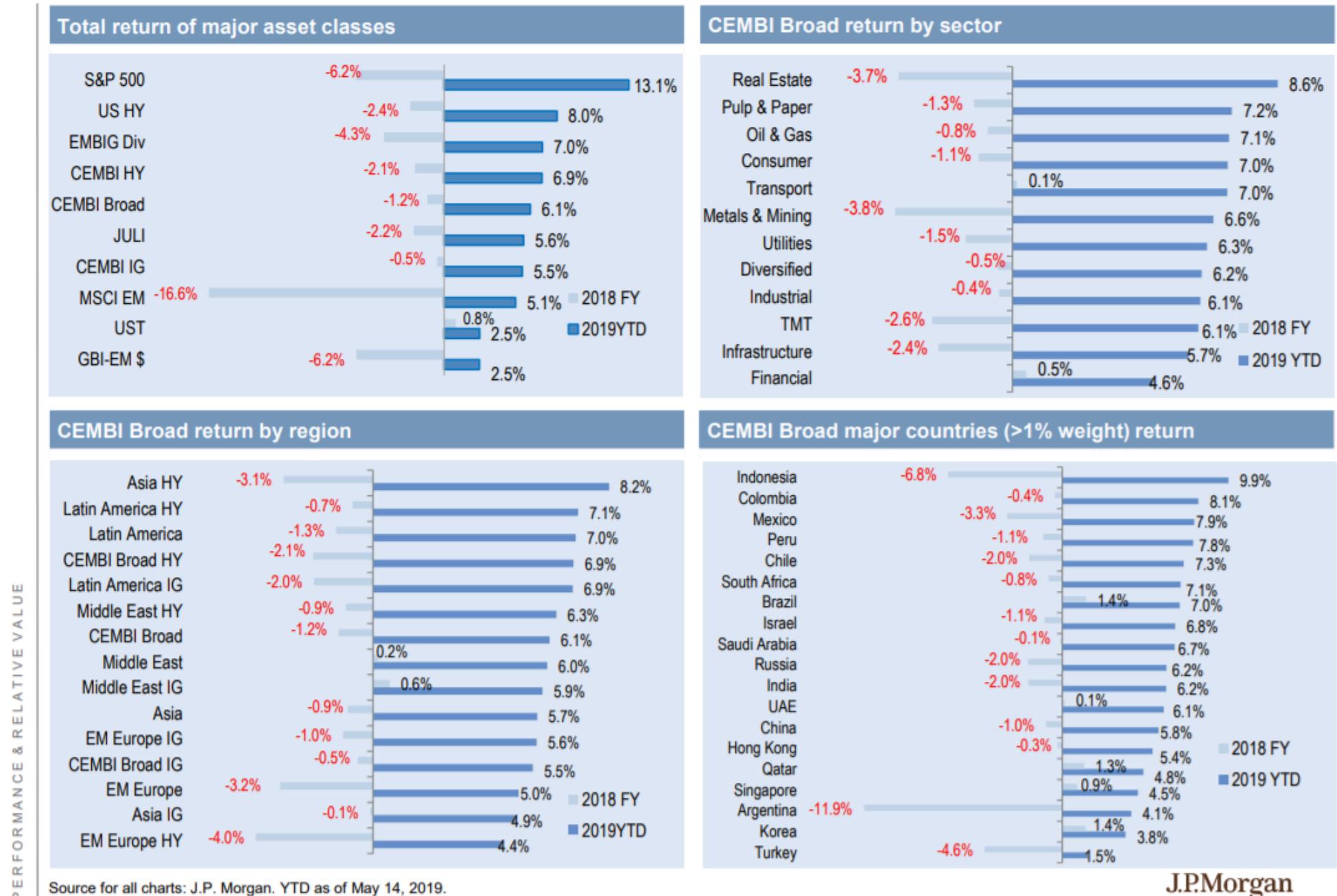
... and benefit the 10y sector the most



Source: Bloomberg, PEMEX, Morgan Stanley Research

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## Strong returns YTD led by HY segments

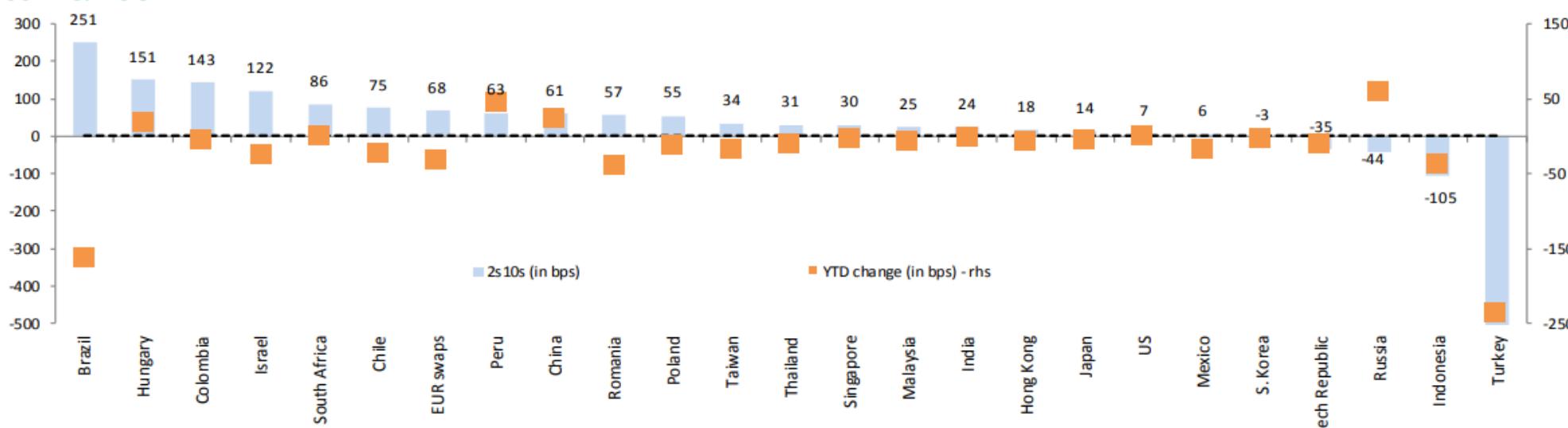


Source for all charts: J.P. Morgan. YTD as of May 14, 2019.

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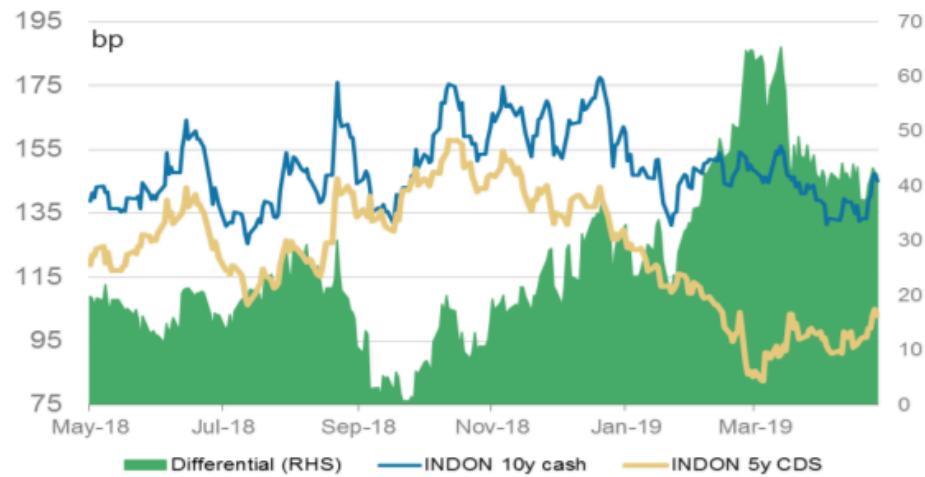
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## 2s10s IRS/XCCY



## Sovereign Credit – Asian EMs: Risk/Reward Seems Fairly Balanced

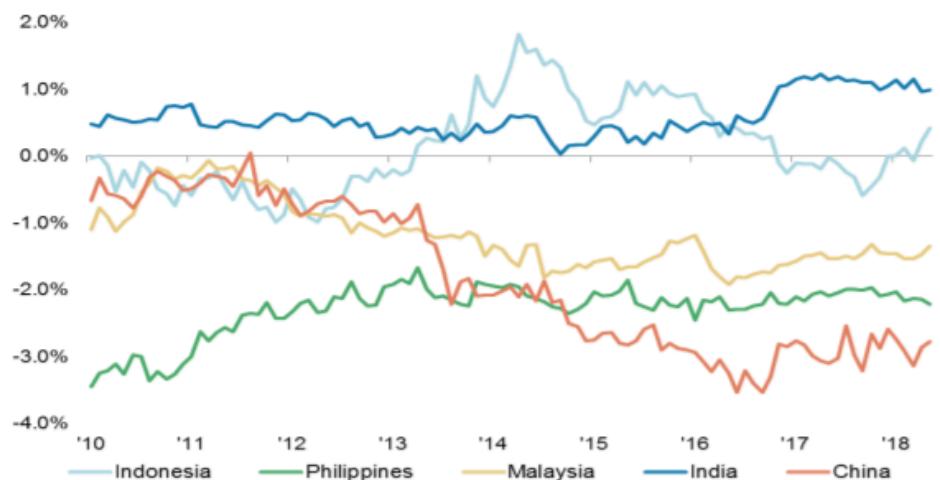
### INDON 10y cash still attractive versus CDS



### Technicals to keep PHILIP curve supported



### INDON benefits from some structural underweights by EMBI investors in Asia IG



### However, MALAYS 5y CDS could come under pressure if CHINA spreads widen



Source: Bloomberg, EPFR, Datstream, Morgan Stanley Research

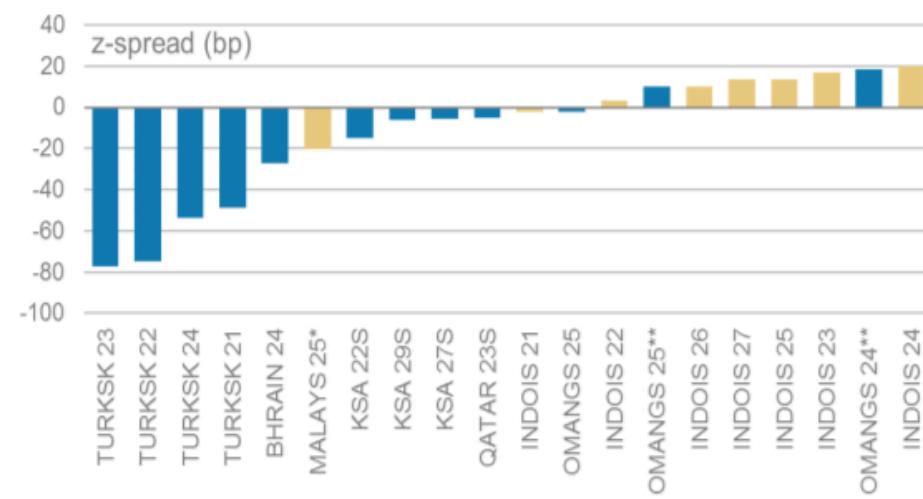
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## Sovereign Credit – Asia EMs: Select Opportunities on the Curves

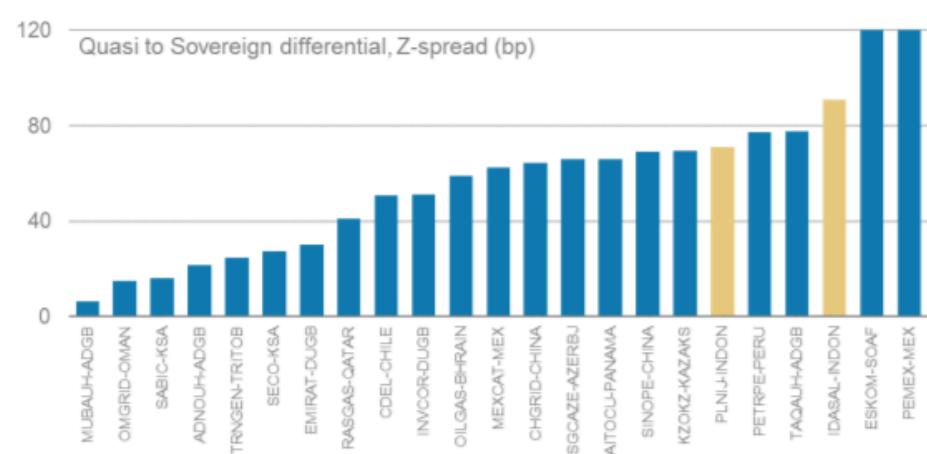
### Larger differentiation among quasis is warranted



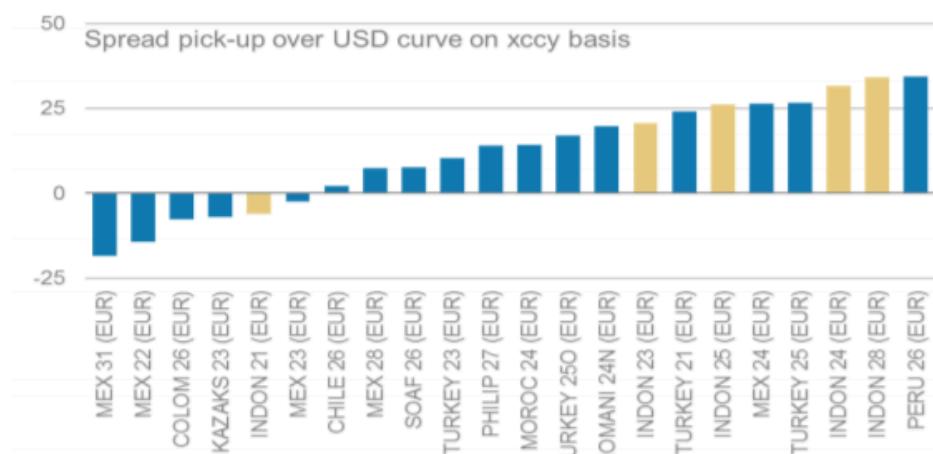
### Asian sukuks trade wide of the conventionals



### INDON quasis are still wide of the sovereign



### INDON EUR now trades tight to USD especially with potential EUR issuance

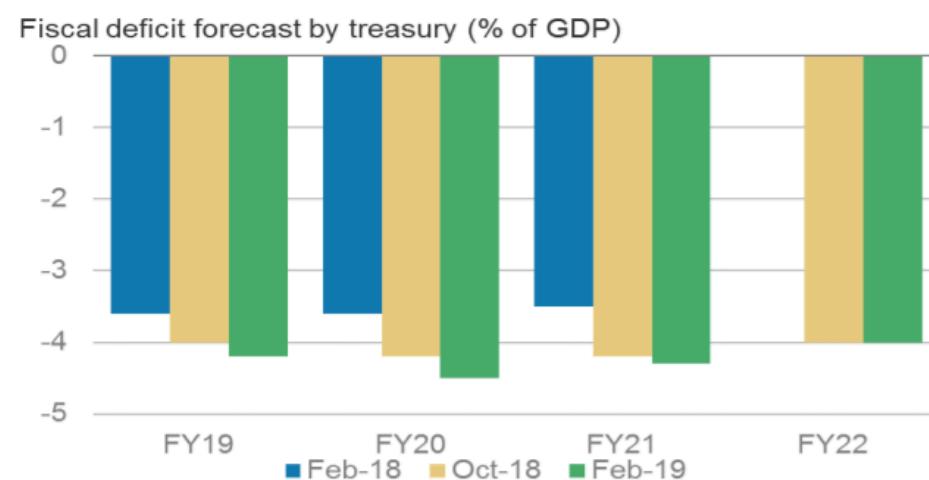


Source: Bloomberg, Morgan Stanley Research Note: We have used PETMK curve as a proxy for conventional curve in Malaysia. We have interpolated the conventional curve to match maturity in Oman.

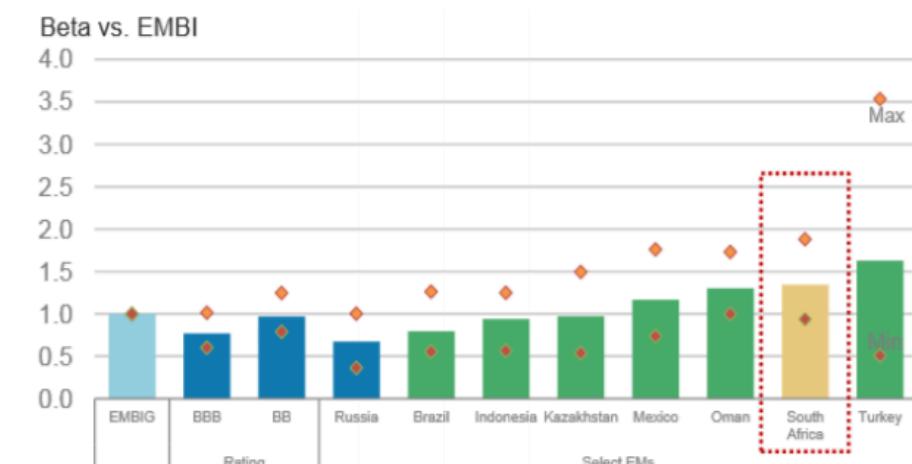
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## Sovereign Credit – South Africa: Credit Offers Less Value than Local

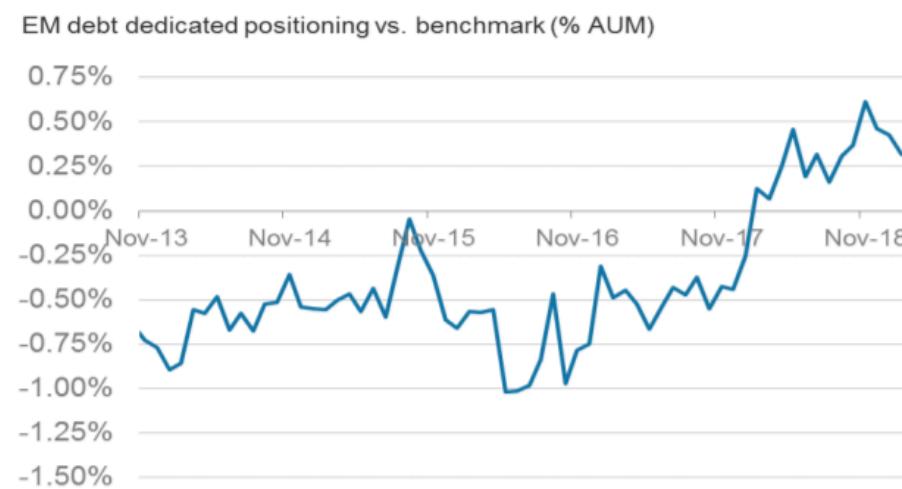
Treasury fiscal deficit forecasts have moderated over time



SOAF has had a higher beta persistently



Positioning in SOAF credit is still heavy



SOAF 5y CDS and USDZAR have diverged

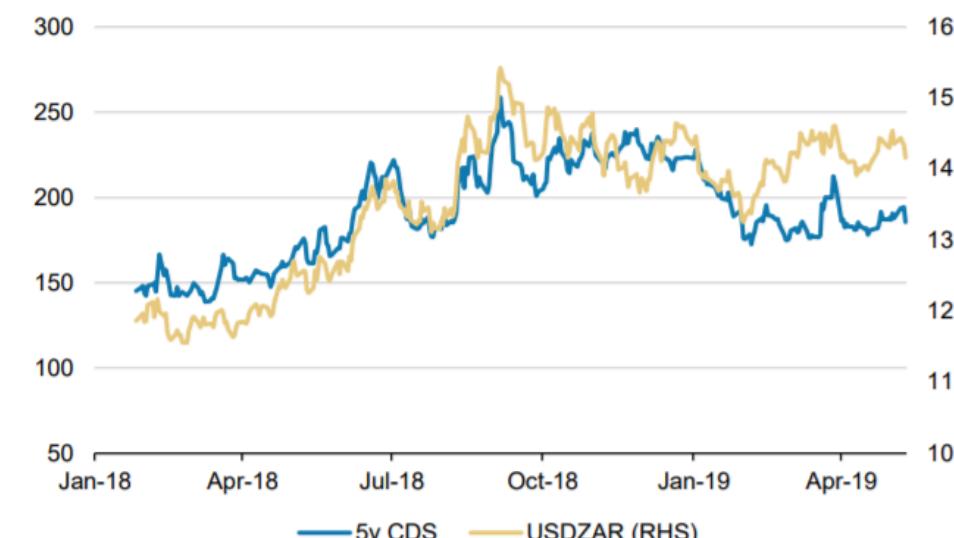
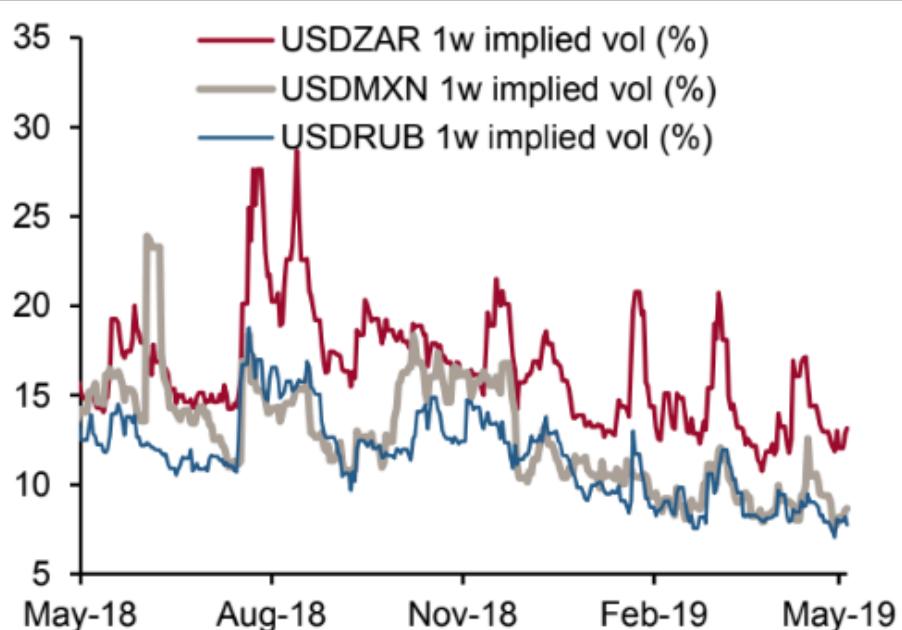
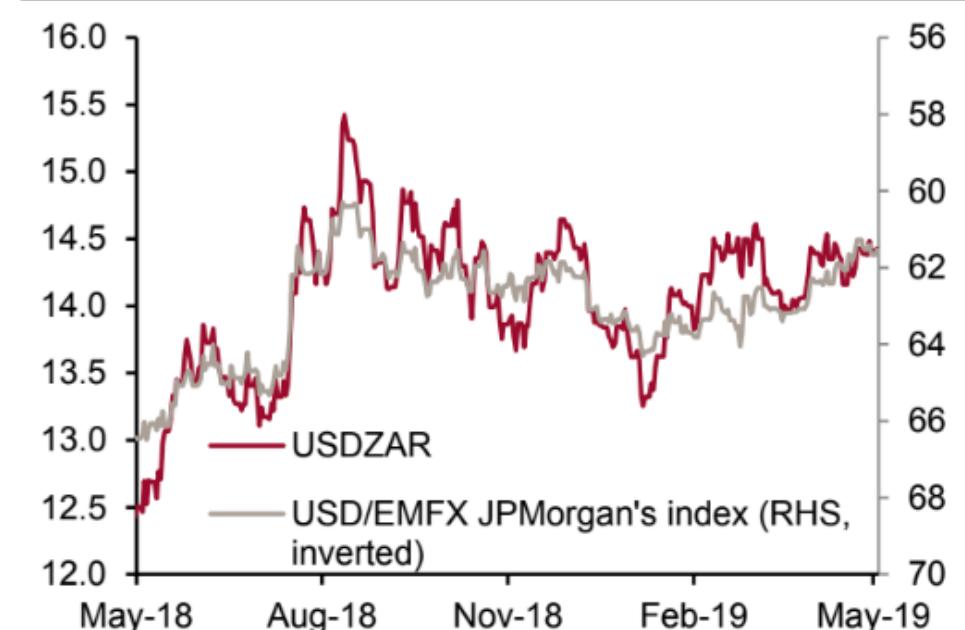


Figure 15. USDZAR vols have not reacted as much as spot



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

Figure 16. USDZAR does not look dislocated versus the global EM FX complex

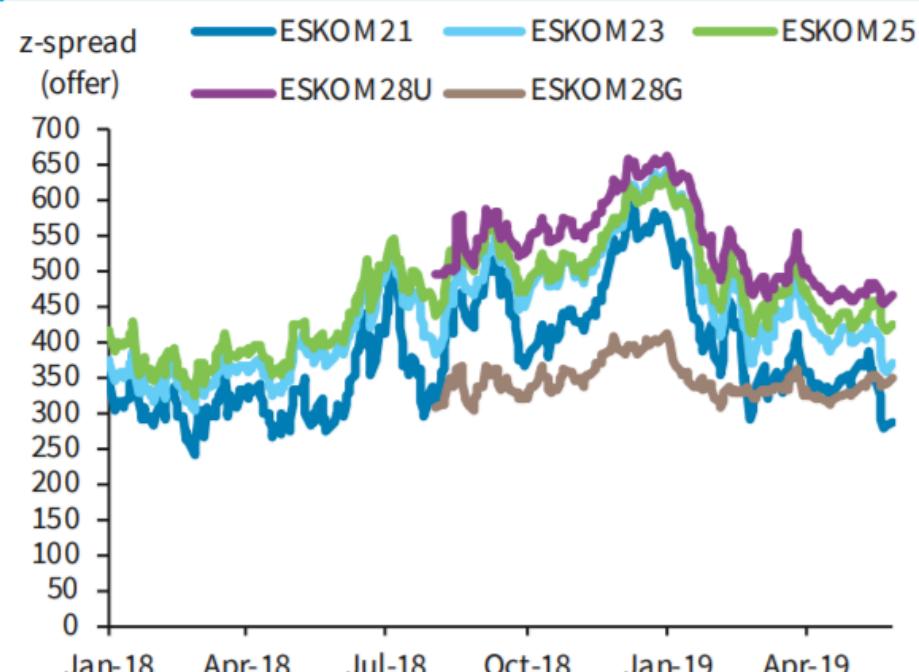


Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

## Switch from ESKOM '21s into government guaranteed '28s

Stella Cridge, Barclays, UK

- Eskom bonds have materially tightened to the sovereign as market expectations of additional sovereign support, on top of the ZAR23bn annual support package over three years announced in February, has grown. Selected spreads on the Eskom unsecured bond curve have now reached c180-200bp over the sovereign, close to the tights.
- While we believe that Eskom will require additional financial support in FY 20 to meet the negative cash flow gap, the government continues to have to balance protecting sovereign credit quality with that of reducing market-related risks to Eskom. While we continue to expect the government to provide liquidity support to Eskom, if needed, we do not believe it is inevitable that the National Treasury provides material debt relief for Eskom at this juncture given the motivation to protect sovereign credit metrics in the post-election period when President Ramaphosa is seeking to re-boot growth.
- We expect Eskom bonds will be well supported given sovereign support, and wider spreads when compared to other global quasi-sovereigns (such as Pemex, Petrobras) which would have similar net leverage if Eskom were to exclude all SOAF-guaranteed debt from its balance sheet. However, Eskom spreads, when compared on a spread to sovereign basis to these peers, are already pricing in material debt relief. As a result, we think it makes sense to take down some risk on the Eskom curve to reduce the risk of disappointment. A switch from the unsecured '21s into the guaranteed '28s allows a pickup of spread and yield of c20bp, moving into explicit sovereign-guaranteed, rather than unsecured, risk (offering 65bp over the sovereign).

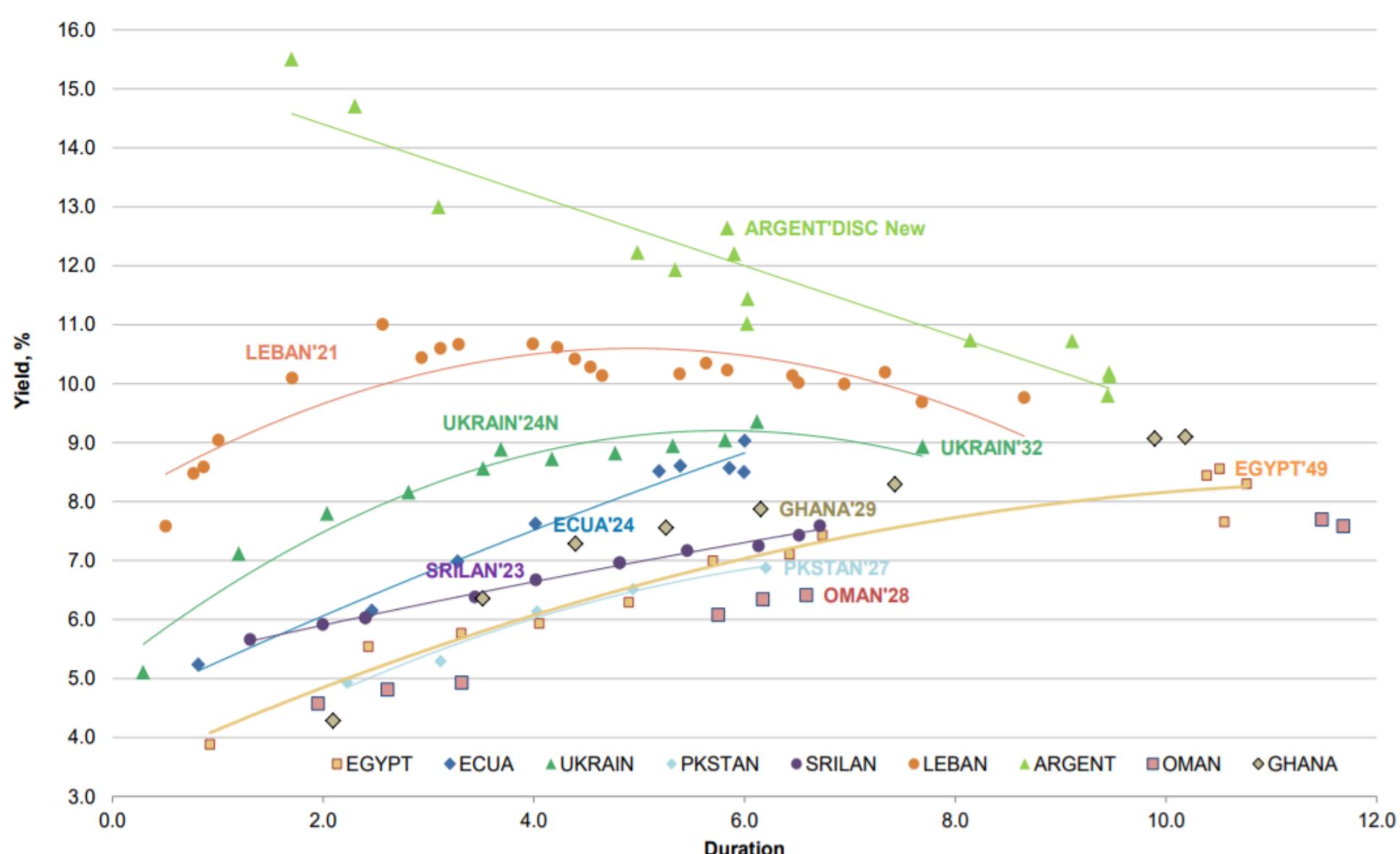


Source: Barclays Research

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May 2019

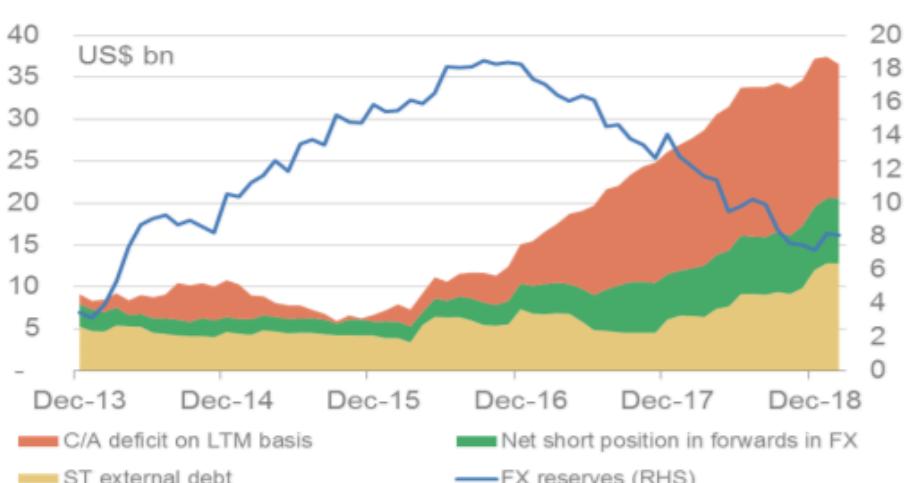
## Sovereign Credit – Benchmark Frontier Curve and Preferred Bonds on Curves



Source: Bloomberg, Morgan Stanley Research

## Sovereign Credit – Pakistan: IMF Support Now in the Price?

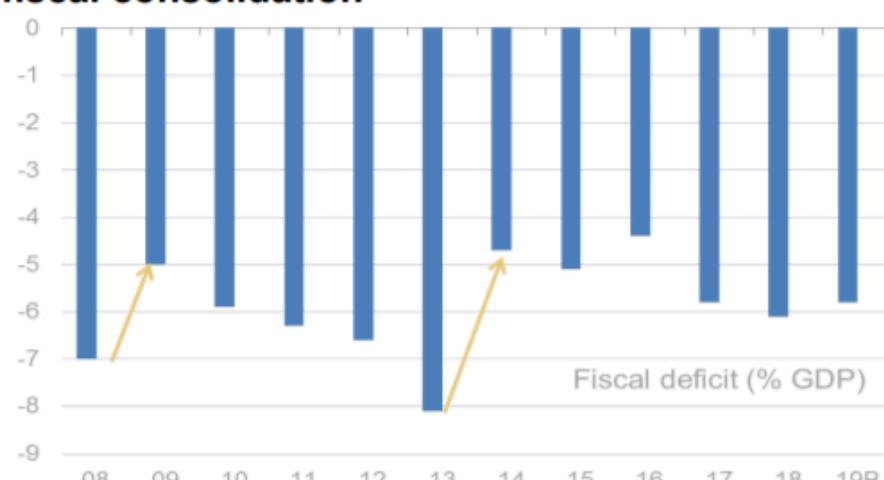
### External liquidity position remains stretched



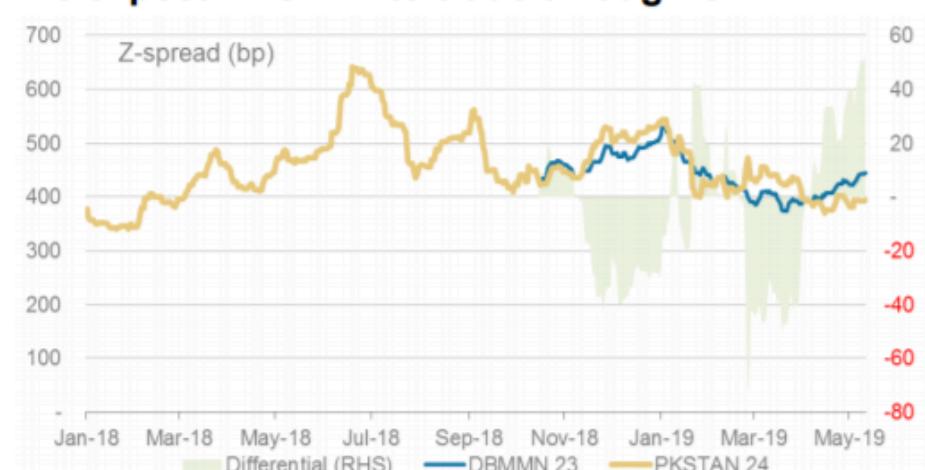
### PKR REER has been adjusting per IMF estimates



### IMF programme usually accompanied by upfront fiscal consolidation



### We expect PKSTAN to trade through SRILAN



Source: SBP, EAD, Haver Analytics, Bloomberg, Morgan Stanley Research

Morgan Stanley

## Sovereign Credit – Sri Lanka: Valuations Not Rich but Fundamental Concerns Persist

### Sri Lanka FX reserves yet to show a turnaround



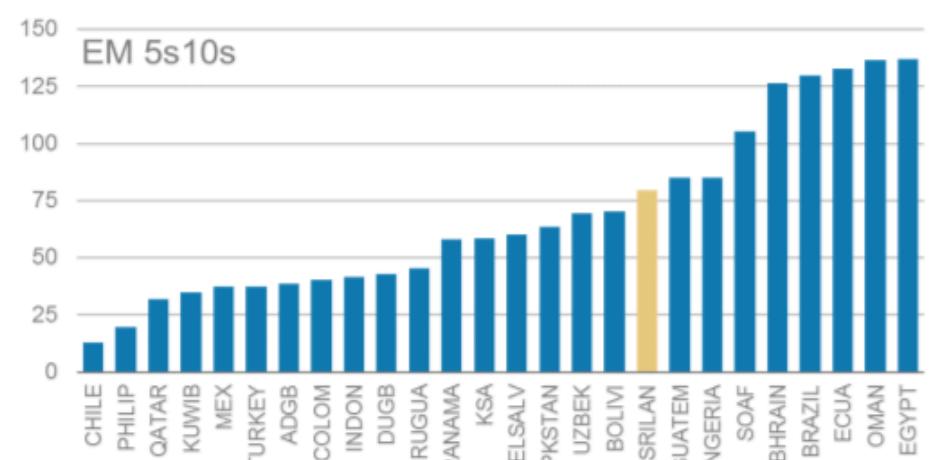
### Spike in local currency marketable debt post political crisis in 4Q18



### SRILAN should be much wider to EGYPT



### SRILAN 5s10s too flat compared to single B peers

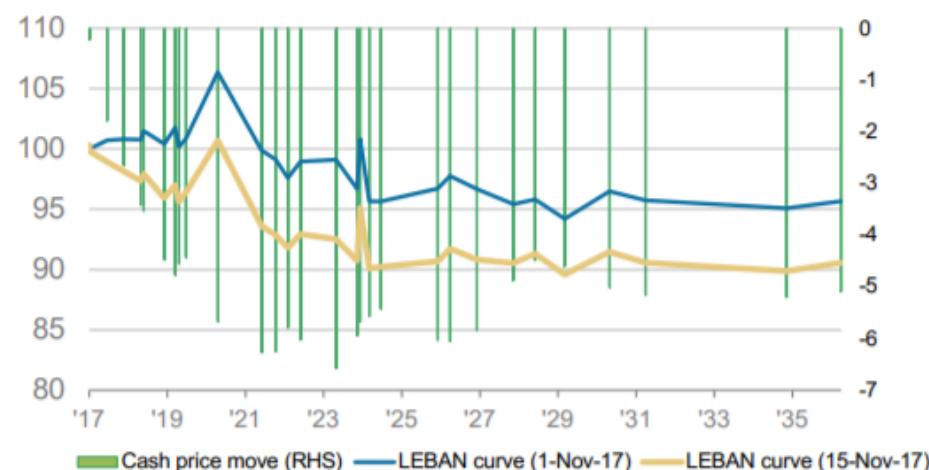


Source: CBSL, Haver Analytics, Bloomberg, Morgan Stanley Research

**Cash prices to become important should geopolitical tensions flare up further:** We would expect the LEBAN curve to start to flatten in cash price terms in this scenario. While the FX reserve adequacy level is adequate versus the external funding needs (basic balance deficit plus redemptions) in this scenario, the funding gap could widen significantly if there is any outflow pressure on FX deposits at domestic banks. As such, the 0-3y part of the curve will still be impacted given their high cash prices, whereas some risks are already reflected in the long end of the curve. We saw a similar reaction on the curve in November 2017 post the resignation of PM Hariri and also in January 2019 when investors became concerned about potential debt restructuring. The previous instance of significant geopolitical risk was in July 2006 but we don't think that it can be used as a template as most bonds were trading above par before the tensions began.

**Exhibit 6:** Front end underperformed in total return terms in November 2017

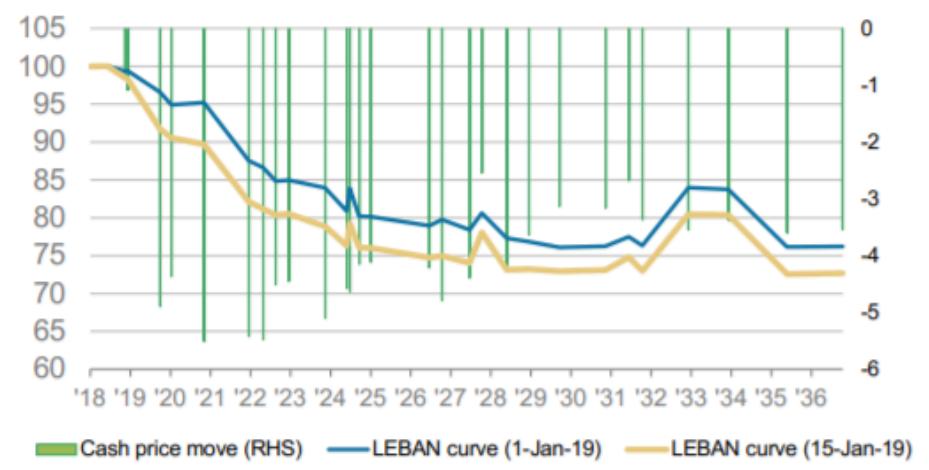
Cash prices versus Maturity



Source: Bloomberg, Morgan Stanley Research

**Exhibit 7:** Front end underperformed again in total return terms in January 2019

Cash prices versus Maturity



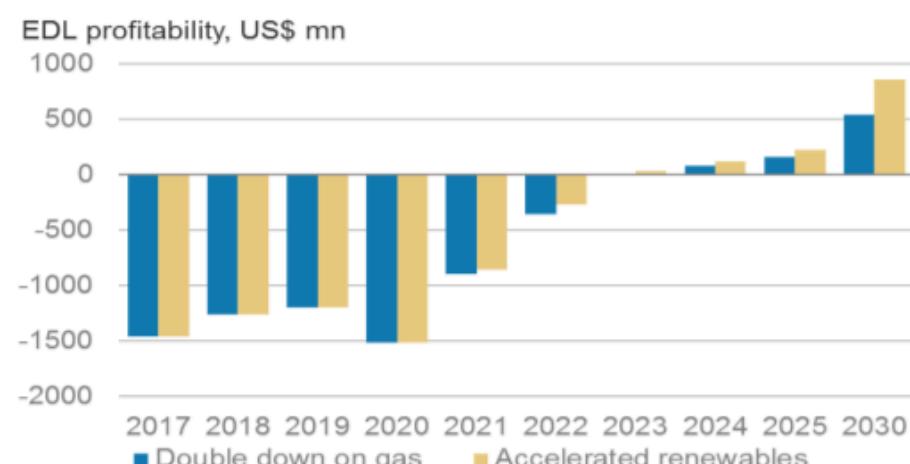
Source: Bloomberg, Morgan Stanley Research

## Sovereign Credit – Lebanon: Yet to Show Signs of Turnaround

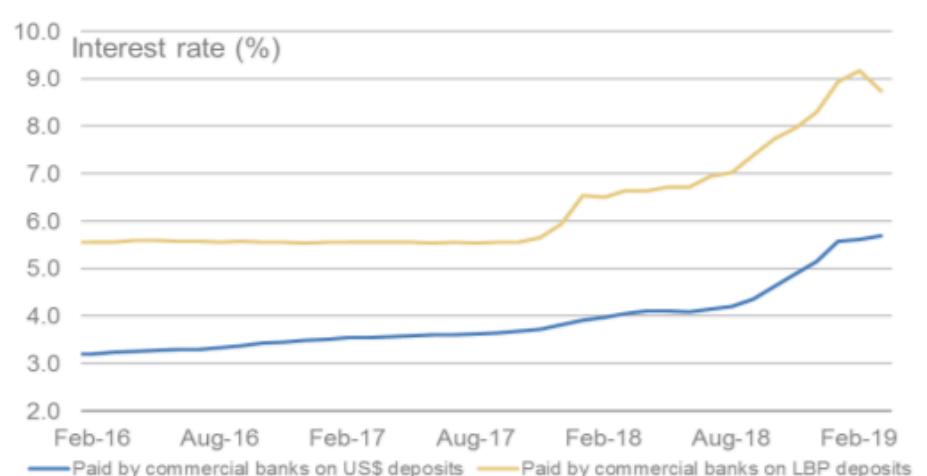
**Deposit growth has been subdued even after the government formation at end-January...**



**Electricity reforms, if implemented, to bear fruit only in long run**



**...and deposit rates remain under pressure**

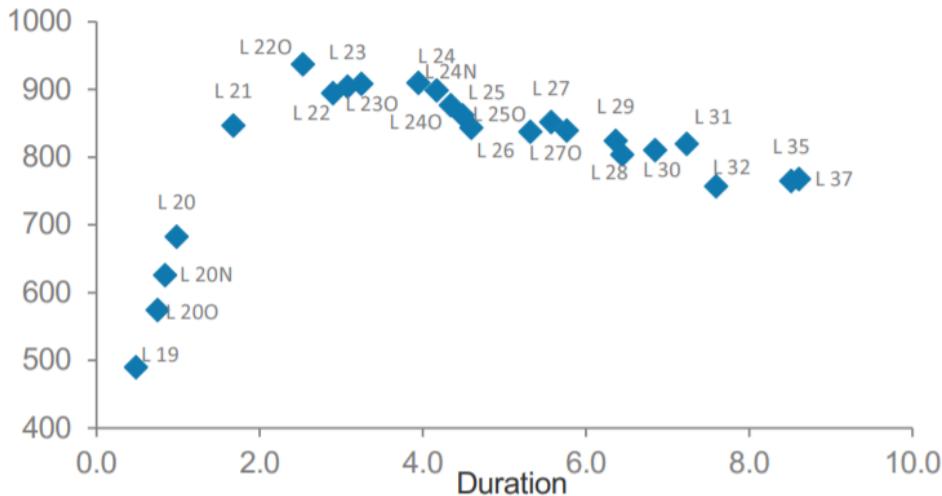


**Even with reforms LEBAN spreads will likely have a slow grind tighter**



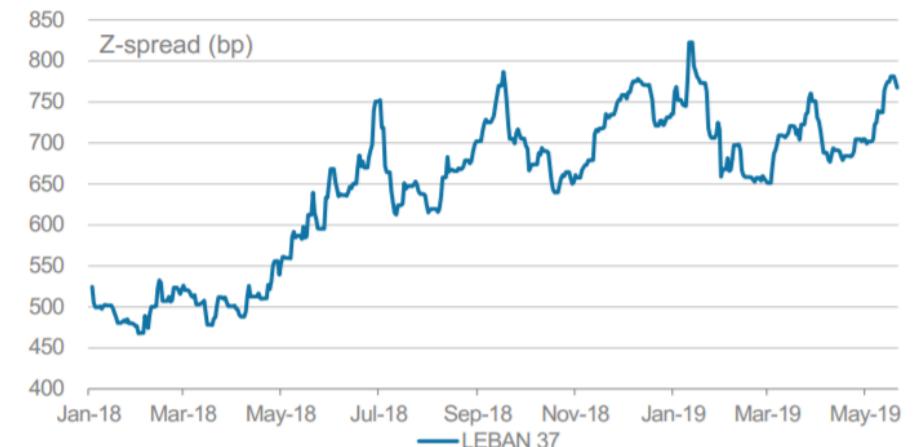
Source: BDL, Haver Analytics, McKinsey, Bloomberg, Morgan Stanley Research

**Exhibit 4:** Lebanon credit curve is inverted after 3y



Source: Bloomberg, Morgan Stanley Research

**Exhibit 5:** LEBAN 37 has given up all the spread tightening seen post the government formation and EDL reforms



Source: Bloomberg, Morgan Stanley Research





**G10 RATES**

**NEW POZSAR**

## Global Money Notes #22

### Collateral Supply and o/n Rates

*In this edition of Global Money Notes, we explain, in never-before-seen detail, the mechanics of intra-day Fed balance sheet operations. These mechanics show why reserves can be scarce enough on some days to create volatility and problems even after trillions of dollars in quantitative easing. We study the detail of how balance sheet reduction (colloquially referred to as "taper") has worked.*

Reserves are scarce...

...and this scarcity now feeds through to daily volatility in the o/n fed funds rate.

The volatility of the o/n FF rate is driven by the supply of Treasury collateral and some banks' increased reliance on daylight overdrafts on settlement days.

The flipside of daylight overdrafts are temporary daylight reserves which banks have to pay back to the Fed everyday by sunset, and these payments are funded by borrowing "permanent" reserves during the day through the o/n FF market.

The days when some clearing banks need to fund in the o/n FF market to settle daylight overdrafts at the Fed typically coincide with the days when bank HQLA portfolios couldn't lend enough reserves in the o/n GC market...

...typically because they hit their intraday liquidity limits.

When those limits are reached arbitrage flows kick in where foreign banks fund in the o/n FF market and lend in the o/n GC market and when arbitrage flows aren't enough, clearing banks bid hard to pay daylight overdrafts at the Fed.

Those are the tough days when the right tail of the distribution of o/n FF trades gets fatter, that is, the days when the volatility in the o/n FF rate picks up, and the effective o/n FF rate drifts higher within the Fed's target band.

Relative to the "ocean" of the o/n GC market, the o/n FF market is a "pond" and so it doesn't take much collateral supply at all to dislocate the latter.

Bill supply will fall between now and the fourth quarter, which should ease pressures on o/n rates. But the curve remains inverted and the trade war with China is getting out of hand and that's a near-term risk for collateral supply before we issue another round of \$300 billion in bills in the fourth quarter.

[Insurance cuts](#) would ease the pressure on o/n rates and it wouldn't be wise to enter the fourth quarter without a mechanism in place to absorb excess bills.

#### CONTRIBUTOR

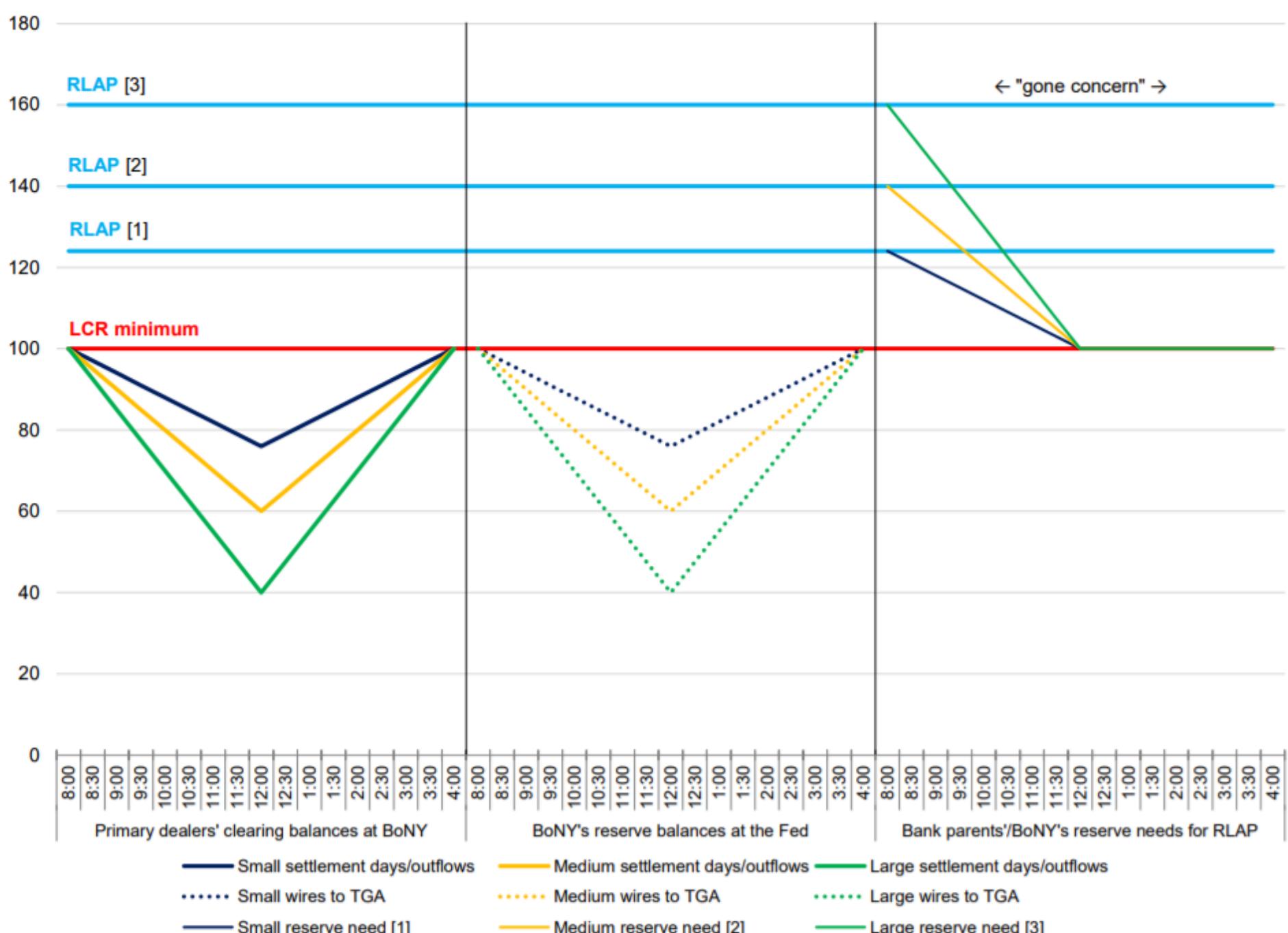
Zoltan Pozsar

212 538 3779

[zoltan.pozsar@credit-suisse.com](mailto:zoltan.pozsar@credit-suisse.com)

**Figure 6: The Faster the Pace of Taper, the Higher Banks' Reserve Needs!**

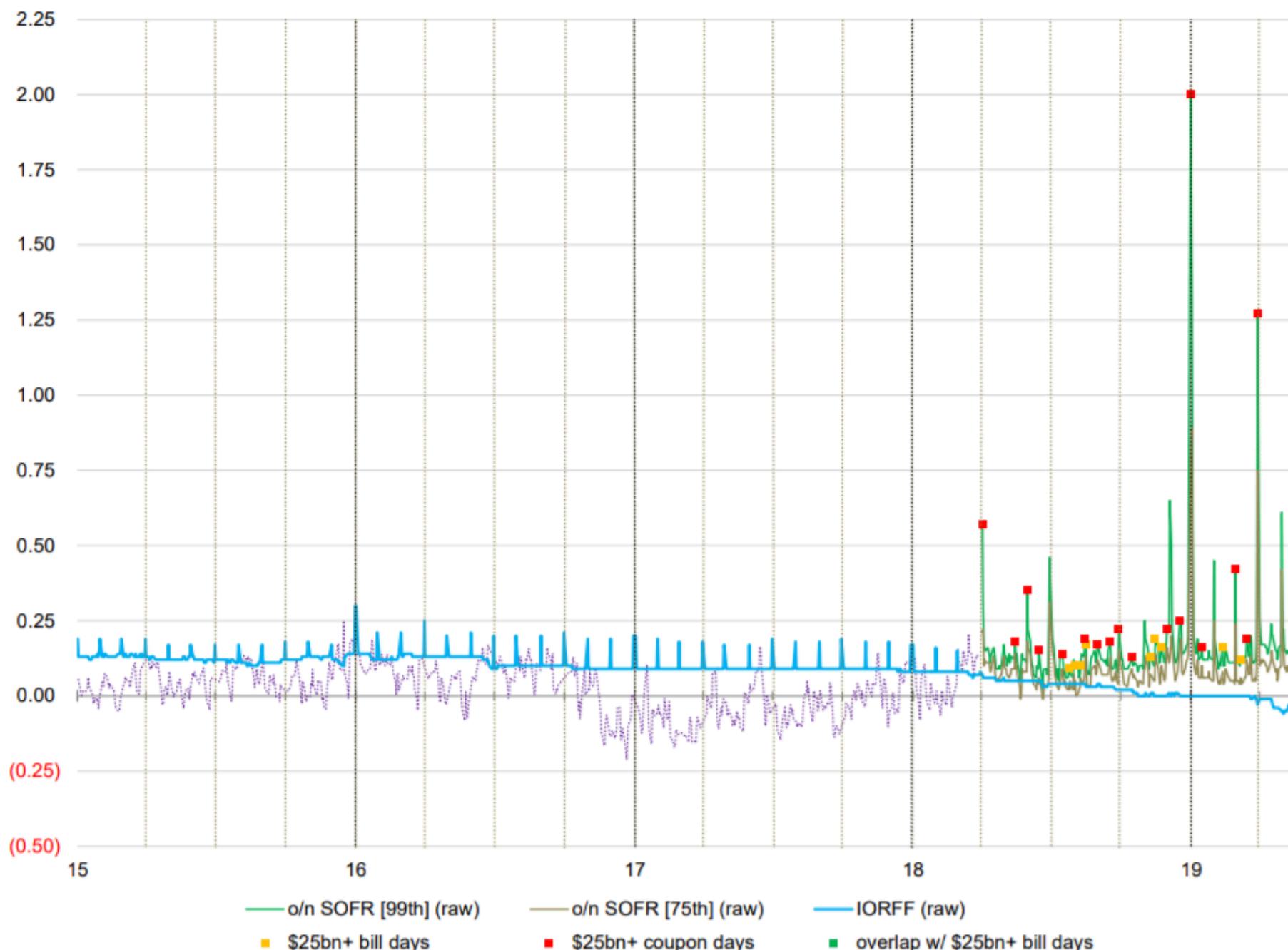
\$ billions, stylized



Source: Credit Suisse

**Figure 48: The “Super” Arbitrage Trade at the Fringes**

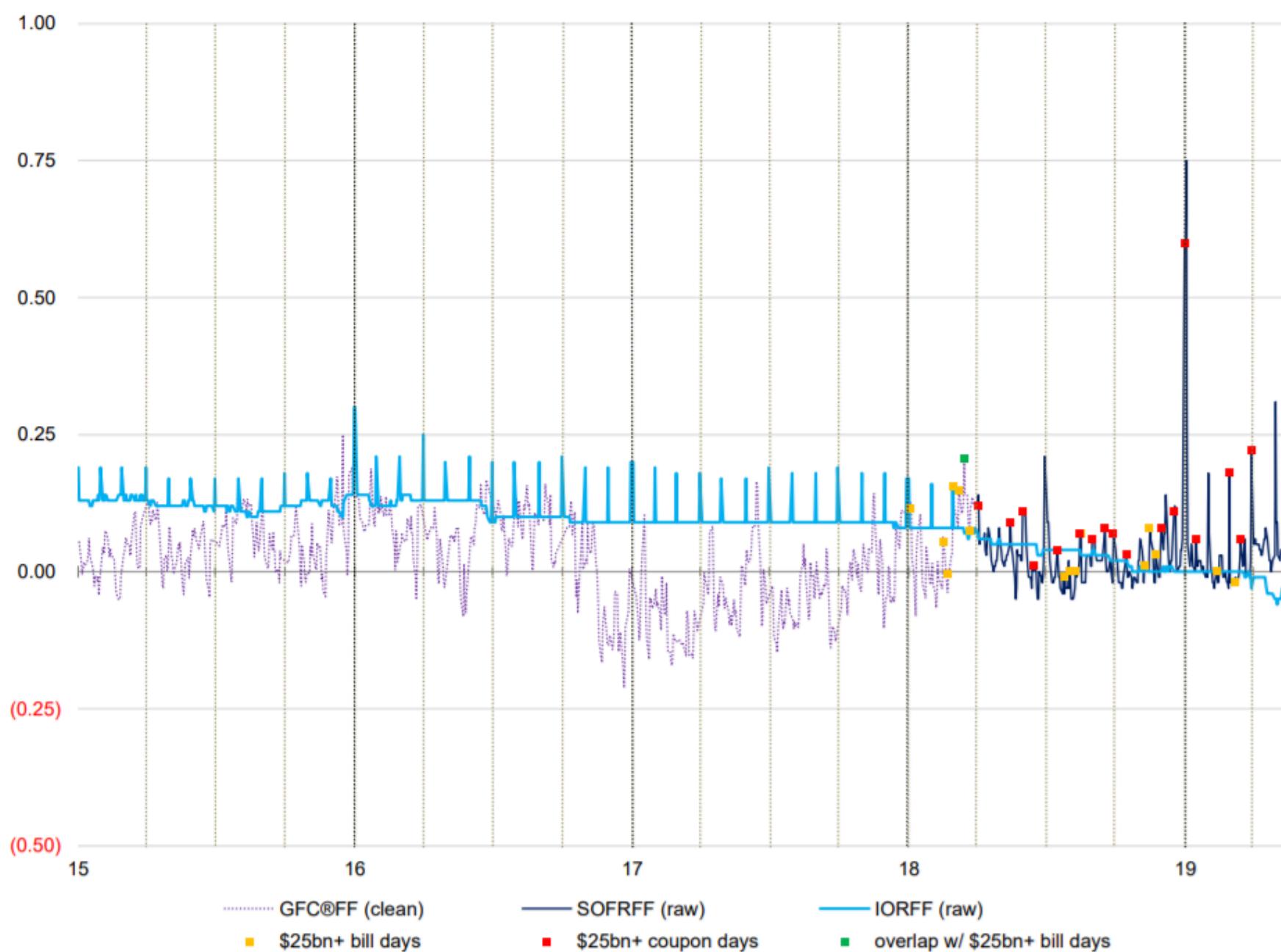
percent



Source: the BLOOMBERG PROFESSIONAL™ service, U.S. Treasury, Credit Suisse

**Figure 47: The Old vs. the New Arbitrage Trade**

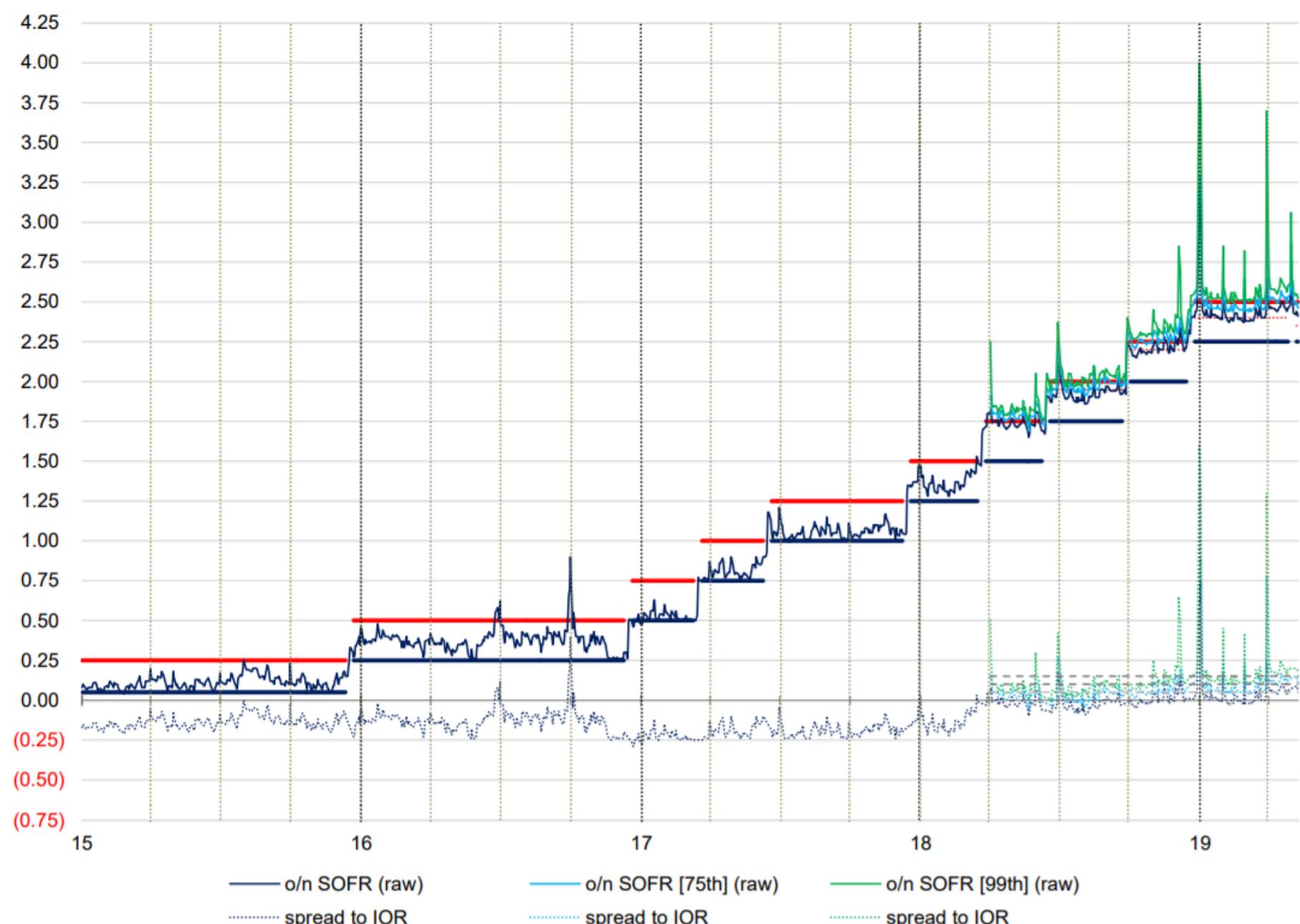
percent



Source: the BLOOMBERG PROFESSIONAL™ service, U.S. Treasury, Credit Suisse

**Figure 43: Top Percentile SOFR Rates**

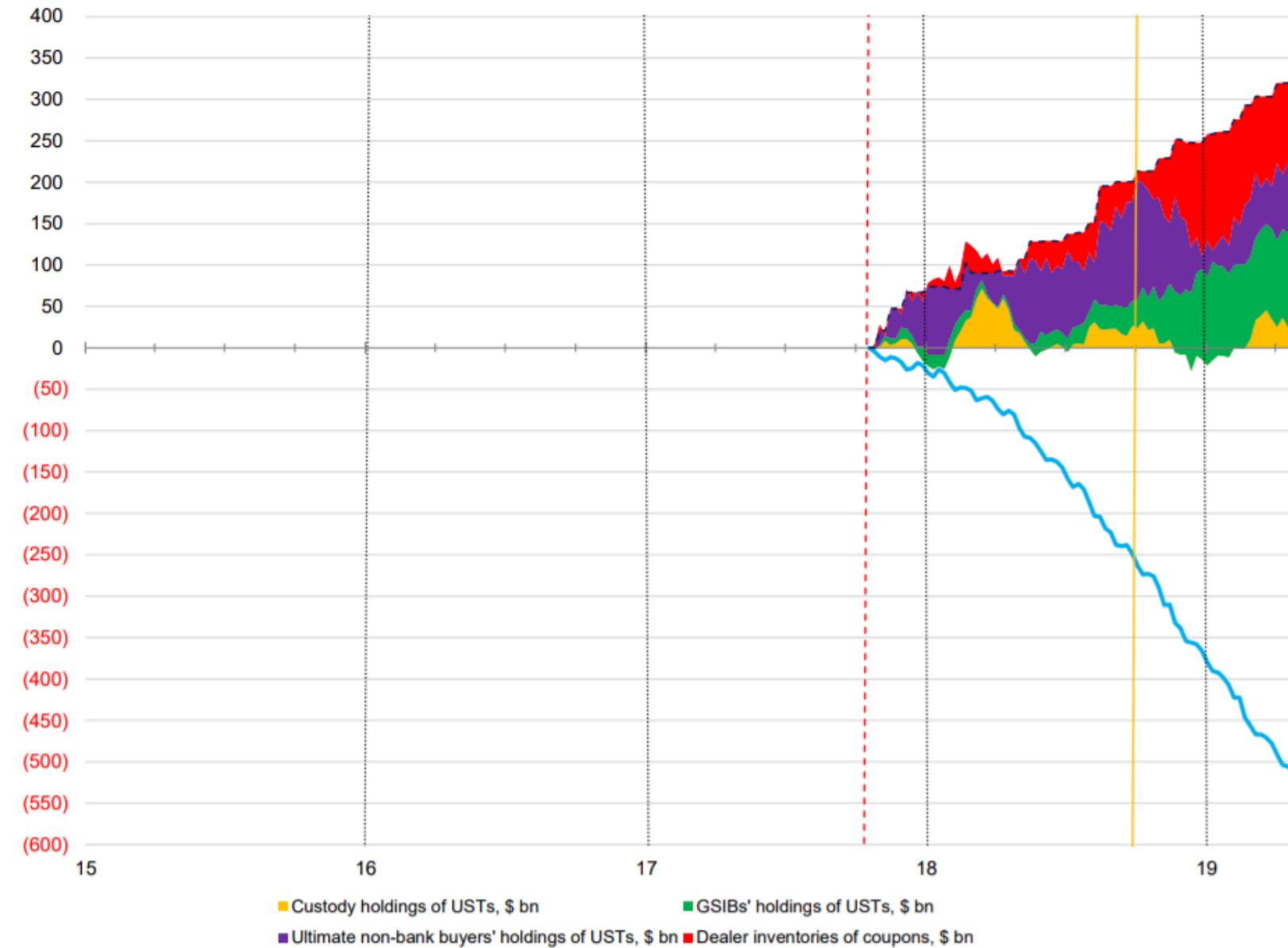
percent



Source: the BLOOMBERG PROFESSIONAL™ service, U.S. Treasury, Credit Suisse

## Figure 17: More Demand for o/n GC Repo and Fewer Reserves to Fund It

\$ billion, dashed red line marks the start of taper and the orange line marks the start of the curve inversion relative to FX hedging costs



Source: Federal Reserve, Credit Suisse

### Balance Sheet Taper With Dealers and Intraday Flows – Dealers as Intermediate Buyers (Scenario 4)

	Federal Reserve (FRBNY)		Dealers (Credit Suisse Securities LLC)		Banks (Citibank, N.A.)		Non-Banks (real money, etc.)	
7:00 AM	UST	Reserves <sub>BONY</sub> Reserves <sub>Citi</sub> TGA	Deposits		Reserves <sub>C</sub>	Deposits	Deposits	
9:00 AM		Reserves <sub>B</sub> ↓ [2B] TGA ↑	[1A] ↓ Deposits UST ↑					
9:30 AM	↓ UST	TGA ↓ [4]						
3:30 PM		Reserves <sub>C</sub> ↓ [6C] Reserves <sub>B</sub> ↑	[5A] ↑ Deposits	BGC ↑	[5B, 6A] ↓ Reserves <sub>C</sub> BGC ↑	Deposits	Deposits	
<b>Scenario 4, net:</b>	↓ UST	Reserves <sub>C</sub> ↓	↑ UST	BGC ↑	↓ Reserves <sub>C</sub> BGC ↑	Deposits	Deposits	
<b>End-of-day, net:</b>	the balance sheet shrank on both sides		the balance sheet increased on both sides		asset swap	-	-	
<b>Intraday:</b>	Deposits (↓/↑)							

	Treasury (Debt Management Office)		Clearing Bank (BoNY)		
7:00 AM	TGA	UST	Reserves <sub>B</sub>	Deposits	
9:00 AM	↑ TGA	UST ↑ [1B]	[2A] ↓ Reserves <sub>B</sub>	Deposits ↓	
9:30 AM	↓ TGA	UST ↓ [3]			
3:30 PM			↑ Reserves <sub>B</sub>	Deposits ↑ [6B]	
<b>Scenario 4, net:</b>	-	-	-	-	
<b>End-of-day, net:</b>	-	-	-	-	
<b>Intraday:</b>	Reserves <sub>B</sub> (↓/↑)		Deposits (↓/↑)		
					<b>Notes:</b> BGC = repo, GC

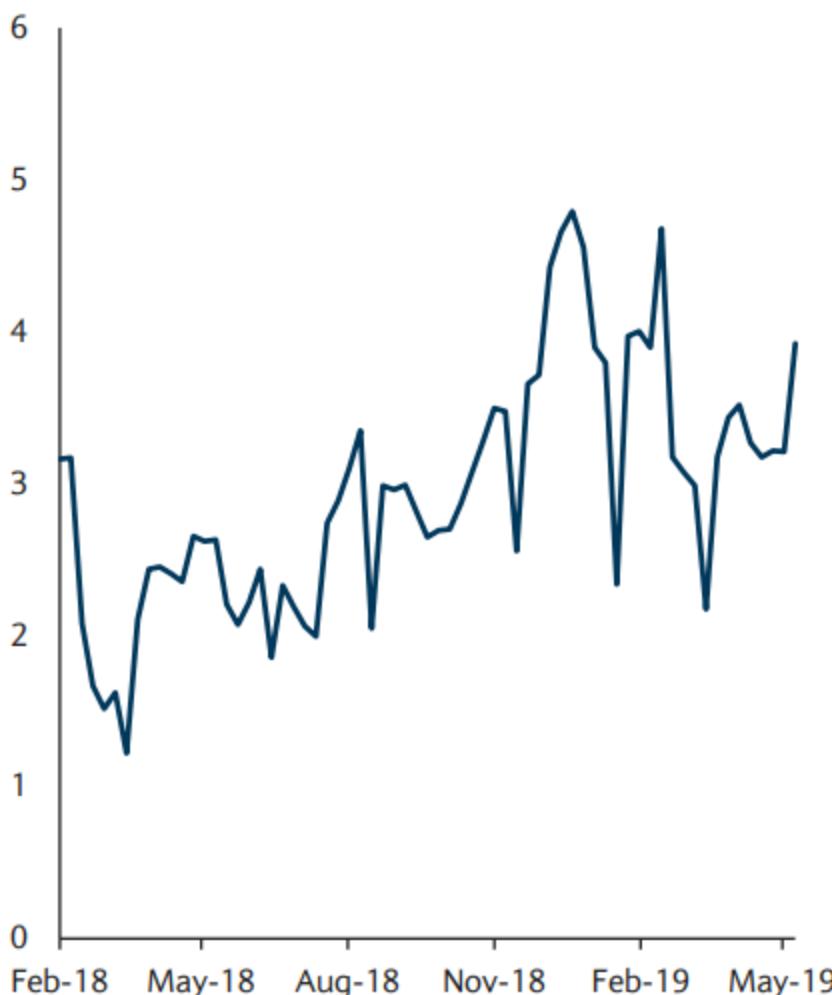
Source: Credit Suisse

## Balance Sheet Taper With Dealers and Intraday Flows – Dealers as Intermediate Buyers (Scenario 3)

	Federal Reserve (FRBNY)		Dealers (Credit Suisse Securities LLC)		Banks (Citibank, N.A.)		Non-Banks (real money, etc.)	
7:00 AM	UST	Reserves <sub>B</sub> <sub>oNY</sub> Reserves <sub>C</sub> <sub>iti</sub> TGA	Deposits		Reserves <sub>C</sub>	Deposits	Deposits	
9:00 AM		Reserves <sub>B</sub> ↓ [2B] TGA ↑	[1A] ↓ Deposits ↑ UST					
9:30 AM	↓ UST	TGA ↓ [4]						
3:30 PM		Reserves <sub>C</sub> ↓ [6C] Reserves <sub>B</sub> ↑	[5A] ↑ Deposits	TRP ↑	↓ Reserves <sub>C</sub>	Deposits ↓ [6A] [5B] ↓ Deposits ↑ TRP	Deposits ↓ [6A] ↓ Deposits ↑ TRP	
<b>Scenario 3, net:</b>	↓ UST	Reserves <sub>C</sub> ↓	↑ UST	TRP ↑	↓ Reserves <sub>C</sub>	Deposits ↓	↓ Deposits ↑ TRP	
<u>End-of-day</u> , net:	the balance sheet shrank on both sides		the balance sheet increased on both sides		the balance sheet shrank on both sides		asset swap	
<b>Intraday:</b>			Deposits (↓/↑)		Reserves <sub>C</sub> (↓)	Deposits (↓)		

# Treasury 2y FRN: Buy and hold investors

## Average trading volume (\$bn/d)



Source: Federal Reserve, Barclays Research

- Secondary market activity in the existing 2y (bill) FRN is fairly thin
  - As investors typically hold the issue to maturity
- By contrast, daily trading in off-the-run fixed rate 2y notes is about \$50bn/day



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## Forward-term SOFR availability

- The Treasury's current floater uses a forward-looking term interest rate (the 3m bill yield) as a reference rate
  - And, clearly, Libor floaters have a forward-looking term reference rate
- But, a forward-looking term SOFR rate may not be available until late 2021
  - Forward-looking term SOFR will be derived from SOFR futures and swaps
    - But there may not be sufficient volume in these derivatives on which to build a robust, IOSCO-compliant benchmark by 2021
- The Alternative Reference Rate Committee (ARRC) is recommending new Libor FRNs include fall back language
  - With a waterfall of reference rates if forward-looking term SOFR is not ready when Libor publication ceases
    - The next fall back in the waterfall is a compounded in arrears average SOFR rate



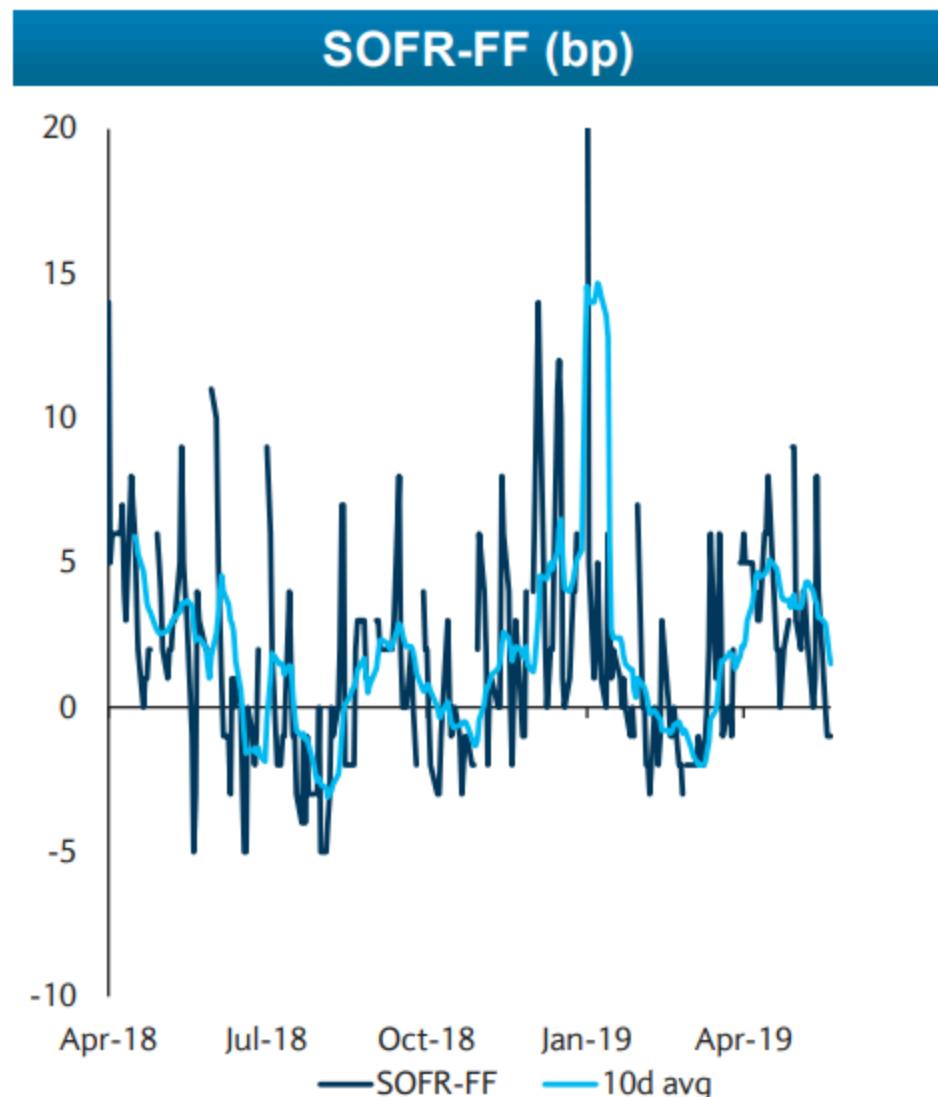
21

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# SOFR is drifting lower...

- The overnight SOFR rate has moved below fed funds for first time since March
  - We expect the decline in bill supply will push SOFR a couple of basis points lower
    - And keep the repo rate slightly below the fed funds rate



Note: Month-ends excluded. Source: US Treasury, Barclays Research

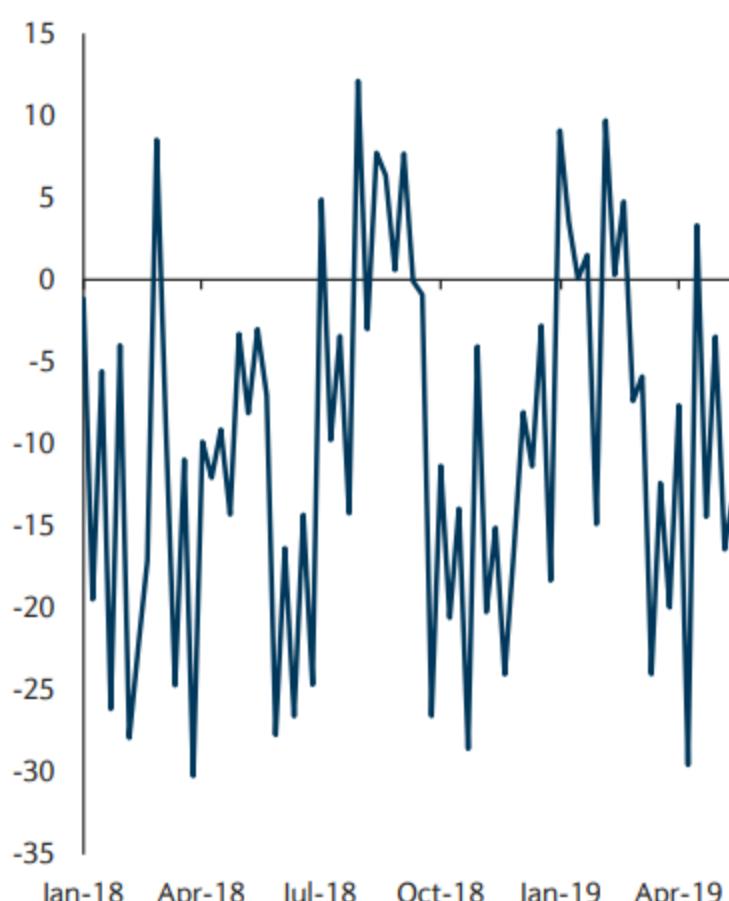


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## Dealers are normally short the on-the-run issues...

### On-the-run coupon holdings (\$bn)



- Dealers are typically short the on-the-run, or most recently issued, Treasuries<sup>1/</sup>
  - And this tends to create a borrowing premium for these securities in the repo market

1/ The exception is the 2y FRN as it takes some time for dealers to distribute the new security to final buyers. We suspect this would also be true of any Treasury SOFR FRN.

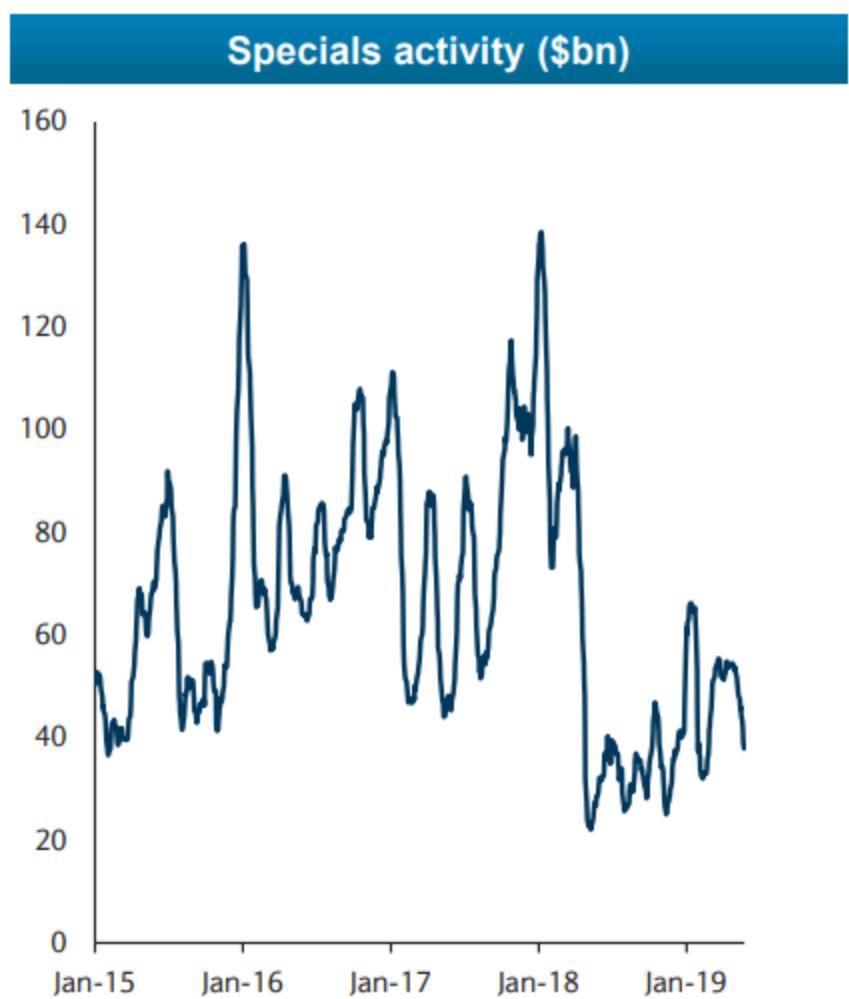
Source: Federal Reserve, Barclays Research



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## But large issue sizes have removed the scarcity premium



Source: Barclays Research

- Large auction sizes have eliminated the borrowing premium in the repo market for the on-the-run issues
  - Specials activity – or securities trading with more than 10bp below general collateral – has faded

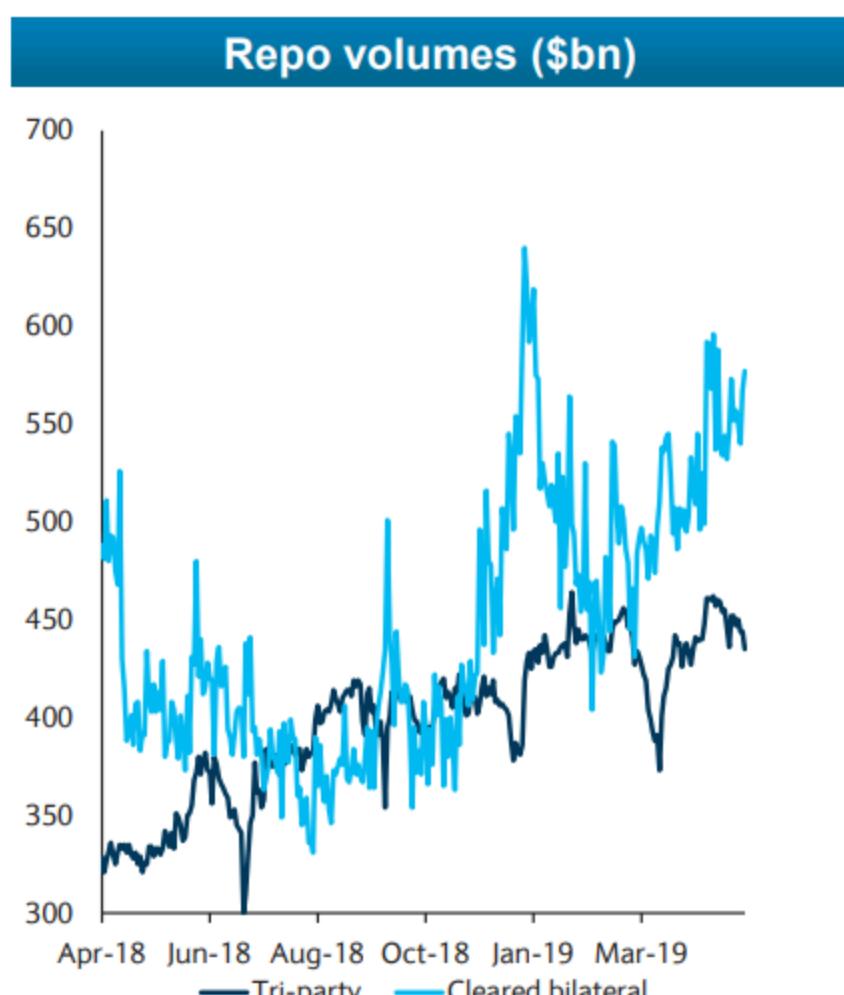


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## Shifting trading patterns in the repo market

- Overnight (SOFR) repo volumes have increased by 35% since May 2018
  - But the fastest growth is in cleared bilateral activity
- Bilateral repo transactions are novated to the FICC
  - The FICC faces both the cash lender and borrower
    - So the dealer can net the transaction against its other cleared repo positions
    - Thereby conserving its balance sheet



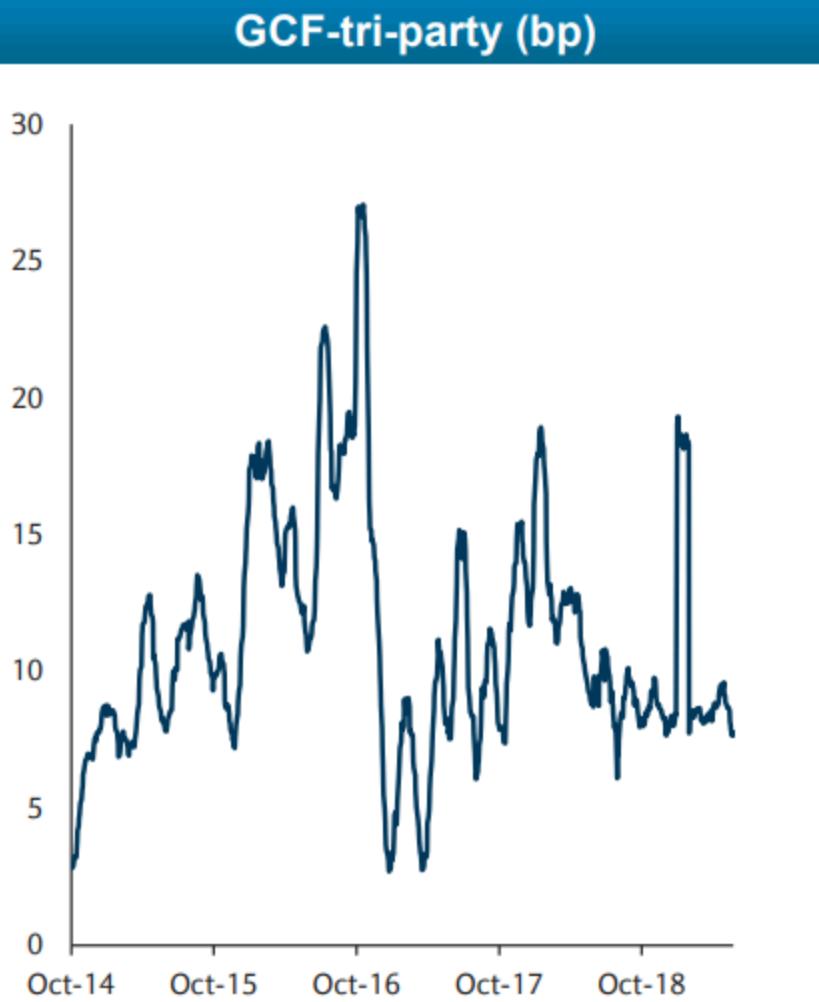
Note: GCF activity is included in the tri-party data. Source: Federal Reserve, Barclays Research



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## Sponsored repo should compress GC repo spreads



Note: 20d average. Source: Federal Reserve, DTCC, Barclays Research

- As sponsored repo activity picks up we expect balance sheet scarcity at quarter-ends to dissipate
- And the spreads between various repo market segments should compress
- Including the spread between the overnight Treasury GCF and tri-party rates
  - When balance sheet scarcity was at its peak, this spread exceeded 20bp<sup>1/</sup>

1/ For fundamentally the same overnight cash/Treasury secured loan

## CCLF costs

- Sponsored repo is not free for the sponsor
  - Sponsors must contribute to the FICC's guarantee fund
    - And are responsible for the completion of all trades initiated by their sponsored clients
  - Sponsors must also be ready to contribute to the capped contingent liquidity facility (CCLF)
    - The CCLF is meant to provide the FICC with liquidity in the event its largest single member defaults
      - So that it can continue clearing transactions and unwind the positions of the defaulter
    - The CCLF contribution is effectively pro-rated across the FICC members based on that member's peak daily liquidity need
    - The CCLF amount is updated every 6m based on past activity
      - Thus as the sponsored client boosts its cash borrowing, its sponsor's CCLF commitment increases

## CCLF costs cont'd

---

- We suspect that sponsoring FICC members will not be able to pass their CCLF costs onto their sponsored clients
  - As more banks sign up to be sponsors, the increase in competition to sponsor firms will force sponsoring firms to absorb the cost
- CCLF costs, however, can be reduced
  - By shifting from overnight to term transactions
    - Which reduces the peak liquidity drawn on any single day
  - Or by staggering the maturities of their overnight activity so that no one particular day creates an above-average spike
- But this requires the cooperation of sponsored clients willing to term out their activity

## New participants

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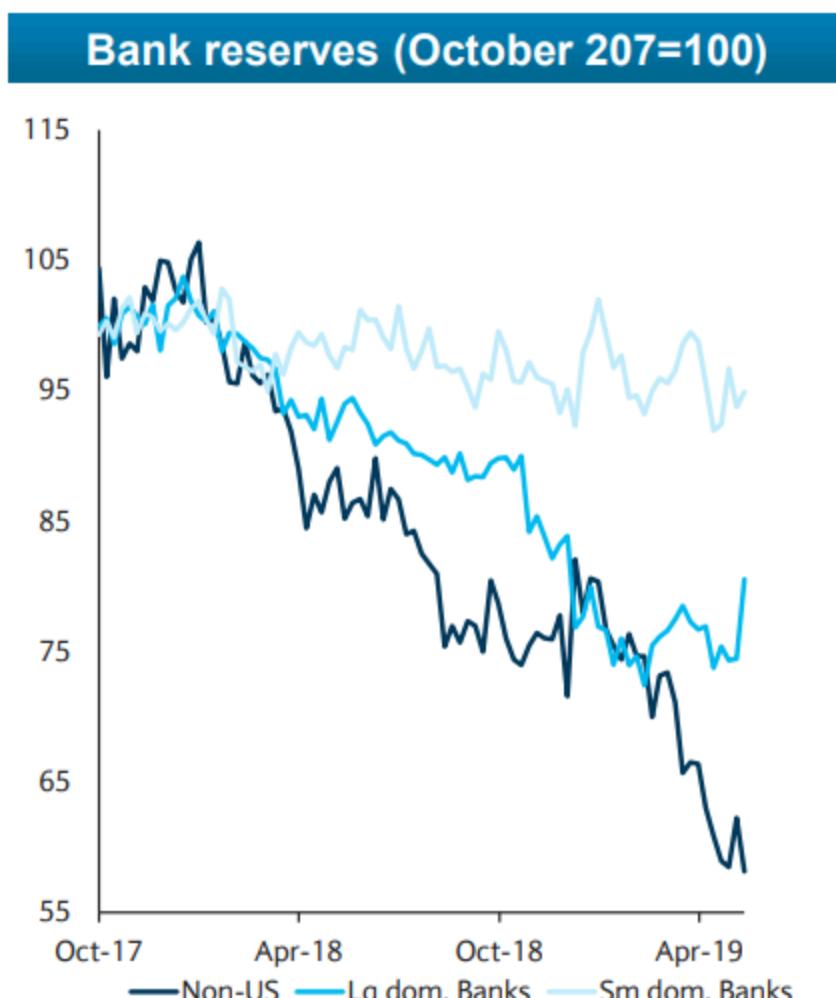
- A recent Fed study looked at cleared repo transactions<sup>1/</sup>
  - It identified the new participants on the FICC's central repo clearing platform since June 2012
- It finds that while there has been an expansion in the number of repo counterparties the volume of transactions they do is quite small
  - New participants account for about 6% of total gross activity (long and short) in the interdealer, brokered GCF repo market (in Q4 2018)
- *Data from money market funds, however, suggests that while the number Treasury repo counterparties has increased, much of the increase in trading volume has come from the traditional large (non-US) primary dealers*

## Changing complexion of repo

- The repo market has grown significantly since 2016 and money fund reform increased the demand for Treasury repo
  - Over the period competition from expanded bill issuance has also increased
- Repo market participation has expanded to include insurance companies as well as smaller, non-primary dealers
  - Smaller, non-dealer intermediation between cash borrowers and lenders has shifted to centrally cleared platforms
  - At the same time, traditional repo market participants have significantly increased their market activity
- The share of repo transactions that are cleared has increased
  - We expect this to continue
    - And cause further compression in repo spreads across different segments of the market

## Who is losing balances?

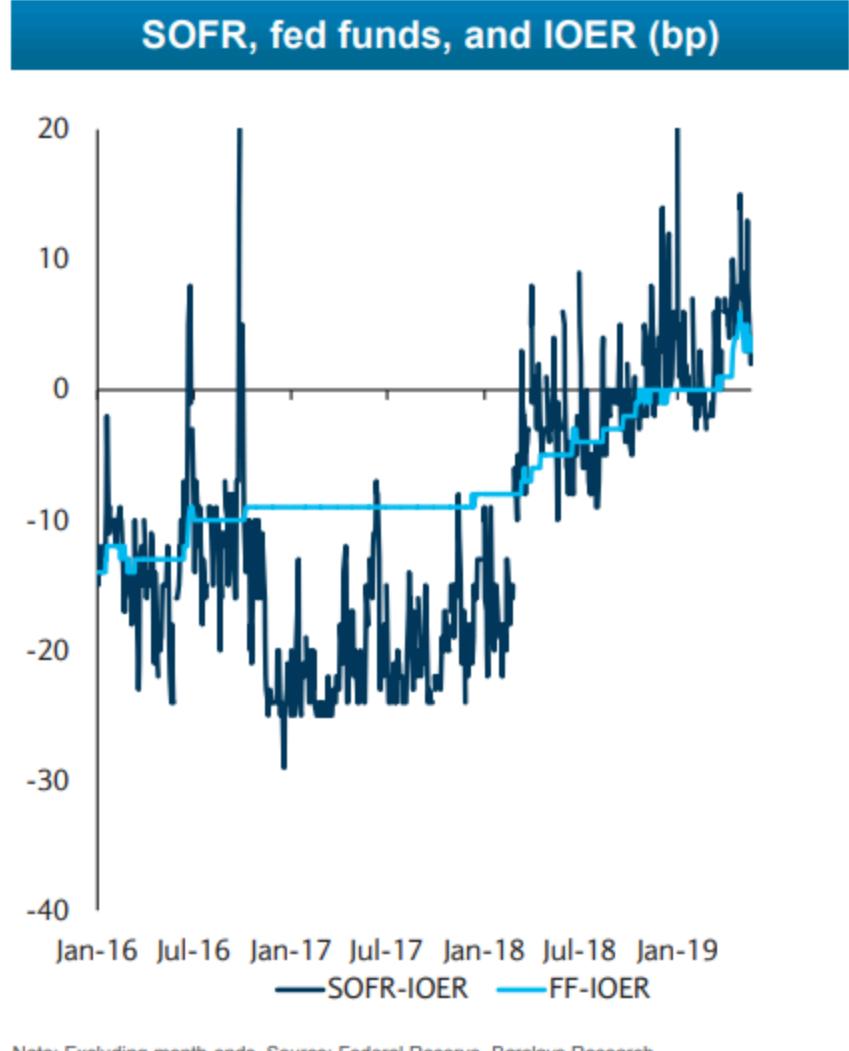
- Most of the reduction in reserve balances has come from non-US banks
  - Which have lost 40% of their balances since October 2017
- Most banks (95%) have reserve balances of \$3bn or less
  - Which are primarily used to meet intra-day clearing requirements



Source: Federal Reserve, Barclays Research

## ...even as market rates exceed IOER

- SOFR and fed funds have both exceeded IOER since last fall
  - And SOFR has traded an average of 3bp over the fed funds rate since October 2018
- In theory, banks should have some incentive to shift balances from IOER-earning balances at the Fed to market repo or fed funds



Note: Excluding month-ends. Source: Federal Reserve, Barclays Research

## Why aren't more banks arbiting IOER?

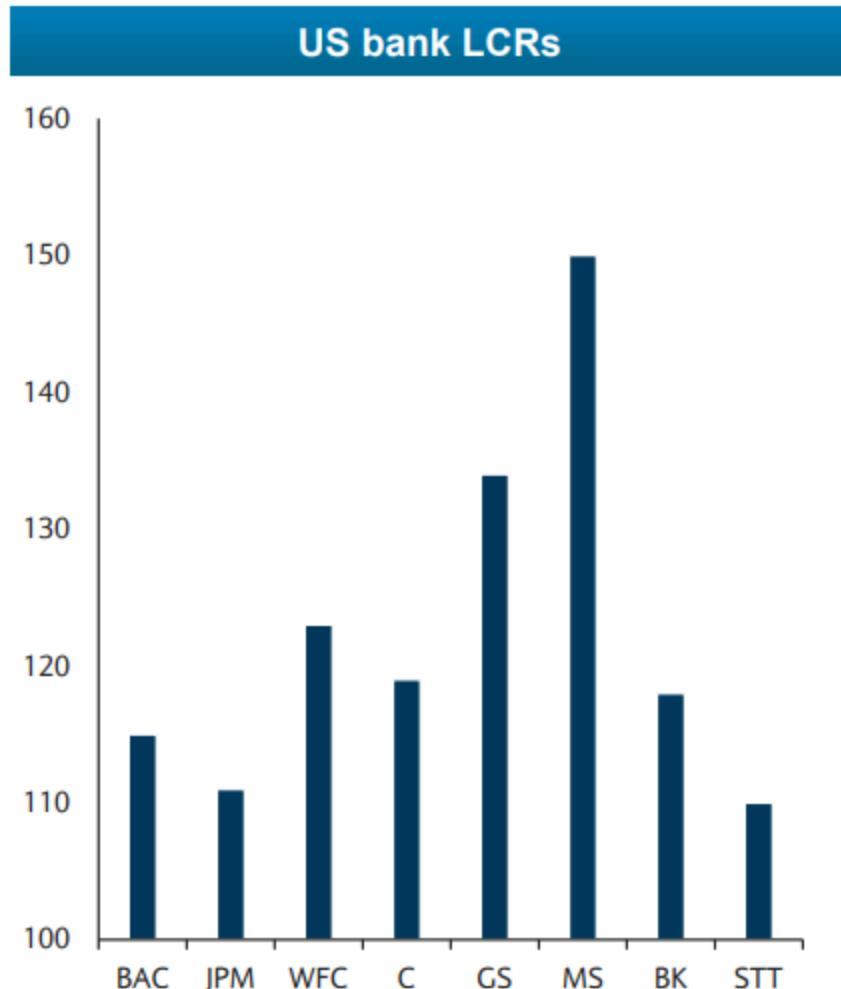
1. Reserve scarcity: Banks may not have enough excess reserves above their regulatory minimums to be able to arb IOER in other markets
2. Managerial preferences: Banks may be reluctant to arb IOER because their management determines both the level and composition of their Level 1 HQLA independent of the level of rates
  - And seeks to maintain a precautionary cushion in excess of regulatory minimums

## How important is IOER for banks?

- In the February 2019 Senior Financial Officer Survey, a plurality of banks (41.3%) noted that earning IOER was “not an important” consideration for keeping reserves balances at the Fed
  - This share was higher for domestic banks (51.2%)
- Both domestic and foreign banks reported that “satisfying *internal* liquidity stress metrics” were important factors in their decision to hold balances at the Fed

## Banks hold excess HQLA

- Bank demand for reserves is variable across institutions
  - On average, banks hold significantly more HQLA (roughly 20%) than the minimum required
    - Or about \$370bn



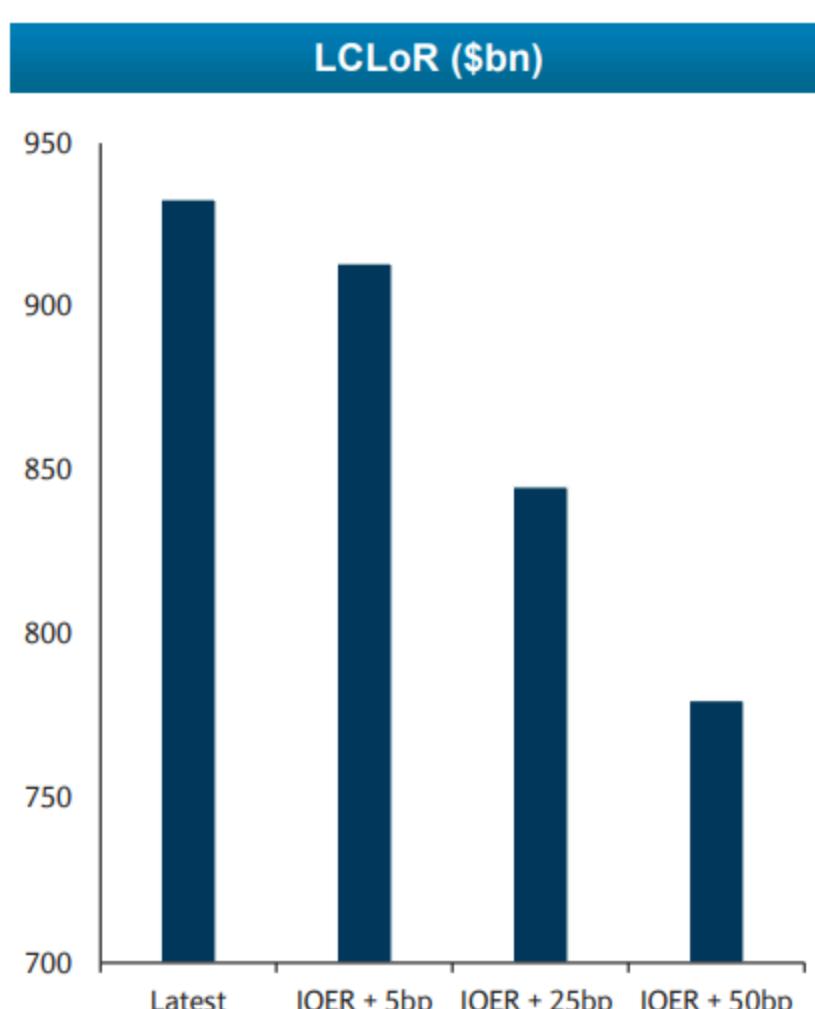
Note: Average across the 8 US GSIBs. Values for Q1 2019. Source: Bank reports, Barclays Research



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## Least comfortable level of bank reserves (LCLoR)



- In aggregate and given prevailing interest rates, banks' LCLoR is about \$930bn<sup>1/2/</sup>
  - This is well below the current \$1.5trn in bank reserves
- In theory, as market rates move further above IOER, banks would economize their reserve balances
  - To earn more in the market
- *LCLoR falls as market spreads to IOER widen*

1/ All figures are scaled upward to reflect survey non-respondents

2/ The figure is higher (\$975bn) if banks are able to hold extra reserves to minimize the day-to-day fluctuations in their balances at the Fed

Source: Federal Reserve, Barclays Research



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## Supervisory demand for reserves

---

- There may be a difference between ample bank reserves and what banks consider their LCLoR
  - That reflects a supervisory demand for balances at the Fed
    - Because reserves are immediately available while Treasuries need to be repo'ed to the market, to the discount window, or sold
      - And are sized to reflect internal liquidity stress metrics
        - Or bank resolution plans (living wills)
- Banks hold more HQLA than required
  - And these levels are frequently sized to reflect internal liquidity stress metrics and bank resolution plans (or living wills).
- *Based on the recent behavior of interest rates, the current level of bank reserves appears to be much closer to the LCLoR than what the Fed's Senior Lending Officer's Survey suggests*



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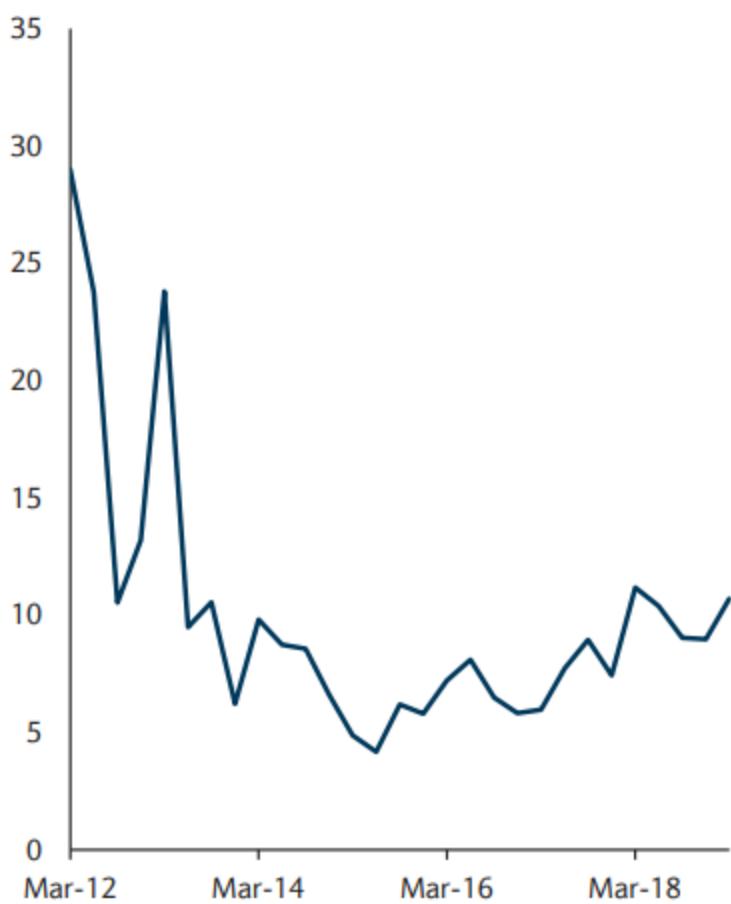
## Spreads may be too narrow to arb

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- The spread between market rates and IOER may be too small to encourage banks to part with their precautionary liquidity buffer
  - Roughly a quarter of the respondents to the Fed's February Senior Financial Officer's Survey reported that spreads weren't wide enough to justify shifting cash out of the Fed and into the repo market<sup>1/</sup>
    - Keep in mind, that lending cash against Treasury collateral would not lower the bank's LCR ratio
  - However, the Survey also revealed that most (61%) would lend cash in the repo market if the spread between IOER and SOFR was between 0 and 15bp
    - *So, the reluctance to arb IOER since last Fall, may just reflect the fact that at 3bp, the spread between SOFR and IOER is not wide enough to be attractive*

## Bank intraday liquidity demands are low

### Peak intraday credit (\$bn)



- Banks maintain balances at the Fed for clearing
  - The Fed provides collateralized and uncollateralized intraday loans...
    - ...that banks can use to insure they do not run an overdraft in their reserve balance
- QE and the expansion in bank reserves has eliminated much of the need for intraday credit
  - But as bank reserves head lower, peak intraday borrowings are growing larger
- Although the effect is small

## Standing repo facility

- The Fed is considering creating a standing repo facility
  - To better control interest rates
  - To reduce the demand for bank reserves
- But there are no details yet on how such a program would be structured
  - Although the Fed plans to review the program at a future FOMC meeting
- We assume:
  - It would be a fixed rate, full allotment program with same day settlement, open only to banks
    - The program rate would likely be lower than the discount rate
  - Available throughout the day – including the period after securities settlement
  - *In effect, the standing repo facility would be a “on-demand open market operation” for banks*

## Could non-banks participate?

---

- We are somewhat skeptical that non-banks would have access to the Fed's lending program
- What about the FICC?
  - Under Dodd-Frank, systemically important financial market utilities such as the FICC are able to *leave* cash on deposit at the Fed
    - And borrow from the discount window in a crisis
  - But it is doubtful that the Fed would participate in a loss mutualizing program like the FICC's centrally cleared repo platform
    - Or *lend* cash to non-banks
- *That said, there may be some other structure that could be used to extend repo loans to non-banks that we are unaware of*

## Why?

---

- The Fed has had no difficulty raising interest rates or keeping the fed funds rate within the 25bp band set by the FOMC
  - However, in order to keep the funds rate from drifting within 5bp of the upper band of the target range, the Fed has had to cut IOER 3 times
- But there is now only 10bp separating IOER and the RRP rate floor
  - And the Fed's ability to counteract additional upward pressure on fed funds through cuts in IOER has waned
    - Moreover, the May FOMC minutes suggest the Committee is nervous about flattening the spread between IOER and the RRP rate too much as this could increase program use

- In theory, if bank liquidity managers knew that they could quickly and easily convert their Treasury HQLA into cash reserves at the Fed whenever the need arose, they might hold less surplus cash balances
- As a result, the Fed could let the level of reserve run down for longer after asset roll-offs end this September
  - However, we do not think the Fed plans to have a long “glidepath” – that is, the period after its balance sheet roll-offs end and when it begins making secondary market Treasury purchases to stabilize the level of bank reserves
    - Instead, increased HQLA flexibility will mean that the terminal level of bank reserves – estimated to be around \$1.2trn – will give banks greater ability to arb market rates
      - Which in turn should keep a leash on market rates such as SOFR
- *But the “leashing” effect works only to the extent that bank managements feel comfortable about shifting their surplus cash liquidity into Treasuries*

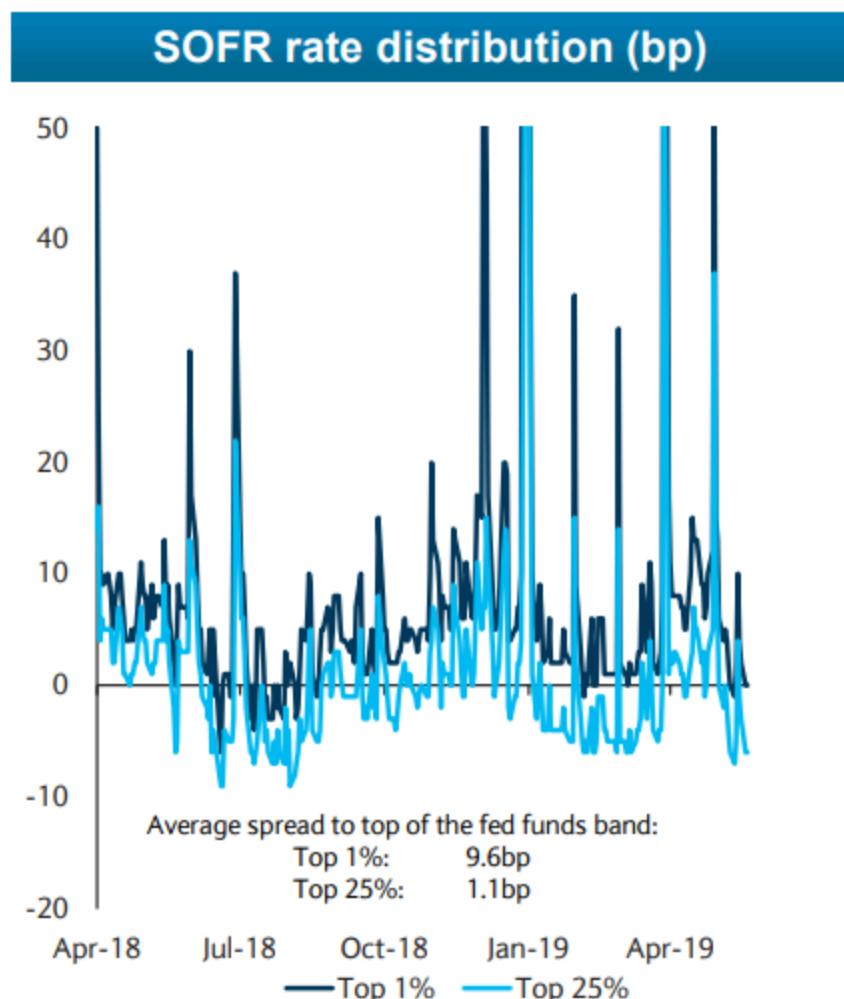


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## Setting the standing repo rate

- Where should the Fed set the rate on the standing repo program?
  - Andolfatto and Ihrig discuss setting the rate a few basis points above the top of the fed funds target band<sup>1/</sup>
- But at this spread, the program would be especially attractive to dealers in the repo market
  - Roughly 25% (or \$250b/day) of SOFR trades 1bp above the top band



<sup>1/</sup> See, “Why the Fed Should Create a Standing Repo Facility”, D. Andolfatto, J. Ihrig, Federal Reserve Bank of St. Louis, March 2019

Note: SOFR spread to the top of the fed funds target band. Source: Federal Reserve, Barclays Research

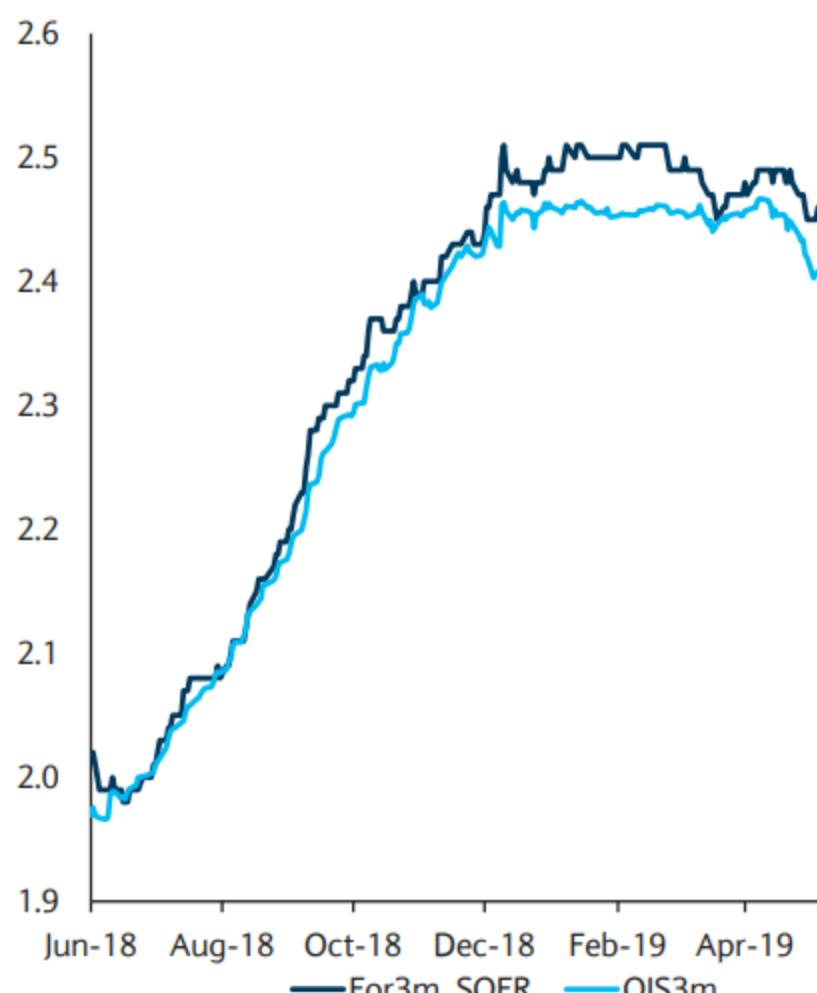


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## Term forward SOFR

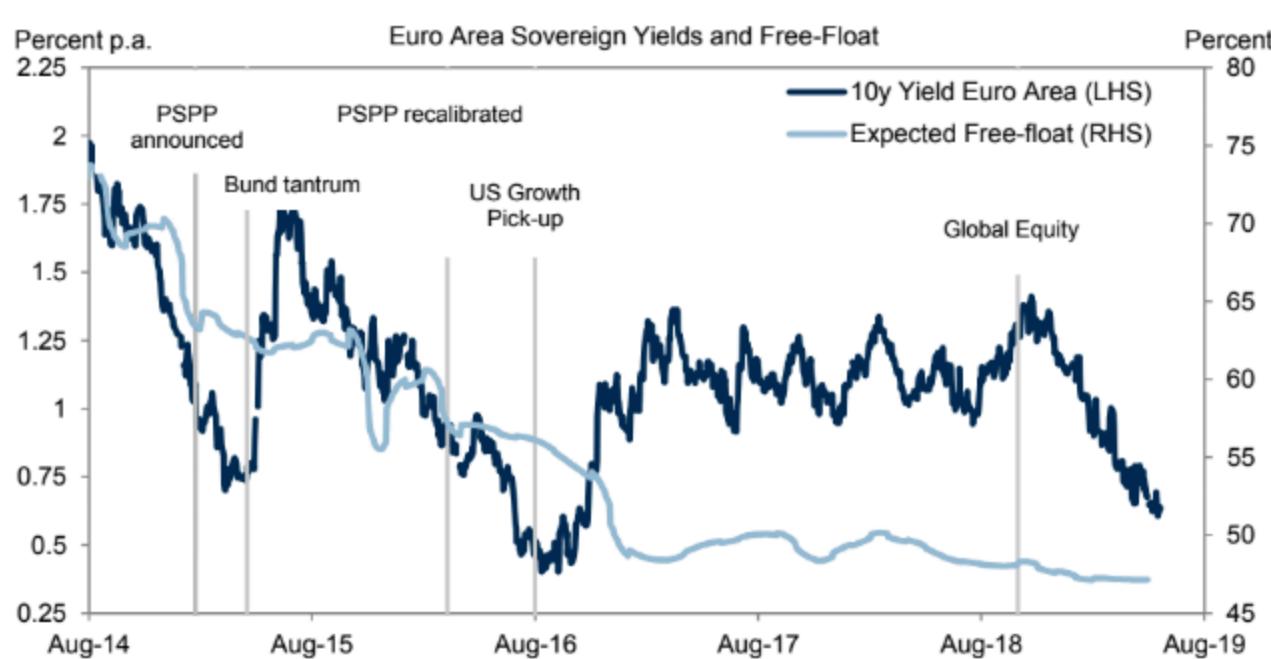
### Forward term SOFR (bp)



Source: Heitfeld and Park (2019), Bloomberg, Barclays Research

- A term SOFR rate can be constructed from activity in the futures market<sup>1/</sup>
  - Although these markets are not robust enough to derive a benchmark interest rate
- The estimated forward term SOFR rate looks very similar to OIS
  - And an average spread of 2bp

1/ See "Inferring Term Rates from SOFR Futures Prices", E. Heitfeld and Y. Park, Federal Reserve Board, February 2019



The chart shows the 10y synthetic yield of all euro area sovereign issuers computed by the ECB.

Source: Haver, IMF CPIS , ECB, Goldman Sachs Global Investment Research

Using the free-float we update our estimates of the yield impact of the ECB's QE.<sup>7</sup> We seek to distinguish stock effects, i.e. the decline of long-term yields on account of expected duration absorption through asset purchases, from flow effects, which temporarily compress yields of targeted securities. As sovereign debt carries a risk premium in the periphery of the euro area, stock effects may also capture the transfer of credit risk to the ECB's balance sheet. We therefore separately regress 10y yields in a panel consisting of Germany and France (core) and one consisting of Italy and Spain (periphery) on the free-float (stock effect) and its monthly change (flow effect). To control for the signalling effect of the ECB's QE programme on the path of short-term interest rates we include the slope of the front-end of the curve up to 3 years as a regressor. In addition, we control for other determinants of the term premium related to uncertainty about the policy rate path, the dispersion of near-term inflation expectations and uncertainty over long-term rates.<sup>8</sup> Our sample covers January 2007 to April 2019 and thus also captures the pre-QE relationship between the free-float and yields.

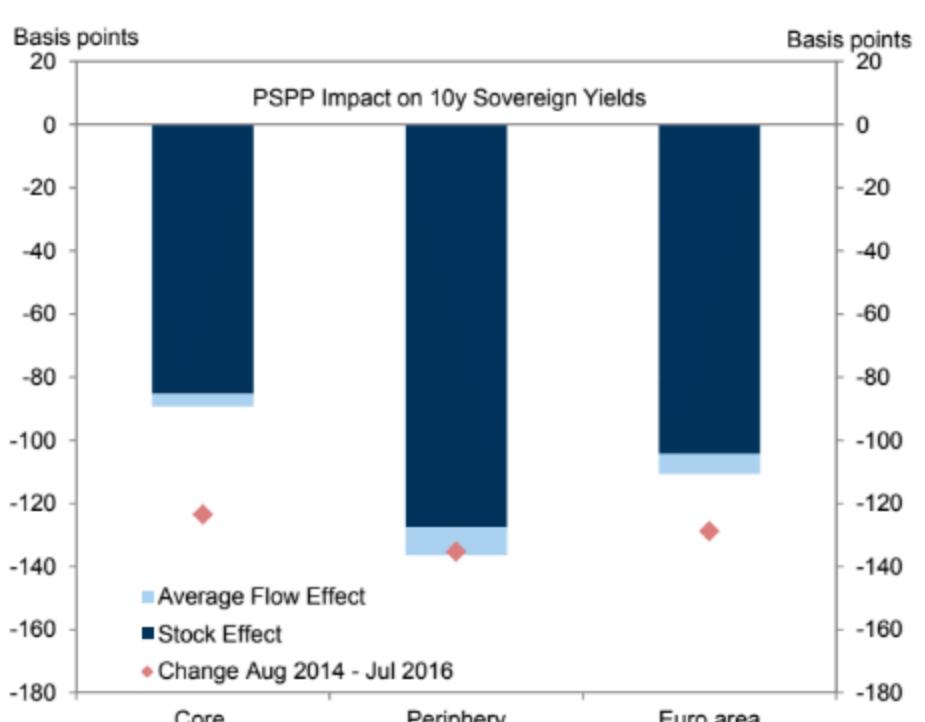
## Exhibit 2: Stocks Dominate Flows

Dependent Variable: 10y Sovereign Yield		
	Core	Periphery
Free-Float: Expected Stock	0.036 [9.74]***	0.057 [9.57]***
Free-Float: Flow	0.068 [1.44]	0.169 [2.93]**
Rate Expectations	1.340 [8.96]***	0.954 [5.64]***
Sample	January 2007 - April 2019	
Observations	296	296

Note: Figures in squared brackets denote t-statistics.

\*\*Significant at the 95% confidence level.

\*\*\*Significant at the 95% confidence level.

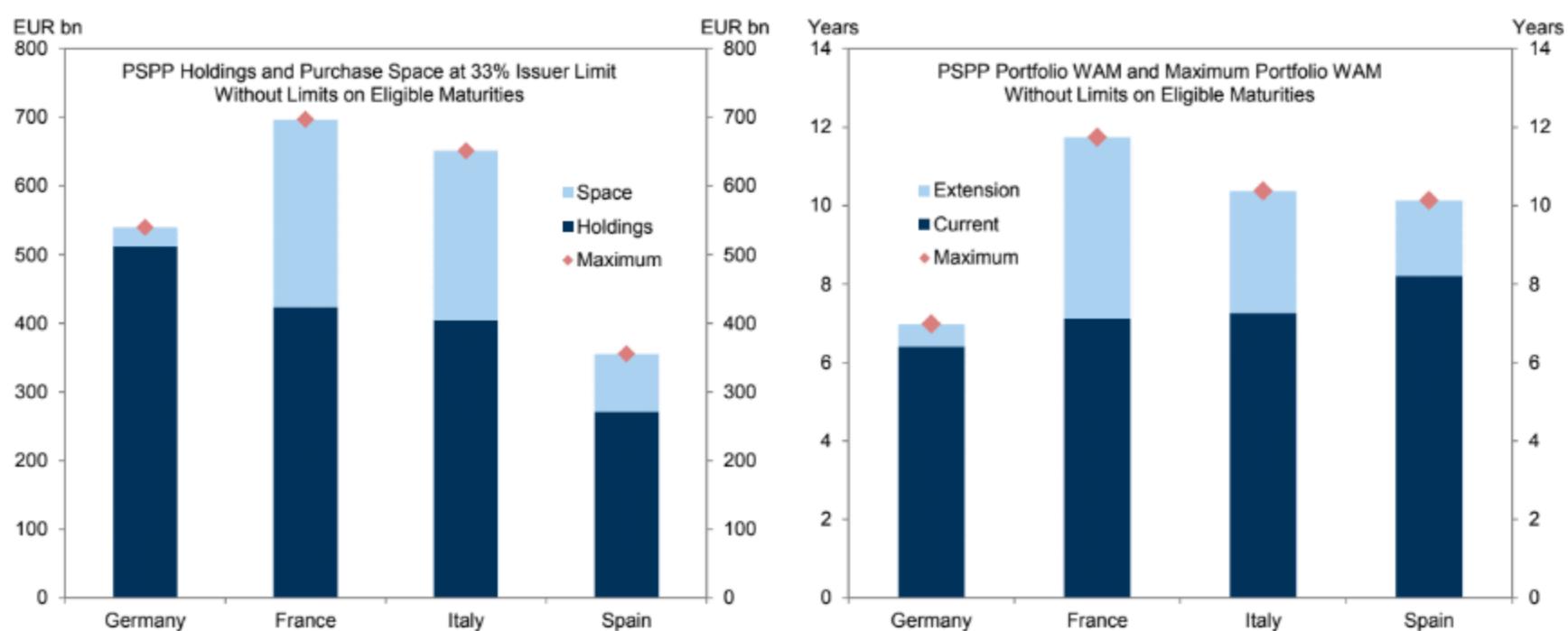


Source: Goldman Sachs Global Investment Research

But a resumption of public sector purchases beyond the stock reached at the end of the net purchase phase in December 2018 is now infeasible as self-imposed constraints are binding (Exhibit 3, left panel). In particular, Eurosystem holdings of German government bonds are flirting with the 33% issuer limit even if restrictions on the residual maturity of eligible securities are lifted.<sup>10</sup> In France and Italy, by contrast, the combined remaining purchase space amounts to around EUR500bn, which reflects the larger size of the debt markets in these countries compared to Germany. But this space cannot be exhausted as purchases are allocated across countries not according to market capitalisation, but according to the ECB's capital key.

To engage in additional net purchases, the ECB would need to either move away from the allocation of future purchases according to capital key or relax the 33% issue/r limits. Neither of these would be an easy choice and would raise legal and political economy issues. As we believe a move to allocation by market capitalisation could be seen by many in the Governing Council as rewarding fiscal imprudence, we think this is the less palatable choice on balance.

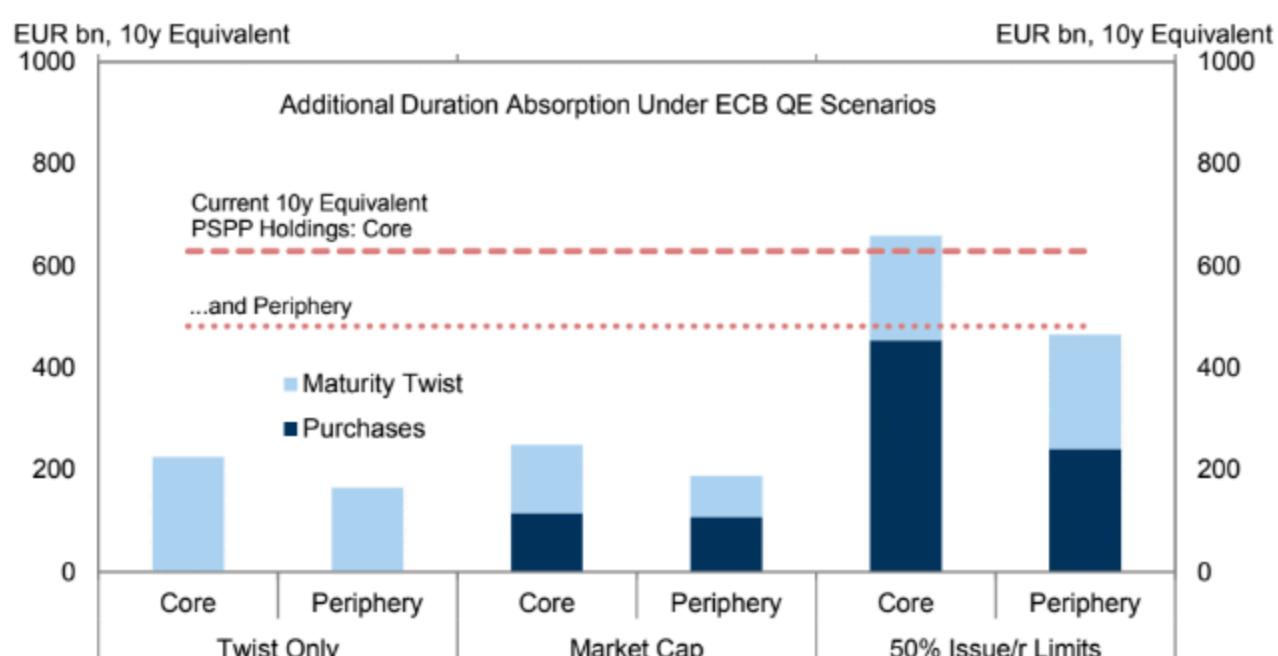
### Exhibit 3: The ECB Could Twist the Maturity of PSPP Holdings



Source: Haver, ECB, National Central Banks, Goldman Sachs Global Investment Research

We therefore consider three easing scenarios: first, a twist on the maturity of the existing government bond portfolio; second, a switch to an allocation of the existing portfolio by market capitalisation; and third, additional net purchases with issue/r limits relaxed to 50%. Both of the latter options could be complemented by a maturity twist. Exhibit 4 highlights the additional duration absorption in Germany and France (core) and Italy and Spain (periphery) if each of these options were pushed to the limit. The twist and market cap options entail similar purchase volumes in 10-year equivalent terms, amounting to less than 40% of the current sovereign bond holdings. The move to 50% issue/r limits combined with a maturity twist would roughly double the current duration-adjusted Eurosystem portfolio.

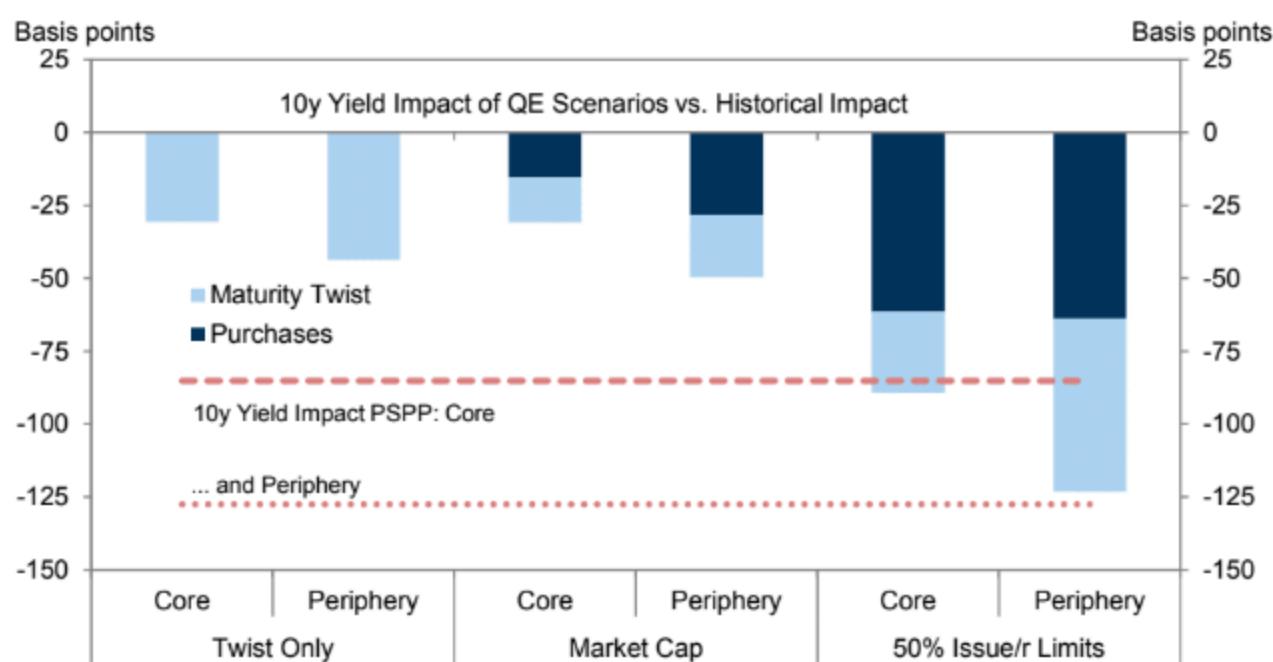
### Exhibit 4: Doubling Down on Duration Absorption With Laxer (Issuer) Limits...



Source: Goldman Sachs Global Investment Research

Extrapolating from our estimated relationship between the free-float and long-term sovereign yields, we would expect a moderate compression of 10-year yields from the maturity twist and market cap scenarios (Exhibit 5). By contrast, a relaxation of issue/r limits to 50% combined with a maturity twist could inject considerable stimulus and broadly replicate the estimated yield effects of the previous purchase programme.

### Exhibit 5: ...Could Inject Significant Stimulus



Source: Goldman Sachs Global Investment Research

### Private Sector Purchases—From Useful Complement to Troubled Waters

In March 2016, the ECB extended its QE programme to include bonds issued by non-financial corporates. Corporate bond spreads of both eligible and ineligible securities declined significantly upon this announcement and the implementation of purchases (Exhibit 6). Empirical studies attribute around 15-40bp of this decline to corporate sector purchases.<sup>11</sup> They also find evidence for spill-over effects to ineligible bonds, a stimulation of issuance activity and diversion of alternative sources of corporate funding, such as bank loans, to firms without direct access to financial markets.

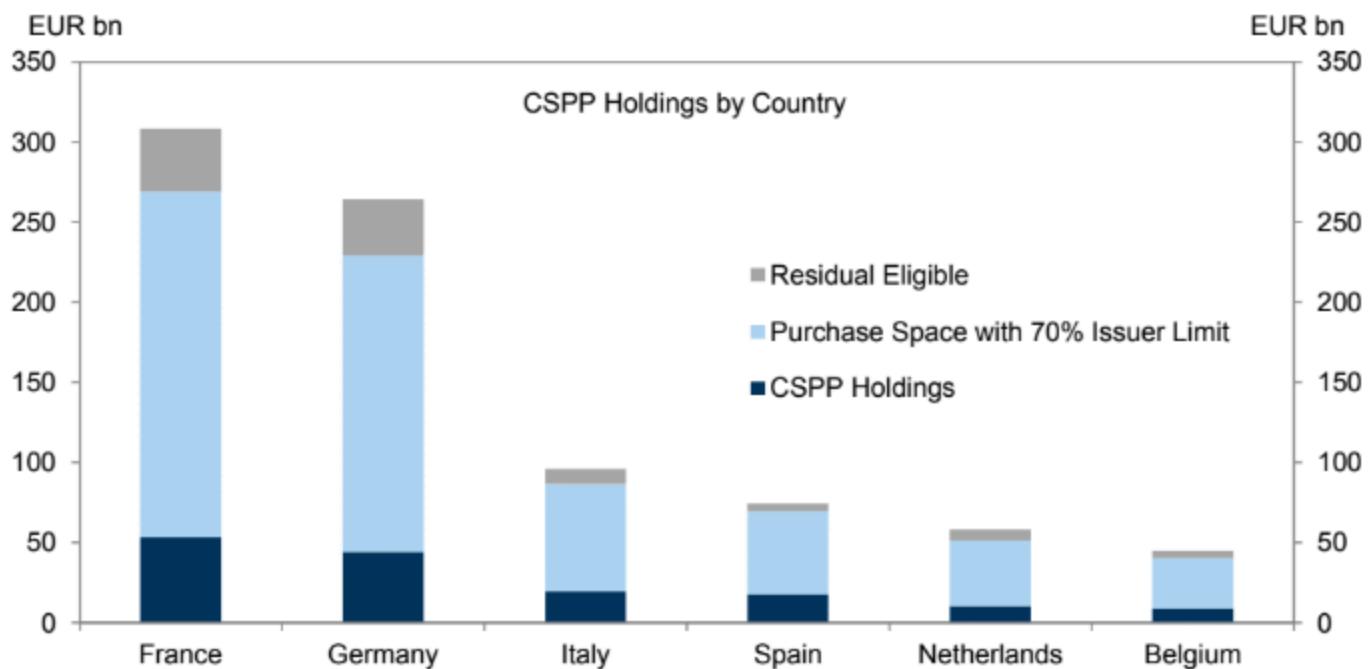
**Exhibit 6:**

Corporate Bond Spreads Declined Significantly after the CSPP Announcement



Source: Haver Analytics, Goldman Sachs Global Investment Research

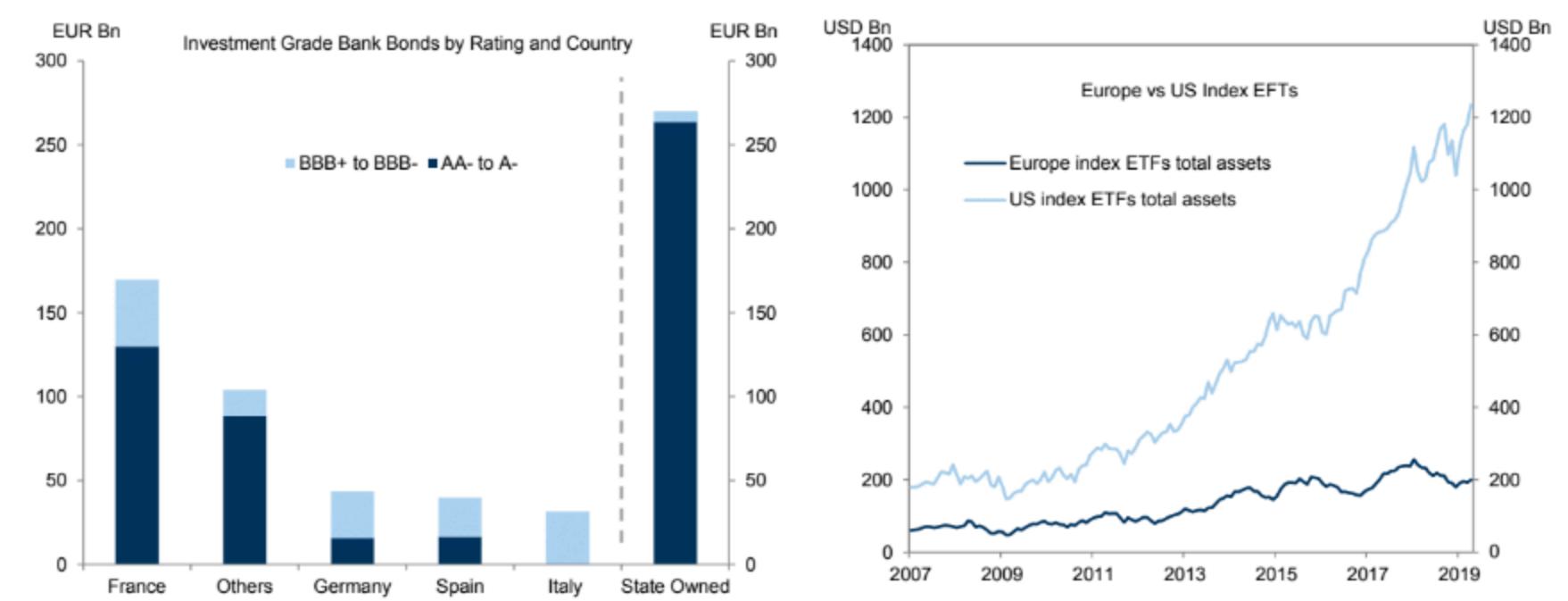
Self-imposed constraints in the corporate space are much less stringent than in the sovereign space. Investment grade securities in a maturity spectrum of 6 months to 31 years qualify for purchases and are subject to an issue limit of 70%. The ECB currently holds only around EUR155bn or 18% of the eligible universe of corporate bonds (Exhibit 7). This leaves ample space to expand the corporate QE, particularly in France and Germany, although liquidity conditions will prevent the ECB from exploiting this space to the extremes.

**Exhibit 7: There is Ample Space to Expand the Corporate Bond Programme**

Source: ECB, Bloomberg, Goldman Sachs Global Investment Research

With purchases into other private asset classes, such as bank bonds or equities, the ECB would be entering unchartered—and potentially riskier—waters. The universe of private investment grade bank bonds is significantly smaller than that of non-financial issuers, amounting to around EUR400bn (Exhibit 8, left panel). In addition to that, state-owned banks have around EUR270bn bonds outstanding. While these were already eligible as substitute purchases under the sovereign QE programme, it is not publicly known what fraction is held by the Eurosystem. Bank bond purchases may look appealing as bank-based finance is still dominant in Europe. Lowering bank bond spreads would directly reduce banks' funding costs, likely feeding into lower loan rates for corporates and households.

## Exhibit 8: Purchases of Bank Bonds or Equity Are Contentious



Source: Bloomberg, Goldman Sachs Global Investment Research

### A QE Pecking Order

We do not expect a return to QE in our baseline outlook for the Euro area economy, but see two lower-bar options and one higher-bar option if economic conditions deteriorate. The hurdle is lowest for a maturity twist of the existing sovereign bond portfolio and for additional corporate sector purchases and both could bring moderate further easing. We think this option could be called for as an intermediate step if growth did not re-accelerate over the next quarters, core inflation failed to pick up and downside risks continued to weigh on the outlook. Given similar effectiveness, we think a reshuffling of the Eurosystem portfolio towards a market capital allocation is much less attractive than a maturity twist given possible adverse incentive effects.

## GENERAL

### How does the Desk intend to implement the FOMC's plan to reinvest principal payments from agency debt and agency MBS into Treasury securities?

On March 20, 2019, the Federal Open Market Committee (FOMC) provided additional information regarding plans for its securities holdings via its [Balance Sheet Normalization Principles and Plans](#). Beginning in October 2019, principal payments received from agency debt and agency MBS holdings will be reinvested into Treasury securities through secondary market purchases subject to a maximum amount of \$20 billion per month; any principal payments in excess of \$20 billion will continue to be reinvested in agency MBS. Treasury securities purchases will initially be conducted across a range of maturities to roughly match the maturity composition of Treasury securities outstanding. The FOMC will revisit this reinvestment plan in connection with its deliberations regarding the longer-run composition of the System Open Market Account (SOMA) portfolio.

### How will the Desk determine the amount of funds to reinvest in Treasury securities each month and how will this be communicated?

The amount of monthly reinvestments into Treasury securities will be approximately equal to the amount of principal payments from agency debt and agency MBS holdings anticipated to be received that month, subject to a maximum amount of \$20 billion per month. On or around the ninth business day of each month, after receiving information from the agencies on expected principal payments, the Desk will publish the amount of Treasury reinvestment purchases expected to take place between the middle of the current month and the middle of the following month and a tentative schedule of operations.

The reinvestment amount will reflect the principal payments anticipated to be received that month; however, actual principal payments received may deviate slightly from the anticipated amount. The actual reinvestment purchases may deviate slightly from the stated purchase amount for operational reasons. The Desk will make adjustments for any deviations in future months.

### What Treasury securities will the Desk purchase?

As directed by the FOMC, the Desk will purchase securities across sectors to roughly match the maturity composition of Treasury securities outstanding. The Desk will distribute the monthly reinvestment amount across 11 different sectors based on the proportional par amount of Treasury securities outstanding in each sector, using the 12-month average as of the end of September 2019. The table below includes the specific sectors the Desk will use, and for illustrative purposes, approximate sector weights based on the 12-month average as of April 30. The Desk will update these weights prior to the start of purchases and this table will be revised at that time. The sector weights are subject to change and will be re-evaluated periodically.

14

# Statement Regarding Plans to Reinvest Principal Payments from Agency Debt and Agency Mortgage-Backed Securities into Treasury Securities

May 30, 2019

On March 20, 2019, the Federal Open Market Committee (FOMC) provided additional information regarding plans for its securities holdings via its [Balance Sheet Normalization Principles and Plans](#). Beginning in October 2019, principal payments received from agency debt and agency MBS holdings will be reinvested into Treasury securities through secondary market purchases, subject to a maximum amount of \$20 billion per month; any principal payments in excess of \$20 billion will continue to be reinvested in agency MBS. Treasury securities purchases will initially be conducted across a range of maturities to roughly match the maturity composition of Treasury securities outstanding. The FOMC will revisit this reinvestment plan in connection with its deliberations regarding the longer-run composition of the SOMA portfolio.

Under this guidance, the Federal Reserve Bank of New York's Open Market Trading Desk (the Desk) plans to distribute secondary market Treasury reinvestment purchases across eleven different sectors, including nominal coupons, bills, Treasury Inflation-Protected Securities, and Floating Rate Notes. The approximate amount of purchases in each sector will be determined by sector weights. These sector weights will be based on the 12-month average of the par amount of Treasury securities outstanding in each sector relative to the total amount outstanding across all sectors, measured at the end of September.

The monthly amount of Treasury reinvestment purchases will be announced on or around the ninth business day of each month and purchases will generally be conducted over the one-month period until the next announcement. The Desk will also release a tentative schedule of purchase operations expected to take place over the monthly period. The Desk plans to release the first schedule of purchase operations on October 11, 2019.

	NOMINAL COUPON SECURITIES BY MATURITY RANGE*								BILLS	TIPS**	FRNS
SECTOR	0-% YRS	%-1½ YRS	1½-2¼ YRS	2¼-3 YRS	3- 4½ YRS	4½-7 YRS	7- 20 YRS	20- 30 YRS	0-1 YRS	0-30 YRS	0-2 YRS
SECTOR WEIGHT	8%	9%	8%	8%	11%	13%	7%	11%	15%	8%	2%

\* The on-the-run 3-year note will be considered part of the 2½ to 3-year sector and the on-the-run 7-year note will be considered part of the 4½ to 7-year sector.

\*\* TIPS weights are based on unadjusted par amounts.

The Desk's monthly purchase schedule will communicate the specific maturity range of each operation in advance. The Desk anticipates transacting across the full maturity range in each sector for most operations; however, in some circumstances the Desk may not always transact in the sector's full maturity range for market functioning and operational efficiency reasons. The Desk will refrain from purchasing securities that are trading with heightened scarcity value in the repo market for specific collateral, newly issued nominal coupon securities, and securities that are cheapest to deliver into active Treasury futures contracts. Additionally, the Desk will not purchase securities with 4 weeks or less to maturity. Specific issues that will be excluded from consideration will be announced at the start of each operation. Currently, the Desk does not plan to purchase STRIPS or securities trading in the when-issued market.

**What are the limits on the SOMA holdings of any one Treasury issue?**

The Desk will limit SOMA holdings to a maximum of 70 percent of the total outstanding amount of any individual Treasury security.

**What is the maximum amount the Desk will purchase in each issue?**

In order to slow the rate of purchases for securities in which the SOMA portfolio already has large holdings as a proportion of Treasury securities outstanding, the Desk will allow the share of SOMA holdings of an individual Treasury security to rise above 35 percent only in modest increments, as specified in the table below. Subject to market conditions, the Desk may further limit the size of additional purchases in certain issues or otherwise change the stated limits as needed.

SOMA Security Ownership Prior to Operation as a Percentage of Outstanding		Maximum Purchase Amount per Security in Operation is the Lesser of:	
	(A)	(B)	
0-30%	N/A	(35% of Outstanding) minus SOMA Holdings	
30%-47.5%	5% of Outstanding	(50% of Outstanding) minus SOMA Holdings	
47.5%-59%	2.5% of Outstanding	(60% of Outstanding) minus SOMA Holdings	
59%-70%	1% of Outstanding	(70% of Outstanding) minus SOMA Holdings	
Above 70%		Not Eligible for Purchase	

**Will the Federal Reserve lend the Treasury securities it purchases through this program?**

Yes, Treasury securities purchased through this program will be available to borrow through the SOMA's securities lending facility. For more information on SOMA Securities Lending, please see:  
[https://www.newyorkfed.org/markets/sec\\_faq](https://www.newyorkfed.org/markets/sec_faq)

**Where are SOMA holdings of Treasury securities reported?**

For a full list of SOMA holdings, please see  
[https://www.newyorkfed.org/markets/soma/sysopen\\_accholdings](https://www.newyorkfed.org/markets/soma/sysopen_accholdings)

## OPERATIONS

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**Who is eligible to transact with the Federal Reserve under this program?**

The Federal Reserve Bank of New York's primary dealers are eligible to transact in these operations directly with the Federal Reserve. Dealers are expected to submit offers for both themselves and their customers.

**How will the purchases be conducted?**

The Desk will conduct purchases of Treasury securities via FedTrade, the Desk's proprietary trading system. FedTrade operations will be conducted using multiple-price, competitive auctions with approved counterparties. A "multiple-price" auction is an auction in which securities are awarded at the price corresponding to the participant's offer in the operation, resulting in the security being awarded at multiple prices. The minimum auction amount, offer size, and offer increment are each \$1 million. Participants can submit up to nine offers per security, with each offer reflecting both a price and par amount.

Offers in FedTrade operations will be evaluated based on their proximity to prevailing market prices at the close of the auction, as well as measures of relative value. Relative value measures are calculated using the Federal Reserve Bank of New York's proprietary model.

**How often will the Desk conduct operations to purchase Treasury securities?**

The Desk anticipates conducting one operation per sector during each monthly period. However, the number of operations per month may be adjusted for holiday schedules or other changes in market conditions to support smooth market functioning.

**How will the Desk communicate the operation results?**

Operation results will be posted on the Federal Reserve Bank of New York's website following each operation. The information posted will include the total amount of propositions received, the total amount of propositions accepted, and the amount purchased per issue. In addition, participating dealers will receive the operation results, including their accepted propositions, via FedTrade, immediately following the close of the auction.

**Will the Desk release operation pricing results?**

The Desk will publish information on transaction prices in individual operations at or around the end of each monthly period. For each security purchased in each operation, the Desk will release the weighted-average accepted price, the highest accepted price, and the proportion accepted of each proposition submitted at the highest accepted price.

In addition to the pricing information released each month, Section 1103 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires that detailed operational results, including counterparty names, be released two years after each quarterly transaction period.

**Whom should dealers call if they experience difficulties during the operation?**

Primary dealers may call the Federal Reserve Bank of New York Trading Desk with submission and verification questions. For system-related problems, dealers may call the Federal Reserve Bank of New York Primary Dealer Support.

**How will the Desk manage the SOMA's maturing Treasury securities?**

As directed by the FOMC, the Desk will roll over maturing Treasury securities at auction. For more information on Treasury rollovers, see <https://www.newyorkfed.org/markets/treasury-rollover-faq.html>.

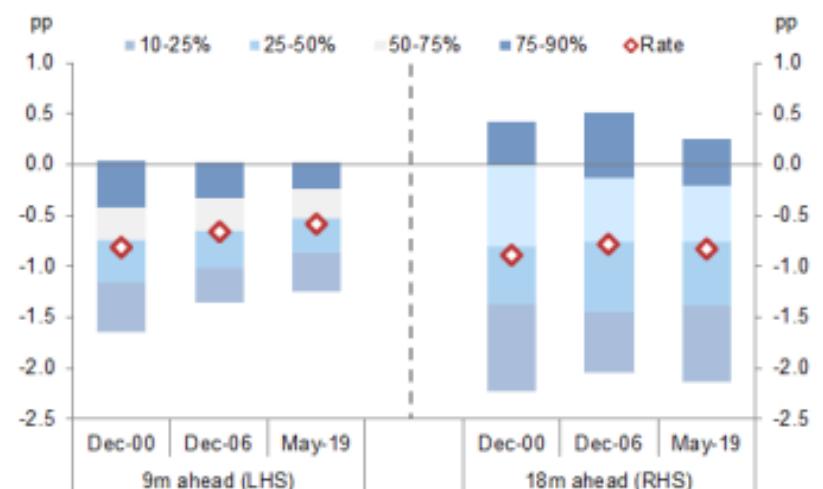
**When and how does Treasury security settlement take place?**

Treasury security settlement will typically occur on a T+1 basis, i.e. one business day after the day of the operation, via the Fedwire Securities System.

31 May 2019 | 4:45PM EDT

## **Global Rates Trader: Trade tensions pull forward cut pricing**

In this week's Global Rates Trader, we note the continuing inversion of US front-end. Market cut pricing is aggressive in our view, but if either economic or financial conditions deteriorate, we could see continued pressure. In this scenario however, further gains are likely to be led by cut pricing moving further in rather than a large amount of additional cuts being priced—and structures such as EDU9/H0/U0 belly richening flys should perform well. We also highlight the relative flatness of the 5s10s real yield curve in the US, both versus level of rates and given the stage of the business cycle. We also note that the Fed's UST purchases starting October are unlikely to have material impact on the yield curve. In Europe, we discuss the upcoming ECB meeting as well as the yield impact of various potential ECB actions (though not all at the next meeting). We highlight some aspects of the EU election aftermath, which we believe is positive for GGBs and negative for BTPs. We also explore potential positioning ahead of an ECB leadership transition.



### United States/North America

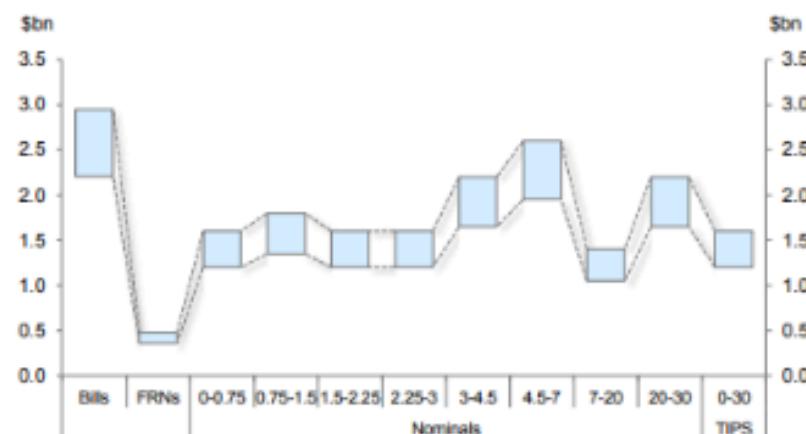
- **Trade tensions bring forward rate cut pricing.** Over the past month, the front end of the yield curve in the US has continued to invert, with current six quarter-ahead/spot yield spread approaching the peak inversion seen ahead of prior recessions, both in terms of levels and probability distribution (Exhibit 1). At present, markets are pricing about even odds of being at or above the current policy rate as they are for about 200bp or greater of cuts (both ~15%). While we agree with the idea that some amount of inversion at the front end is justified given the stage of the cycle (see here and here), this degree of inversion and skew, at least historically, is more typically seen ahead of recessions. At current levels of pricing, being long forwards six quarters (or further) out offers poor protection to a further deterioration in risk sentiment, in our view. In the event that fundamentals or financial conditions deteriorate further, we expect the nearer term forwards (e.g. 9m ahead) to outperform those further out. This is consistent with Exhibit 1, which shows some room for repricing at this horizon compared to longer horizons. Therefore, in this scenario, we would expect structures like the Sep 19/Mar 20/Sep 20 (EDU9/H0/U0) belly-richening Eurodollar fly to perform well.

**Fed purchases relatively neutral (or mildly flattening) for the curve.** The New York Fed announced some clarifying details on how it plans to distribute secondary market purchases of US Treasuries meant to replace MBS securities and agency debt runoff. Beginning this October, the Desk will purchase Treasuries across 11 sectors, including bills, Floating Rates Notes, nominal coupons, and TIPS, in proportion to the size of each sector relative to the total amount outstanding (all in par amounts). The exact sector weights will be based on the 12-month average of these shares, measured at the end of September. In Exhibit 2, using the preliminary maturity sector weights the NY Fed published, we show a rough estimation of monthly purchases by sector, assuming a range of \$15-20bn in monthly MBS runoff (if MBS runoff were to exceed \$20bn, any excess would be reinvested in agency MBS). Overall, we expect the impact on the curve to be negligible. To the extent there is an impact, it is likely to be one of mild flattening, because the sector weights appear to reflect USTs outstanding inclusive of the SOMA Treasury portfolio (which has an average maturity roughly 2.5 years longer than that of the entire UST universe).

**Exhibit 2: Fed purchasing of USTs set to resume in October, and**

**should be largely neutral (or a marginal flattener) for the curve**

Estimated range of monthly purchases assuming a \$15-\$20bn in monthly MBS paydowns and the Fed's sector breakdown



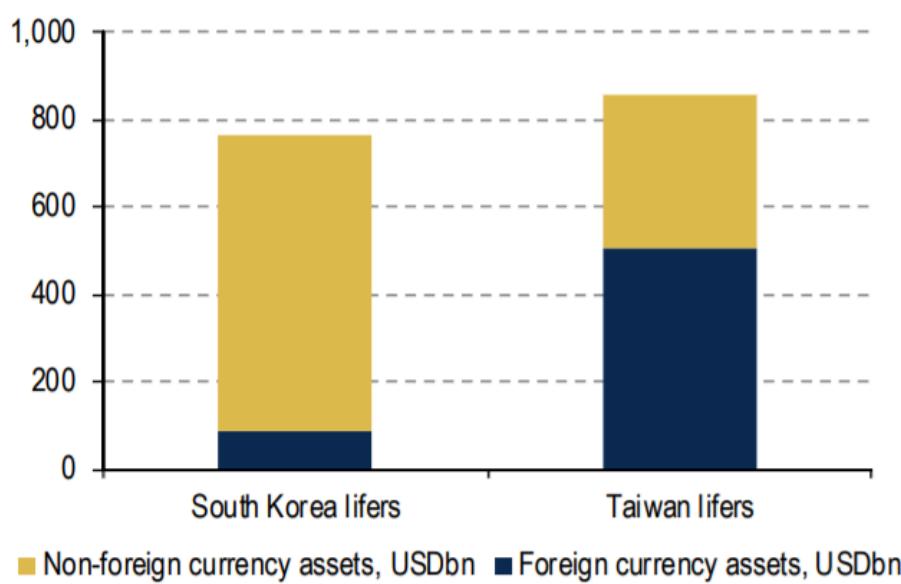
*... Trade update: Following Friday's sharp rally in yields and a relatively more modest drawdown in equities, we were stopped out of our short front end recommendations (short 1y1y hedged with S&P500 puts).*

- **US 5s10s real yield curve—flat relative to levels.** The 5s10s real yield curve is typically counter-directional to the level of yields, and of late, has been nearly 20bp flatter than the level of 5y real yields would suggest. The reason for the counter-directionality is twofold: 1) the 5y point typically prices the full extent of the coming phase of the monetary cycle, whereas the 10y point is more tethered to the long-run policy rate, and 2) real risk premia are countercyclical with the business cycle. We like level-neutral weighted 5s10s real yield curve steepeners, which isolate the second driver, as we think real risk premia are too low; this weighted curve is only ~2bp from the all-time lows. We prefer a real curve steppener over a nominal curve steppener as we believe 5y inflation is cheap relative to our fair value framework, and inflation risk premia have tended to directionally co-move with the business cycle.

- In South Korea, lifers need to FX hedge their overseas investment in order to recognise the duration of their assets from an accounting perspective.
- In Taiwan, there are no formal FX hedging requirements but lifers maintained a FX hedging ratio between 70% and 80% in recent years. We expect the FX hedge ratio to stay in this range because [regulatory changes](#) decrease lifers' foreign exchange volatility reserves at a faster rate than before when lifers make FX losses. Foreign exchange volatility reserves dampen FX movements on lifers' profit and loss.

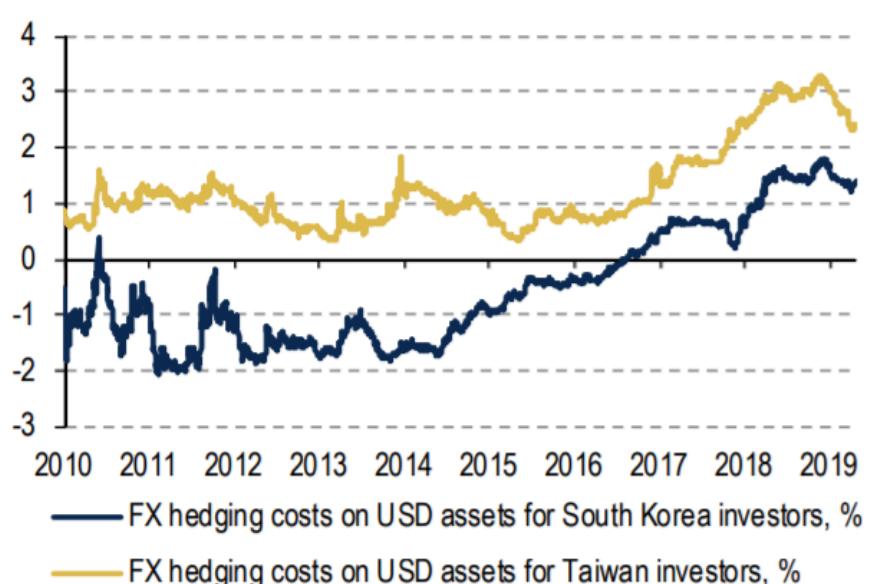
But rate hikes by the US Federal Reserve and strong demand for FX hedging have raised hedging costs and compressed the FX hedged return from USD assets for lifers (Chart 2).

**Chart 1: South Korea and Taiwan lifers' assets in 2018**



Source: BofA Merrill Lynch Global Research, CEIC

**Chart 2: FX hedging costs on USD assets**



Source: BofA Merrill Lynch Global Research, Bloomberg. Based on 12M onshore FX swaps.

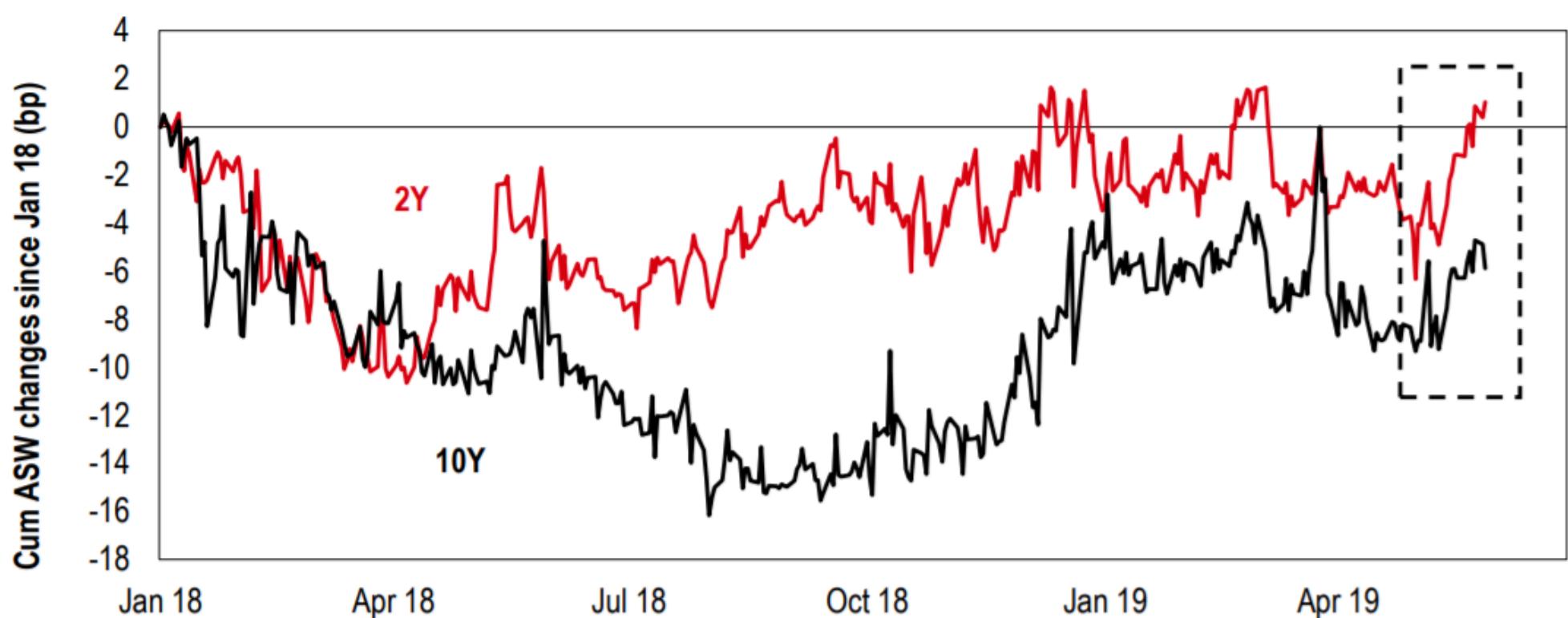
It could make theoretical sense for lifers to increase EUR asset holdings as much as possible given the high yield on a FX hedged basis. But we believe lifers may be cautious of excessive EUR asset accumulation due to the rollover risk from FX hedging: low EUR yields leaves more of the FX hedged returns dependent on FX points than returns from FX hedged USD assets.

**Figure 1: Scenario analysis of possible EUR asset purchases by South Korea lifers in 2019, USDbn**

Foreign currency assets, % of total assets	EUR share of foreign currency assets, %									
	18	20	22	24	26	28	30	32	34	36
10.0	-2	0	1	3	4	6	8	9	11	12
10.5	-1	0	2	4	5	7	9	10	12	14
11.0	-1	1	3	5	6	8	10	12	13	15
11.5	0	2	4	6	7	9	11	13	15	17
12.0	1	3	5	7	8	10	12	14	16	18
12.5	2	4	6	8	10	12	14	16	18	20
13.0	2	4	6	8	11	13	15	17	19	21
13.5	3	5	7	9	12	14	16	18	20	22
14.0	4	6	8	10	13	15	17	19	22	24
14.5	4	7	9	11	14	16	18	21	23	25
15.0	5	8	10	12	15	17	20	22	24	27

Source: BofA Merrill Lynch Global Research, CEIC

**Figure 4. USD SSA ASW widening has been more pronounced at the front-end**



Source: HSBC, Bloomberg

## Sell 9Y USD ASIA vs swaps

- ◆ Dollar SSA spreads have more room to widen despite the recent underperformance of cash bonds vs LIBOR swaps
- ◆ Receiving activity on long-dated swaps is likely to increase while the downward trend in LIBOR fixings may continue
- ◆ US based SSA issuers are lagging behind in their funding progress and we anticipate increased bond issuance from them

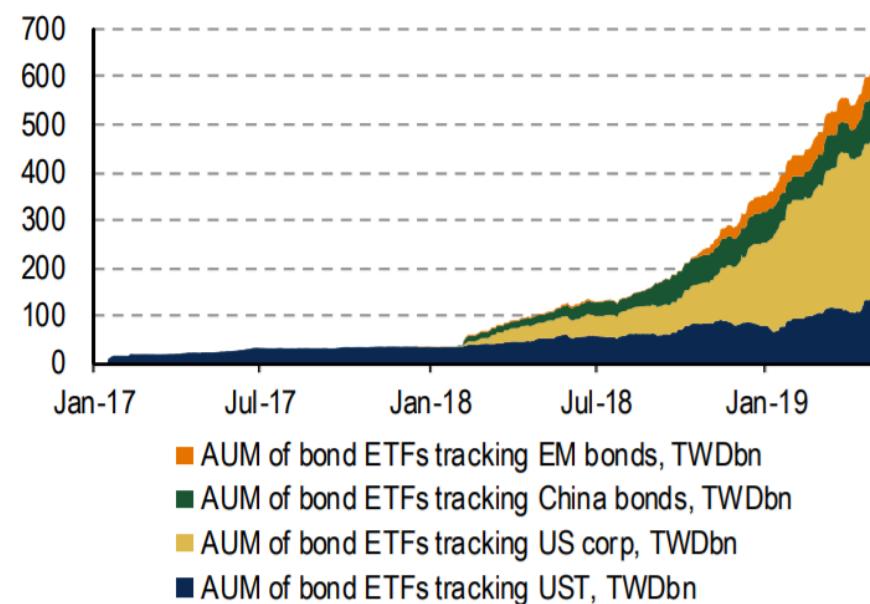
**Table 3. Sell SSA bonds vs swaps**

Trade	Time horizon	Entry (date)	Target	Stop	3m C+R	Rationale	Risk
Sell ASIA2.5 11/27 vs swaps	3mths	15bp (31 May 19)	25bp	10bp	+1bp	Spreads are too tight at the long end	If spread compression increases further

Source: HSBC, Bloomberg

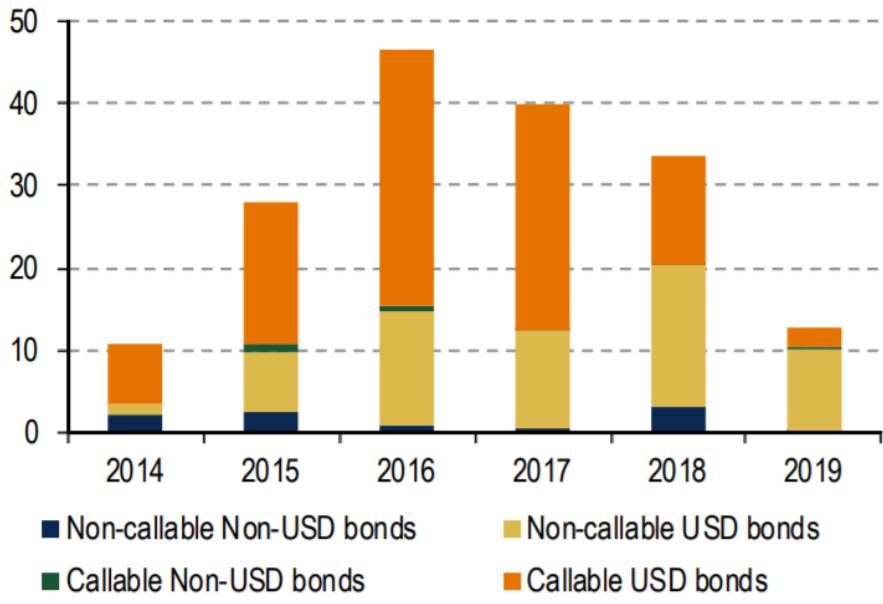
- Formosa bonds. Issuance declined since 2017 as the market expected Formosa bonds to be subject to the lifers' foreign currency investment limit (Chart 6). The change was implemented in November 2018.

**Chart 5: Taiwan's bond ETF market**



Source: BofA Merrill Lynch Global Research, Bloomberg

**Chart 6: Formosa bond issuance since 2014, USDbn**



Source: BofA Merrill Lynch Global Research, Bloomberg

Our base scenario is for total asset growth to be 10% and foreign assets' share of total assets to increase 4ppt in 2019. These assumptions are consistent with the assumptions made in our [2019 USD/TWD FX flows analysis](#). Under these assumptions, Taiwan lifers may purchase as much as USD 53bn of Formosa bonds in 2019. One risk to our base scenario is lifers continue to purchase bond ETFs, which would cause foreign assets' share of total assets to not increase as much as we expect.

Unlike their counterparts in South Korea, we do not expect Taiwan lifers to increase EUR assets significantly. We believe the use of FX swaps by Taiwan lifers is perceived as for FX hedging only. So while EUR assets on a FX hedged basis is significantly more attractive than USD and TWD denominated assets, the low absolute EUR yields may be the main deterrent for Taiwan lifers from investing in EUR assets.

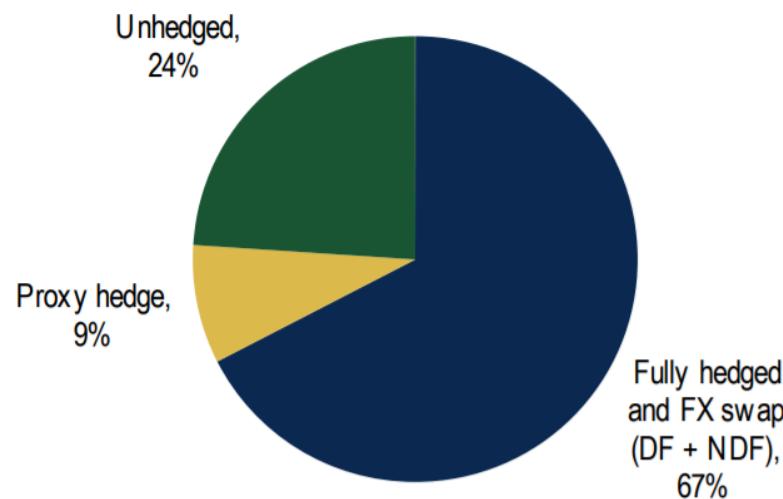
**Figure 2: Scenario analysis of possible Formosa bond purchases by Taiwan lifers in 2019, USDbn**

Change in foreign asset's share, ppt	Asset growth							
	8.0%	8.5%	9.0%	9.5%	10.0%	10.5%	11.0%	
-1	19	20	22	23	25	26	27	
0	24	26	27	29	30	32	33	
1	30	31	33	34	36	37	39	
2	35	37	38	40	41	43	44	
3	41	42	44	45	47	49	50	
4	46	48	49	51	53	54	56	
5	52	53	55	57	58	60	61	
6	57	59	60	62	64	65	67	
7	63	64	66	68	69	71	73	

Source: BofA Merrill Lynch Global Research, CEIC

In Taiwan, a possible response to an increase in FX hedging costs by lifers is proxy hedging. We estimate 9% of Taiwan lifers' total foreign exchange exposure was hedged via proxy hedges in 4Q 2018 (Chart 7). While [FX hedging cost savings](#) are largest from currencies with positive FX points, such as IDR, Taiwan lifers may prefer currencies with a more similar economic structure to Taiwan, such as KRW, SGD, and THB, than others.

**Chart 7: Taiwan lifers' foreign currency asset exposure, 4Q 2018**



Source: BofA Merrill Lynch Global Research, company reports

**Chart 8: FX hedged USD and EUR returns for South Korea lifers**



Source: BofA Merrill Lynch Global Research, Bloomberg

## Implications for Asia FX and rates

### Downward pressure on Asia FX points

Foreign currency asset investment by South Korea and Taiwan lifers would increase FX hedging flows and put downward pressure on KRW and TWD DF FX points. In South Korea, we estimate there are [almost seven times](#) more buy/sell USD/KRW FX swap flows than sell/buy USD/KRW FX swap flows, which reflects the structural imbalance in the market due to FX hedging activities. Additional FX hedging South Korea by lifers via FX swaps could exacerbate the structural imbalance in the FX swap market. One risk is if lifers use cross currency swaps to hedge their foreign assets instead of FX swaps.

## Implications for EUR rates vol

Lifers in search for yield on a FX hedged basis should find that EUR callable bonds are among the most attractive fixed income assets. In fact, for South Korea lifers, Table 1 shows that the most recently issued EUR callable bonds provide the highest yield pick-up out of all the EUR & USD long-dated bonds we considered, bar the lower rated BBB EM sovereign bonds. With that in mind, increased interest by South Korea lifers in foreign bonds should have some bearish impact on EUR vol.

### In 2018, Asian demand was seen in EUR-denominated SSA issuance

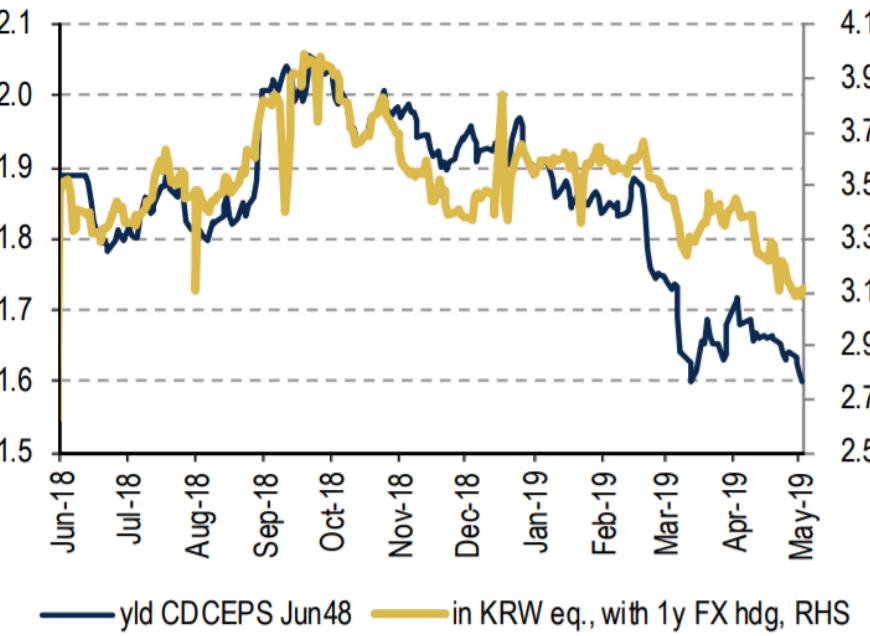
Last year, we noted a significant pick-up in SSA issuance of long-end EUR callable bonds. To us, it was a good indication of possible interest from Asian investors. Indeed, this type of supply contrasted with the decline in the more traditional short-dated callable issuance, which used to appeal to European real money investors, especially in 2015-16. Also, we argued that as Asian investors look to diversify into EUR bonds, they would first do so buying high quality paper, with SSAs therefore first in line.

Ultimately, this ties in well with the above statistics of increased EUR holdings by Korean lifers in 2018. In total, long-dated (>15y) callable SSA issuance amounted €2.3bn over 2018, while similar issuance by financial Corp totaled €2.7bn.

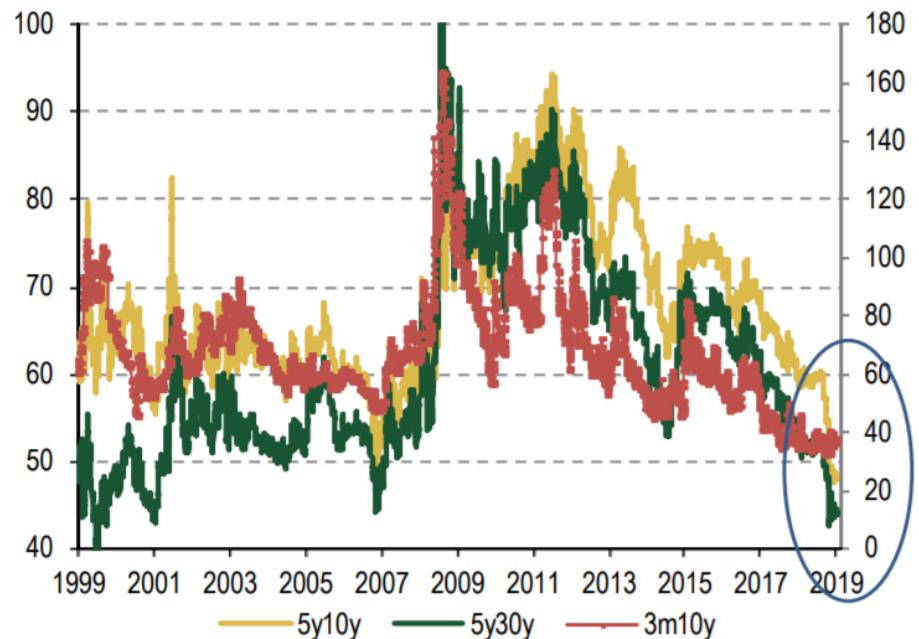
## EUR vega already collapsed, but opportunities remain

Implied vols in the rates world have been falling for years now, driven by ever declining delivered vols and increasingly predictable central banks. However, this year, in EUR, the phenomenon extended beyond short expiries (gamma), to intermediate expiries & vega. 5y10y and 5y30y collapsed to record lows, without gamma making new lows (Chart 14).

**Chart 13: Eg of 30NC10 SSA yield (outright & in KRW eq w/ 1y FX hdg)**



**Chart 14: EUR vega collapsed this year, despite no major move in gamma**



Source: BofA Merrill Lynch Global Research.

Source: BofA Merrill Lynch Global Research estimates.

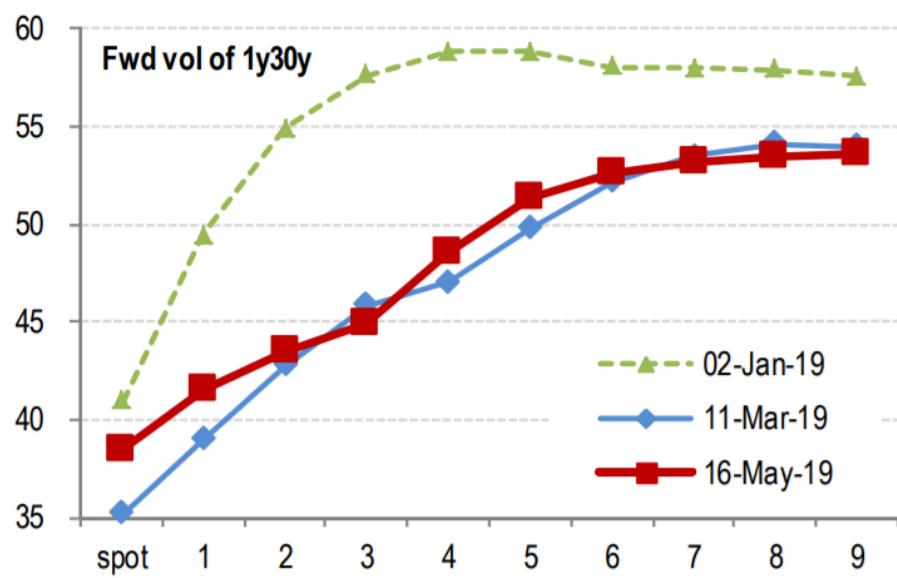
For 20y and 30y tails, the increase in long-dated callable issuance highlighted above represents a strong explanation. For shorter tails, this could have been driven by: (1) the search for yield, that has pushed selling of payers to intermediate expiries (with the carry on rates & vol best in those), and (2) the Japanification theme, which could be interpreted as bearish vega in the belly of the EUR curve (pricing a future YCC for eg).

With demand for EUR bonds likely to be sustained from South Korea lifers, and possibly concentrated in the longer-end, as per our analysis above, we think implied vols in intermediary/long expiries on 30y tails can remain quite depressed. This should therefore create RV opportunities:

1. Based on the term structure of 1y30y fwd vols, selling 4y fwd 1y30y vol appears attractive (the roll-down to 3y fwd 1y30y is relatively elevated - Chart 15).
2. Like in the US case below, buying 1y30y or 2y30y vs 5y30y, can be the right expression to position for continued long-end callable supply in a context of increased delivered vol in 30y rates (which can happen for example if the market were to price in Japanification with a large 10s30s bull flattening).
3. Go short 10y10y vs 5y10y (calendar spread) or 5y30y again vs 5y10y (cross tails) to trade the long-end callable issuance theme, while fading the significant cheapening of 5y10y (Chart 16).

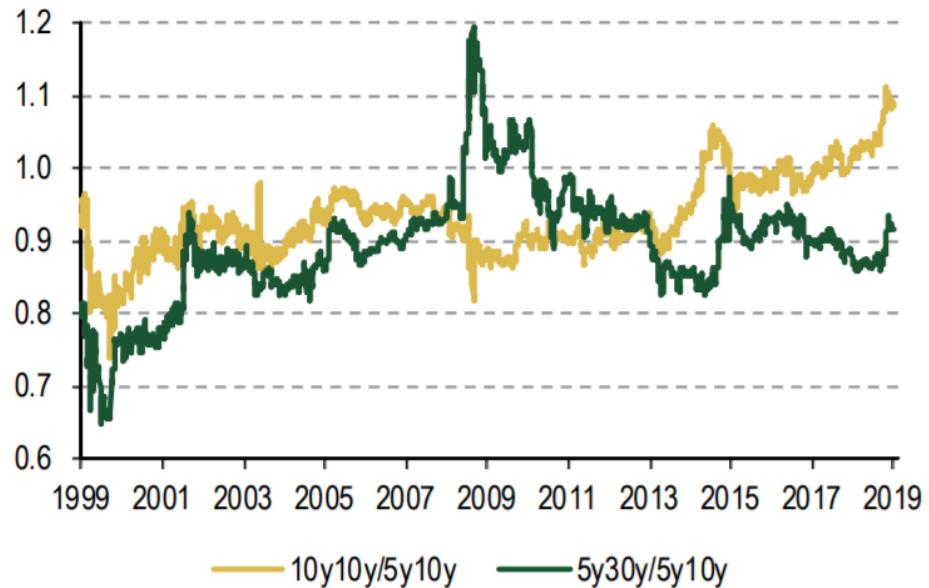
The risks to these trades are that long-dated callable issuance slows down, concentrates in shorter non-call periods (for a larger yield enhancement), and/or delivered vol declines, pushing down vol in shorter expiries.

**Chart 15: Term structure of 1y30y vol started to flatten, but more to go**



Source: BofA Merrill Lynch Global Research estimates

**Chart 16: Significant cheapening in 5y10y vol (vs 10y10y and 5y30y)**



Source: BofA Merrill Lynch Global Research estimates.

# Implications for USD rates vol

## The lack of USD rates vol supply already materialized

It's widely known that the USD rates vega market speaks Taiwanese. Long dated volatility supply in recent years hinges on the callable bond demand by Taiwan life insurance companies. In the last five years, foreign bonds listed on the Taipei exchange have been a key source for lifers' yield enhancement. The same bonds have also been the main source of marginal vega supply in USD rates market, responsible for the persistent collapse in long dated volatility (Chart 17).

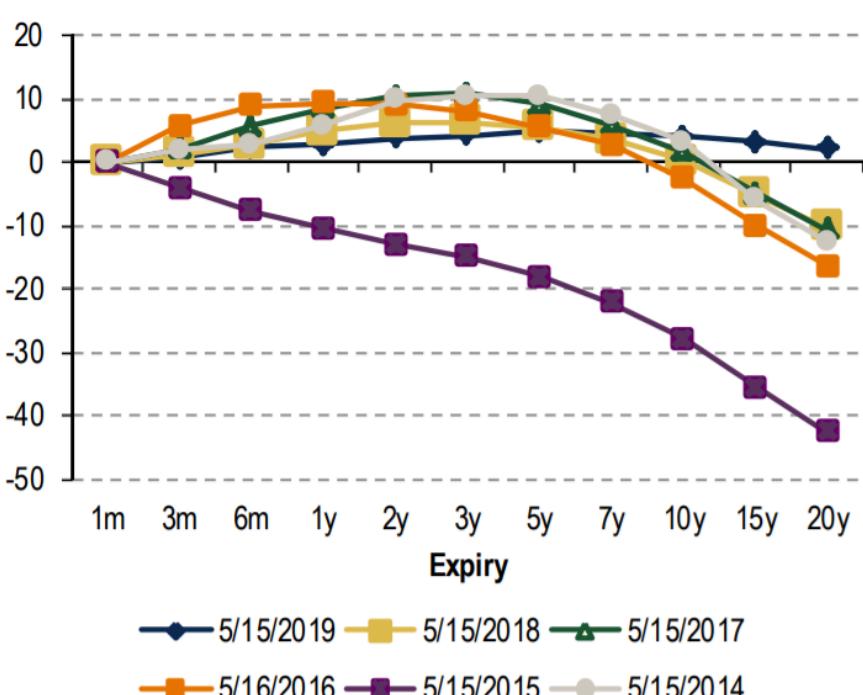
By our count, Taiwanese lifers have bought about \$100bn of USD denominated callable bonds since 2014 with a concentration in 30y maturities. As we've noted before, the regulation changes since 2018 combined with expensive FX hedging costs damped demand for Formosa bonds (and parts of these demand have shifted to domestic listed ETFs). Issuance in 2019 has been sluggish with only over \$12bn in Formosa bond issuance and just about 1/6<sup>th</sup> of the issuance had callable features (Chart 6).

In our view, the lack of Formosa supply has already materialized. While the overall level of volatility has been low due to the general low yield environment and shrinking term premium in the long end of the yield curve in recent years, volatility in the bottom right has picked up on a relative basis, and the ratio of 5y30y vs 2y30y volatility are currently around record high levels (Chart 18).

Looking ahead, we think it's time to consider calendar spreads to fade the relative richness of long dated vol, for both micro and macro reasons. As argued above, Formosa issuance has potential to make a comeback if Taiwanese regulators start to push back on lifers' fast growing ETF investments. And it could limit the upside for vol beyond 5y

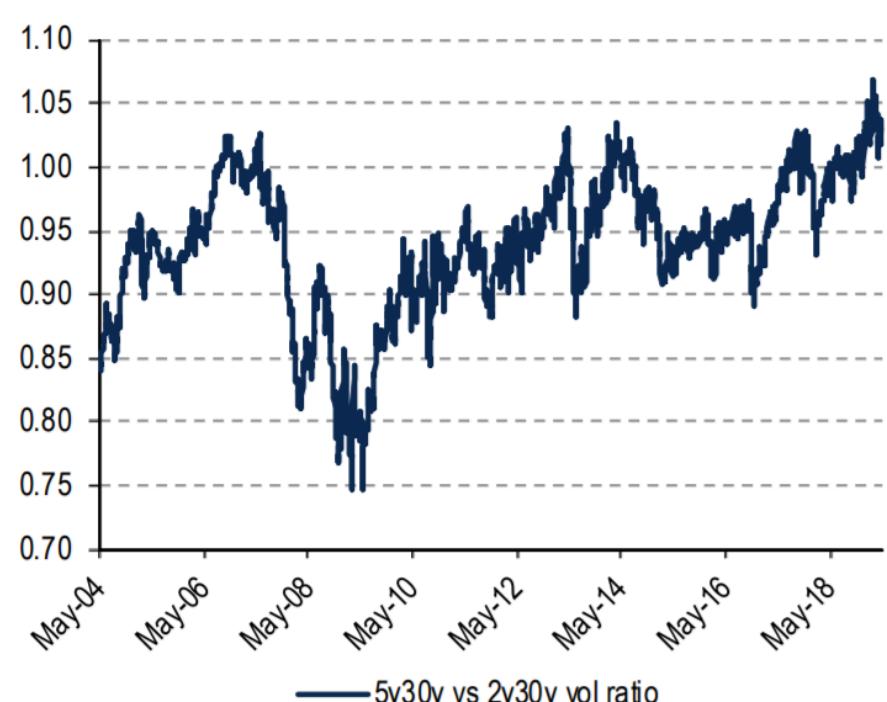
expires as chatters on this topic re-emerge. From a macro perspective, volatility in the 1y-2y expiries is more sensitive to underlying moves on risk events. Rhetoric on the potential Fed cuts in coming months or years could pick up driving vols in the shorter expiries higher. With these arguments, we close our long 5y30y straddle position opened over a year ago.

**Chart 17: Formosa bond supply has been the main driver of inverted expiry curves in recent years (chart showing expiry curve for 30y vol)**



Source: BofA Merrill Lynch Global Research

**Chart 18: The expiry curve on 30y tenor is at record flats**



Source: BofA Merrill Lynch Global Research

# Buy 2Y USD swap spread

- ◆ Swap spreads have collapsed and now appear to be challenging credit market fundamentals
- ◆ The spread between 3M LIBOR and rolling DTCC repo rate has averaged 19bp since 2014, far more than today's swap spread
- ◆ At 4.6bp two-year swap spreads seem 15bp tighter vs their likely carry

**Table 4. Two-year swap spread projects unusually low LIBOR minus repo spread**

Trade	Time horizon	Entry (5/29/19)	Target	Stop	3m C+R	Rationale	Risk
Buy T2.125% 5/31/21	3mths	4.6bp	10bp	0bp	Roughly 1bp	Spread near historical narrow	Repo cheapens to 3M LIBOR
Pay fixed on 2Y swap		(31 May 18)					

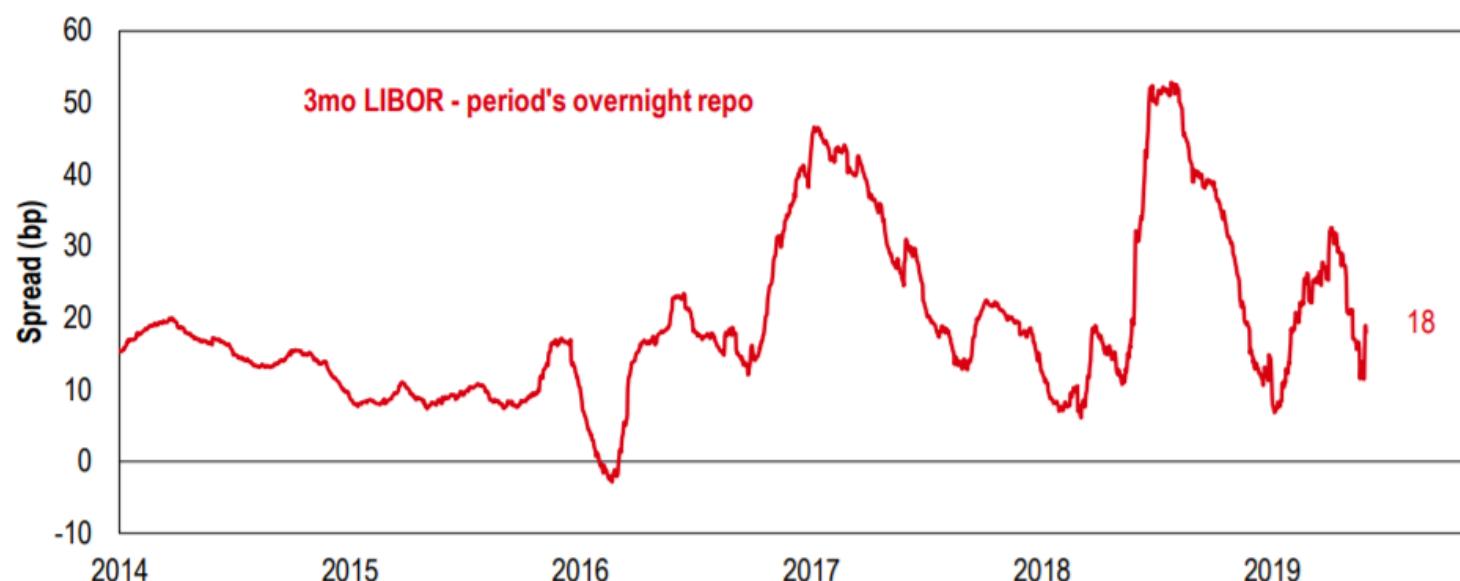
Source: HSBC, Bloomberg

## Carry may win

The difference in funding costs between three month USD LIBOR and repo suggests that front-end swap spreads should widen to better reflect the likely carry. A swap spread position locks in a fixed spread between the swap's future funding costs versus the equivalent charge calculated from the Treasury's repo market. At 4.6bp, we believe that the current swap spread is well below the likely funding cost difference.

A three-month LIBOR rate reflects the average of the projected unsecured overnight rate plus a credit and term premium. Since January 2014, the three-month LIBOR rate averaged 19bp above the comparable three-month average for the overnight Treasury repo rate. Thus, a historically "fair" two-year swap spread should be roughly +19bp – the average difference between the funding costs for the two floating rate legs of the position. Indeed, the average two-year swap spread for this period was 20bp. A spread significantly below this is likely cheap and something significantly above this is likely to be rich.

**Figure 8. Realized 3M USD LIBOR minus average overnight DTCC repo rate**



Source: HSBC, Bloomberg, DTCC

Historically, the realized funding difference for three-month LIBOR position minus the overnight repo rate has ranged from -3bp to 52bp over the past five years (Figure 8). The negative spread occurred when the Fed surprised the market by hiking in late 2015, which caused the repo curve to unexpectedly accommodate higher rates.

### Narrow initial two-year swap spread

The two-year swap spread is less than 5bp (Figure 9). This is a historically tight level, following a rapid 5bp narrowing over the last three week period. Moves such as this have often reversed over short periods as seen during January 2015 and late 2017 periods.

We see limited downside risk to this position as dealers and banks would unlikely set three-month USD LIBOR below Treasury collateralized repo rates for a prolonged period. Thus, carry may win out over time. The risk to the trade is if unsecured funding rates continue to move lower vs the Treasury yields.

**Figure 9. Two-year swap spread very narrow compared to projected funding spread**



Source: HSBC, Bloomberg

## Swap spreads: how low can they go?

29 May 2019 (Corrected)

### Key takeaways

- Treasuries are suffering from heavy supply vs limited balance sheet. The Fed has balance sheet, but will they deploy it?
- We see no arbitrage arguments for a floor on spreads, but at around -30 bp, leveraged 2y spreads start to look compelling
- CBO deficit projections argue for tightening of spreads over the years, while flight-to-safety widening is harder to achieve

**By Ralph Axel**

**Chart of the day: Treasuries are at, or near, all-time cheaps versus swaps**



Source: BofA Merrill Lynch Global Research

### The collapse may not be over yet

Swap spreads, particularly at the front end of the curve, appear to be in free fall. 2y swap spreads hit all-time lows last week, while 5y spreads turned negative and are about 10bp away from their historic lows. Further out the curve, 30y spreads have tightened as well, but are further from their all-time lows. We [recommended a 5y spread tightener on 16 May](#) and still recommend the trade (sell T2.25% 4/30/24 vs matched swaps, current = -0.7bp, target = -6bp, stop = 4bp, risks are a blowout in financial conditions or a US-China trade deal resolution), as we see the spread widening risk of Fed intervention in the Treasury market as lower in the near term.

The main issues we see at play for spreads, in order of near-term importance are:

1. Trade war escalation leading to Chinese currency defense (tighter spreads)
2. Convexity receiving if interest rates decline further (tighter spreads)
3. Increased deficit expectations as trade wars slow growth and politicians consider increased spending including infrastructure plans (tighter spreads)
4. Increased Treasury repo funding pressure as we move into 3Q/4Q (tighter spreads)
5. Fed shortening of its Treasury portfolio maturity (wider spreads sub-5y)
6. Fed introduction of a Treasury repo facility (wider spreads sub-5y)

### Trade wars the main tightening force in the near term

In terms of selling of Treasuries out of reserve portfolios, the CNY devaluation event of 2015-16 serves as a dramatic example of spread tightening on currency-related Treasury selling ([Chart 2](#)). Swap spreads declined across the curve immediately after the CNY devaluation of August 2015, with 2y spreads showing the sharpest move initially. While we do not expect the same magnitude of spread moves [given changing Chinese reserve portfolio dynamics](#), we do think that without a deal, this dynamic could remain an ongoing pressure on Treasury cheapening versus swaps and OIS.

The cheapening of Treasuries on recent trade war developments is most clearly seen in Treasury-OIS spreads, which had been relatively stable over the last 12 months, but started moving rapidly after the surprise 5 May tweet threatening higher tariffs. 2y Treasuries cheapened 5bp vs OIS since then, which is reflected in tighter swap spreads. While the consensus around trade negotiations seems to be that there's a pain threshold upon which a deal will be made, the approach to that threshold may involve ongoing currency management operations, [lower rates](#), and tighter spreads.

## Trade wars aggravate an underlying theme: increasing Treasury supply

A powerful but slow-moving force for cheaper Treasuries vs OIS and swaps is increasing Treasury supply. Unless unpopular spending cuts or tax hikes are implemented, CBO expects debt-to-GDP to far surpass the previous peak achieved during World War II (Chart 1). While we have estimated [the historical sensitivity of swap spreads to Treasury supply](#), these estimates may not be reliable in the post-DoddFrank regime in which primary dealers are no longer able to freely warehouse Treasury supply due to leverage

Chart 1: CBO projects a steady increase in government debt (%)

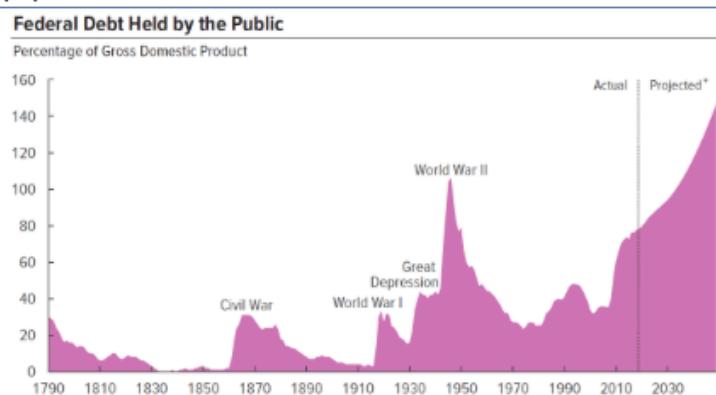
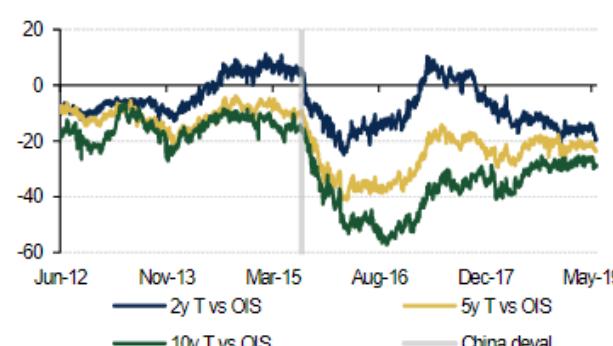


Chart 2: Treasuries cheapened vs OIS after the Aug 2015 CNY deval (bp)



ratio constraints. Trade wars play into deficits as they increase the chance of economic slowdowns and recessions, which in turn increase the chance of stimulative deficit spending including infrastructure spending plans. It is telling that despite the intense political division in the US today, both parties appear comfortable working together to undo spending cuts agreed upon in the 2011 Budget Control Act and potentially even raise the debt ceiling well before the anticipated "X date" in late summer/early fall. As a result, we view the Treasury supply story as backdrop for tighter spreads subject to spread volatility arising from other areas such as LIBOR reform, trade wars, convexity flows, etc.

### Is there a floor on spreads: yes but probably far from here

Swap spreads are a leveraged trade that contain very low liquidity risk and effectively no credit risk (swap leg is cleared, and Treasuries rarely default), but do require access to overnight funding—which has become less reliable around month ends—and do have a spread risk component that ultimately limits the total size and leverage that can be applied. 2y spreads were 5bp in 2016, 37bp in 2017 and back to 3bp today; not a negligible amount of VAR for a trade that could potentially be levered 20 times. But at some level, a 2y swap spread would become a compelling risk-return alternative for a hedge fund. If 2y swap spreads were, say, -30bp, then a 20-times leveraged position would be expecting a roughly 6% annualized return, which should be compelling given the simplicity of the trade, the liquidity of the market, and the fact that outside of daily funding availability, the risk to the maturity date appears very low. But of course something must be happening to push 2y spreads to -30bp and this context might give pause to potential buyers of Treasuries. At the levels at which leveraged spread returns become compelling, the context could become increasingly important.

### Buyers emerging, but no arb

But even today, while 2y Treasuries are still rich to swaps, there seems to be strong buying interest simply on mean reversion expectations. We would expect increasing spread buying interest as swap spreads decline – especially below the psychologically important 0bp level in 2y. But from a theoretical perspective, we do not see an arbitrage here. We are not aware of a riskless trade that earns positive return in swap spreads. Even if one expects to hold to maturity, the path of repo funding remains uncertain, as does the path of 3-month LIBOR, and the potential for stop-outs cannot be eliminated. For banks, unless Treasuries become cheap to MBS, which would be symptomatic of a much bigger problem in the Treasury market, we do not see a compelling reason for banks to buy Treasuries instead of MBS, outside of the standard considerations around basis views. Banks may be interested in the Treasury-swap or Treasury-OIS spread trade at the right level, but again, spreads are not arbitrage free and would likely require substantially negative levels before getting involved.

As a result, now that 5y spreads are negative, we would not be surprised to see negative 2y spreads—which would be a first in history—and if trade wars worsen and deficits worsen, we could be living in a world with term Treasury rates well above swaps. Over the long run, if the CBO is right, this would be our base-case scenario.

## The Fed may save the day, but probably not this year

The Fed has the power to buy Treasuries, and at some point may become a force for wider swap spreads. The two main Fed tools are its portfolio maturity, [which we expect to shorten](#), and [the potential for a Treasury repo facility](#), which would help limit funding stress and increase the potential for banks to hold Treasuries instead of cash to meet liquidity requirements. While we think the Fed will eventually implement such a facility, we think it is unlikely to happen this year. Another possible widening dynamic is the usual massive flight-to-safety trade that has traditionally occurred during a crisis. But even these kinds of events may not show the traditional spread widening of the past given how dealer balance sheet availability could contract during a crisis and funding tightness could mitigate spread widening.

Ultimately, Treasuries in our view are suffering from a combination of too much supply and too little (and too countercyclical) balance sheet. Whether the Fed's big balance sheet is enough to permanently richen Treasuries versus swaps we think will be the main long-term question for spreads. In the near term, however, as the Fed remains on the sidelines, we think the path of least resistance is for tighter spreads.

## Guess who also likes ASWs....

Banks... and unlike 98, it's not Prop Desks

A look at wrong way takes on the hypothetical Fed Repo Facility

[https://docs.google.com/document/d/1PwtK0qIKYLr6aTFHajcHpjSNmAhJclqVNr\\_tkDPx70g/edit?usp=sharing](https://docs.google.com/document/d/1PwtK0qIKYLr6aTFHajcHpjSNmAhJclqVNr_tkDPx70g/edit?usp=sharing)

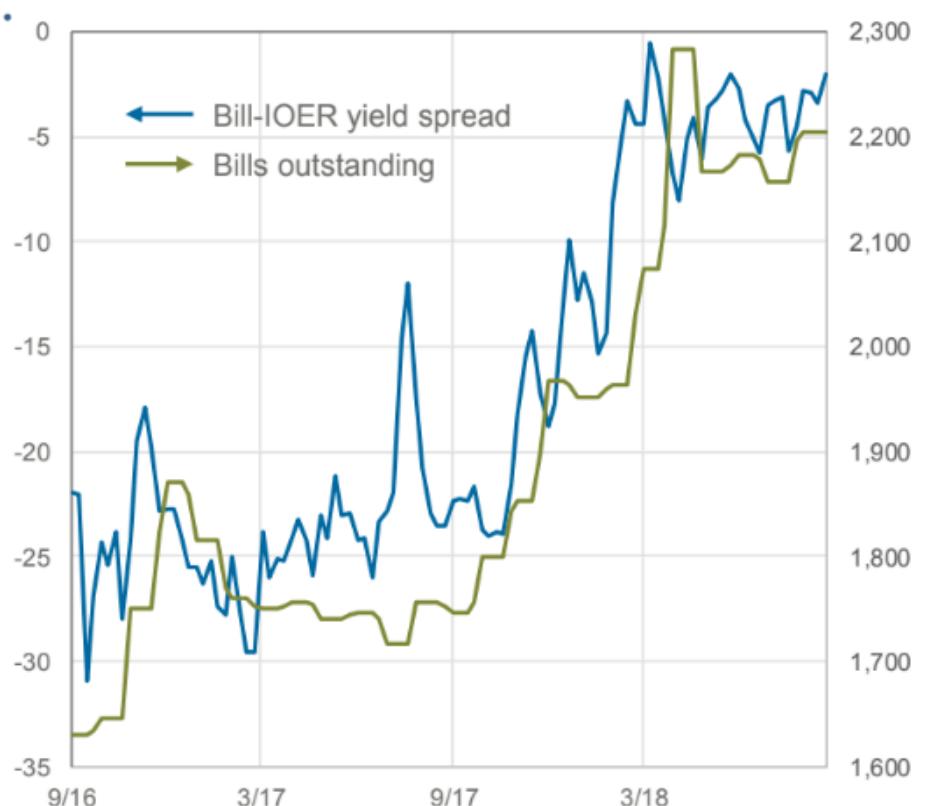
Treasury asset swaps and bills are close substitutes to reserves for LCR and have cheapened with Treasury supply

- Treasury asset swaps (buy Treasury note; pay fixed in swaps) have similar (~zero) duration to reserves but higher yields; their one downside is they have AOCI volatility when held in bank AFS portfolios
- Treasury bills yield modestly lower than IOR but the gap has narrowed with supply; further cuts in IOR and/or increases in bill supply may push bill yields above IOR

**Yield pickup on 5 & 7-year US Treasury asset swaps vs. IOER (bp)**



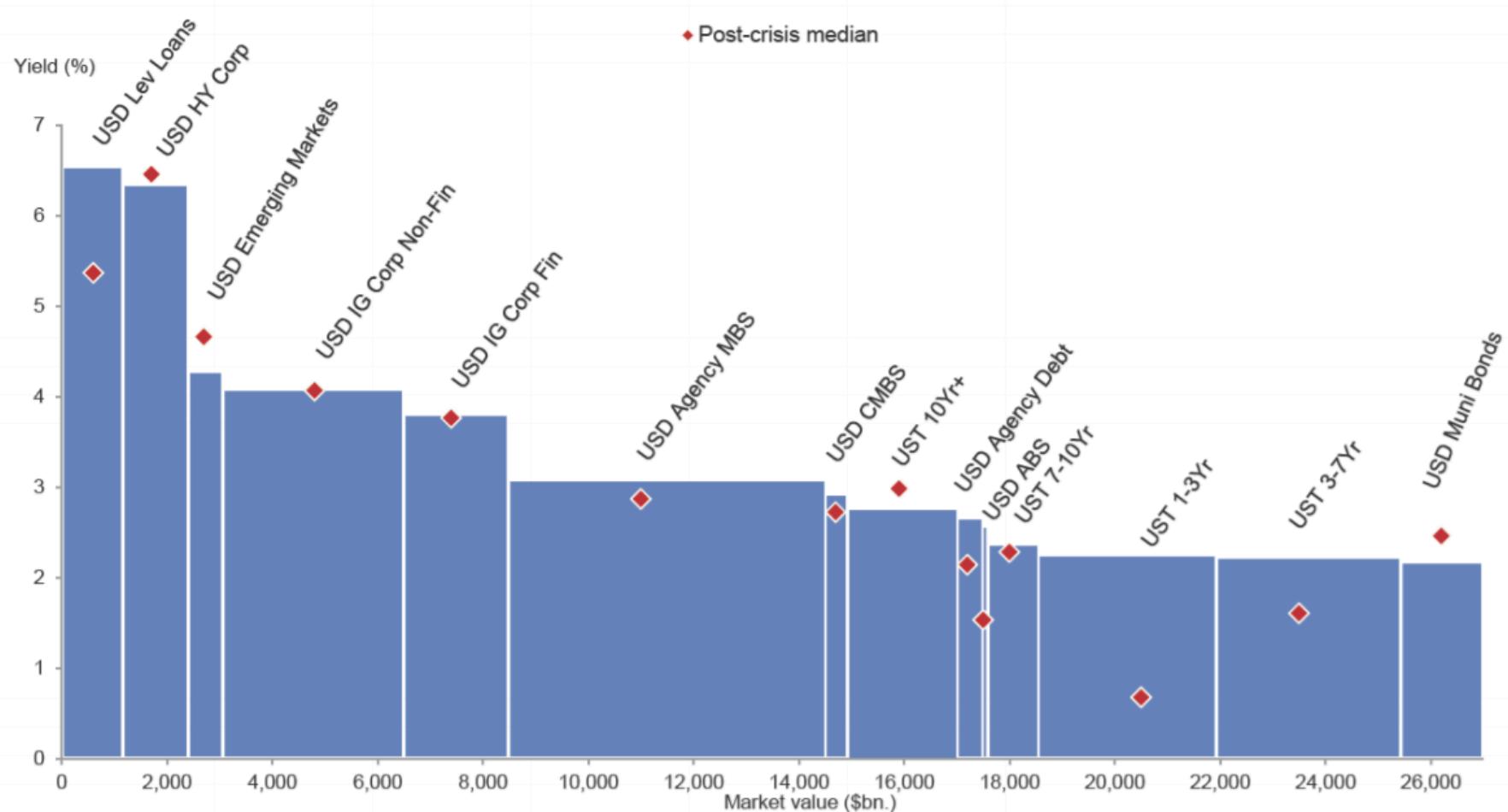
**3M bill - 3M IOER\* spread (bp) vs. Treasury bills outstanding (\$bn)**



Yes that was last fall, but the Zero Duration aspect is compelling, especially for the select banks making the marginal bid for Reserves.

	Bond Buying Size (\$ bn)	Length of Operations	Amount per Month (\$, Avg)	Deficit Over Period (\$ bn)	Treasury Market (\$ bn)	Bond Buying Size As a % of Treasury Market	
2004	51	12	4	399	3,575	12.82%	1.43%
QE1	300	6	50	634	6,266	47.29%	4.79%
QE2	600	8	75	830	8,748	72.28%	6.86%
QE3	790	22	36	992	11,053	79.62%	7.15%
2021 Proforma TSY	180	12	15	962	18,589	18.71%	0.97%
2021 w/MBS	312	12	26	962	18,589	32.43%	1.68%

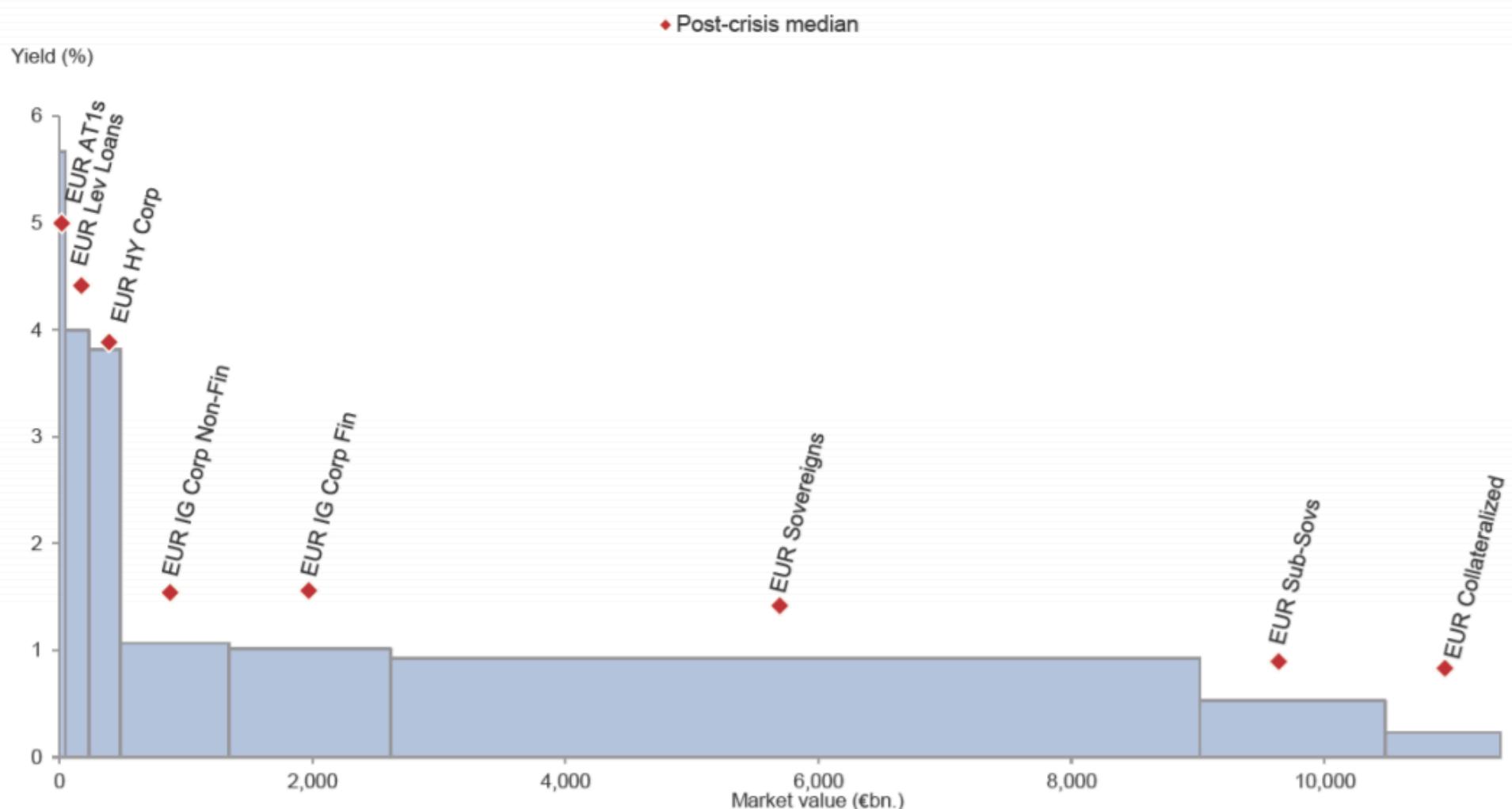
Exhibit 41: Average yield vs. total market value outstanding for USD fixed income markets



Note: We use the iBoxx indices for the IG corporate credit and US Treasury markets, the Bloomberg-Barclays indices for the HY, MBS, CMBS and ABS markets, the EMBI index for the EM credit market, and the S&P LSTA index for the leveraged loan market.

Source: iBoxx, Bloomberg, Goldman Sachs Global Investment Research

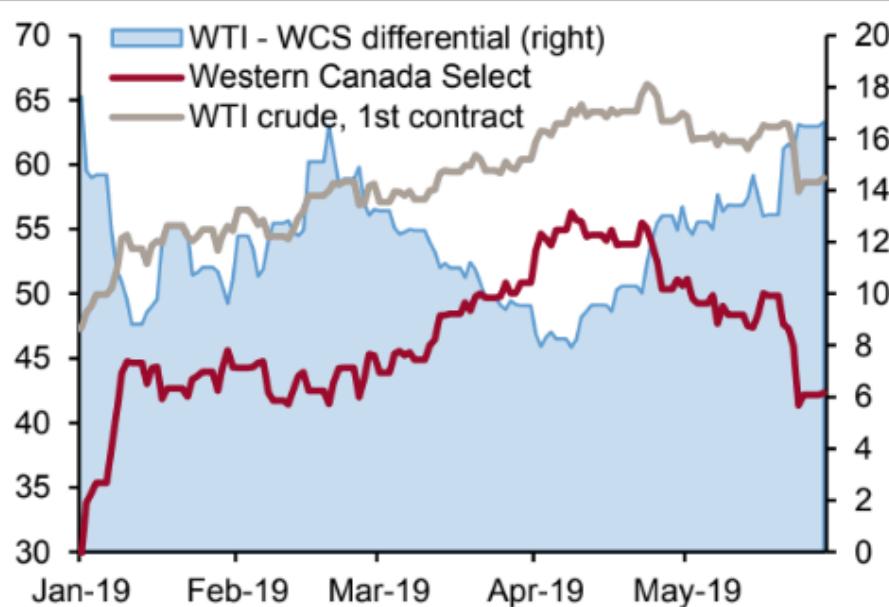
Exhibit 42: Average yield vs. total market value outstanding for EUR fixed income markets



Source: iBoxx, Goldman Sachs Global Investment Research

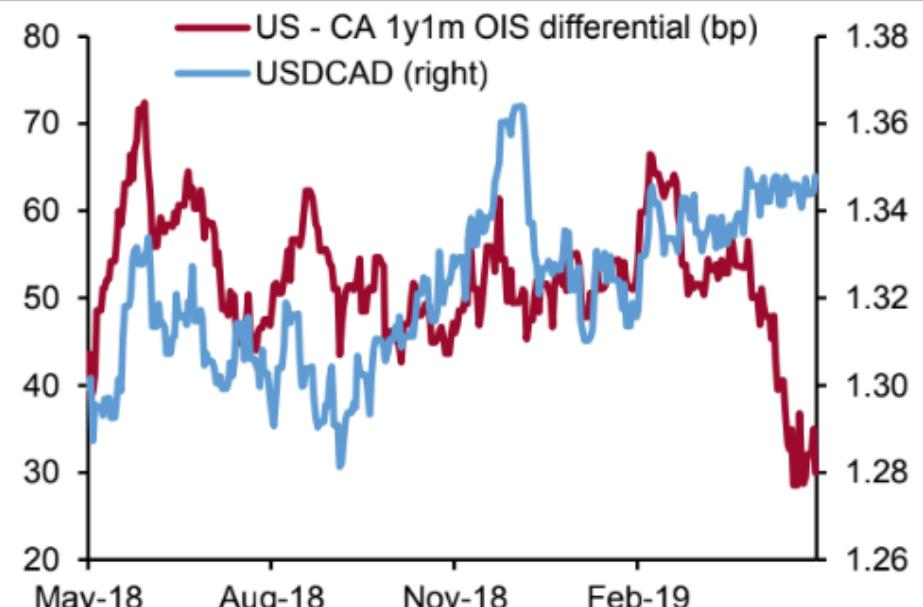
23 May 2019

**Figure 9: Canadian oil prices have underperformed US benchmarks since the last BoC meeting**



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

**Figure 10: Policy expectations differential vs USDCAD divergence remains wide**



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

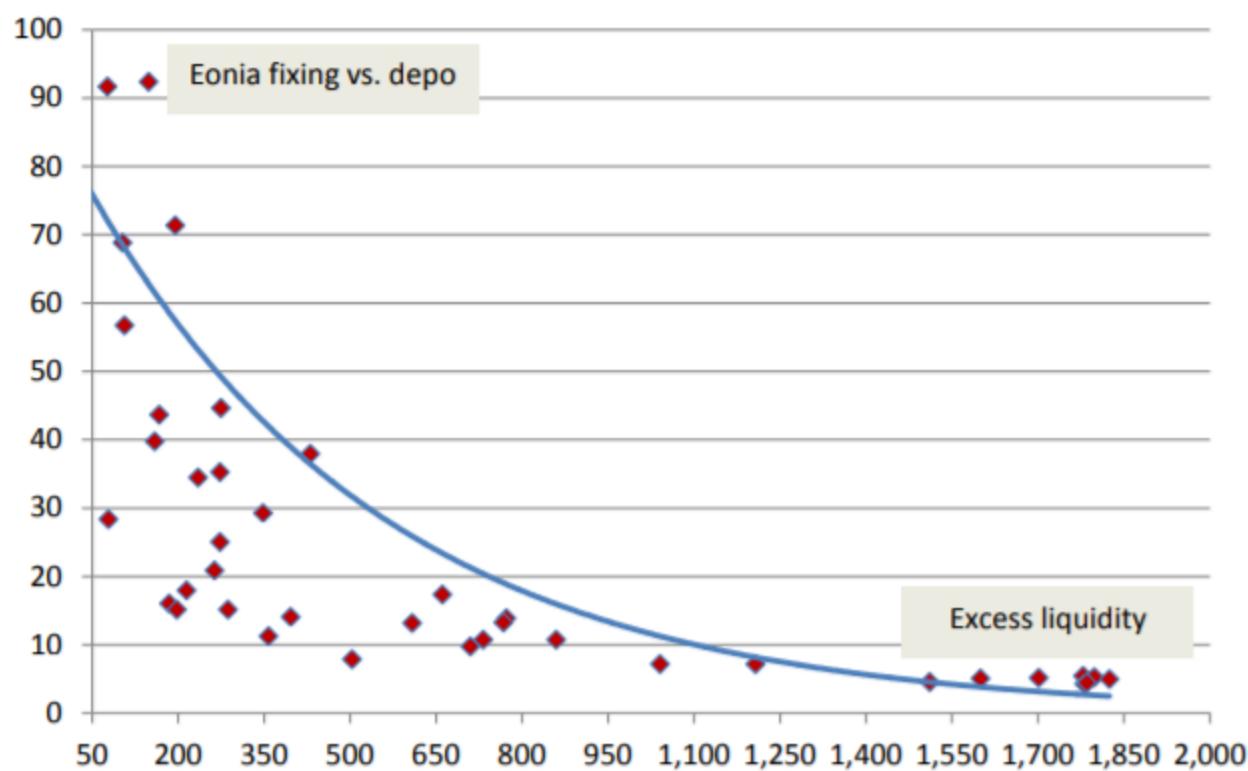


In addition to the aforementioned policy signaling and political challenges, the ECB would also have to take in due consideration the impact of tiering on (i) short-term rates and the repo market on the one hand and (ii) HQLA demand on the other.

## Deposit tiering, short-end rates and the repo market

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Figure 5. Excess liquidity vs. EONIA/depo spread



Source: Citi Research

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**EONIA and the migration to the risk-free rate:** Currently EONIA is mainly driven by the excess liquidity in the interbank system (Figure 5).

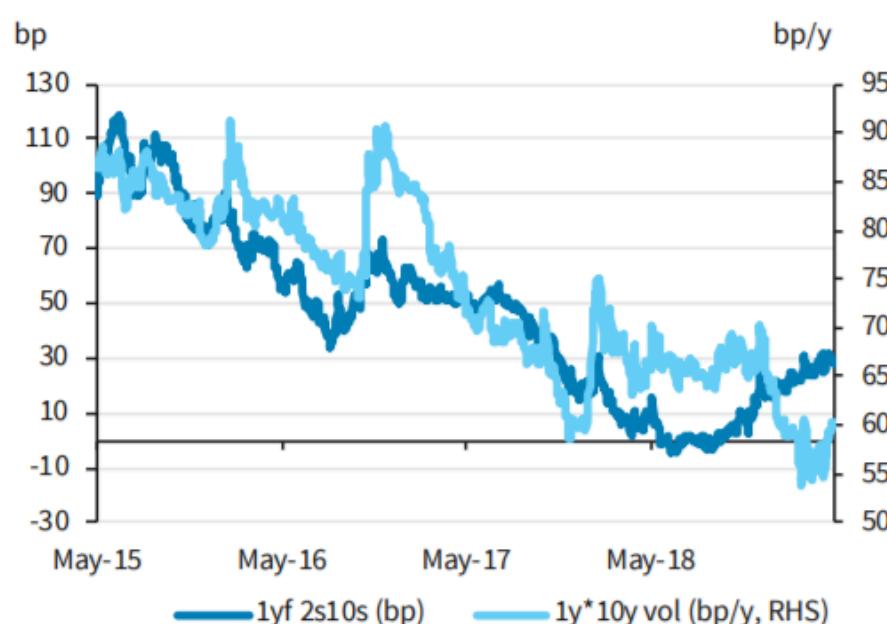
It seems to us that on the discussion about the relationship between a tiering mechanism and the EONIA/€STR spread a number of commentators is neglecting a crucial and impending change: Last December and subsequently again in March this year the working group on euro risk-free rate recommended modifying EONIA methodology so that EONIA is redefined to be €STR plus a fixed positive number (to be determined by the ECB) until the end of 2021. In particular, the working group proposed that this new definition apply from the first publication date of €STR, which has been set for the forthcoming 2 October<sup>1</sup>. Accordingly, the introduction of a tiering mechanism after the launch of €STR would be immaterial with the regard to the spread between the two rates.

If the tiering were introduced *before October* the EONIA/€STR spread would be affected given that the two benchmarks result from different computation and reporting methodologies<sup>2</sup>. In particular, while the EONIA rate is an average lending o/n interbank rate, €STR is an average borrowing rate. In addition €STR also captures transactions between banks in the eurosystem and eligible non-bank institutions such as money market funds. Indeed, €STR currently trades through the deposit facility rate, around 5bp below it. In a Swiss-type tiering scenario both rates would likely increase from current levels but we would expect €STR to probably underperform EONIA (as currently defined) in the move.

**GC repo rates vs. the depo rate:** While tiering would promptly decrease the cost for core banks to park excess liquidity at the ECB we do not expect a meaningful impact on German general collateral (GC) given the still strong relationship between German repo costs and Bund scarcity. Hence, in our baseline scenario, German GC would continue to trade below the ECB (lower) deposit facility rate.

FIGURE 1

1y\*10y vols has begun catching up with the curve, but likely has room to increase more



Source: Barclays Research

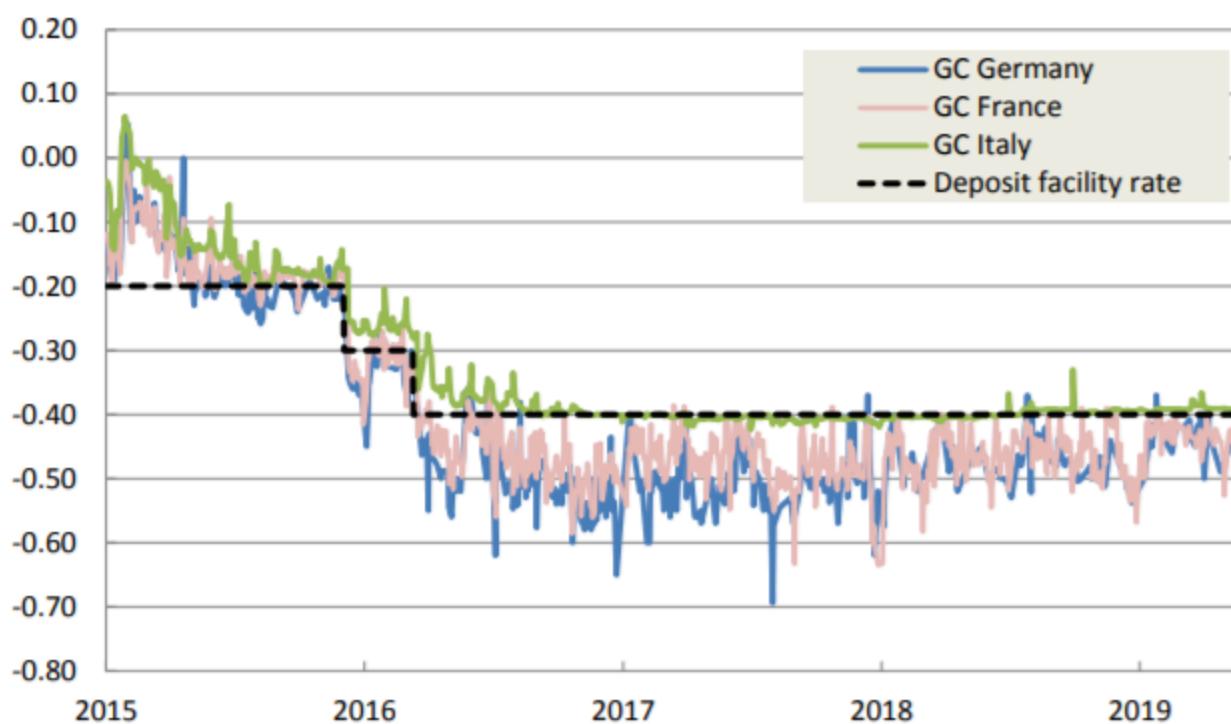
FIGURE 2

Vol difference between 2y\*30y and 2y\*2y vols has risen to levels last seen during December 2018



Source: Barclays Research

**Figure 6. ECB deposit rate vs. GC repo rates**



Source: Citi Research

On the other hand, tiering could gradually exert some upward pressure on periphery GC rates. In particular, while Italian bank treasuries invest part of the available cash in the repo market with Italian GC trading around or marginally above the deposit facility rate (Figure 6), a higher rate introduced by a tiering mechanism would encourage reallocation of liquidity from the repo market to the tiered deposit facility. In turn, the Italian GC rate would then be subject to upward pressure. Clearly, in this scenario the increase would be capped at the higher tiered deposit facility rate.

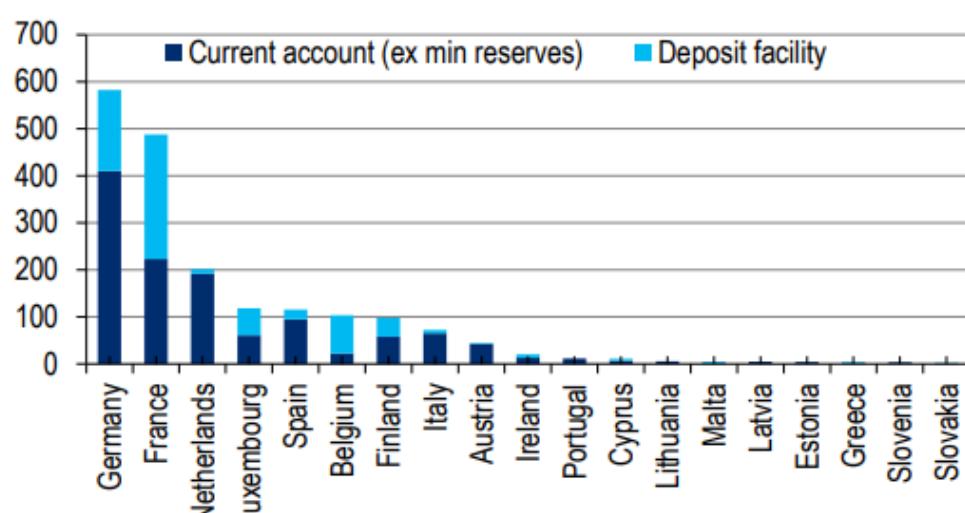
<sup>1</sup> <https://www.ecb.europa.eu/press/pr/date/2019/html/ecb.pr190314~28790a71ef.en.html>

<sup>2</sup> [https://www.ecb.europa.eu/paym/pdf/cons/euoir/consultation\\_details\\_201803.pdf](https://www.ecb.europa.eu/paym/pdf/cons/euoir/consultation_details_201803.pdf)

## LCR Portfolios and the Role of Excess Reserves

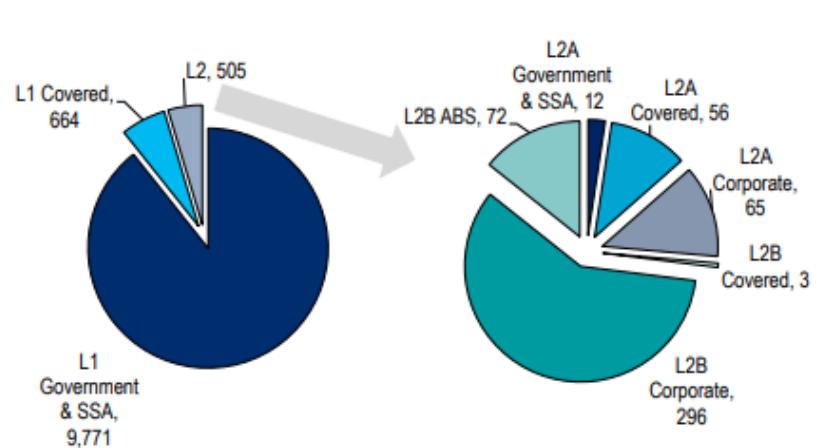
**Excess reserves as parts of liquidity buffers...**: Excess reserves currently total around €1.9tn (Figure 7). These can be used as HQLA by banks to fulfill the Liquidity Coverage Ratio, despite scarcity of HQLA not being a problem *per se*. In fact, there has been enough HQLA supply in the form of public and private debt over recent years. Total HQLA supply summed up to €9.1tn at the end of 2017 (Figure 8). However, highly rated assets are also sought by non-LCR investors while €2.5tn of HQLA is currently held under QE.

**Figure 7. Excess reserves by current accounts and the deposit facility by system, €bn**



Source: ECB, Citi Research

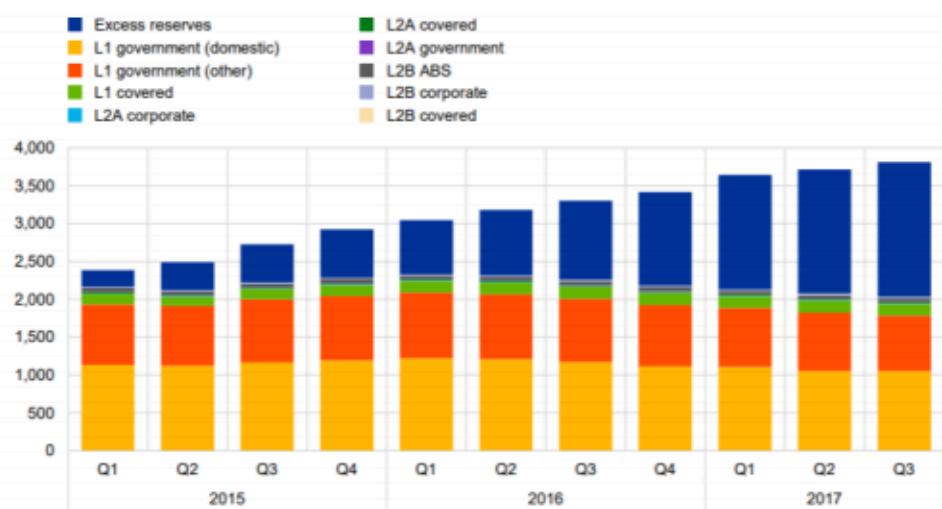
**Figure 8. Total supply of HQLA by governments, SSAs and private entities, €bn, 3Q17**



Source: ECB, Citi Research

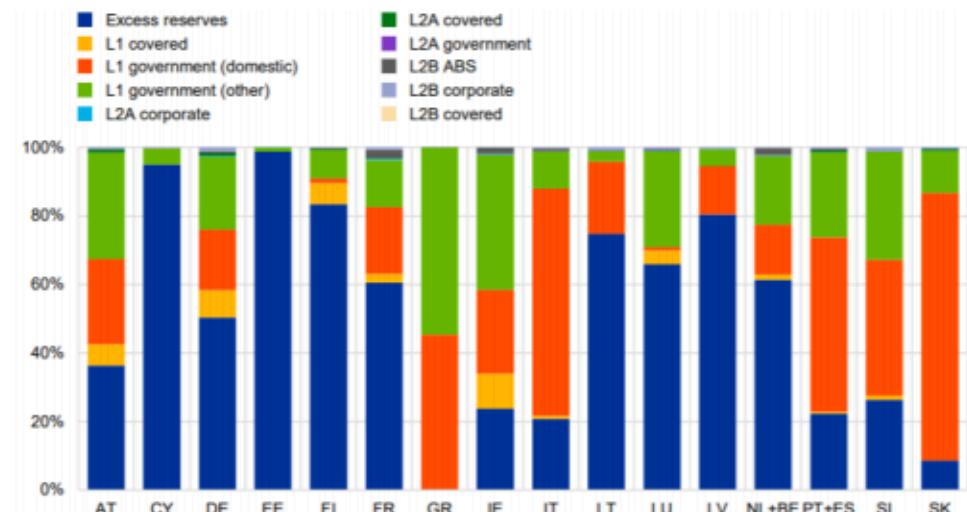
...have been growing strongly since 2015: Hence, since the beginning of PSPP, the LCR requirement has been increasingly met with excess reserves (Figure 9). The latest available data show that at the end 3Q17, excess reserves amounted to 47% (€1.8tn of €3.8tn) of HQLA. This share was higher in banking systems in markets where domestic government bonds yielded less than the deposit rate (Figure 10).

Figure 9. Evolution of HQLA holdings of euro area banks, €bn, 3Q17



Source: ECB, Citi Research; L = Level

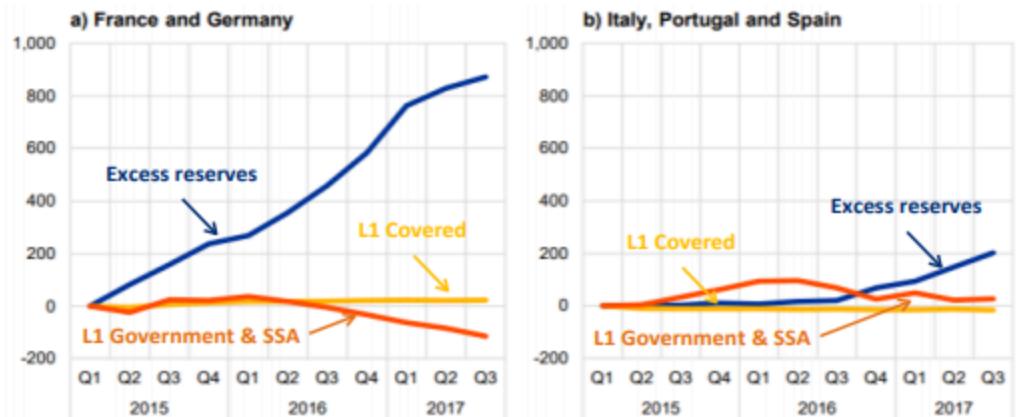
Figure 10. HQLA holdings of banks by jurisdiction, %, 3Q17



Source: ECB, Citi Research

**Cash more attractive than EGBs:** The last point is relevant for core euro-area banking systems where excess reserves represent between 61% (Benelux) and 50% (Germany) of HQLA holdings. In contrast, domestic government bonds total up to 51% of LCR buffers in Iberia and 61% in Italy. The shift to excess reserves in core countries is also displayed in Figure 11. From that perspective, lifting marginal rates on an overly large amount of excess reserves could have an impact on the composition of liquidity buffers.

Figure 11. Evolution of HQLA holdings of banks in France and Germany and in Italy, Portugal and Spain, €bn, 3Q15-3Q17

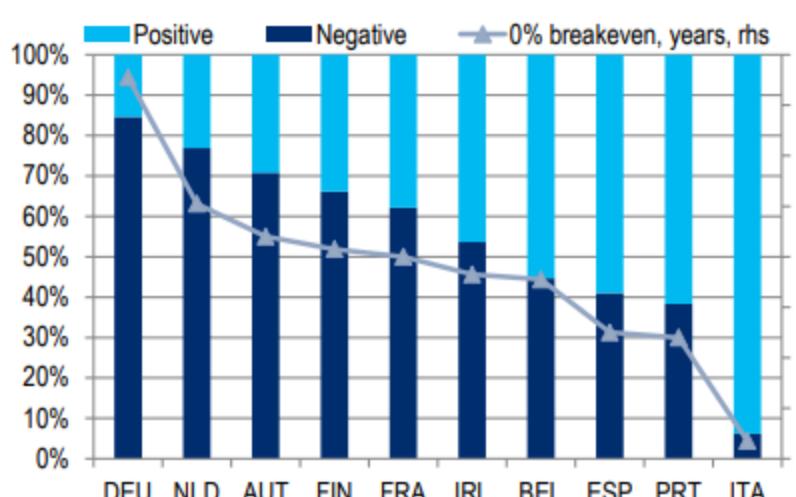


Source: ECB, Citi Research

### Bank EGB holdings, the home bias and yield levels

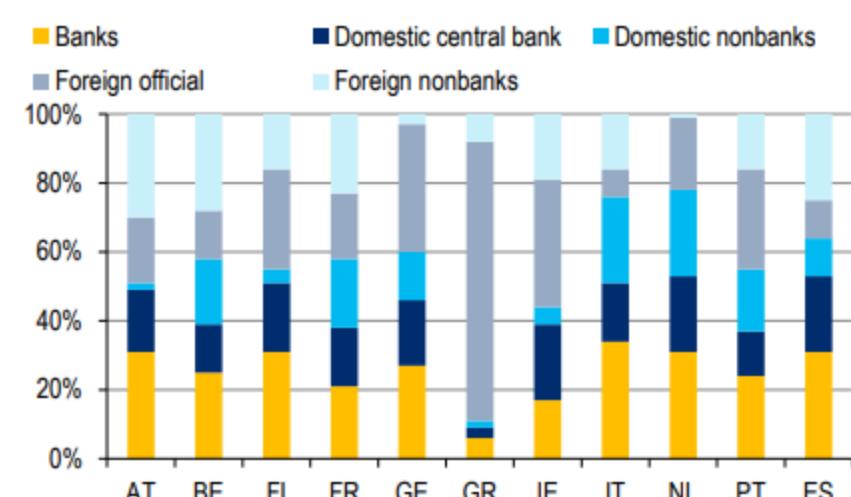
Should a full substitution effect between excess reserves and HQLA in the form of government bonds materialize, the biggest impact would most likely be seen in sovereign bond markets (i) where yields are negative (Figure 12), (ii) whose domestic banking system hold large excess reserves (see above), (iii) where bonds are widely used as HQLA (Figure 13) and (iv) which exhibit a relatively strong home bias (Figure 14).

Figure 12. Share of negative yielding government bonds by issuer and % yield breakeven maturity, %, years



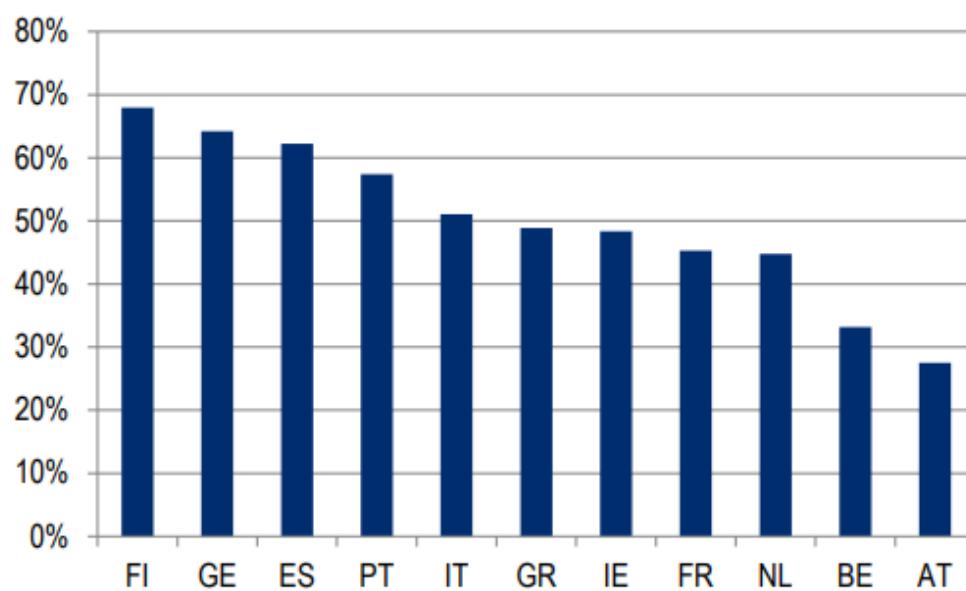
Source: Bloomberg, Citi Research

Figure 13. Distribution of general government debt by issuer and investor type, 2Q18, %



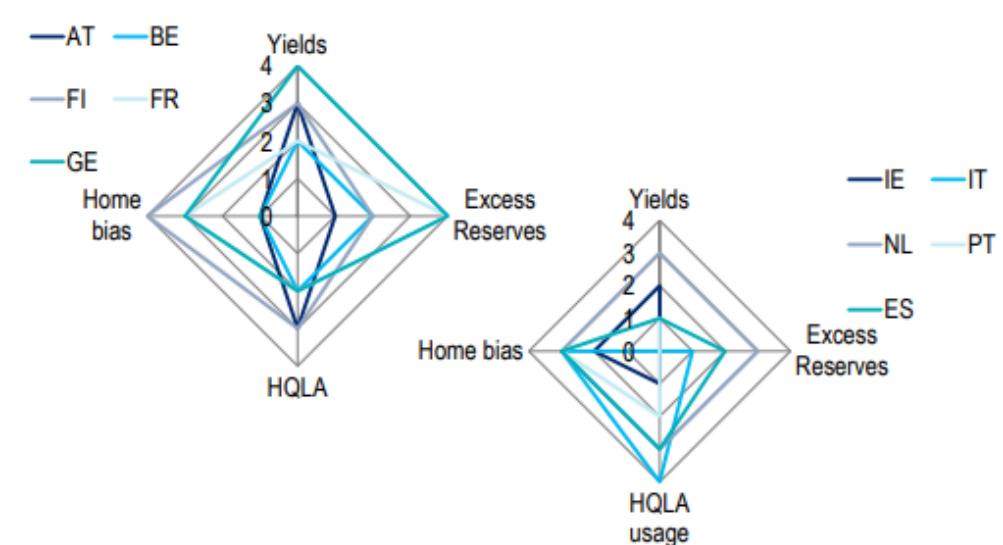
Source: IMF, Citi Research

**Figure 14. The home bias: share of domestic sovereign bonds of total sovereign bond holdings by bank systems in the 3yr-10yr sector, %**



Source: EBA, Citi Research

**Figure 15. German, Finnish and Dutch government bond markets would be most impacted in case of excess reserves becoming a 0% HQLA**



Source: Citi Research

**The Swiss tiering system:** One way to address these fragilities could be found in the Swiss tiering system. To optimize the balance of excess reserves exemption while minimizing the negative side effects of the implementation, the ECB could follow the SNB and limit the amount of excess reserves that are exempt from paying the depo rate to a multiple of the required minimum reserves (in case of SNB, 20x the minimum reserves + change in cash holdings between two reference periods).

**Optimizing the multiple of the minimum reserve exemption:** Yet, as shown in Figure 16, even if the ECB were to opt for 10x the required reserves, banks in some countries would end up holding no excess reserves. Accordingly, they could increase reserves up to the threshold where the deposit rate applies. Therefore, there is a risk that they would substitute the richest trading HQLA they hold with reserves.

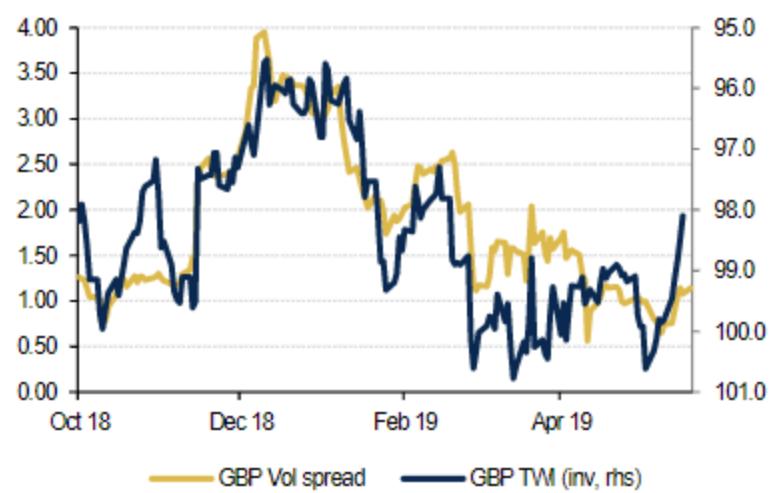
**Figure 16. SNB depo rate tiering for the ECB with different multiples of required reserves being exempt from the deposit rate**

Country	Excess Reserves (excl. minimum reserves)	Depo rate exemption for a ... multiple of required reserves				Excess reserves left adjusted by a ... multiple minimum reserve exemption			
		5x	10x	15x	20x	5x	10x	15x	20x
Austria	44488	19680	39360	59040	78720	24808	5128	0	0
Belgium	103014	12670	25340	38010	50680	90344	77674	65004	52334
Finland	100744	15225	30450	45675	60900	85519	70294	55069	39844
France	485169	128000	256000	384000	512000	357169	229169	101169	0
Germany	589703	178390	356780	535170	713560	411313	232923	54533	0
Ireland	18991	10000	20000	30000	40000	8991	0	0	0
Italy	63152	77410	154820	232230	309640	0	0	0	0
Netherlands	209937	55000	110000	165000	220000	154937	99937	44937	0
Portugal	10377	9225	18450	27675	36900	1152	0	0	0
Spain	110409	75000	150000	225000	300000	35409	0	0	0

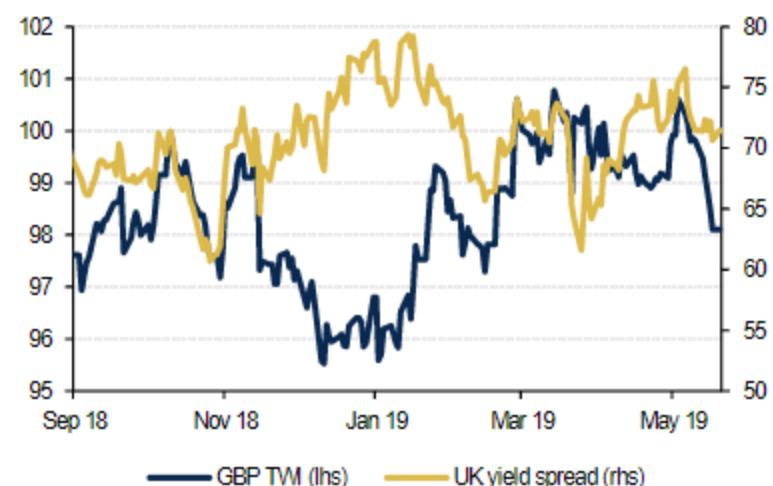
Source: ECB, Citi Research

At a multiple of 9x, excess reserves would be held in all banking systems except Italy, Spain and Portugal. For those markets, the relatively high share of positive yielding HQLA may reduce the incentive to switch from sovereign bonds to cash.

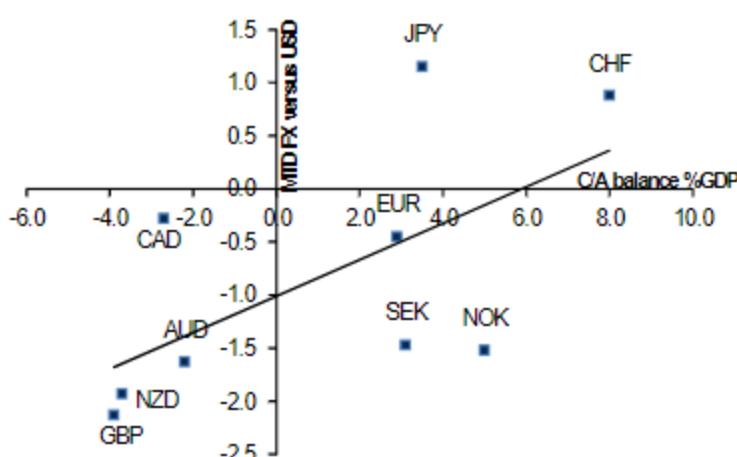
**Chart 1: GBP move is not a function of political risk premium...**



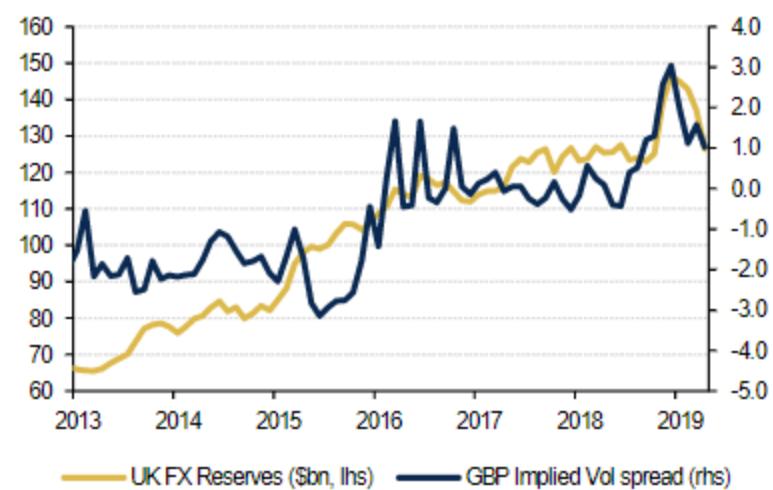
**Chart 2: .... Nor a function of UK rate differentials.**



**Chart 3: GBP price action consistent with G10 FX trends**



**Chart 4: UK reserve accumulation could accelerate if GBP vol spikes.**

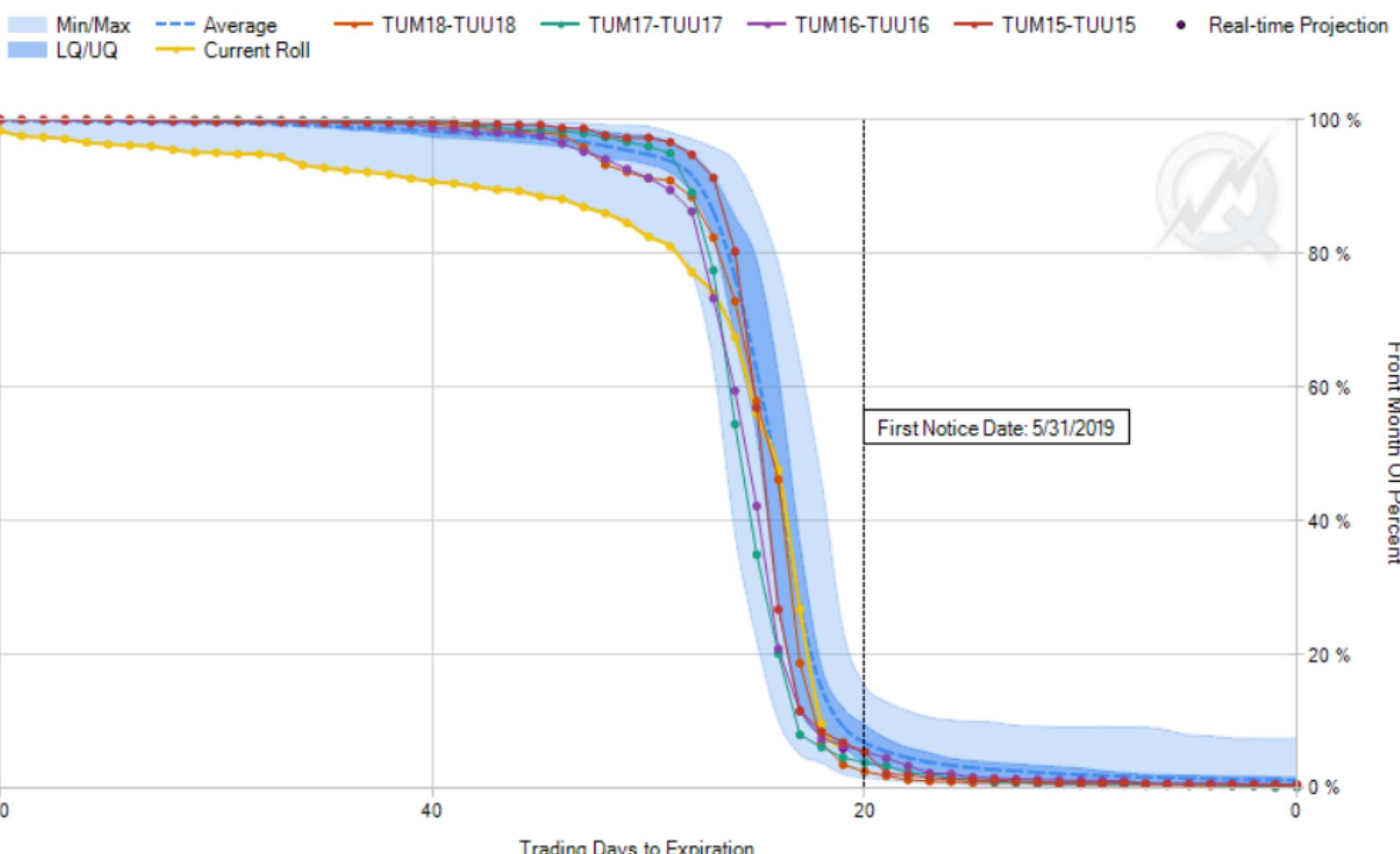


## Like the Ceiling Can't Hold Us



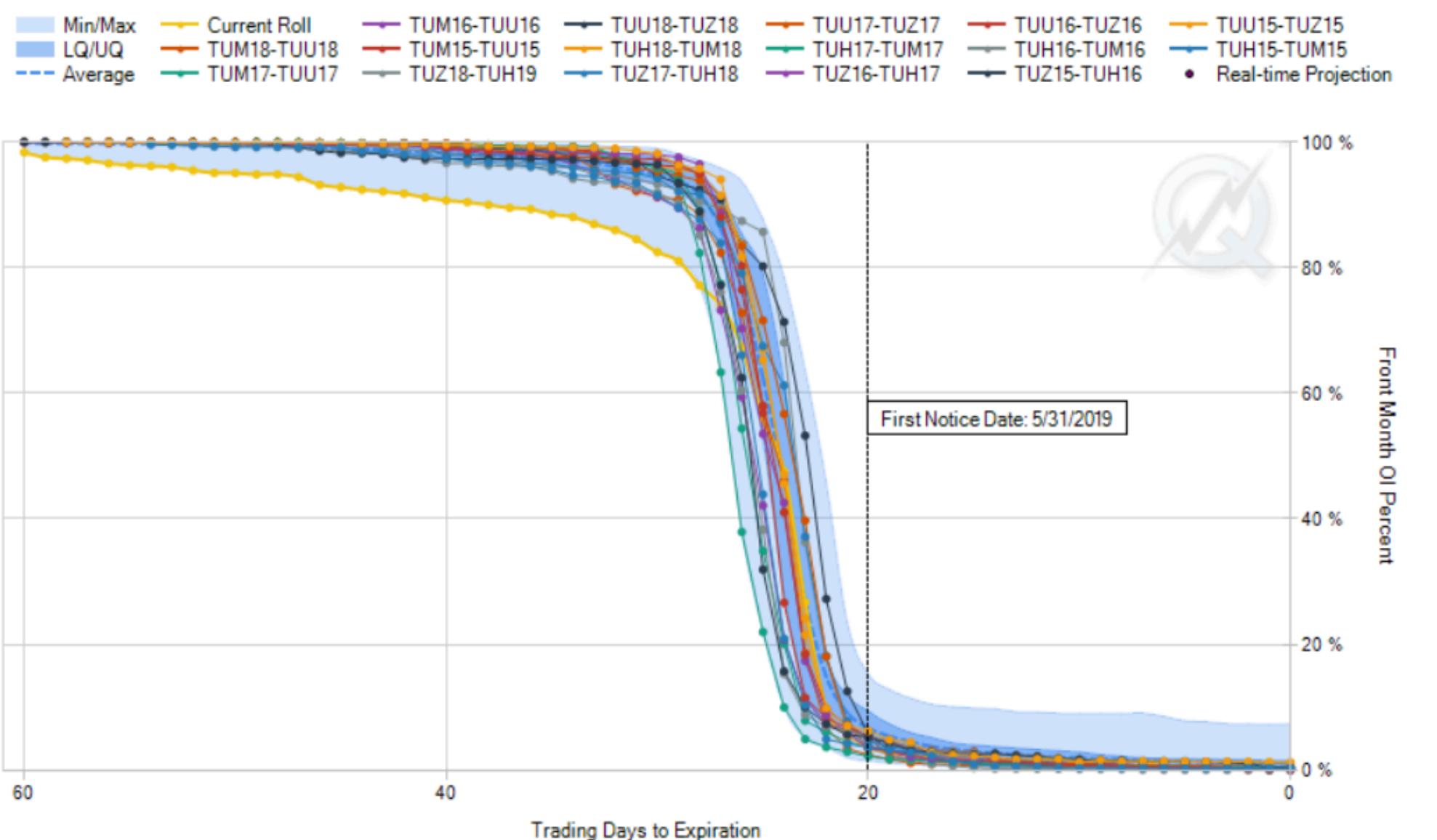
PERCENT COMPLETE	LATEST TRADE DATA	EXPIRATION DATE	TUM19 OPEN INTEREST	TUU19 OPEN INTEREST
90 % (▲ 5 %)	5/29/2019	6/28/2019	360,433 (▲ 167,175)	3,404,917 (▲ 2,224,821)

### 2 Yr Pace of the Roll



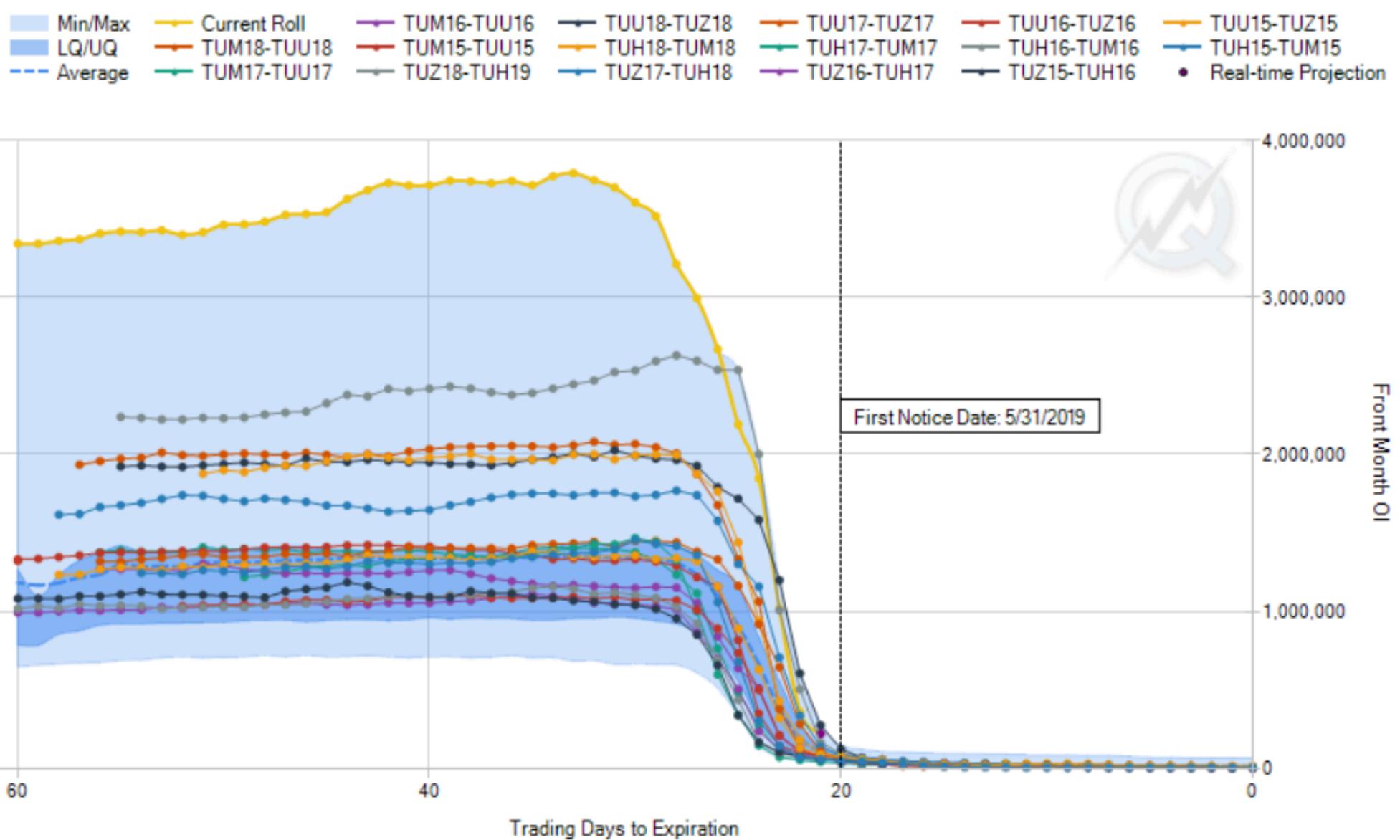
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### 2 Yr Pace of the Roll



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## 2 Yr Pace of the Roll

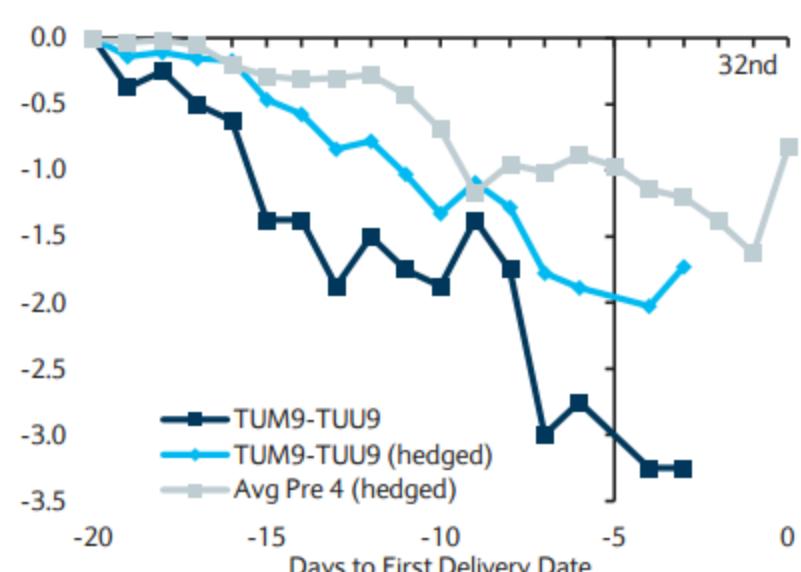


### TU calendar roll: Closing long recommendation on back CTD

TU calendar roll activity is nearly complete with over 90% of the open interest rolled into the back contract. Roll activity began immediately after the last delivery date (April 3, 2019) of the H9 contract, which was earlier than normal. In *Rolling Forward*, we discussed the early roll activity in TU, which we attributed to several reasons including early delivery of CTD securities, asset managers' historically net long positioning, and relative value considerations.

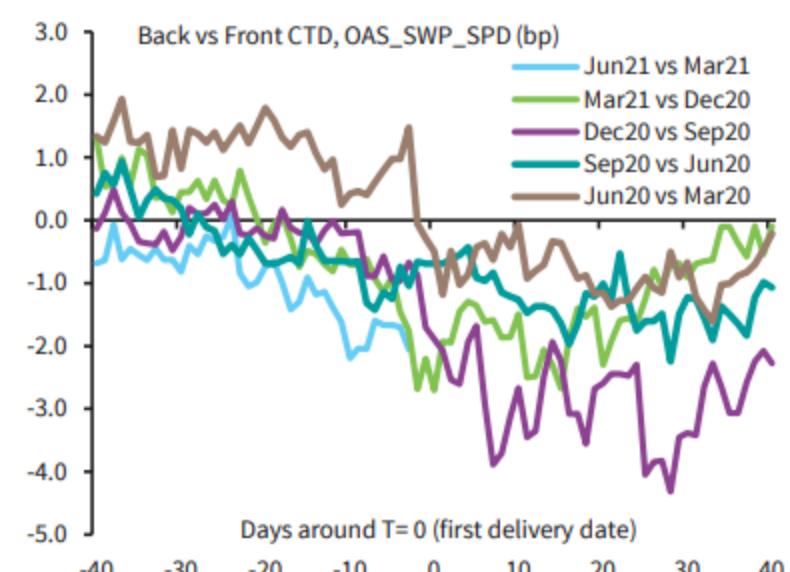
The current hedged calendar roll cheapened (ie, front cheapen, back richen) appropriately, in line with our bearish view, Figure 1. We expect almost all open interest to be rolled by the first delivery date and do not see further cheapening pressure on the roll, given that most asset managers would have rolled their contracts already. Dealers are also likely to reduce activity in repo to free up balance sheet heading into month-end, in addition to auction

**FIGURE 1**  
TU-hedged calendar roll cheapened toward the first delivery date, in line with previous roll cycles



Source: Barclays Research

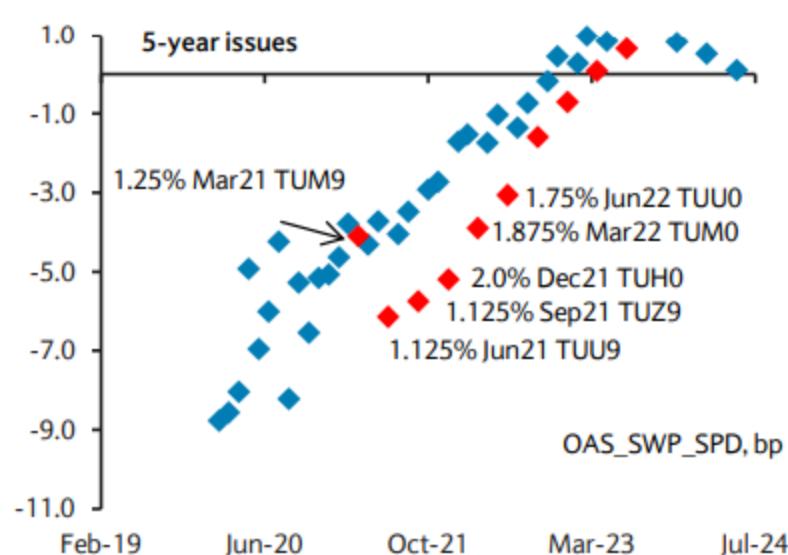
**FIGURE 2**  
TU back CTD typically richened vs. front CTD heading into T=0 (first delivery date of front contract)



Source: Barclays Research

FIGURE 3

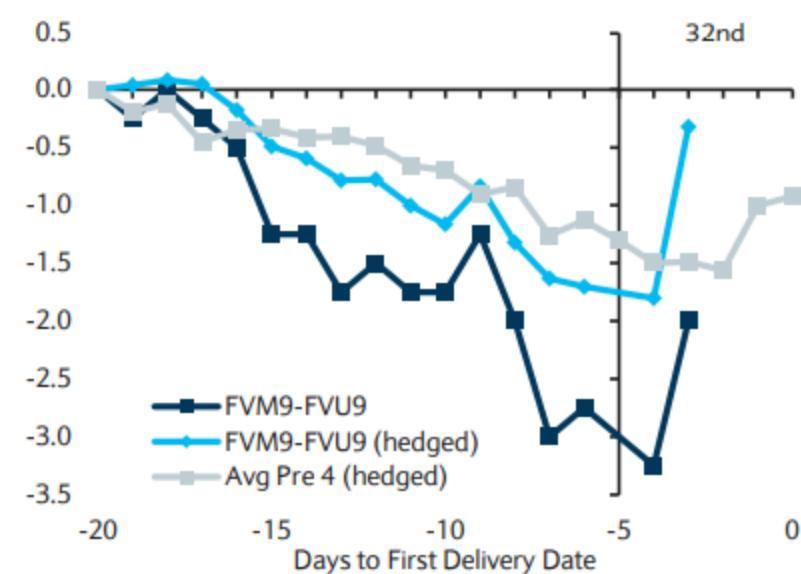
Deferred TU CTDs of seasoned 5-year issues trade rich on the curve



Note: Red marker denotes deferred TU CTDs. Source: Barclays Research

FIGURE 4

FV-hedged calendar roll cheapened toward the first delivery date, in line with previous roll cycles



Source: Barclays Research

settlements on May 31, 2019. This may put upward pressure in funding markets and force participants to exit long basis positions (ie, long Treasury versus short futures), which is bullish for the calendar roll. Figure 1 also shows the recent reversal of the cheapening trend.

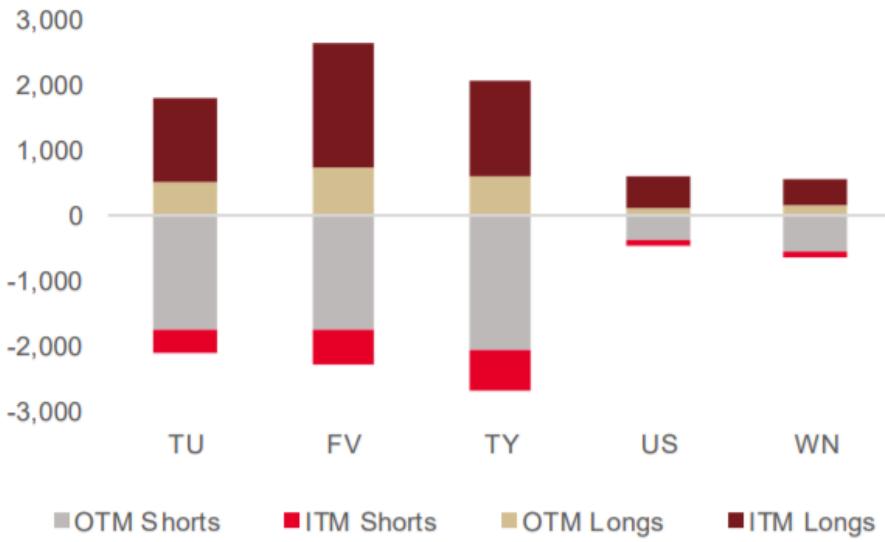
*We are closing our recommendation to go long the 1.125% Jun21s vs. 1.25% Mar21s*

As a result, we are closing our recommendation to buy 1.125% Jun21s versus 1.25% Mar21s, which are back and front CTDs in TU, respectively. Figure 2 plots the relative asset swap spread of the back versus front CTD heading into the first delivery date ( $T=0$ ). The back CTD richened nearly 2bp versus the front CTD. The issues did not trade too special relative to each other, so there was a minimal effect on the carry-adjusted performance for investors rolling overnight funding. In our view, the CTD spread has reached the trough at this stage of the futures roll cycle and is no longer attractive.

Furthermore, Figure 3 plots the asset swap spread of 5-year issues with the red markers indicating the seasoned 5-year issues that will likely be CTDs in deferred TU contracts. These securities are trading rich on the curve. Mar21s are trading fair versus nearby securities since it will lose CTD status after the last delivery date (July 3, 2019). While it may be tempting to fade the richness in Jun21s (back CTD), we prefer to wait. Figure 2 shows that the historical performance after the first delivery date has been mixed and we prefer to wait closer to the next roll cycle (U9-Z9) to fade the issue.

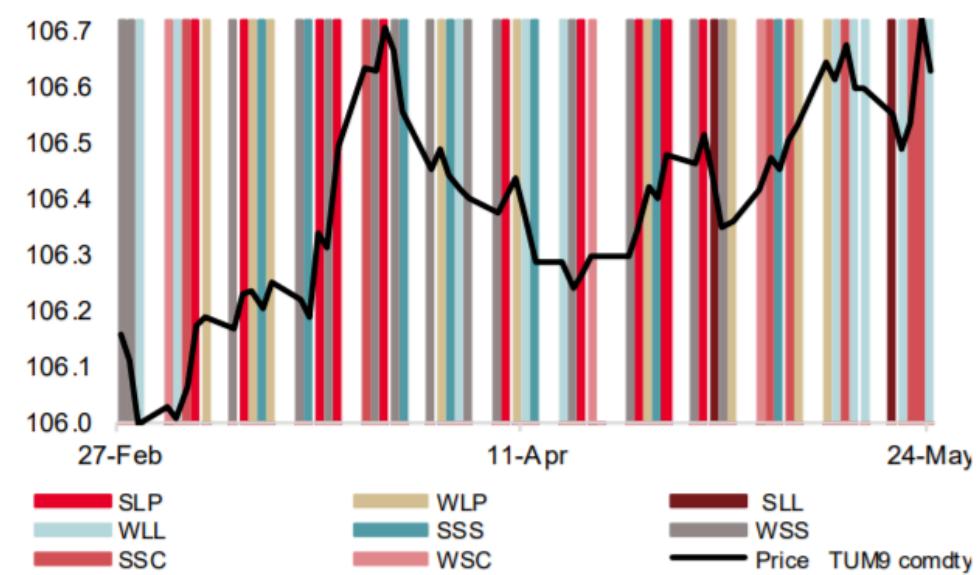
## Market positioning and flows

**Graph 1. Market positioning expressed using open interest in futures (number of contracts, 000)**



Source: SG Cross Asset Research/Rates, Bloomberg \*white bands include weekends/holidays

**Graph 2. Positioning momentum in the TU M9 contract based on changes in price, open interest and volume**



Source: SG Cross Asset Research/Rates, Bloomberg \*white bands include weekends/holidays

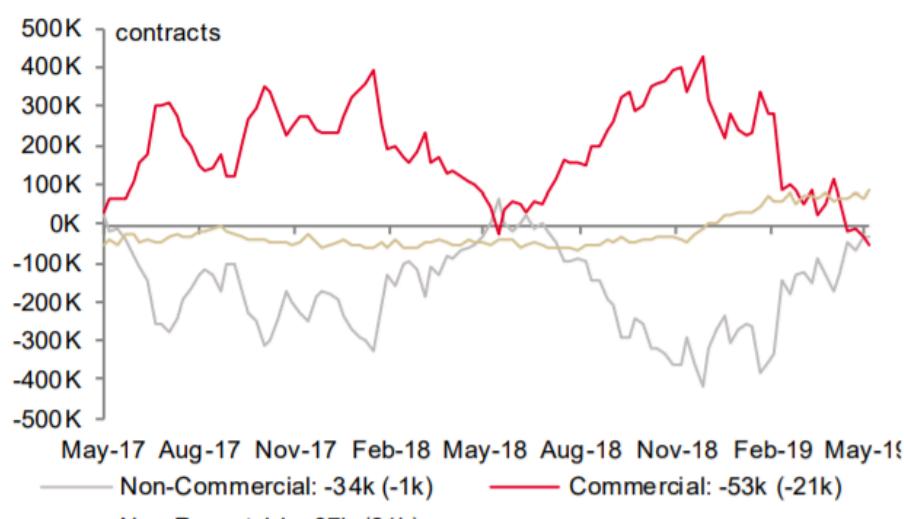
**Table 3. Summary of futures net positions (net contracts in '000s with 52w stats)**

	2y	1w chg	%tile	%OI	5y	1w chg	%tile	%OI	10y	1w chg	%tile	%OI	UXY	1w chg	%tile	%OI	30y	1w chg	%tile	%OI	U-Long	1w chg	%tile	%OI
Non-commercial	-34	-1	29%	-1%	-169	-31	27%	-3%	-423	-71	4%	-10%	-18	-5	17%	-2%	-44	2	20%	-4%	-327	6	0%	-26%
Commercial	-53	-21	30%	-1%	179	58	62%	4%	331	30	85%	8%	62	14	67%	1%	-4	-7	32%	0%	238	-8	98%	19%
Non-reportable	87	21	100%	2%	-10	-27	85%	0%	92	40	100%	2%	-44	-9	43%	-1%	48	5	100%	5%	90	2	100%	7%
Dealer	-178	11	3%	-4%	-419	10	3%	-8%	-2	2	78%	0%	-39	-11	10%	-1%	-82	-5	41%	-8%	-166	3	14%	-13%
Asset mgr/institutional	1273	-58	100%	31%	1632	12	95%	33%	829	-47	93%	20%	45	27	95%	1%	97	-3	28%	9%	716	-7	100%	57%
Leveraged funds	-1460	98	0%	-36%	-1270	-24	2%	-26%	-971	11	1%	-23%	1	-4	2%	0%	-41	-3	42%	-4%	-624	0	0%	-49%
Other reportables	278	-73	99%	7%	67	29	89%	1%	51	-5	42%	1%	37	-3	91%	1%	-22	6	36%	-2%	-15	4	3%	-1%

Source: SG Cross Asset Research/Rates, CFTC, Bloomberg

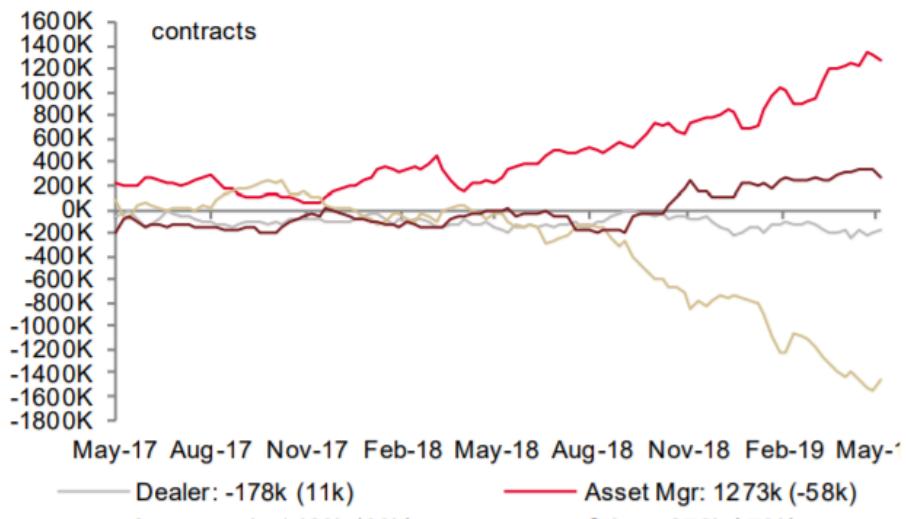
\*%tile is the one-year percentile rank and %OI is the net position percentage of current open interest

**Graph 17. 2y (TU) futures net positions by trader category**



Source: SG Cross Asset Research/Rates, CFTC, Bloomberg

**Graph 18. 2y (TU) futures net positions by trader type**



Source: SG Cross Asset Research/Rates, CFTC, Bloomberg

**Figure 1: USD, JPY, EUR 1y1y swap rates**



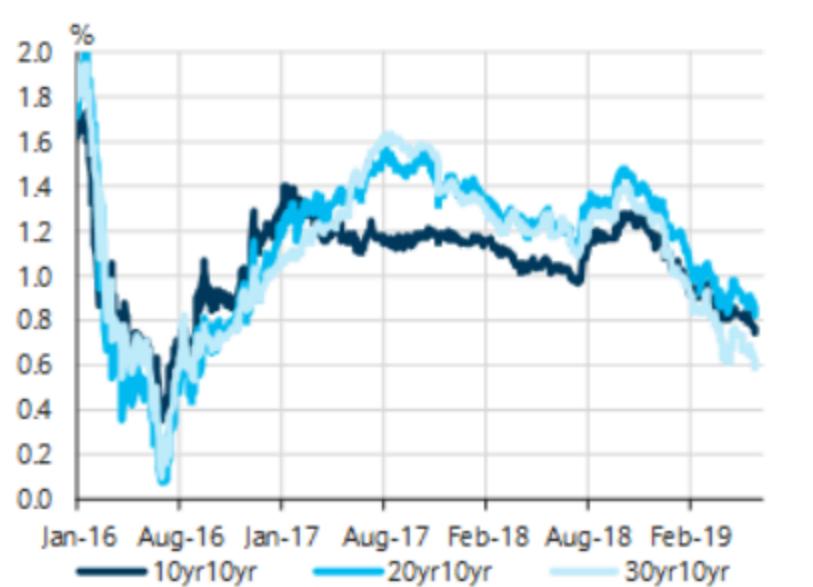
Source: Barclays Research

**Figure 2: USD 1y1y swap rates and JPY 30y10y swap rates**



Source: Barclays Research

**Figure 3: JGB forward 10y rates**



Source: Barclays Research

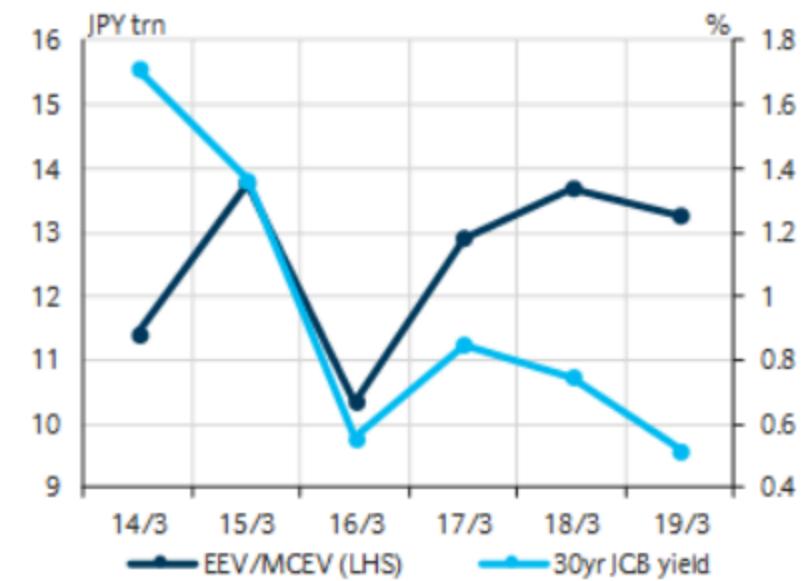
**Figure 4: JGB 30y10y/20y10y spreads and JGB 30s40s spreads**



Source: Barclays Research

Source: Barclays Research

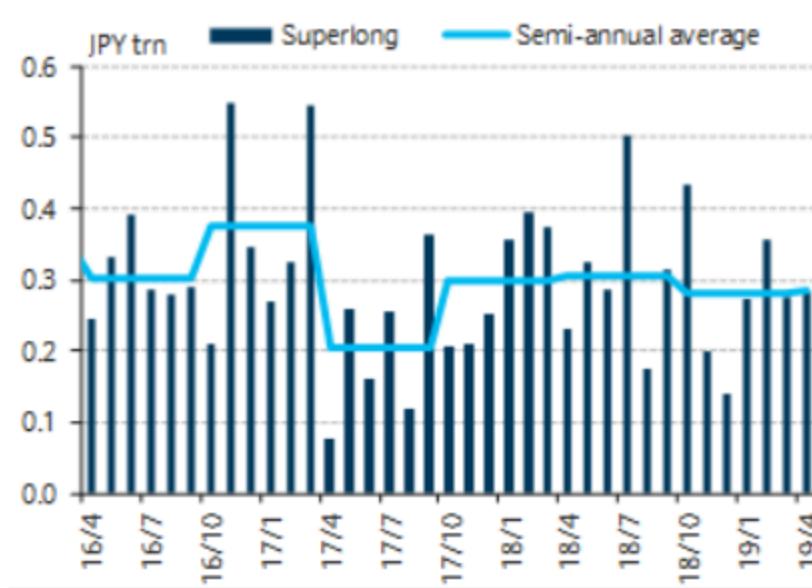
**Figure 5: EEV/MCEV and JGB 30y yields**



Source: Disclosures of Japanese life insurers, Barclays Research

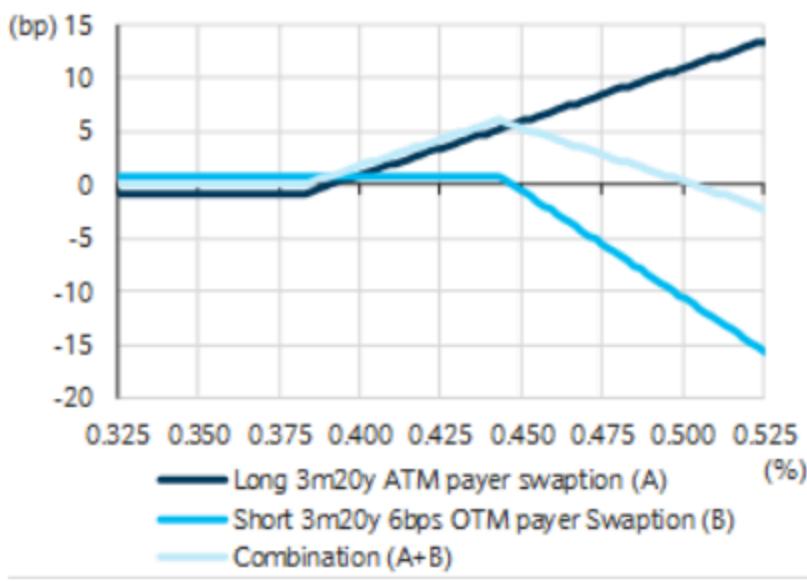
Source: Barclays Research

**Figure 6: Net purchases of superlong JGBs by insurers**



Source: JSDA, Barclays Research

**Figure 7: Payoff at expiry (payer spreads)**



Source: Barclays Research

**Figure 8: JPY 20y swap rates**



Source: Barclays Research

The JGB curve has bull-flattened, led by 30s and 40, with the decline in overseas yields. We see a limit to this move, but believe the initiation of bear trades in the long end needs to be timed cautiously.

At this stage, we believe utilizing options to hedge against the risk of a further decline in yields while positioning to profit on an upturn in yields is a strategy that makes sense. One way to do that would be through long payer spreads (JPY 3m20y 1 x 2 ratio).

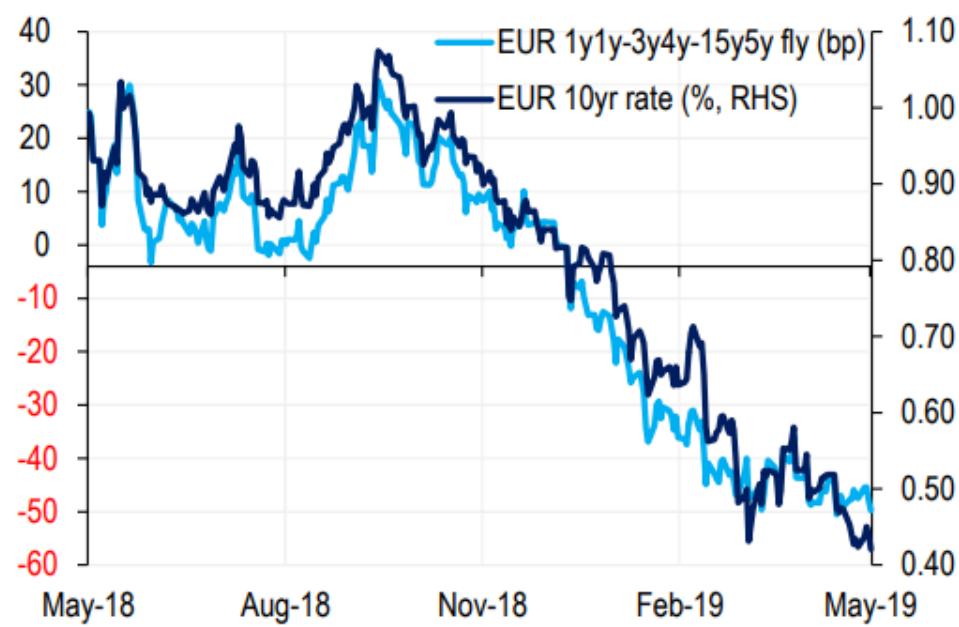
- The JGB curve has bull-flattened, led by 30s and 40, with the decline in overseas yields. Whether this will continue is one focus in the yen rates markets. At this stage, we believe there is a natural limit to this move for three reasons.
- Possibility of temporary position factors to cover delta:** In US and European rates markets, the decline in long-term yields comes with a move in shorter sectors to discount the perceived easing biases at the Fed and ECB. USD 1y1y rates are clearly below 2%, a level that fully discounts the Fed cutting rates more than once in the coming year (Figure 1). In yen rates markets, if the market strengthened its view that the BoJ will prolong the current YCC program through stronger forward guidance, for example, yields might be expected to fall with a downward push on forward 10y rates starting near the 10y sector, but the actual situation is different with the response to lower overseas yields actually bigger in the 30y and 40y superlong sectors (Figure 2). It is difficult to believe that the current bull-flattening in yen rates is a structural move reflecting the outlook for BoJ monetary policy; instead, we believe it could be a temporary position factor driven by strengthened demand to cover delta in the long end under market conditions marked by a strengthening decline in overseas yields, weakening of share prices and appreciation of the JPY. In that sense, it is difficult to see the move persisting.
- Relatively rich valuations on the yield curve:** As yields have fallen led by the long end, JGB 30y10y rates have shown a relatively strengthened downward trend while the spread with JGB 20y10y rates has fallen below the recent lows reached in 2016-17 and headed toward its lowest levels since 2010 (Figures 3 and 4). On the yield curve, it is possible to see just how much the 40y sector has outperformed. Looking at relative value within the superlong end, 15s and 20s appear more attractive than 30s and 40s, suggesting any further decline in yields led by the latter will naturally be limited in terms of curve valuation.
- Life insurers maintain constant-buying stance:** Life insurers, the main payer in the long end, appear unlikely at this stage to engage in investment behavior that spurs aggressive bull-flattening of the JGB curve like that seen through the summer of 2016. As discussed in [Japanese Life Insurer Results: JGB investment accelerates, foreign bond investment slows, while FX hedging methods diversify](#) (28 May 2019), the EEV/MCEV of Japanese life insurers that disclose such figures was down slightly at end-March 2019 with the decline in yields, but levels were only marginally lower than at end-March 2018, even with superlong yields falling to their lowest level since FY16, due to the effect of an extension in asset duration linked to past ALM and the utilization of UFR premised on risk free rates (Figure 5). In this sense, life insurers as a whole are in a different business environment than they were at that time, and most appear likely to maintain the constant-buying investment stance seen since mid-FY17 (Figure 6).
- For the above three reasons, we see no need to remain bullish, especially on the 30y and 40y sectors of the long end. However, it is difficult to forecast how long the risk-off turmoil driven by intensifying US-China trade frictions will last, so there is no ruling out further bull-flattening. It is therefore necessary to be cautious about timing the initiation of bear trades in the long end. In this sense, we believe utilizing options to hedge against the risk of a further decline in yields while positioning to profit on an upturn in yields is a strategy that makes sense. One way to do that would be through long payer spreads.
- Long JPY 3m20y 1 x 2 payer spreads:** Payer spreads are an effective strategy when yields rise to a limited extent. One specific trade would be to combine buying one unit of 3m20y ATM payer swaptions and selling two units of 3m20y 6bps OTM payer swaptions for a 3m20y 1 x 2 ratio. In that case, the payoff at expiry would involve profits increasing with a rise in yields from the ATM level of 0.383% and peaking at the 6bps OTM level of 0.443%, with a breakeven level at the 12bps OTM level of 0.503% (Figures 7 ad 8). For investors who find it difficult to expect a sharp rise in yields, but do see a potential rise of up to 12bps due to the rapid decline in yields to date, we believe 3m20y 1 x 2 ratio payer spreads are an attractive bear trade that could be built at roughly zero cost with P&L in the event of a decline in yields limited to the combined receipt and payment of option premiums. The risk to this trade is a rise in yields exceeding 12bps. Due to the sale of options, losses would be unlimited.

## €swap RV update: 7yr cheap in forwards

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- Forward structures in the 7yr area, such as €3y4y or €5y2y, are looking cheap on the curve following the recent rally. Figure 24 shows that the 1y1y-3y4y-15y5y fly, which has a 98% correlation with the spot 10yr rate, has dislocated from its historical relationship even after outperforming over past couple of days since we first highlighted it ([€swaps RV](#)) . The statistical dislocation is now +9bps and has started to turn (Figure 25). It might be a good expression for investors looking to enter long positions. This also provides better protection than spot 10yr against any sell-offs, as discussed below.
- **Protection against sell-off in rates:** €3y4y rolls down 10.2bps over 6 months, highest on the forward curve. This drives the roll down of +19bps for the fly. Thus it provides a decent cushion against any sell-off in rates. Note that our base case is *neutral on duration*.

Figure 24. €1y1y-3y4y-15y5y fly looks relatively cheap vs 10yr



Source: Citi Research. As at 15:00 London time 23<sup>rd</sup> May 2019.

Figure 25. Residual of regression of €1y1y-3y4y-15y5y vs 10yr



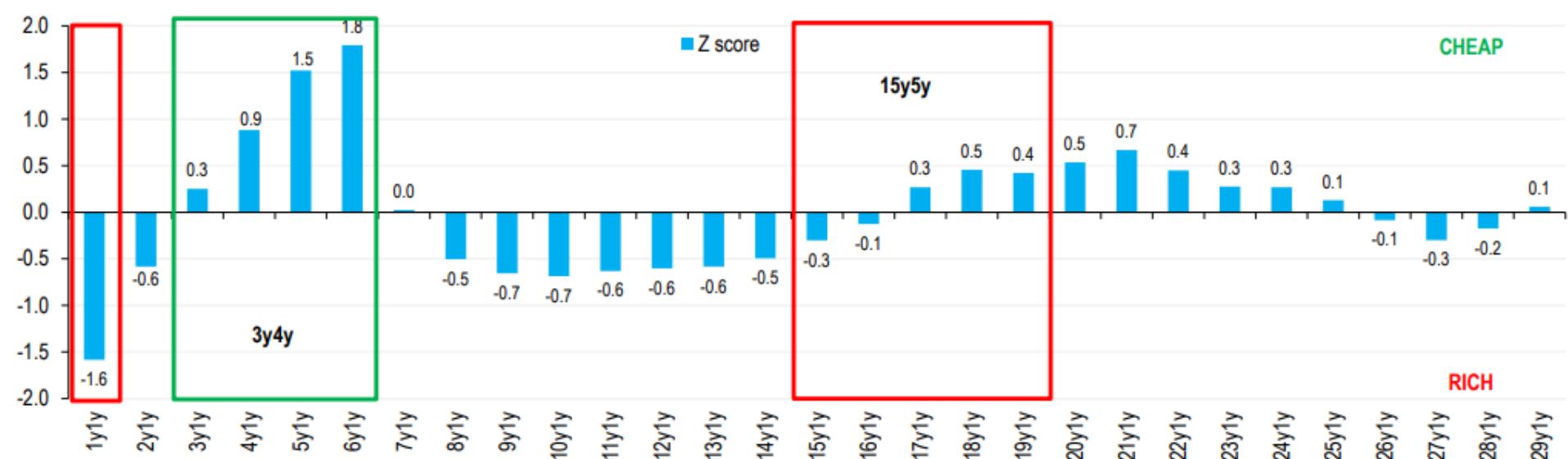
Source: Citi Research. As at 15:00 London time 23<sup>rd</sup> May 2019.

YOU CALL THAT A “DISLOCATION” ?????

## Cheapness confirmed by PCA analysis

- We use consecutive 1-year forward swap rates (1y1y, 2y1y and so on to 29y1y) over a 1yr history as inputs into a 2-factor PCA model. Results are shown in Figure 26 – €3y4y is trading cheap, while €1y1y is trading rich.
- The 15y5y point has turned from rich to close to fair value now. However, paying €15y5y rolls down positively over 6m (in contrast to paying €10y5y which rolls negatively), thus enhancing the overall roll down of receiving the belly of the fly.

Figure 26. 1yr z-scores of residual of a 2-factor principal component analysis on consecutive EUR 1yr forward swap rates (1 year history)



Source: Citi Research. As at 15:00 London time 23<sup>rd</sup> May 2019.



