EHSAN KHOMAN
Head of Commodities, ESG and Emerging Markets Research – EMEA

DIFC Branch – Dubai
T:+971 (4)387 5033
E: ehsan.khoman@ae.mufg.jp

RAMYA RS
Analyst

DIFC Branch – Dubai
T:+971 (4)387 5031
E: ramya.rs@ae.mufg.jp

LEE HARDMAN
Senior Currency Analyst

Global Markets Research
Global Markets Division for EMEA
T: +44(0)20 577 1968
E: lee.hardman@uk.mufg.jp

PAUL FAWDRY
Head of Emerging Markets FX Desk

Emerging Markets Trading Desk
T: +44(0)20 577 1804
E: paul.fawdry@uk.mufg.jp

MUFG Bank, Ltd.
A member of MUFG, a global financial group

09 January 2023

Ten questions for 2023

Macro focus: We wish all of our readers a happy, healthy and prosperous 2023. In the first EM EMEA Weekly of this year, we examine what we believe are the ten most important macro questions for 2023.

FX views: EM FX continue to benefit from improving investor sentiment, policy support & re-opening optimism in China. US recession risk encourages speculation over further dovish Fed policy pivot. US CPI poses risk to USD weakening trend.

Trading views: Positives for EM seem to centre around cheap valuations, improving BoP but actual positive catalysts for EM seem a bit stretched – China upside growth picture could be one.

Week in review: The EM EMEA aggregate PMI rose from 50.0 in November 2022 to 51.2 in December 2022 (on a PPP-weighted basis). A third round of sharp FX declines over the first days of 2023 took EGP to ~27 against the USD, taking Egyptian Pound (EGP) losses since the first devaluation in March to ~45%. Inflation in Poland decreased from 17.5% y/y in November to 16.6% y/y in December. Finally, inflation in Turkey declined from 84.0% y/y in November to 64.3% y/y in December.

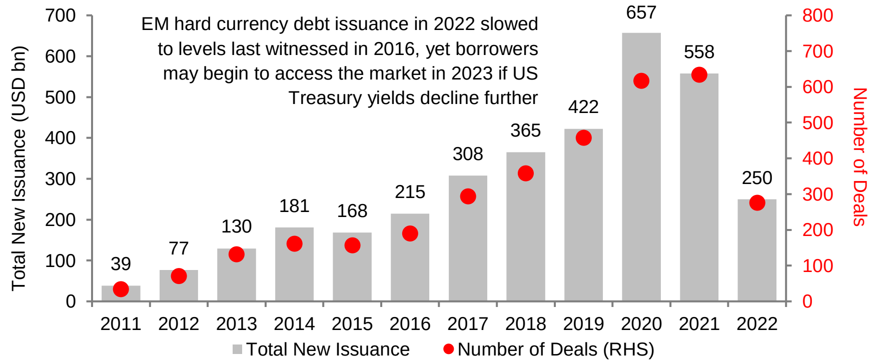
Week ahead: This week, beyond the rate decision in Romania (MUFG and consensus: +25bps to 7.00%), we will have a host of inflation prints for December, (i) in Egypt (MUFG: +2.4ppts to 20.2% y/y); (ii) in Russia (MUFG: +0.2ppts to 12.2% y/y; consensus: 12.0% y/y)); (iii) in Hungary (MUFG: +2.5ppts to 25.0% y/y; consensus: 25.8% y/y); and (iv) Czech Republic (MUFG; -0.3ppts to 16.0% y/y).

Forecasts at a glance: Headwinds facing EMs are getting stronger as persistently high inflation prompts more hawkish monetary policy responses leading to further tightening of financial conditions and more sacrifices from growth.

Core indicators: In 2023, the backdrop for fund flows remains challenging. On the one hand, we have a deteriorating global liquidity backdrop, which implies further weakness in portfolio flows into EM. On the other hand, there is the widening of EM's growth premium over DM, which should attract more capital into EMs.

CHART OF THE WEEK: EM NEW ISSUANCE SLOWS TO WEAKEST SINCE 2016

TOTAL EM EXTERNAL DEBT ISSUANCE (USD BN, NUMBER OF DEALS)



Source: Bloomberg, MUFG Research

Macro focus

Ten questions for 2023

We examine ten key questions shaping the 2023 outlook

We wish all of our readers a happy, healthy and prosperous 2023. In the first EM EMEA Weekly of this year, we examine what we believe are the ten most important macro questions for 2023.

1. WILL THE EM EMEA REGION ENTER RECESSION?

No recession across EM EMEA though risks abound

No. While the EM EMEA region faces severe economic headwinds from the tightening in global financial conditions that has taken place in the past year and the slowdown in global growth that is currently underway, we expect it to avoid a recession and for the region to record moderate growth in 2023. Having said that, the region continues to face considerable economic headwinds, especially from the tightening in global financial conditions that has taken place over the past year and the slowdown in global growth that is currently underway. Additionally, there are risks to the outlook that are more challenging to quantify, notably the trajectory of the war in Ukraine and the prospects of China's reopenings from its draconian lockdowns.

2. WILL EM EMEA INFLATION RETURN TO SINGLE DIGITS?

We remain above consensus on our inflation call across EM EMEA this year

No. Although we anticipate headline inflation to decline through the course of 2023 due to the combination of more moderate commodity prices and base effects, underlying inflationary pressures have risen sharply across most of EM EMEA, and we expect inflation to average more than 10% in 2023. It is critical to note that underlying inflationary pressures rose sharply in 2022, reflecting a broadening of price pressures away from energy and food prices, towards core goods and services. This rise has been particularly marked in the CEE region and Russia. Given persistently elevated inflation, we anticipate further monetary tightening across most of EM EMEA, especially in the CEE region, Russia and a category-on-its-own, Turkey.

3. WILL WE WITNESS CENTRAL BANKS CUTTING INTEREST RATES?

Given elevated inflation, we do not envisage central banks in EM EMEA to have the space to ease interest rates (bar South Africa)

No. Given evidence of a de-stabilisation of inflation expectations across the CEE region, we expect that policy rates will need to remain higher for longer to bring inflation back to central bank targets. While the market is pricing in significant rate cuts in CEE over the next year, we view most CEE central banks will either tighten policy further or leave rates unchanged – the most likely exception is Hungary, where the policy rate is currently 13.0%. To put this into further context, although growth slowed sharply in H2 2022, inflation remains the principal economic issue for the CEE region at the current juncture. The factors that initially pushed CEE inflation on an upward trajectory at the beginning of 2022 were predominantly external and supply-side driven. However, since then, underlying inflation dynamics have intensified and whilst the tightness of CEE labour markets is contributing to elevated inflation, we consider that the broad-based nature of price increases reflects an ongoing de-anchoring of inflation expectations.

4. WILL THE CENTRAL BANK OF RUSSIA RAISE POLICY RATES?

We anticipate Russian inflation to undergo a rebound, driving the Central Bank of Russia to raise rates once again

Yes. Since the war in Ukraine began in February 2022, activity in Russia has been supported by a sharp easing in fiscal policy. However, the conflict and sanctions are inflicting significant damage on the economy's productive capacity and this imbalance is contributing to an increase in domestic inflationary pressures. While headline inflation is likely to decline further in the coming months, we expect it to rebound by end-2023 and for the Central Bank of Russia (CBR) to raise rates in response.

5. WILLTHE GCC REGION CONTINUE TO ENJOY SURPLUSES?

The GCC region remains well buffered with the focus on the ongoing diversification strategy

Yes. Oil prices have fallen sharply in H2 2022 from their H1 2022 highs. However, because of significant – albeit uneven – progress on fiscal consolidation across GCC economies, prices nevertheless remain well above fiscal and external breakeven levels (~USD65/b and ~USD50/b, respectively, on our estimates). In the absence of further large oil price declines, we expect significant GCC fiscal and external surpluses over the coming three years.

6. WILL TURKEY WITNESS FINANCIAL STABILITY PRE-ELECTIONS?

Adequate reserve buffers and the potential for more bilateral funding could see the authorities preserve financial stability Turkey before the elections in June 2023

Yes. Supported by tight fiscal and credit policies, combined with sizeable funding from non-G7 countries, the Turkish authorities managed to stabilise financial markets in H2 2022. While we expect looser demand policies to lead to the re-emergence of an external funding gap ahead of the June general elections, in our view the reserve buffer and the potential for more bilateral funding are likely to allow the authorities to preserve financial stability reasonably stable ahead of the vote.

7. WILL SOUTH AFRICA START A RATE CUTTING CYCLE?

With lower inflation that its EM peers, South Africa does have the scope to ease rates in 2023

Yes. South Africa's rate hiking cycle began in November 2021, and we forecast a further 50bp of tightening to a 7.5% peak. However, with lower inflation prospects than most of its peers, a weak growth outlook, and a policy rate that is likely to be at or slightly above the South African Reserve Bank's (SARB) estimates of neutral at its peak, we expect the SARB to begin a rate-cutting cycle by year-end (one of the few places across EM EMEA to ease monetary policy this year) that will extend into 2024.

8. WILL EGYPT MOVE TOWARDS A MORE FLEXIBLE FX POLICY?

Egypt to fully move towards a more flexible exchange rate

Yes. We anticipate the recent depreciation of the Egyptian Pound (EGP) signals a move to a more flexible exchange rate regime. Our central expectation is that the authorities will pursue a managed float that allows for more two-way volatility than in the past. It is unclear how much the currency will weaken in the near term (the parallel rate was trading at a 50% discount to the official rate at the start of the year) but, to avoid a significant overshoot, significant capital inflows will be required to ease liquidity constraints.

9. WILL SUB-SAHARAN AFRICA WITNESS A CONFLUE OF DEFAULTS?

SSA unlikely to see a wave of defaults given FX reserves are adequate to cover external financing in 2023

No. Notwithstanding elevated market-implied default probabilities, we forecast debt restructuring to be limited to only few jurisdictions. FX reserves are adequate to cover external financing needs for 2023 in the case of a prolonged absence of international capital markets access. Kenya stands out as comprising the most pressing financing needs, yet it does have an IMF programme alongside stable capital inflows.

10. WILL PUBLIC FINANCES BE THE NEXT DIVIDING LINE FOR EM'S?

Public finances across EMs will be under the spotlight in 2023

Yes. Throughout 2022, EMs have faced global and fundamental headwinds with the growth and inflation mix still looking challenging. We believe that public finances could be the next major imbalance to surface – specifically, large budget deficits and elevated public debt. In many ways, EMs have given a similar fiscal and monetary policy response to the pandemic as DMs, which has caused public finances to deteriorate. Now with global growth slowing, the global cost of funding rising, global quantity of funding (liquidity) falling and the US dollar (USD) remaining strong, we view markets will differentiate across EM based on the fiscal outlook this year.

FX views

Improving investor sentiment towards EM is evident at start of new year

EM FX continuing to benefit from improving investor sentiment towards emerging markets

Emerging market currencies have extended their recent rebound against the USD at the start of the new calendar year. The top performing EM currencies have been the RUB (+5.3% vs. USD YTD), THB (+3.4%), MXN (+2.1%), KRW (+2.0%), and CNY (+2.0%). In contrast, the PLN (-0.2% vs. USD YTD) and TRY (-0.1%) have both underperformed. Emerging market currencies are benefitting from a pick-up in capital flows into emerging markets since November of last year. More supportive capital flows appear to have continued at the start of the new calendar year with MSCI's emerging market equity index threatening to close above its 200-day moving average for the first time since September 2021. The rebound in emerging market equities is being led by China-related markets with the Hang Seng China Enterprises equity index extending its advance above its own 200-day moving average last week.

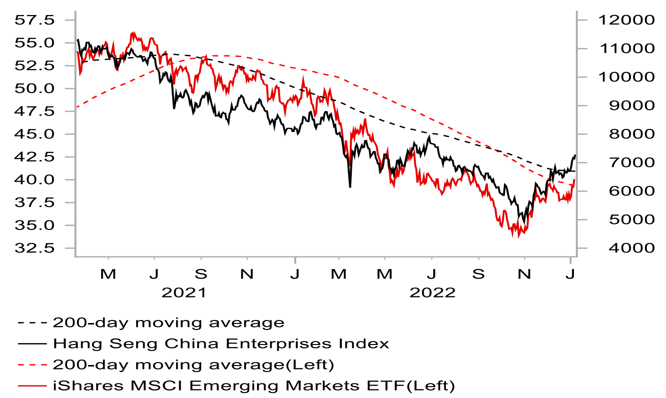
Policy support & re-opening optimism in China providing tailwind for EM FX more broadly

Improving investor sentiment towards emerging markets has been reinforced by reports over the past week that policymakers in China are considering adjusting policy settings further to provide more support for the beleaguered housing market. The rolling back of China's so-called "three red lines for developers" which were introduced in August 2020 would allow developers to take on more debt and leverage, and delay the grace period for meeting debt targets. Furthermore, there have been encouraging early reports that subway use has already started to rebound in nearly a dozen major Chinese cities which has reinforced optimism that China's economy will re-open more quickly than expected after the current surge in COVID has peaked. Market participants remain willing to look through short-term disruption to China's economy in anticipation of stronger demand ahead as pent-up demand is set to be unleashed.

US recession risk encourages speculation over further dovish Fed policy pivot weighing on USD & US yields. US CPI poses risk to USD weakening trend in week ahead

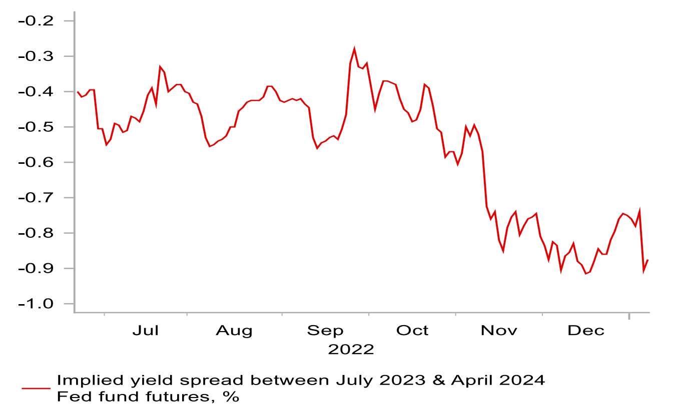
Emerging market currencies are continuing to benefit as well from the broad-based sell-off for the USD alongside lower US yields. Renewed USD weakness has been triggered by the release of the ISM services survey that has signalled a heightened risk of a sharper slowdown/recession for the US economy. Market participants are hopeful that it will encourage the Fed to further slow and pause their rate hike cycle and thereby avoid a harder landing for the US and global economies. The release on Thursday of the latest US CPI report for December will provide the main challenge to the USD weakening trend at the start of this year. The USD could prove more sensitive to an upside inflation surprise given market participants are expecting more evidence of softening inflation and the Fed delivering a smaller 25bps hike in February.

CHINA LEADING EM EQUITY REBOUND



Source: Bloomberg, Macrobond & MUFG Research

FED RATE CUT SPECULATION IS BUILDING



Source: Bloomberg, Macrobond & MUFG Research

Trading views

Disclaimer: "Trading views" offers an overview of what our professional traders and desk analysts are watching in the markets, their commentary and views are theirs alone and are not intended to be construed as investment advice. This material is intended to be of general interest only and should not be considered a recommendation or solicitation to buy, sell or hold any security or to adopt any investment strategy. The information provided in this material is not intended as a complete analysis of every material fact regarding any country, region or market.

Scenarios and/or case studies referenced herein are used solely for illustrative purposes; through its trading desk, MUFG may or may not currently hold positions in the jurisdictions outlined in the content, and as commentary from an active trading desk the information provided is not considered to be "investment research" for any particular strategy, investment product or indication of trading intent of MUFG or any MUFG client, but solely the views of the author.

Trading views: For EMFX it makes sense to go with the flow even if risks are there

EM equities are starting to outperform their US peers however there is a long way to go before allocators get excited

The strength in EM is coming through not just FX but also in other assets with EM equities starting to outperform developed nations. The depth and length of EM asset underperformance to US markets has been such that this outperformance still looks like a blip and it will take a lot more for allocators to really start to go back into EM in a big way, especially given the geopolitical concerns currently in many of the large EM economies. EM bonds may have more support given the popularity of EM FI longs as a trade for 2023. This is as much to do with how much further in the rate cycle both LatAm and CEE countries are.

While EM FX has strengthened against the USD there has not been much overall outperformance which is strange, given China COVID reopening is leading the global growth charge

Moving onto EMFX, we find a resumption of Q4's pattern with a base in US terminal rates helping risk and helping EM. It is though notable that in spite of China's reopening driving a lot of the good news for global growth forecasts, EMFX has not really outperformed in a significant way. Since 7th December, which is when China relaxed it's COVID policy, only KRW, THB and HUF have done a lot better than the majors. Clearly a very hawkish tilt from both BOJ and ECB is partly to blame for this. Nonetheless it is surprising that we have not moved further, suggesting there is still a lot of concern surrounding the EM landscape.

Positives for EM seem to centre around cheap valuations, improving BoP but actual positive catalysts for EM seem a bit stretched – China upside growth picture could be one

From a trading stance, we like EMFX purely on price action, cheap valuations and the potential flow of funds moving towards this universe, especially when US equities appear stalling. Our trading strategy is "going with the flow" even if we see a few things that make us concerned. This go with the flow attitude makes sense especially as not many pairs look particularly stretched. The main exception to this would be THB where we wonder how much of the good news in China reopening is priced in already.

Risks centre over how long we can be in the middle of the USD smile, looking for a goldilocks period alongside the geopolitical risks in the EM world

However there are several concerns we have, there will be moments where we pare back. On the US side clearly the Fed becoming more hawkish again is a risk. But as much as this is the fact how long can we have a soft landing narrative and lower US rates. Currently the market is pricing a type of goldilocks environment for EM. While this can continue for a little bit more, there will come a time when the rate cuts are priced. H2 23/24 will either have to be corrected or something has to change significantly from Fed's thinking. Either of these things will see us move to edges of the smile, making it a not so great environment to own EMFX.

The second risk is geopolitical. In part this may come from the consequences of China exiting its zero COVID policy. We see a lot of risks for things to go wrong due healthcare worries or significant protests etc. This may turn China more insular or may worsen relations elsewhere. We also have the Russia situation plus significant concerns over the transition of power in Brazil. Overall it is not a very smooth geopolitical landscape. That said, low expectations coupled with any thawing of East/West relations in 2023, would make it the biggest surprise of the year and eventually a very bullish EM signal.

Week in review

EM capital flows: taking stock of 2022 and initial considerations for 2023's fund flows

2022 was another year to forget for EM fund flows

EMs witnessed a sharp recovery in the last quarter of 2022, as cheap valuations and favourable positioning coincided with downside inflation surprises in DMs that helped revive the expectations of a pivot by core central banks. Having said that, 2022 was another year to forget as all EM assets ended the year with double-digit losses. The only exception was EM FX (down by 5.1% y/y), which benefited from an improving carry on the back of aggressive rate hikes by EM central banks. On the flows front, there were diverging trends between bond and equity flows, though EM funds had outflows of USD58.2bn on a cumulative 28 day rolling average basis in 2022. EM equities witnessed USD35.2bn in outflows whilst EM debt saw USD23.0bn in outflows.

2023 will be another challenging year for EM fund flows

In 2023, the backdrop for fund flows remains challenging. On the one hand, we have a deteriorating global liquidity backdrop, which implies further weakness in portfolio flows into EM. On the other hand, there is the widening of EM's growth premium over DM, which is expected to reach ~3.0ppt in 2023 (the highest level since 2013), based on our estimates. This should attract more capital into EMs. Moreover, positioning remains quite light among active funds following last year's aggressive redemptions, which could work as a balancing factor for both bond and equity flows in 2023.

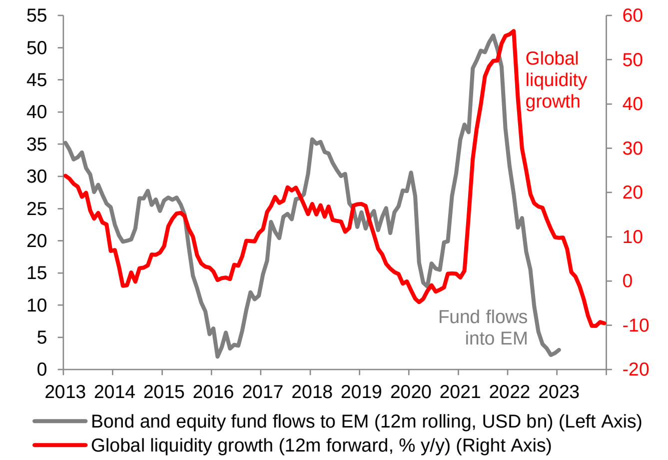
EM EMEA PMI: activity indicators stronger in December but remain mixed

Regional PMI ended 2022 on a stronger footing

The EM EMEA aggregate PMI rose from 50.0 in November 2022 to 51.2 in December 2022 (on a PPP-weighted basis), exceeding its long-term average (51.0). The largest improvement was in Hungary, from 56.0 to 63.1, where the PMI now stands at a historically high level. The pace of economic activity also increased in Turkey (from 45.7 to 48.1) and Egypt (from 45.4 to 47.2), although the PMI values of these countries remain within contractionary territory. Activity in the CEE region strengthened overall, as the PMIs also edged up in the Czech Republic (from 41.6 to 42.6) and in Poland (from 43.4 to 45.6), albeit from low levels. Across Sub-Saharan Africa, the PMI rose by 2.1pts to 47.0 in Ghana, by 0.7pts to 51.6 in Kenya and by 0.3pts to 54.6 in Nigeria. The composition was more mixed across MENA, as the Qatar PMI rose (from 48.8 to 49.6) while the Saudi Arabia PMI declined from high levels (from 58.5 to 56.9).

GLOBAL LIQUIDITY TURNED SHARPLY NEGATIVE IN 2022, ACCELERATING EM FUND FLOWS

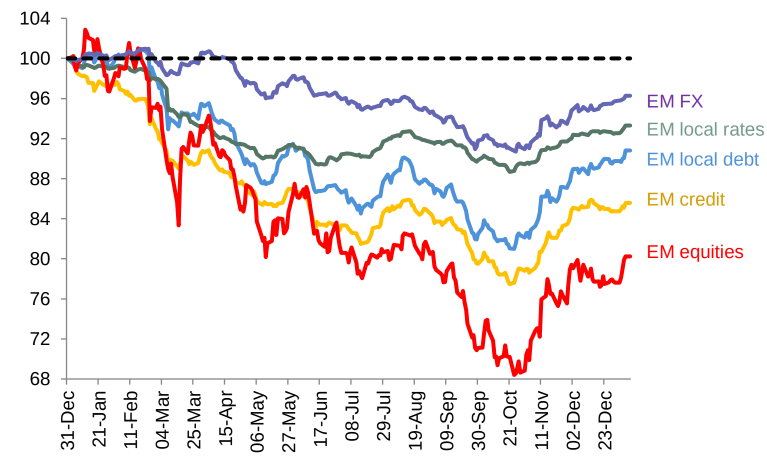
GROWTH IN G4 BALANCE SHEETS (% Y/Y) VS EM FUND FLOWS (USD BN)



Source: Bloomberg, IIF, MUFG Research

EM RISK ASSETS WITNESSED A REBOUND TOWARDS THE END OF 2022 BUT WERE ALL LOWER LAST YEAR

EM EQUITIES, FX, RATES, CREDIT AND DEBT (1 JANUARY 2022 = 100)



Source: Bloomberg, MUFG Research

Egypt adjustment is underway but hard currency is still in short supply

Egypt: third round of FX adjustments takes EGP losses to ~45% in less than a year

A third round of sharp FX declines over the first days of 2023 took EGP to ~27 against the US dollar (USD), taking Egyptian Pound (EGP) losses since the first devaluation in March to ~45%. Notwithstanding the scale of the moves, we see EGP continuing to decline this year and forecast year-end levels at 28.6. In such turbulent market conditions, with funding needs so high and capital inflows weak, there are few grounds on which to estimate with conviction the level at which the currency will find a floor. To put the current devaluation round into context, this forms part of a long anticipated drive to rebalance the country's external accounts following the external shocks of 2022. There have been other signs of progress on this complex rebalancing task in recent weeks, including IMF board approval in late December for the new USD3bn Extended Fund Facility (EFF). The approval releases a first USD350m disbursement from the EFF, and should open the way for USD3bn in support from other multilateral sources before the end of the fiscal year in June. This is in addition to the rollover of GCC deposits at the central bank, USD2bn in foreign investment in Egypt's divestment programme and up to USD1bn from the IMF Resilience and Sustainability Facility.

Inflation in Poland decreased on lower energy, transport fuel and food costs

Poland: inflation declines in December for the second consecutive month

Inflation in Poland decreased from 17.5% y/y in November to 16.6% y/y in December. The main driver of decrease was much weaker household energy, transport fuel and food costs. The released reinforces the National Bank of Poland's (NBP) relatively dovish guidance for rate stability. Indeed, in a scheduled press conference, NBP governor Glapinski stuck to previous guidance pointing to rate stability, emphasising slowing demand growth and easing external inflationary pressures that should help inflation gradually fall back to target. Having said that, governor Glapinski reiterated that the NBP has not necessarily ended the tightening cycle and that further steps will be better assessed in March when the next forecast update round will occur.

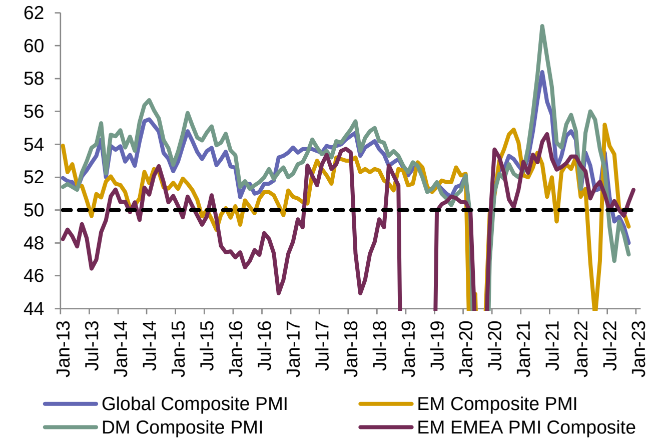
Inflation in Turkey ended 2022 at 64% y/y

Turkey: inflation in December falls sharply as expected on acute base effects

Inflation in Turkey declined from 84.0% y/y in November to 64.3% y/y in December, on the back of sharp base effects due to the currency crisis in December 2021 and falling energy prices. Core inflation also declined considerably, from 68.9% y/y in November to 51.9% y/y in December and undershot expectations. Headline inflation in December was also lower than the year-end expectations of both the government and the Central

EM EMEA PMI ENDED 2022 ABOVE THE EM AND DM AVERAGES, ALTHOUGH THE COMPOSITION IS MIXED

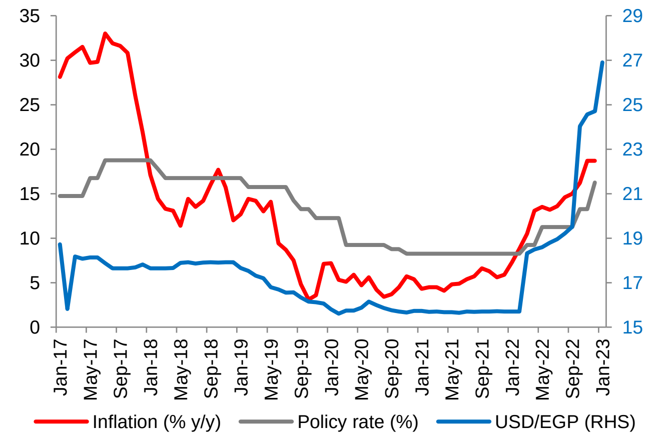
PMI INDEX (0-100, 100 = HIGHEST)



Source: Bloomberg, Markit, MUFG Research

A THIRD ROUND OF EGP DEVALUATION TAKES THE TOTAL DEPRECIATION TO ~45% SINCE MARCH 2022

EGYPT INFLATION (% Y/Y), DEPOSIT RATE (%) AND USD/EGP

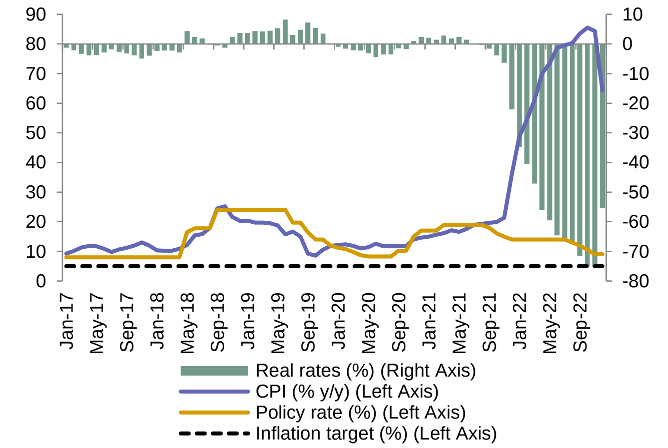


Source: Bloomberg, CBE, MUFG Research

Bank of Turkey (CBRT), at 65.0% y/y and 65.2% y/y, respectively. The decline in headline inflation in December was driven primarily by transport and food, although most core categories also contributed negatively to overall inflation. Transport inflation fell from 107.0% y/y to 54.4% y/y with an 8.8pp downward contribution, mostly due to falling fuel prices but also because of the adjustments in auto tax brackets. Food inflation fell from 102.5% y/y to 77.9% y/y in December, helped also by positive weather conditions, and contributed negative 6.2pp to overall inflation. Looking ahead, we forecast annual inflation to fall towards 42% y/y by April but remain more sticky between 35-45% y/y for the remainder of the year, with risks skewed to the upside given the recent 55% hike to the minimum wage.

INFLATION IN TURKEY FALLS SHARPLY (AS EXPECTED) IN DCCEMBER ON ACUTE BASE EFFECTS

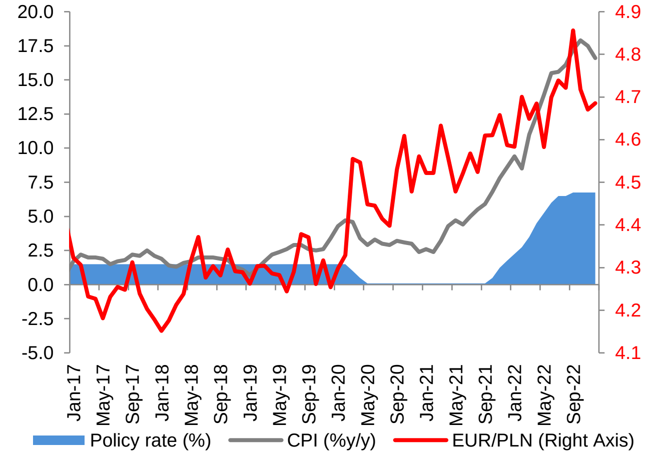
TURKEY INFLATION (% Y/Y) AND POLICY RATES (%)



Source: Bloomberg, TurkStat, MUFG Research

POLAND KEEPS RATES ON HOLD AT 6.75% BUT TRAJECTORY CONDITIONAL ON CORE PRICES AND PLN

POLAND INFLATION (% Y/Y), RATES (%) AND EUR/PLN



Source: Bloomberg, Statistics Poland, MUFG Research

Week ahead

Romania to continue raising rates

Romania: NBR to hike by 25bp to 7.00% with core inflation north of 10% y/y

The National Bank of Romania (NBR) will meet on 10 January and we (in line with consensus) expect hike rates by 25bp to 7.00%. Recent inflation developments in Romania have been relatively hawkish, and arguably argue for a larger increase. Inflation was significantly higher than expectations in November, on the back of rising energy costs and strong core, while the NBR recently revised its inflation projections to the upside. On top of this, inflation expectations of households and firms have been on the rise for some time, making it harder for the NBR to tame double-digit inflation.

Inflation readings for November in Egypt, the CEE and Russia

Inflation across the region: a host of inflation prints for December to be released

A host of inflation readings for December will be announced:

1. Egypt. We forecast inflation in Egypt to edge higher from 18.8% y/y in November to 20.2% y/y in December, mainly owing to passthrough effects from the FX depreciation at the end of October, as well as further weakening of the currency in the parallel market through December. Looking ahead, we expect headline inflation to accelerate in the coming months due to the latest round of EGP depreciation which began on 4 January. The outlook for the currency remains unclear and will be a key determinant for the path of domestic inflation this year. Our base case is that the CBE is successful in clearing the FX backlog and that the EGP broadly stabilises in the coming weeks, in which case we believe the inflation impulse is likely to be temporary, with our forecasts suggesting that inflation will revert to within the CBE's current inflation target range of 7% ± 2ppts by Q1 2024 and fall in line with the CBE's new inflation target of 5% ± 2ppts by 2026 year-end.
2. Czech Republic. We anticipate inflation the Czech Republic to be the outlier and fall from 16.3% y/y in November to 16.0% y/y in December, owing to declines in transport costs more than offsetting the rises in energy related prices. Looking ahead, we expect headline CPI to peak in in January 2023 at 17.1% y/y due to a reversal of the methodological changes that mechanically reduced CPI in the last quarter of 2022, before decelerating throughout 2023. However, we see two-sided risks to our inflation forecast for 2023, stemming from the uncertainty around household energy prices.
3. Hungary. We expect inflation in Hungary to rise from 22.5% y/y in November to 25.0% y/y (consensus: 25.8% y/y, MNB: 24.8% y/y) in December, driven by the removal of retail fuel price cap in December. Fuel prices have been frozen in Hungary since November of 2021 and the freeze was largely expected to last into 2023 and withdrawn gradually. However, as fuel shortages started to emerge, the Hungarian government announced a sudden removal of this policy.
4. Russia. We forecast inflation in Russia to rise from 12.0% y/y in November to 12.2% y/y (consensus: 12.0% y/y) in December, marking the first rise since July 2022. This is primarily expected to be driven by higher utility costs which have been visible in the weekly inflation prices. Moreover, underlying inflation has increased over recent weeks, notably in the services sector, raising inflation risks to the upside. Looking ahead, we expect price pressure to broaden as the Russian Rouble (RUB) depreciates, the effects from the harvest dissipate and the tightness in the labour market becomes more evident. Consequently, we expect the monetary policy to tighten from mid-2023.

Weekly calendar

	Country	Day	GMT	Indicator/Event	Period	MUFG Forecast	Consensus	Previous	Market Moving
	Egypt	09/01/2022		GDP (% q/q)	3Q	--	--	-0.3%	!!!
	Qatar	09/01/2022		GDP (% y/y)	3Q	--	--	6.3%	!!!
	Egypt	09/01/2022		Urban CPI (% y/y)	Dec	--	--	18.7%	!!
	Egypt	09/01/2022		Core CPI (% y/y)	Dec	--	--	21.5%	!!
	Czech Republic	09/01/2022	08:00	GDP (% y/y)	3Q F	1.70%	1.7%	1.7%	!!
	Romania	10/01/2022		Policy rate decision (%)	Jan	7.00%	7.00%	6.75%	!!!
	UAE	10/01/2022		CPI (% y/y)	Dec	--	--	4.7%	!!
	UAE	10/01/2022	04:15	PMI Composite	Dec	--	--	54.90	!!!
	Ukraine	10/01/2022	13:30	CPI (% y/y)	Dec	--	27.4%	26.5%	!!
	Czech Republic	11/01/2022	08:00	CPI (% y/y)	Dec	16.00%	16.3%	16.2%	!!!
	Jordan	12/01/2022		CPI (% y/y)	Dec	--	--	5.0%	!!
	Nigeria	12/01/2022		CPI (% y/y)	Dec	--	21.7%	21.5%	!!!
	Romania	12/01/2022	07:00	GDP (% y/y)	3Q F	4.0%	4.0%	4.0%	!!
	Oman	13/01/2022		CPI (% y/y)	Dec	--	--	2.1%	!!!
	Romania	13/01/2022	07:00	CPI (% y/y)	Dec	--	16.5%	16.8%	!!!
	Hungary	13/01/2022	07:30	CPI (% y/y)	Dec	--	25.8%	22.5%	!!!
	Poland	13/01/2022	09:00	CPI (% y/y)	Dec F	--	--	16.6%	!!
	Russia	13/01/2022	16:00	CPI (% y/y)	Dec	--	12.2%	12.0%	!!!
	Qatar	14/01/2022		CPI (% y/y)	Dec	--	--	5.3%	!!!
	Saudi Arabia	15/01/2022	06:00	CPI (% y/y)	Dec	--	--	2.9%	!!!
	Israel	15/01/2022	16:30	CPI (% y/y)	Dec	5.40%	5.3%	5.3%	!!!

Source: Bloomberg, MUFG Research

Forecasts at a glance

EM EMEA economic growth, fiscal balance and current account balance

	Real GDP (%, y/y)			Fiscal balance (% of GDP)			Current account (% of GDP)		
	Latest	2021	2022	Latest	2021	2022	Latest	2021	2022
Bahrain	10.87	6.00	3.50	-17.86	-11.10	-4.66	-9.34	6.70	8.57
Czech Rep.	1.70	2.90	3.00	-5.88	-5.88	-4.01	-0.93	-0.93	-4.30
Egypt	74.71	3.30	5.50	-6.96	-6.96	-6.22	-4.36	-4.36	-3.63
Greece	9.63	6.50	4.30	-7.95	-7.95	-4.41	-6.49	-6.49	-6.72
Hungary	4.00	7.30	4.30	-6.77	-6.77	-4.89	-3.17	-3.17	-6.70
Iraq	4.43	3.60	6.70	-0.85	-0.85	11.06	7.83	7.83	16.30
Israel	-100.00	7.00	5.00	-10.66	-3.81	0.09	4.19	4.19	2.49
Jordan	2.56	2.00	2.20	-8.59	-8.05	-5.86	-5.73	-8.79	-6.72
Kenya	5.18	5.50	5.60	-8.02	-8.02	-6.96	-5.20	-5.20	-5.93
Kuwait	-8.86	4.50	6.40	-12.86	-0.35	14.11	3.21	16.31	29.05
Lebanon	-25.91	-5.20	2.00	-3.53	-	-	-15.83	-	-
Morocco	1.60	5.70	3.10	-5.94	-5.94	-5.32	-2.27	-2.27	-4.33
Nigeria	2.25	2.50	5.60	-5.58	-6.05	-6.24	-3.95	-0.42	-0.19
Oman	3.09	2.70	0.90	-3.24	-3.24	5.50	-6.07	-6.07	6.17
Poland	3.60	5.00	4.50	-1.87	-1.87	-4.12	-0.67	-0.67	-4.02
Romania	3.96	7.60	3.00	-6.86	-6.86	-6.42	-6.98	-6.98	-8.44
Qatar	6.30	2.90	6.00	4.39	4.39	12.52	-1.98	14.71	21.17
Russia	-2.46	4.40	-7.00	0.80	0.80	-2.30	6.88	6.88	12.16
Saudi Arabia	8.78	4.50	11.20	-2.35	-2.35	5.49	5.32	5.32	15.98
South Africa	4.10	5.10	1.60	-6.04	-6.04	-4.90	3.68	3.68	1.20
Turkey	3.85	9.80	1.60	-3.86	-3.86	-4.19	-1.66	-1.66	-5.66
Ukraine	-30.80	4.00	-28.00	-3.33	-3.33	-	3.31	-1.63	-
UAE	3.90	5.00	5.00	2.14	2.14	7.66	5.88	11.42	14.72

EM EMEA inflation, interest rates and FX

	Inflation (% y/y, average)			Policy interest rates (%)			FX (against USD)		
	Latest	2020	2021	Latest	End-2021	End-2022	Latest	End-2021	End-2022
Bahrain	3.90	3.90	1.90	6.50	6.00	3.00	0.38	0.38	0.38
Czech Rep.	16.20	3.90	11.30	7.00	3.75	5.50	23.95	24.89	21.38
Egypt	18.70	5.40	7.90	16.25	7.75	11.50	0.04	15.72	15.42
Greece	8.54	-0.10	0.40	2.50	2.00	0.40	1.07	1.14	1.13
Hungary	22.50	4.90	7.80	13.00	2.40	5.50	371.25	324.46	314.70
Iraq	4.50	6.40	5.00	4.00	4.00	5.00	1460.00	1460.00	1460.00
Israel	5.28	1.50	2.80	3.75	3.25	0.50	3.51	3.10	3.10
Jordan	4.99	1.60	2.00	7.25	6.75	2.00	0.71	0.71	0.71
Kenya	9.10	6.00	5.90	8.75	8.75	9.50	123.67	113.14	113.04
Kuwait	3.18	2.90	3.40	3.50	3.00	3.00	0.31	0.30	0.30
Lebanon	142.37	124.10	85.00	2.75	2.75	7.75	1518.95	1512.33	1512.33
Morocco	8.30	1.40	1.20	2.00	2.00	2.00	10.29	9.25	9.25
Nigeria	21.50	17.30	12.00	16.50	16.50	14.00	460.99	424.83	440.50
Oman	2.06	1.30	2.00	3.30	3.15	14.00	0.38	0.39	0.39
Poland	16.60	4.90	10.00	6.75	1.75	5.50	4.39	4.04	3.95
Romania	16.76	5.30	11.90	6.75	6.75	5.50	4.62	4.35	4.39
Qatar	5.30	1.60	4.00	5.25	4.75	2.50	3.64	3.64	3.64
Russia	11.98	6.60	16.60	7.50	5.75	15.00	118.69	74.68	71.13
Saudi Arabia	2.93	3.10	2.20	4.50	4.00	2.50	3.76	3.76	3.76
South Africa	7.40	4.50	6.20	7.00	3.50	4.75	17.08	15.94	15.80
Turkey	64.27	17.90	62.00	9.00	14.00	20.00	0.05	13.32	14.25
Ukraine	26.50	9.40	15.30	25.00	25.00	14.00	36.75	27.29	29.80
UAE	6.77	0.10	1.20	4.29	0.65	2.00	3.67	3.67	3.67

Core indicators

EM EMEA sovereign bond yields (%)

	Maturity	09-Dec	16-Dec	23-Dec	30-Dec	06-Jan	Change in yield (basis points) Week	MTD	YTD
Bahrain	10 years	5.62	5.58	6.13	6.16	5.99	-16.20	-16.06	-16.06
Czech Rep.	10 years	4.70	4.90	4.98	5.20	4.64	-55.30	-51.19	-51.19
Egypt	9 years	11.68	11.88	12.07	12.12	11.55	-57.10	-56.91	-56.91
Greece	8 years	3.46	3.82	3.99	4.04	3.78	-25.40	-24.11	-24.11
Hungary	8 years	9.73	9.14	9.37	9.85	8.63	-121.90	-120.55	-120.55
Israel	8 years	3.03	3.16	3.34	3.37	3.40	2.70	2.83	2.83
Jordan	5 years	6.00	5.93	6.37	6.48	6.34	-14.40	-14.38	-14.38
Kenya	7 years	9.76	10.02	10.27	10.31	10.22	-9.20	-9.05	-9.05
Kuwait	6 years	4.15	4.14	3.59	3.60	4.04	43.90	43.93	43.93
Lebanon	9 years	96.34	97.48	98.84	101.52	101.52	-0.20	18.40	18.40
Morocco	11 years	5.07	4.98	5.17	5.23	5.37	14.20	14.26	14.26
Nigeria	9 years	11.79	11.79	11.99	12.03	11.63	-40.10	-40.01	-40.01
Oman	9 years	5.79	5.67	5.80	5.91	5.80	-10.50	-10.51	-10.51
Poland	8 years	3.31	3.34	3.50	3.49	3.45	-3.90	-4.81	-4.81
Romania	7 years	5.54	5.66	5.78	5.85	5.78	-6.10	-5.89	-5.89
Qatar	9 years	4.16	4.11	4.21	4.37	4.31	-5.90	-5.98	-5.98
Russia	5 years	32.17	32.41	32.68	32.86	33.07	20.60	20.28	20.28
Saudi Arabia	8 years	4.43	4.32	4.51	4.61	4.51	-10.30	-10.37	-10.37
South Africa	9 years	6.89	6.94	6.88	7.03	6.68	-35.00	-37.01	-37.36
Turkey	7 years	8.07	8.21	8.24	8.33	8.37	4.40	4.60	4.60
Ukraine	8 years	39.38	39.70	40.11	41.11	41.73	61.60	55.76	55.76
Abu Dhabi	6 years	3.80	3.82	3.94	4.16	4.18	2.10	2.13	2.13
Dubai	8 years	4.68	4.54	4.70	4.62	4.55	-6.90	-6.95	-6.95

EM EMEA equity market (index)

	02-Dec	09-Dec	16-Dec	23-Dec	30-Dec	06-Jan	Change (%) Week	MTD	YTD
Bahrain	1,865	1,855	1,854	1,852	1,895	1,893	-0.14	-0.40	-0.40
Czech Rep.	1,199	1,173	1,166	1,198	1,202	1,249	3.96	3.96	3.96
Egypt	13,640	14,838	15,142	14,483	14,599	16,002	9.62	9.62	9.62
Greece	904	916	912	921	930	951	2.33	2.33	2.33
Hungary	45,804	44,182	45,069	45,008	43,794	45,420	3.71	3.71	3.71
Israel	1,875	1,847	1,821	1,786	1,797	1,790	-0.38	0.82	0.82
Jordan	2,502	2,506	2,497	2,475	2,502	2,584	3.31	5.41	5.41
Kenya	126	126	128	128	127	127	-0.49	-0.49	-0.49
Kuwait	7,567	7,450	7,351	7,209	7,292	7,122	-2.33	-2.12	-2.12
Lebanon	1,299	1,305	1,303	1,376	1,410	1,395	-1.11	-1.11	-1.11
Morocco	11,028	11,257	11,050	10,955	10,720	9,718	-9.35	-9.35	-9.35
Nigeria	48,155	48,882	49,316	49,706	51,251	51,222	-0.06	-0.06	-0.06
Oman	4,614	4,784	4,856	4,838	4,857	4,868	0.22	-0.47	-0.47
Poland	1,733	1,730	1,741	1,780	1,792	1,856	3.57	3.57	3.57
Romania	11,925	12,253	11,963	12,147	11,664	12,135	4.04	4.04	4.04
Qatar	12,018	11,489	10,977	10,989	10,681	11,145	4.35	6.69	6.69
Russia	2,180	2,178	2,133	2,124	2,154	2,156	0.11	0.68	0.68
Saudi Arabia	10,823	10,247	10,290	10,216	10,478	10,532	0.51	0.82	0.82
South Africa	68,237	68,350	66,897	67,324	66,955	70,810	5.76	7.56	7.56
Turkey	4,963	5,005	5,214	5,455	5,509	5,342	-3.03	-3.03	-3.03
Ukraine	519	519	519	519	519	514	-0.98	-0.98	-0.98
Abu Dhabi	10,552	10,252	10,328	10,306	10,211	10,198	-0.13	-0.70	-0.70
Dubai	3,324	3,325	3,329	3,316	3,336	3,302	-1.01	-0.62	-0.62

EM EMEA FX against USD*

	02-Dec	09-Dec	16-Dec	23-Dec	30-Dec	06-Jan	Change (%) Week	MTD	YTD
USD Index	104.55	104.81	104.70	104.31	103.52	103.88	-0.34	0.11	0.11
Bahrain**	0.38	0.38	0.38	0.38	0.38	0.38	-0.03	-0.05	-0.05
Czech Rep.	23.12	23.06	22.89	22.80	22.56	22.57	-0.04	0.57	0.57
Egypt	0.04	0.04	0.04	0.04	0.04	0.04	8.91	10.08	10.08
Greece***	1.05	1.05	1.06	1.06	1.07	1.06	0.57	-0.29	-0.29
Hungary	389.52	397.18	383.18	377.05	373.34	370.72	0.70	0.56	0.56
Israel	3.41	3.43	3.46	3.51	3.51	3.50	0.34	0.14	0.14
Jordan**	0.71	0.71	0.71	0.71	0.71	0.71	0.00	0.00	0.00
Kenya	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Kuwait	0.31	0.31	0.31	0.31	0.31	0.31	0.15	0.15	0.15
Lebanon	1519.75	1517.75	1517.75	1517.68	1519.75	1518.95	0.05	0.05	0.05
Morocco	10.55	10.55	10.50	10.50	10.44	10.33	1.09	1.48	1.48
Nigeria	444.77	445.26	450.22	454.25	460.82	461.11	-0.06	-0.04	-0.04
Oman**	0.39	0.39	0.39	0.39	0.39	0.39	-0.08	-0.08	-0.08
Poland	3.76	3.76	3.78	3.77	3.77	3.77	-0.01	-0.03	-0.03
Romania	4.68	4.67	4.64	4.62	4.62	4.63	-0.33	0.07	0.07
Qatar**	3.66	3.66	3.66	3.66	3.66	3.66	-0.01	-0.02	-0.02
Russia	62.07	62.53	64.77	69.10	74.19	72.47	2.31	3.95	3.95
Saudi Arabia**	3.76	3.76	3.78	3.77	3.77	3.77	-0.01	-0.03	-0.03
South Africa	17.51	17.35	17.68	17.02	17.04	17.11	-0.41	-0.28	-0.28
Turkey	18.64	18.65	18.69	18.66	18.71	18.72	-0.03	-0.38	-0.38
Ukraine	36.85	36.78	36.92	36.92	36.92	36.75	0.45	0.45	0.45
UAE**	3.67	3.67	3.67	3.67	3.67	3.67	0.00	0.00	0.00

Note: * Exchange rate quoted as amount of USD per currency in line with market convention, other exchange rates are amount per USD; ** 12 month forward given pegged against USD; *** EUR per USD

EM EMEA 5 year CDS spreads (basis points)

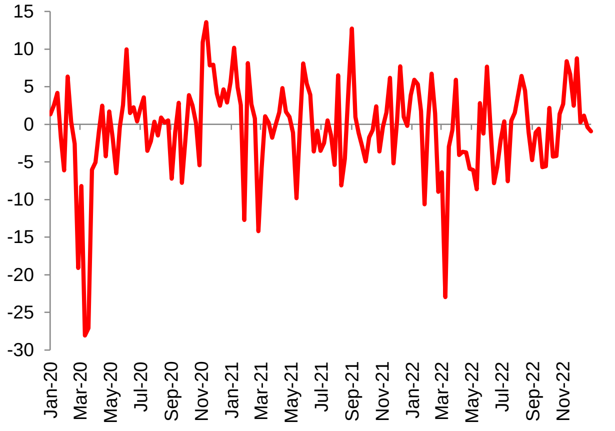
	02-Dec	09-Dec	16-Dec	23-Dec	30-Dec	06-Jan	Change in yield (basis points) Week	MTD	YTD
Bahrain	243.26	233.57	232.13	233.06	230.83	243.49	12.67	12.67	12.67
Czech Rep.	50.77	46.45	49.94	48.68	46.28	45.06	-1.22	-1.22	-1.22
Egypt	898.68	831.42	759.65	792.66	877.06	832.55	-44.51	-44.51	-44.51
Greece	152.53	141.22	136.75	129.44	138.00	129.26	-8.75	-8.75	-8.75
Hungary	221.12	224.77	216.68	196.79	197.80	212.36	14.56	14.56	14.56
Israel	38.18	39.88	38.50	40.94	45.67	46.05	0.38	0.38	0.38
Kenya	754.99	761.40	732.11	716.98	757.75	758.07	0.33	0.33	0.33
Kuwait	51.88	50.16	50.07	49.97	50.03	50.00	-0.03	-0.03	-0.03
Morocco	274.44	263.79	235.00	230.03	161.96	161.04	-0.92	-0.92	-0.92
Nigeria	947.58	905.26	799.15	795.95	794.37	775.96	-18.41	-18.41	-18.41
Oman	180.45	158.46	160.18	166.51	187.60	182.77	-4.83	-4.83	-4.83
Poland	134.57	121.61	127.99	118.81	114.95	120.39	5.44	5.44	5.44
Romania	314.18	286.21	295.75	265.00	267.25	283.96	16.71	16.71	16.71
Qatar	48.09	44.39	47.17	47.30	47.90	47.84	-0.06	-0.06	-0.06
Saudi Arabia	61.82	57.68	58.04	60.11	61.05	62.75	1.70	1.70	1.70
South Africa	260.99	240.14	266.78	265.53	250.13	251.11	0.97	0.97	0.97
Turkey	588.74	534.40	511.02	524.66	510.18	526.90	16.73	16.73	16.73
Abu Dhabi	48.05	44.39	45.91	46.50	44.19	43.03	-1.16	-1.16	-1.16
Dubai	100.40	95.40	95.33	87.27	84.04	84.38	0.34	0.34	0.34

Source: Bloomberg, MUFG Research

EM capital flows

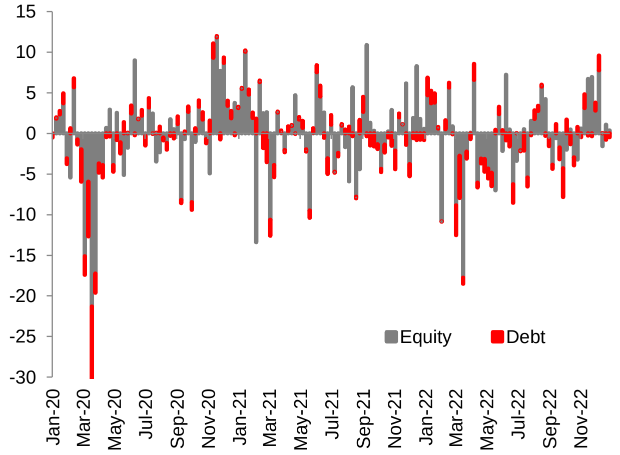
WEEKLY TOTAL EM OUTFLOWS OF USD1.0BN – 30 DECEMBER

TOTAL WEEKLY PORTFOLIO FLOWS (DEBT AND EQUITY) (USD BN)



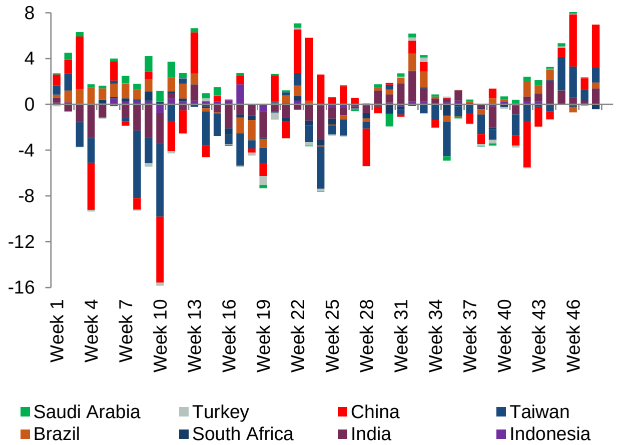
WEEKLY EM OUTFLOWS FROM EQUITY (USD-0.5BN) AND DEBT OUTFLOWS (USD-0.5BN) – 30 DECEMBER

WEEKLY DEBT AND EQUITY FLOWS (USD BN)



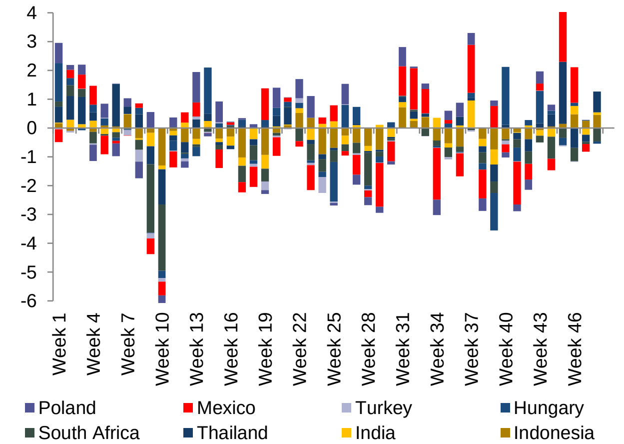
TAIWAN (USD-0.8BN) AND INDIA (USD-0.3BN) LED WEEKLY EM EQUITY OUTFLOWS – 30 DECEMBER

WEEKLY PORTFOLIO FLOWS BY COUNTRY, WEEK 1 = JANUARY 2022 (EQUITY) (USD BN)



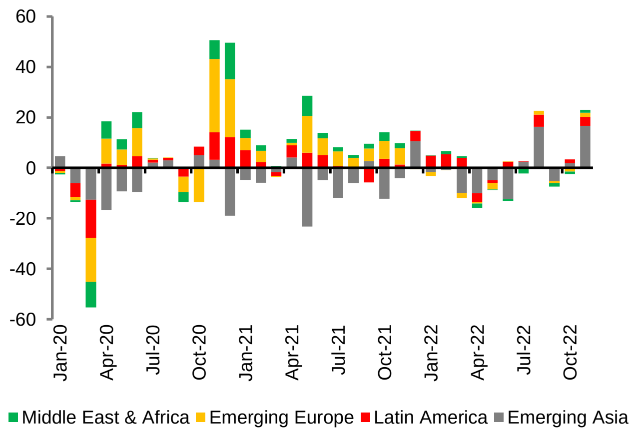
HUNGARY (USD-1.0BN) LED EM DEBT OUTFLOWS LAST WEEK – 30 DECEMBER

WEEKLY PORTFOLIO FLOWS BY COUNTRY, WEEK 1 = JANUARY 2021 (DEBT) (USD BN)



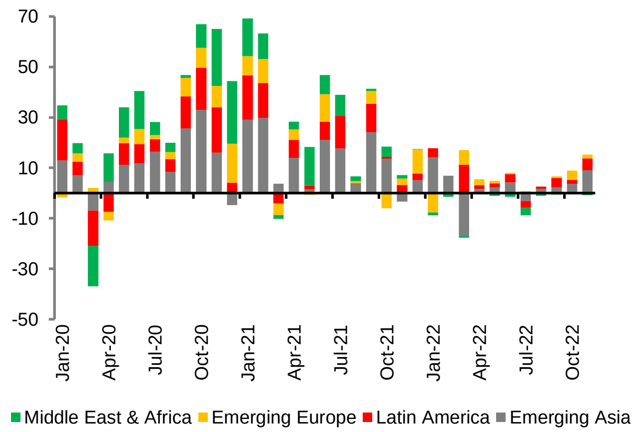
EM EQUITY INFLOWS TOTALLED USD23.0BN IN NOVEMBER, LED BY EM ASIA (USD16.6BN)

MONTHLY PORTFOLIO FLOWS BY REGION (EQUITY) (USD BN)



EM DEBT INFLOWS TOTALLED USD14.4BN IN NOVEMBER, LED BY EM ASIA(USD9.0BN)

MONTHLY PORTFOLIO FLOWS BY REGION (DEBT) (USD BN)



Source: Bloomberg, IIF, MUFG Research

Research

London:

MR DEREK HALPENNY
Head of Research, Global Markets EMEA
& International Securities
T: +44 (0)20 7577 1887

MR LEE HARDMAN
Senior Currency Analyst
T: I+44 (0)20 7577 1968

MS MOMOKO MIYACHI
Research Assistant
T: +44 (0)20 7577 1886

Shanghai:

MR MARCO SUN
Chief Financial Markets Analyst
T: +86 21 2063 5485

Hong Kong:

MS LIN LI
Head of Global Markets Research Asia
T: +852 2862 7005

New York:

MR GEORGE GONCALVES
Head of US Macro Strategy
T: +1-212- 405-6687

Dubai:

MR EHSAN KHOMAN
Head of Commodities, ESG and Emerging Markets Research – EMEA
T: +971 (0)4 387 5033

Tokyo

MR TEPPEI INO
Tokyo Head of Global Markets Research
T: +81 (0) 3 6214 4185

MS SUMINO KAMEI
Senior Analyst
T: +81 (0) 3 6214 4179

MR TOMOKI HIRAMATASU
Analyst
T: +81 (0) 3 6214 4152

MR TAKAHIRO SEKIDO
Chief Japan Strategist
T: +81 (0) 3 6214 4150

MR KENTO SAITO
Research Assistant
T: +81 (0) 3 6214 4149

MR TOSHIYUKI SUZUKI
Global Market Economist
T: +81 (0) 3 6214 4148

Singapore:

MR JEFF NG
Senior Currency Analyst
T: +65 6918 5536

MS SOPHIA NG
Currency Analyst
T: +65 6918 5537

Sao Paulo:

MR CARLOS PEDROSO
Chief Economist
T: +55-11-3268-0245

MR MAURICIO NAKAHODO
Senior Economist
T: +55-11-3268-0420

Disclaimer

This document has been prepared by MUFG Bank, Ltd. (the "Bank") for general distribution. It is only available for distribution under such circumstances as may be permitted by applicable law and is not intended for use by any person in any jurisdiction which restricts the distribution of this document. The Bank and/or any person connected with it may make use of or may act upon the information contained in this document prior to the publication of this document to its customers.

Neither the information nor the opinions expressed in this document constitute or are to be construed as, an offer, solicitation or recommendation to buy, sell or hold deposits, securities, futures, options or any other derivative products or any other financial products. This document has been prepared solely for informational purposes and does not attempt to address the specific needs, financial situation or investment objectives of any specific recipient. This document is based on information from sources deemed to be reliable but is not guaranteed to be accurate and should not be regarded as a substitute for the exercise of the recipient's own judgment. Historical performance does not guarantee future performance. The Bank may have or has had a relationship with or may provide or has provided financial services to any company mentioned in this document. Our group affiliates, from time to time, may have interests and/or underwriting commitments in the relevant securities mentioned in this document or related instruments and/or may have positions or holdings in such securities or related instruments.

All views in this document (including any statements and forecasts) are subject to change without notice and none of the Bank, its head office, branches, subsidiaries and affiliates is under any obligation to update this document.

The information contained in this document has been obtained from sources the Bank believed to be reliable but the Bank does not make any representation or warranty nor accepts any responsibility or liability as to its accuracy, timeliness, suitability, completeness or correctness. The Bank, its head office, branches, subsidiaries and affiliates and the information providers accept no liability whatsoever for any loss or damage of any kind arising out of the use of or reliance upon all or any part of this document.

The Bank retains copyright to this document and no part of this document may be reproduced or re-distributed without the written permission of the Bank. The Bank expressly prohibits the distribution or re-distribution of this document to private or retail clients, via the Internet or otherwise, and the Bank, its head office, branches, subsidiaries and affiliates accept no liability whatsoever to any third parties resulting from such distribution or re-distribution.

MUFG Bank, Ltd. ("MUFG Bank") is a limited liability stock company incorporated in Japan and registered in the Tokyo Legal Affairs Bureau (company no. 0100-01-008846). MUFG Bank's head office is at 7-1 Marunouchi 2-Chome, Chiyoda-Ku, Tokyo 100-8388, Japan. MUFG Bank's London branch is registered as a UK establishment in the UK register of companies (registered no. BR002013). MUFG Bank is authorised and regulated by the Japanese Financial Services Agency. MUFG Bank's London branch is authorised by the Prudential Regulation Authority (FCA/PRA no. 139189) and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of MUFG Bank London branch's regulation by the Prudential Regulation Authority are available from us on request.

This Presentation has been prepared by MUFG Bank. This Presentation is not intended for Retail Clients within the meaning of the United Kingdom PRA/FCA rules and should not be distributed to Retail Clients. This Presentation has been prepared for information purposes only and for the avoidance of doubt, nothing express or implied in this Presentation constitutes any commitment by MUFG Bank or any of its subsidiaries or affiliates to arrange and/or provide any party with any services and/or financing. This Presentation does not constitute legal, tax, accounting or investment advice.

MUFG Bank retains copyright to this Presentation and no part of this Presentation may be reproduced or redistributed without the prior written permission of MUFG Bank. MUFG Bank and its subsidiaries and affiliates accept no liability whatsoever to any third parties resulting from any unauthorised distribution. MUFG Bank and its subsidiaries, affiliates, directors and employees accept no liability whatsoever for any reliance on the information contained in the Presentation and make no representation or warranty as to its accuracy and completeness.

This Presentation is based on information from sources deemed by MUFG Bank to be reliable but is not guaranteed to be accurate and should not be regarded as a substitute for the exercise of the recipient's own judgement.

The views contained in this Presentation (including any statements and forecasts) are solely those of MUFG Bank and are subject to change without notice. MUFG Bank is under no obligation to correct any inaccuracies in the Presentation or update the information contained therein.

The provision of the service described in this Presentation is or will be subject to an agreement constituting terms of business ("the Agreement"). In the event of a conflict between information in this Presentation and the Agreement, the latter shall prevail.

The MUFG Bank Presentation and all claims arising in connection with it are governed by, and to be construed in accordance with, English law.

The Bank's DIFC branch - Dubai is part of the Mitsubishi UFJ Financial Group and is located at Level 3, East Wing, The Gate, Dubai International Financial Centre, Dubai, UAE. The Bank's Dubai branch is regulated by the Dubai Financial Services Authority (DFSA) (License number: F000470) and the Japanese Financial Services Agency.

The Bank's Doha office is part of the Mitsubishi UFJ Financial Group and is located at Suite A3, Mezzanine floor, Tornado Tower, West Bay, Doha, Qatar. The Bank's Doha branch is regulated by the Qatar Financial Centre Regulatory Authority (QFCRA) (Licence number: 00103) and the Japanese Financial Services Agency.

The Bank's Abu Dhabi branch is part of the Mitsubishi UFJ Financial Group and is located at 1st Floor, IPIC Square, Muroor Street, PO Box 2174, Abu Dhabi, UAE. The Bank's Abu Dhabi branch is regulated by the Central Bank of the U.A.E (CBUAE) (License number:CN-1002032) and the Japanese Financial Services Agency.

The Bank's Bahrain branch is part of the Mitsubishi UFJ Financial Group and is located at 12th Floor, West Tower, Bahrain Financial Harbor, Bahrain. The Bank's Bahrain branch is regulated Bahrain by the Central Bank of Bahrain (CBB) (License number WB/020) and the Japanese Financial Services Agency.

This presentation has been prepared by the Bank and is not intended for Retail Clients within the meaning of the PRA/FCA, the DFSA, QFCRA, CBB and CBUAE rules and should not be distributed to Retail Clients. This presentation has been prepared for information purposes only and, for the avoidance of doubt, nothing express or implied in this presentation constitutes any commitment by the Bank, its subsidiaries or affiliates to arrange and/or provide any party with any services and/or financing. This presentation does not constitute legal, tax, accounting or investment advice. The Bank retains copyright to this presentation and no part of this presentation may be reproduced or redistributed without the prior written consent of the Bank. The Bank and its subsidiaries and affiliates accept no liability whatsoever to any third party resulting from any unauthorised distribution. The Bank, its subsidiaries, affiliates and each of their respective directors and employees accept no liability whatsoever for any reliance on the information contained in the presentation and make no representation or warranty as to its accuracy and completeness. This presentation is based on information from sources considered by the Bank to be reliable but is not guaranteed to be accurate and should not be regarded as a substitute for the exercise of the recipient's own judgement. The views, opinions and other information contained in this presentation (including, without limitation, any statements or forecasts) are solely those of the Bank and are subject to change without notice.

Notwithstanding the foregoing, nothing contained herein shall be deemed to limit or exclude liability on the part of the Bank to the extent it is not permitted to exclude in accordance with the laws administered by the Dubai Financial Services Authority (DFSA).

The Bank is under no obligation to correct any inaccuracies or update the information contained in this presentation. The provision of the service described in this presentation is, or will be, subject to an agreement constituting terms of business. In the event of a conflict between information contained in this presentation and such terms of business, the latter shall prevail. This disclaimer is governed by English law.

This report shall not be construed as solicitation to take any action such as purchasing/selling/investing in financial market products. In taking any action, the reader is requested to act on the basis of his or her own judgment. This report is based on information believed to be reliable, but the Bank does not guarantee or accept any liability whatsoever for, its accuracy. The Bank, its affiliates and subsidiaries and each of their respective officers, directors and employees accept no liability whatsoever for any loss or damage of any kind arising out of the use of all or any part of this report. The contents of the report may be revised without advance notice. The Bank retains copyright to this report and no part of this report may be reproduced or re-distributed without the Bank's written consent. The Bank expressly prohibits the re-distribution of this report to Retail Customers (within the meaning of the PRA/FCA, the DFSA, QFCRA, CBB, CBUAE rules), via the internet or otherwise and the Bank, its subsidiaries and affiliates accept no liability whatsoever to any third parties resulting from such re-distribution.ta9

The author(s) mentioned on the cover of this report hereby certify(ies) (or, where multiple authors are responsible, individually certify with respect to each security that the author covers in this report) that the views expressed in this report accurately reflect their personal views about the subject company(ies) and its (their) securities, and also certify(ies) that they have not been, are not, and will not be receiving direct or indirect compensation in exchange for expressing any specific recommendation(s) or view(s) in this report.

"Trading view" offers a overview of what our professional traders and desk analysts are watching in the markets, their commentary and views are theirs alone and are not intended to be construed as investment advice. This material is intended to be of general interest only and should not be considered a recommendation or solicitation to buy, sell or hold any security or to adopt any investment strategy. The information provided in this material is not intended as a complete analysis of every material fact regarding any country, region or market.

Scenarios and/or case studies referenced herein are used solely for illustrative purposes; through its trading desk, MUFG may or may not currently hold positions in the jurisdictions outlined in the content, and as commentary from an active trading desk the information provided is not considered to be "investment research" for any particular strategy, investment product or indication of trading intent of MUFG or any MUFG client, but solely the views of the author.

This report has been prepared by the Global Markets Research, US Rates and Credit Strategy desks within MUFG Bank , Ltd. ("MUBK") and MUFG Securities EMEA plc ("MUS(EMEA)") and may be distributed to you either by MUBK, MUS(EMEA) or by another subsidiary of the Mitsubishi UFJ Financial Group ("MUFG").

Legal entities and branches

The securities related businesses within MUFG (together referred to in this presentation as "MUFG Securities") are: (1) MUFG SECURITIES EMEA PLC ("MUS(EMEA)") which is authorised in the United Kingdom by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA (FS Registration Number 124512). MUS(EMEA) has a branch office that is registered at Level 3, East Wing, The Gate, Dubai International Financial Centre, PO Box 506894, Dubai, UAE ("Dubai Branch"). The Dubai Branch is authorised to operate in the Dubai International Financial Centre ("DIFC") as a Non-DIFC Entity (Commercial License Number CL1656) and is regulated by the Dubai Financial Services Authority (Reference Number F002623); (2) (MUFG Securities (Europe) N.V. ("MUS (EU)") which is authorized and regulated in the Netherlands by the Dutch Authority for the Financial Markets (AFM) and also regulated by De Nederlandsche Bank (DNB). MUS (EU) Paris Branch is regulated in France by the Autorité de contrôle prudentiel et de résolution (ACPR) and the Autorité des marchés financiers (AMF); (3) MUFG SECURITIES AMERICAS INC. ("MUS(USA)") which is registered in the United States with the Securities and Exchange Commission ("SEC") and regulated by the Financial Industry Regulatory Authority ("FINRA") (SEC# 8-43026; CRD# 19685); (4) MUFG SECURITIES (CANADA), LTD. ("MUS(CAN)") which is registered in Canada with the Ontario Securities Commission ("OSC") and regulated by the Investment Industry Regulatory Organization of Canada ("IIROC"); (5) MUFG SECURITIES ASIA LIMITED ("MUS(ASIA)") which is incorporated in Hong Kong, licensed under the Hong Kong Securities and Futures Ordinance and regulated by the Hong Kong Securities and Futures Commission (Central Entity Number AAA889). MUS(ASIA) is registered as a foreign company under the Corporations Act 2001 of Australia ARBN No. 169 329 453; and (6) MUFG Securities Asia (Singapore) Limited ("MUS(SPR)") which is licensed as an approved merchant bank by the Monetary Authority of Singapore. In respect of the financial services provided to wholesale clients in Australia, MUS(ASIA), MUS(EMEA), MUS(USA) and MUS(SPR) are each exempt from the requirement to hold an Australian financial services licence under the Corporations Act 2001 of Australia under the Australian Securities and Investments Commission Class Order Exemption CO 03/1099, CO 03/1103, CO 03/1100, and CO 03/1102, respectively. Each of MUS(ASIA), MUS(EMEA), MUS(USA), MUS(CAN), and MUS(SPR) are regulated under the laws of Hong Kong, the United Kingdom, the United States, Canada and Singapore respectively, which differ from Australian laws.

MUFG Bank Ltd ("MUBK"), is a limited liability stock company incorporated in Japan and registered in the Tokyo Legal Affairs Bureau (company no. 0100-01-008846). MUBK's head office is at 7-1 Marunouchi 2-Chome, Chiyoda-Ku, Tokyo 100-8388, Japan. MUBK's London branch is at Ropemaker Place, 25 Ropemaker Street, London EC2Y 9AN, and is registered as a UK establishment in the UK register of companies (registered no. BR002013). MUBK is authorised and regulated by the Japanese Financial Services Agency. MUBK's London branch is authorised by the UK Prudential Regulation Authority ("PRA") and regulated by the UK Financial Conduct Authority ("FCA") with limited regulation by the PRA.

General disclosures

This report is for information purposes only and should not be construed as investment research as defined by MIFID 2 or a solicitation of any offer to buy or sell any security, commodity, futures contract or related derivative (hereafter "instrument") or to participate in any trading strategy. This report does not constitute a personal recommendation and does not take into account the individual financial circumstances, needs or objectives of the recipients. Recipients should therefore seek their own financial, legal, tax or other advice before deciding to invest in any of the instruments mentioned in this report.

Certain information contained in this report has been obtained or derived from third party sources and such information is believed to be correct and reliable but has not been independently verified. MUFG Securities does not make any guarantee, representation, warranty or undertaking, express or implied, as to the fairness, accuracy, reliability, completeness, adequacy or appropriateness of any information or comments contained in this report. Furthermore the information may not be current due to, among other things, changes in the financial markets or economic environment. MUFG Securities has no obligation to update any such information contained in this report.

This report is not intended to forecast or predict future events. Past performance is not a guarantee or indication of future results. Any prices provided herein (other than those identified as being historical) are indicative only and do not represent firm quotes as to either price or size.

This report is proprietary to MUFG Securities and may not be quoted, circulated or otherwise referred to without our prior written consent. Notwithstanding this, MUFG Securities shall not be liable in any manner whatsoever for any consequences or loss (including but not limited to any direct, indirect or consequential loss, loss of profits and damages) arising from any reliance on or usage of this report and accepts no legal responsibility to any investor who directly or indirectly receives this material.

Country and region specific disclosures

This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or is located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to any law, regulation or rule. In this regard, please note the following in relation to the jurisdictions in which MUFG Securities has a local presence:

• United Kingdom / European Economic Area (EEA): This report is intended for distribution to a "professional client" or "eligible counterparty" as those terms are defined in the rules of the FCA and PRA. In other EEA countries, this report is intended only for persons regarded as professional investors (or equivalent) in their home jurisdiction.

• United States of America: This report, when distributed by MUS(USA), is intended for Institutional Investors ("Institutional Accounts" as defined by FINRA Rule 4512(c)). When distributed by a non-US affiliate of MUS(USA), this report is intended for distribution solely to "major U.S. institutional investors" or "U.S. institutional investors" pursuant to Rule 15a-6 under the U.S. Securities Exchange Act of 1934, as amended. Securities referenced in this report may have been underwritten by MUS(USA) and/or its affiliates. Nothing in this report should be considered an offer or solicitation of an offer to buy or sell securities or any other financial product or a commitment of any kind with respect to any transaction.

IRS Circular 230 Disclosure: MUFG Securities does not provide tax advice. Accordingly, any discussion of U.S. tax matters included herein (including any attachments) is not intended or written to be used, and cannot be used, in connection with the promotion, marketing or recommendation by anyone not affiliated with MUS(USA) of any of the matters addressed herein or for the purpose of avoiding U.S. tax-related penalties.

• Hong Kong: This report is only intended for distribution to a "professional investor" as that term is defined in the Securities and Futures Ordinance and should not be passed onto any other person.

• Singapore: This report is only intended for distribution to an "institutional investor", "accredited investor" or "expert investor" as those terms are defined under regulation 2 of the Financial Advisers Regulation. It is solely for the use of such investors and shall not be distributed, forwarded, passed on or disseminated to any other person. Investors should note that, as a result of exemptions that apply when this report is distributed to "accredited investors" and "expert investors", MUSS is exempt from complying with certain requirements under the Financial Advisers Act, including section 25 of the Financial Advisers Act (which requires a financial adviser to disclose all material information on certain investment products), section 27 (which requires a financial adviser to have a reasonable basis for making recommendations on investments) and section 36 (which requires a financial adviser to disclose any interests that it holds in securities that it recommends).

• Canada: When distributed in Canada, this report is distributed by MUS(EMEA) or MUSA. MUS(EMEA) operates under an International Dealer Exemption from registration with the securities regulators in Alberta, British Columbia, Manitoba, Ontario and Québec. MUSA operates under an International Dealer Exemption from registration with the securities regulators in all Canadian Provinces and Territories. This report is only intended for a "permitted client" as that term is defined under the National Instrument 31-103 in Canada and is not intended for re-distribution to any other person. The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Under no circumstance is the information contained herein to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient.

• Japan: This Note, when distributed by MUFG Securities affiliates located outside of Japan, is intended for distribution in accordance with Article 58-2 of the Financial Instruments Exchange Act 1948 ("FIEA") i) to a "Financial Instruments Business Operator" engaged in "Securities-Related Business" as defined in the FIEA or ii) to the government, the Bank of Japan, a qualified financial institution defined in Article 209 of the Cabinet Office Ordinance Concerning Financial Instruments Business, Etc., or an Investment Manager.

When distributed by Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., this Note is intended for distribution to a "Professional Investor (tokutei-toushika)" as defined in the FIEA.

• United Arab Emirates: This report is only intended for distribution to a "Professional Client" or "Market Counterparty" as those terms are defined under the rules of the Dubai Financial Services Authority and only a person meeting the criteria for these terms should act upon this report.

• Australia: This Note is only intended for distribution to persons in Australia who are sophisticated or professional investors for the purposes of section 708 of the Corporations Act of Australia, and are wholesale clients for the purposes of section 761G of the Corporations Act of Australia. This Note is not intended to be distributed or passed on, directly or indirectly, to any other class of persons in Australia.

Other jurisdictions:

MUFG Securities also relies on local registrations or regulatory exemptions in order to undertake certain securities business in other countries. In Thailand, MUS(EMEA) has a derivatives dealer registration with the Securities and Exchange Commission, Thailand. In Canada, MUS(EMEA) and MUS(USA) each operate under an international dealer exemption registered with the securities regulators. MUS(EMEA) operates under the exemption in Alberta, Quebec, Ontario, British Columbia and Manitoba. MUS(USA) operates under the exemption in all Canadian Provinces and Territories.

"Trading views" offers an overview of what our professional traders and desk analysts are watching in the markets, their commentary and views are theirs alone and are not intended to be construed as investment advice. This material is intended to be of general interest only and should not be considered a recommendation or solicitation to buy, sell or hold any security or to adopt any investment strategy. The information provided in this material is not intended as a complete analysis of every material fact regarding any country/region/market.

Scenarios and/or case studies referenced herein are used solely for illustrative purposes; through its trading desk, MUFG may or may not currently hold positions in the jurisdictions outlined in the content, and as commentary from an active trading desk the information provided is not considered to be "investment research" for any particular strategy, investment product or indication of trading intent of MUFG or any MUFG client, but solely the views of the author. yy