GLOBAL FOREIGN EXCHANGE COMMITTEE

SUMMARY OF MARKET CONDITIONS BY GFXC MEMBER COMMITTEES

Material for 5-6 December 2022 GFXC Meeting

Market Conditions

Liquidity conditions in foreign exchange markets – including those for the Australian dollar – have deteriorated in recent months, relative to conditions at the start of the year. Despite this, market functioning has remained mostly orderly.

Liquidity conditions in spot foreign exchange markets have deteriorated in recent months, relative to conditions observed earlier in 2022. It was also noted there were several events in both USD/YEN and GBP/USD during September and October with significant intra-day volatility. The speed of some market moves during this time created challenges for some market participants where their systems struggled with market update speeds. Top-of-book bid-offer spreads for major currencies had widened by approximately 25 per cent over this time. Broader liquidity measures such as depth-of-book also deteriorated and suggested that liquidity was only around 60 per cent of the levels seen earlier in the year. Uncertainty around the evolution of global inflation and the growth outlook is likely to see heightened volatility persist in the near term.

Market functioning in the FX swaps market was considered orderly and allowed for the facilitation of customer trades, albeit at wider spreads than seen earlier in the year. Wider spreads reflected the heightened interest rate volatility, with even the most liquid interest rate markets seeing reduced liquidity in recent months. Members also discussed the premium for US dollars around the turn of the year, with the basis emerging earlier this year than in recent years. This led to some concerns around swap market functioning into the year-end.

Buy-side Outreach

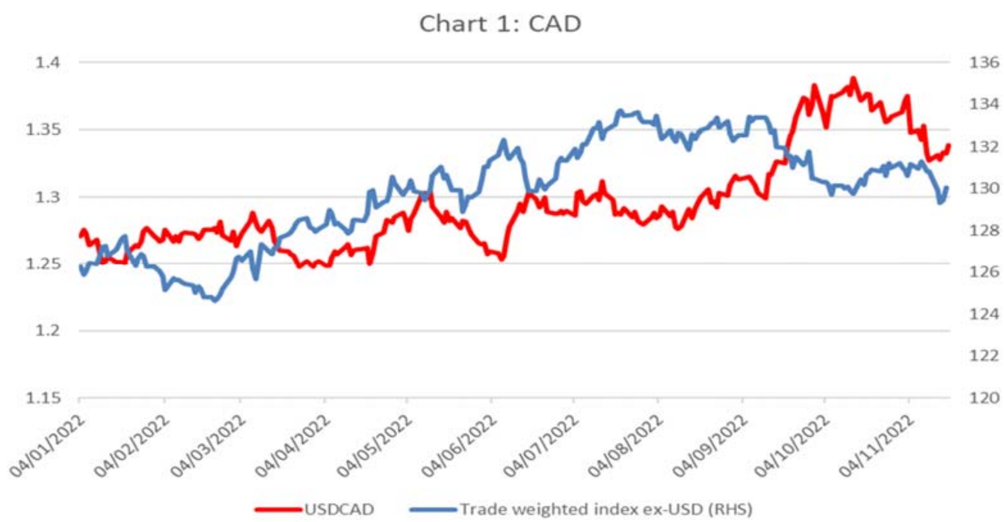
Over recent months AFXC sell-side members had conducted a number of calls with a range of both real money and corporate clients regarding their engagement with the FX Global Code. There was a reasonable – but far from universal – awareness of the Code amongst these buy-side participants. However, many of the buy-side firms contacted said they were not in a position to sign a Statement of Commitment to the Code at this time. Factors cited as constraining buy-side participants included changing organisational structures, where several of the participants had only recently in-housed their FX trading activities (and therefore were only just starting to consider the Code); it was noted that follow-up calls would be arranged with these market participants in the future. Another factor commonly cited as constraining buy-side participants was that many of them already felt they had a high compliance burden given a range of regulatory responsibilities, and therefore adoption of the Code was not a high priority. In conducting the outreach, the AFXC members directed the buy-side participants to the guides and tools on the GFXC website for future reference.

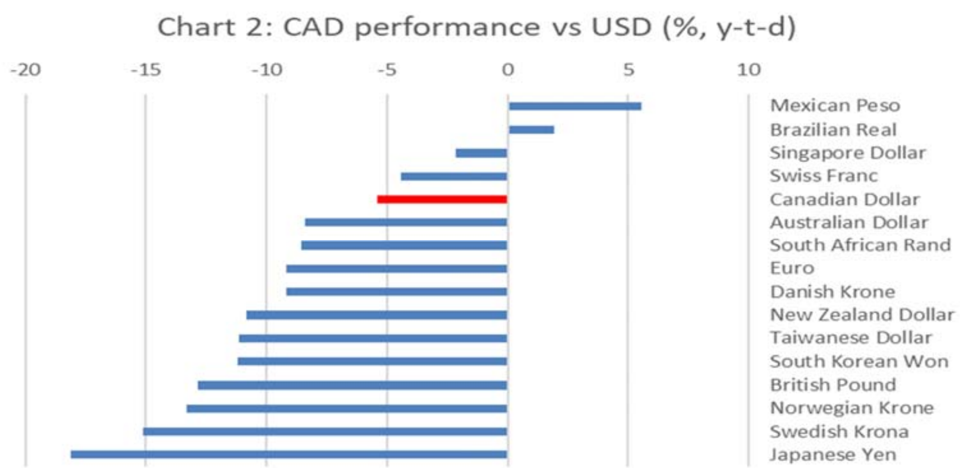
AFXC

Canadian
Foreign Exchange
Committee

Update on Canadian dollar market conditions

The Canadian dollar depreciated by about 4% against the US dollar since the June GFXC meeting. On an ex-USD trade-weighted basis, the CAD has appreciated about 1.5% over the same period (Chart 1). Year-to-date, the CAD is about 5.7% weaker against the US dollar but is one of the best performing G-10 currencies (Chart 2).

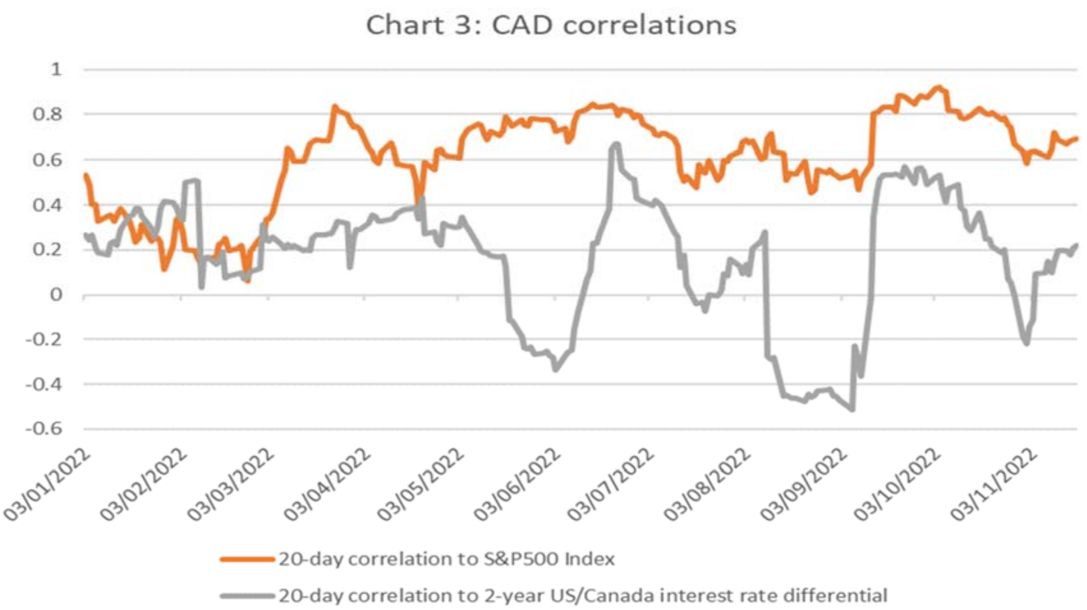




November 18, 2022

Canadian Foreign Exchange Committee

Following a period of relative stability against the USD, the CAD started to depreciate against the US dollar in September. An increase in safe haven flows into the US dollar driven by increased economy uncertainty was the key driver of CAD weakness. Tentative signs that the Canadian economy was beginning to slow and a growing divergence between Canadian and US interest rates (as Canadian rates fell further below those of the US) further contributed to CAD weakness. USDCAD reached a high of almost 1.40 in mid-October. However, as risk aversion eased and the US dollar strength reversed, the CAD has rebounded modestly. As chart 3 illustrates, the Canadian dollar remains highly correlated to the S&P 500 Index, a proxy for broader risk aversion.

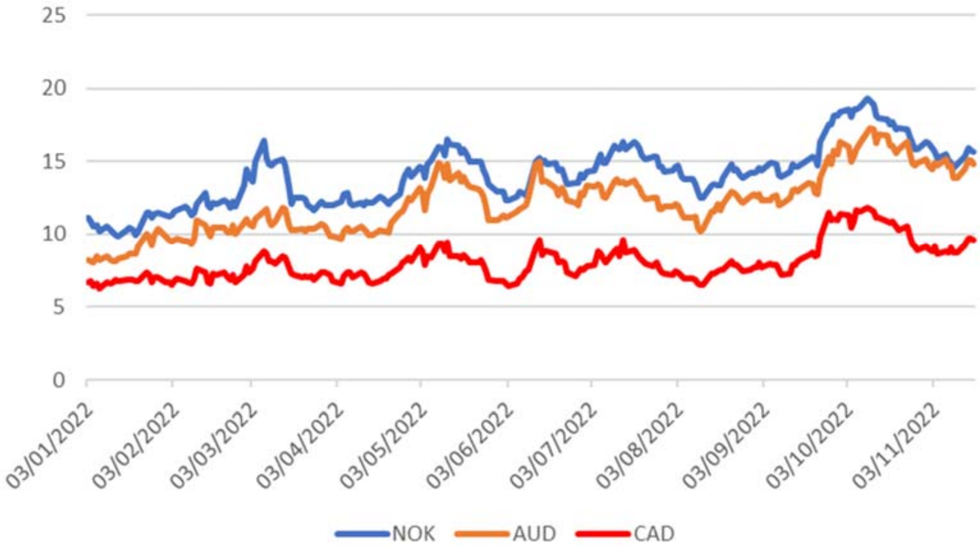


Similar to other major currencies, CAD implied volatility has recently increased. However, volatility remains lower than other commodity linked currencies (chart 4). Dealers have noted some deterioration in market liquidity since the GFXC meeting. However overall, market functioning in the CAD has been relatively good, in spite of the increased volatility in FX and interest rate markets. Bid-offer spreads in the spot market have widened but remain well below levels seen during the Covid-19 crisis.

FX basis swap spreads over the turn of the year have recently widened. Dealers have noted a decline in volumes in the forward market but no specific strains in US dollar funding. US dollar funding is available, albeit at higher rates.

Various positioning measures indicate that CAD positioning is a little short after long positions were unwound since September.

Chart 4: 1m implied volatility



CFXC

Updates on Market Developments and Outreach Activities from the China FX Committee

1. China's FX Market Overview

i. RMB exchange rate: Since the beginning of 2022, the RMB exchange rate has featured two-way fluctuation and remained basically stable at an reasonable and equilibrium level. The RMB depreciated against the U.S. dollar after mid-August due to a confluence of factors. However, the trend has been reversed since November as the U.S. Dollar Index fell rapidly and China's COVID-19 policies were further improved. Compared with the end of June, the RMB depreciated around 4.6% against the U.S. dollar based on the USD/CNY fixing rate, which was 7.0421 as of mid-November. In trade-weighted terms, the RMB depreciated 4.0% against a basket of currencies based on the CFETS RMB Index, which was 97.90 as of mid-November. As the China-U.S. interest rate spread turned negative, the USD/CNY swap curve moved downside into the negative territory. The implied volatility of USD/CNY options was on the rise.

ii. Market liquidity: In 2H 2022, China's FX market has seen more active trading and relatively abundant liquidity, supported by improving economic fundamentals. From July to October, the average daily trading volume in the interbank FX market was above USD 130 billion.

iii. Cross-border capital flows: In the first three quarters, China's current account registered a surplus of USD 310.4 billion, increasing 56% year on year and accounting for about 2.4% of GDP, within a reasonable equilibrium range. Cross-border capital flows have been generally stable and orderly.

2. Issues to Monitor

Market participants suggest that they will keep a close eye on the possible shift of monetary policy stances in major economies, China's further economic recovery driven by a package of policy support, as well as geopolitical factors.

3. Outreach Activities

Based on the GFXC guidance on the renewal of Statements of Commitment (SoC), the China FX Committee (CFXC) has been making efforts to further embed the updated FX Global Code in China’s FX market. The CFXC has been actively engaging China’s wholesale FX market participants, well beyond the CFXC members, on SoC renewal, including further aligning their FX market activities with the updated FX Global Code by using the standardized templates such as Disclosure Cover Sheets. As of the end of November, a total of 49 market participants have renewed their SoCs, and 31 have completed and published their Disclosure Cover Sheet, with more to follow shortly.

HKFXC Updates on Market Developments

- As the Fed continued to hike policy rates since March this year, HKD-USD interest-rate differentials widened, with 1-month HIBOR-LIBOR spread reaching the widest level of -140 basis points in mid-July.
- The wide interest-rate differentials drove the HKD/USD spot rate to 7.85 and the weak-side Convertibility Undertaking (CU) had been triggered multiple times since May, with the Aggregate Balance[1] reduced as a result.
- The drain in liquidity was pronounced in Q3, with the Aggregate Balance reduced from HKD233 billion (USD29.7 billion) to HKD123 billion (USD15.7 billion). As a result, 1-month HIBOR-LIBOR spread narrowed from -140 basis points in mid-July to -60 basis points at the end of September. The trend continued in Q4 as HKD interbank rates continued to play catch up with USD interbank rates. The Aggregate Balance is now standing at about HKD96 billion (USD12.3 billion), with 1-month HIBOR-LIBOR spread narrowed further to -30 basis points as at 21 November. With a weaker USD due to lower-than-expected US CPI inflation rate in October, narrowed HKD-USD interest rate spreads and continued net inflows from the southbound Stock Connects providing support to the HKD, the USD/HKD spot rate has now moved away from 7.85, hovering around 7.80-7.81. In the longer term, HKD interest rates are expected to continue to increase at a similar pace with their USD counterparts.
- The weak-side CU triggering and the interest rate automatic adjustment process as described above are completely within the design and expectations of the Linked Exchange Rate System (LERS). The market has sufficient understanding and operational experience of, as well as strong confidence in, the LERS.
- On the commercial interest rates, many banks have already raised their saving and lending rates.

[1] The Aggregate Balance is the sum of the balances in the clearing accounts maintained by the banks with the Hong Kong Monetary Authority ("HKMA") representing the level of interbank liquidity.

Specifically, following the US policy rate hike in early November, many banks further raised their best lending rates by 25 basis points, after the 12.5-basis point increase in late September.

Updates for December 2022 GFXC Meeting

1. Trend in Domestic Currency and measures taken by the Reserve Bank of India (since July 2022)

i. The global macroeconomic and financial environment has continued to remain turbulent due to geo-political tensions, tightening of monetary policy in major economies and intermittent surges of volatility in financial markets. As a result, the dollar continued to strengthen and touched a two-decade high of 114.78 (on an intra-day basis) towards the end of September 2022. Incidentally, during the second half of the calendar year (till November 17, 2022) Dollar strengthened by 1.91%.

ii. While India's monthly trade deficit has continued to hover around $25 bn per month, softening crude prices, net FPI inflows of $9.67 bn (from July 01, 2022 to November 17, 2022, Source: NSDL) in equities, and softening in Dollar after lower-than-expected U.S. CPI inflation for October 2022 provided support to the Rupee. INR has depreciated by 3.26% (till November 17, 2022) during the second half of the calendar year.

iii. Headline CPI has continued to breach the upper tolerance band of the Monetary Policy Committee (MPC) amid global geopolitical developments and elevated imported inflation pressures. The MPC has undertaken calibrated policy actions keeping in mind the medium-term growth prospects. The policy repo rate now stands at 5.90%, with 50-bps hikes in August and September each. Notably, the headline CPI inflation rate fell to a three-month low of 6.77 percent in October from 7.41 percent in September.

iv. The average one-month implied volatility of USDINR has been 5.48% (till November 17, 2022) as against the average of 5.33% in the first half of the calendar year.

v. The generic 10-year Government bond yield has decreased by 17 bps from 7.45% (June 30, 2022) to 7.28% (November 17, 2022) tracking almost a 22% fall in crude prices, and signs of easing inflation.

2. Regulatory Developments

i. <u>International trade settlement in Indian Rupees:</u> To promote growth of global trade with an emphasis on exports from India and to support increasing interest of global trading community in INR, a new arrangement for invoicing, payment, and settlement of exports/imports in INR was introduced in July 2022.

ii. To broad base the sources of forex funding while ensuring overall macroeconomic and financial stability, the following temporary measures were undertaken
   a) Exemption from Cash Reserve Ratio and Statutory Liquidity Ratio on Incremental Foreign Currency Non-Resident (B) and Non-Resident External Term Deposits
   b) Relaxation of regulations pertaining to Interest Rates on Foreign Currency Non-Resident (B) and Non-Resident External Term Deposits
   c) Increased borrowing limits for External Commercial Borrowings
   d) Relaxation of regulations of Foreign Portfolio Investors' investment in debt securities
   e) Widening the scope of lending by Authorised Dealer – Category I banks of funds raised through overseas foreign currency borrowing

iii. Banks and Standalone Primary Dealers have been permitted to offer Foreign Currency Settled – Overnight Interest Swaps to persons not resident in India.

3. FX Code Outreach activities

As informed by Foreign Exchange Dealers Association of India (FEDAI), which coordinates the activities of the India Foreign Exchange Committee (IFXC), the following outreach activities were done:

i. FEDAI Local Committees' General Meeting at Kochi and Chennai FEDAI Central Office deliberated on the GFXC and improving the awareness within the member banks and requested the participating members to take it forward to their corporate clients. On the same lines, two more local committee meetings are scheduled next month.

ii. Union Bank of India, one of the members of IFXC, conducted an outreach activity on GFXC with their MSME Export/Import customers at Udaipur.

Bank of Israel
Market Operations Department
Tal Biber
Victoria Doron

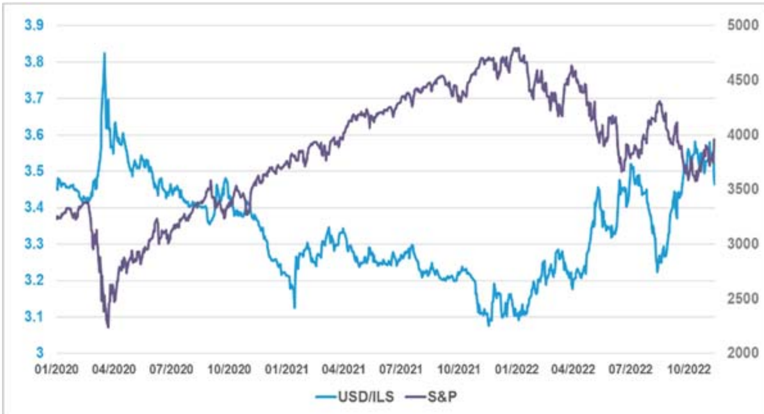
בנק ישראל
חטיבת השווקים
טל ביבר
ויקטוריה דורון

2nd December 2022

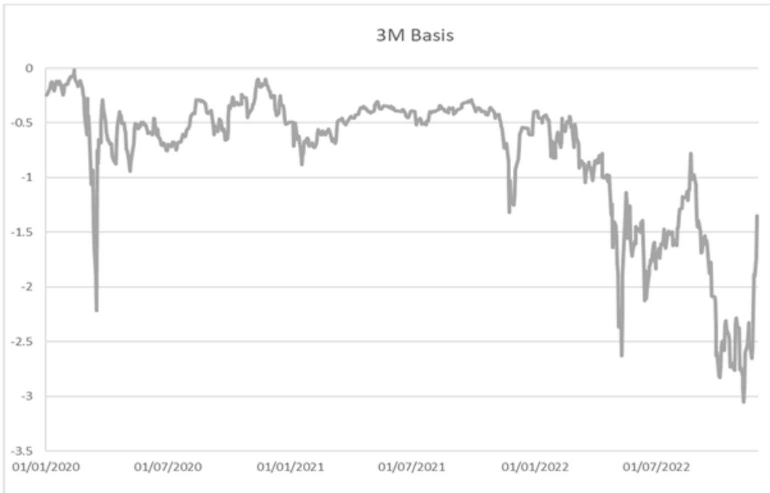
Recent Conditions in the ILS FX Market[1]

The Israeli Shekel (NIS) has been on a depreciation trend for most of 2022, in line with the global strengthening of the US$, until the end of September. The trend was supported by the decline in global equity markets due to the high correlation between these markets (Graph 1). The correlation arises due to the fact that a significant part of long term savings are invested in international equity markets with profits and losses resulting in FX flows.

Graph 1



Graph 2



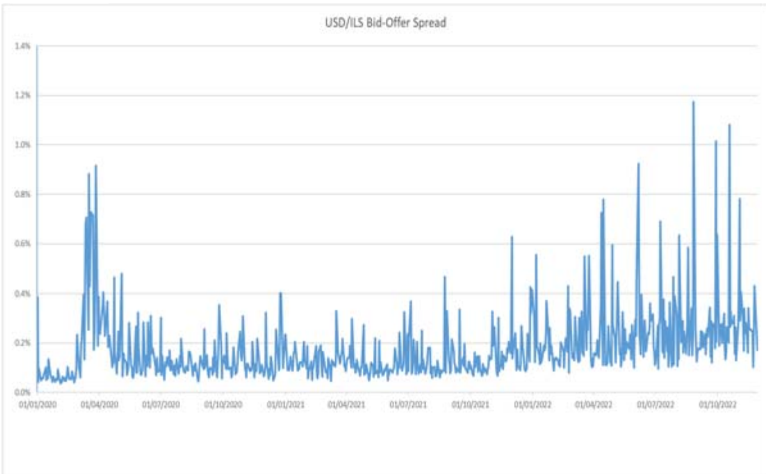
Repo facility for Financial Institutions (15.3) .1
Government Bond Purchase Program (23.3) . 2
Base Rate Cut (6.4) .3
Corporate Bond Purchase Program(7.6).4

[1] *Background note submitted for the GFXC Videoconference, December 2022*

In addition, the fact that local pension funds invest a share of their foreign equity investments through derivatives means that a decline in foreign equity markets results in margin calls and additional need for US$ liquidity. Pension funds' demand for FX liquidity, together with the end of year effect of the global increase for US$ funding, caused a substantial increase in the US$ borrowing rates in the local swap market (Graph 2). At times the demand for FX liquidity spilled over to the spot market adding to the depreciation trend and some widening of bid/offer spreads (Graph 3).

The BOI increased its MAKAM (Israeli T-bills) issuance last month, which attracted foreign investors to invest US$ in the local basis and caused some basis tightening (Graph 2).

Graph 3



Market Conditions Update

Since June, the momentum of inflation was high globally, and the central banks of major economies with particularly strong upward pressure, tightened monetary policy aggressively to suppress high inflation. As a result, volatility in interest rate markets rose significantly, and market sentiment became risk-off with focus to recession.

Moreover, as market makers' risk appetite declined due to the increased volatility in financial markets, market liquidity also declined. With these movements, dollar appreciated significantly mainly against JPY and European currencies in the FX market, and in the interbank market, price ranges turned out to be wider than usual when executing customer orders.

While market functioning is still stable, the resilience of market liquidity is getting weaker, which may lead to more volatility compared to previous years as liquidity declines towards the end of the year.

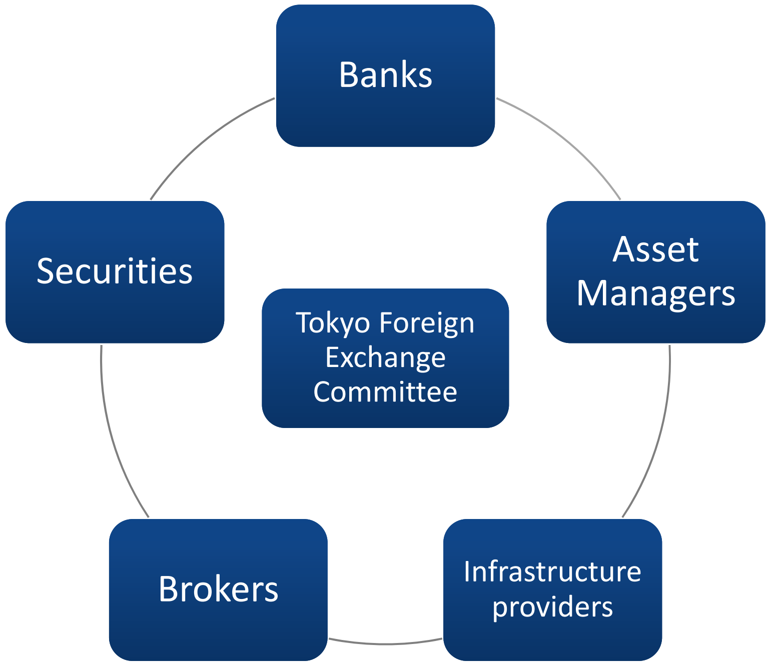
Code Outreach Activities by the Tokyo Foreign Exchange Market Committee

Dec 2022

1. Overview of the Tokyo Foreign Exchange Market Committee

- The Tokyo Foreign Exchange Market Committee (TFXC) is formed by 25 market participants from a variety of segments such as banks, securities, asset managers, and brokers/infrastructure providers.
- Meeting is done on a monthly base to share and discuss recent topics surrounding the FX market, including recent activities by the GFXC.
- Other than the 25 committee members, over 20 market participants from the sell-side and buy-side community are involved in the 9 sub-committees to have intense discussions on specific topics.

TFXC by Segment



TFXC's sub-committees

2. Recent activities by the TFXC

- TFXC have been heavily discussing and working on widely raising awareness on the revised version of the code and explaining the importance of re-adherence to the market participants in Japan.
- On buy-side outreach, TFXC have been engaging with major asset managers and corporates to ask for their input on the activities by the Proportionality WG.
- TFXC have also been taking part in supporting the discussions around newly adopting PvP settlement for FX with Japanese asset managers these past years.

Recent topics discussed

#	Key Topics	Details
1	Code Adoption (Re-adherence to the code)	• Planned steps for rolling out the revised version of the code (including preparing for the translated version of the code, related guidance and document). • Considered ways to widely raise awareness on the revised version of the code by working with industry associations and media (preparing seminars and notices). • Shared progress on re-submission of SoC by the market participants in the Japan and discussed next actions for those who still haven't.
2	Buy-side Outreach	• Shared update on recent activities by the GFXC's the Proportionality WG from members who are currently participating in the WG. • Discussed the results (results) when directly communicating with the buy-side .
3	PvP Settlement adoption for funds	• Shared progress and potential hurdles upon adopting PvP Settlement for funds.
4	BCP (including continuing business during COVID times)	• Shared how each committee members are continuing business through COVID times (measures being taken) and potential conduct issues which may arise when trading from WFH environment. • Prepared the annual BCP training for FX market participants in Tokyo.
5	Market Research	• Shared results for Semi-Annual Turnover Survey.
6	Urgent topics	• Shared topic relating to sudden changes in market conditions and actions taken by industry associations (due to the invasion of Ukraine by Russia).

3. Status of adherence in Japan

- Ongoing promotion activities of the code by the TFXC lead to the continuous growth of the number of adherences in Japan (A).
- While 67% of those who have adhered to the code are 'Banks', major 'Asset Managers' have also adhered to the Code (B).
- TFXC is still facing challenges when promoting the Code to 'Insurance / Corporates' (C). The most effective way of promotion would be considered through our engagement with the activities by the Proportionality WG.
- As of today, roughly 70% of market participants have already re-adhered to the Code (+10% plans to re-adhere towards the end of this year). Disclosure cover sheets also being published on market participants' website (D).

Japanese Market participants' adherence to the Code

Sector	# of institutions as of March 2018	# of institutions as of Today (8th Nov 2022)	# of usage of disclosure cover sheets (as of 8th Nov)	# of re-adherence to the Code (as of 8th Nov)	# of re-adherence to the Code (incl those who are planning to re-adhere towards the end of Dec)
Bank	7	100	44	72	89
Major bank	5	19			
Foreign bank	1	14			
Regional bank	0	66			
Other	1	1			
Securities Company	2	18	7	11	11
Japanese	1	9			
Non-Japanese	1	9			
Broker/Infra or tech provider	6	10	2	9	10
Asset Manager (B)	1	10	Not in scope	7	7
Insurance/Corporate (C)	0	0	Not in scope	0	0
Retail Broker	0	11	1	3	3
Others	1	1	Not in scope	1	1
Total (A)	17	150	54	103	121
(%)			41% (D)	69%	81%

MEXICAN FOREIGN EXCHANGE COMMITTEE

MARKET DEVELOPMENTS

Since June 2022, most emerging market currencies have experienced widespread depreciations against the U.S. dollar, albeit, with some exceptions, including the Mexican peso. The aforementioned performance has been mainly explained by the adoption of more restrictive monetary policies by global central banks, particularly the U.S. Federal Reserve. The foregoing has occurred within an environment that has not been suitable for risk assets, in which tighter financial conditions has been just one of the factors affecting emerging market financial assets. Additional factors include the geopolitical conflict between Russia and Ukraine and "*zero-Covid*" policies in China, coupled with a context of higher inflation levels worldwide.

Nevertheless, there has been a differentiation between emerging market currencies. This differentiation has been observed both inter- and intra-regionally, with the Emerging Europe region standing out for its underperformance, mainly explained by its proximity to the geopolitical conflict between Russia and Ukraine, and its implications on growth and inflation. While, the Emerging Asian currency bloc also shows generalized depreciations, explained by the late start of monetary policy normalization cycles by central banks, coupled with expectations of lower economic growth, derived from the implementation of zero-Covid policies in China. Finally, Latin American currencies show the most limited depreciation, benefited from the interest rate differential with respect to the United States, supported by the early beginning of the restrictive cycles by central banks within the region.

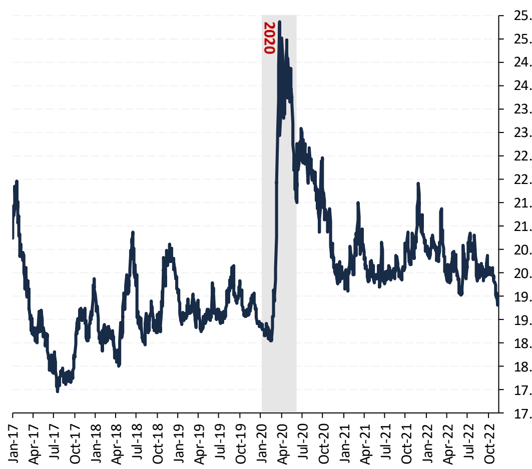
In addition to the aforementioned factors, investors have continued to differentiate between emerging assets based on the economic fundamentals of each of the economies, as well as the presence or absence of news/idiosyncratic factors of each country. In that sense, going forward, maintaining solid fundamentals will be even more important, given the context of more restrictive global liquidity conditions.

Speaking of the Mexican peso, the currency stands out as the best performing currency of the emerging market bloc (+1.3%) during the second half of the year. The currency has been supported, among other factors, by the interest rate differential between Mexico and the United States, amid the continuation of Bank of Mexico's restrictive cycle. Consequently, the interest rate differential has made the Mexican peso's carry more attractive to investors, and at the same time has made the use of this currency as a proxy hedge more expensive. Furthermore, these carry levels have further benefited from the low levels of volatility that prevailed during the period. In fact, the volatility of the Mexican peso stands out among the lowest in Latin America and Emerging Europe, despite the increase in global risks and risk aversion shown during this period.

In addition, the behavior of the Mexican peso has been influenced by several factors other than the rate differential and the currency's carry. On the one hand, macroeconomic factors, such as solid and stable macroeconomic fundamentals -especially the fiscal position and a relatively narrow current account deficit-, strong remittance flows and the anticipation of a continued restrictive monetary policy. Moreover, there is a growing expectation that the country could benefit from the global nearshoring trend, which could increase foreign investment in the country and boost economic growth.

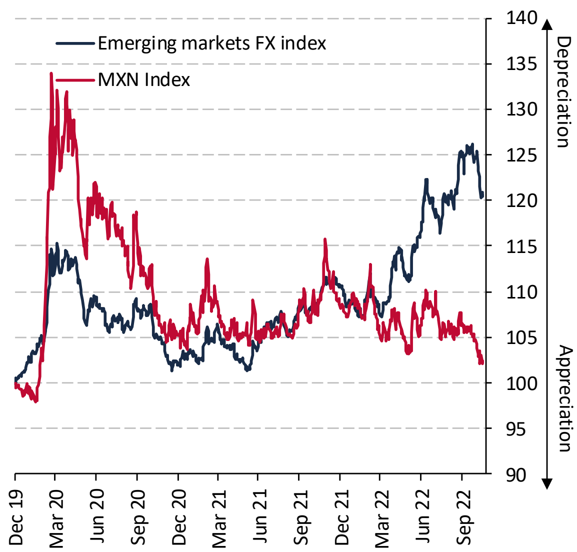
On the other hand, there are certain conjunctural factors, such as the remoteness to the conflict in Ukraine, which, coupled with a higher correlation with the US economy than with the European Union, may continue to support the currency in the coming months, given the relative economic performance between these regions. Furthermore, during this period, the positioning in the Mexican peso has remained neutral, which helped to avoid the destruction of positions after the volatility presented by the different risk events observed. Finally, derived from the decrease in non-resident holdings of MXN denominated government securities, the need to cover such positions in the foreign exchange market has decreased considerably.

Mexican peso exchange rate
Pesos per US dollar



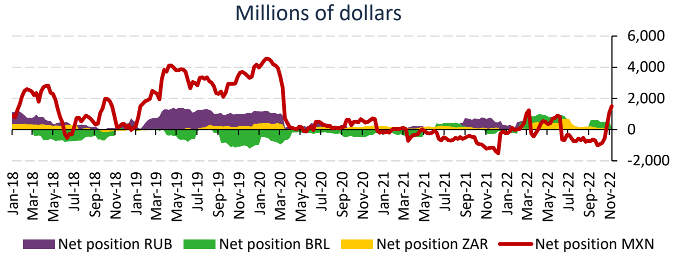
Source: Bloomberg.

EM currencies and Mexican peso index
Index (12-31-2019 = 100)



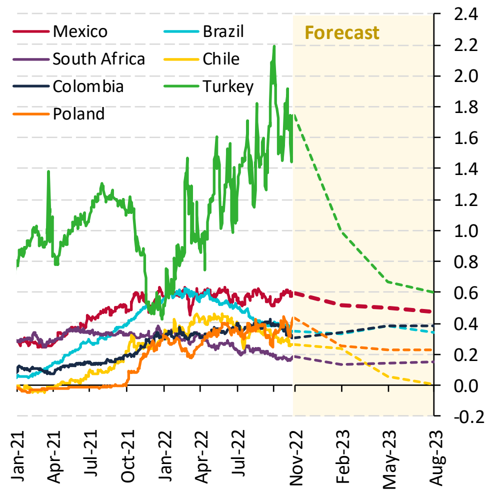
Source: Bloomberg.

Speculative position in Chicago (IMM) futures
Millions of dollars



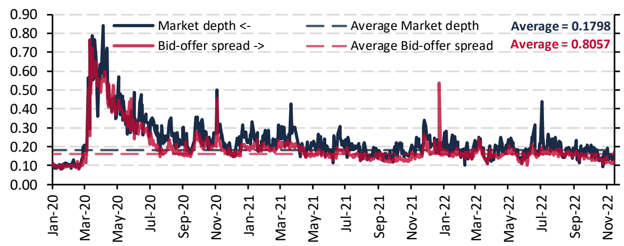
Note: The last available data point for the ruble's speculative position is the 15th of March 2022.
Source: CFTC and Banco de México.

3-month interest rate differential adjusted by volatility between emerging markets and US
Index



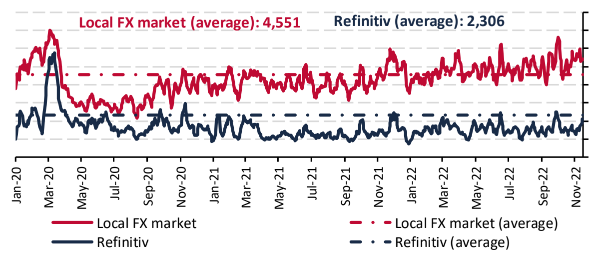
Note: Estimates were calculated using 3-month forward rates between 6-, 9-, and 18-month spreads, adjusted for 3-month forward volatility between the same terms
Source: Banco de México with data from Bloomberg.

Market Depth and bid/ask spreads
Peso cents



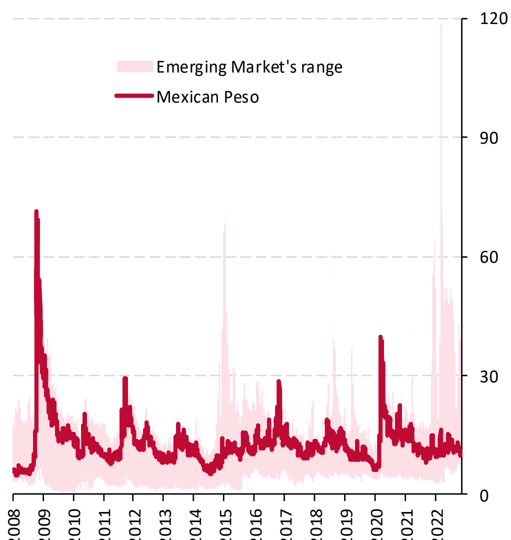
Note: The dotted line represents the average of the historical data calculated since January 2017.
Source: Banco de México with data from Refinitiv.

Mexican peso spot turnover
Millions of U.S. dollars (5-day moving average)



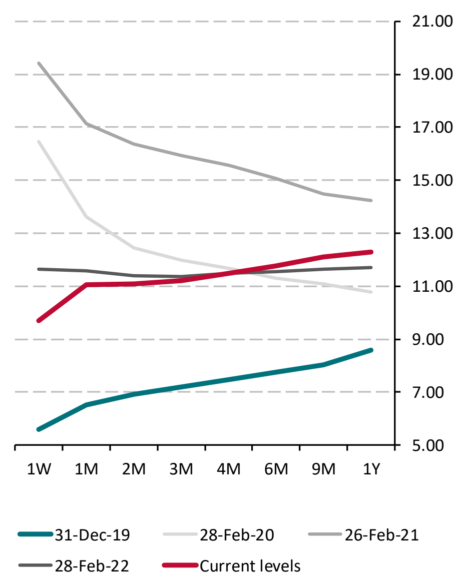
Note: The dotted lines represent the average of the historical data calculated since November 2016.
Source: Banco de México with own and Refinitiv data.

1 Month 25 Delta Risk Reversal
Percentage



Source: Bloomberg,

USD/MXN option implied volatility curve
Percentage



Source: Bloomberg.

Code outreach activities in the Scandinavian FX Committee

There is an ongoing work talking to large pension funds regarding the Code. There is still some work to be done in explaining the principles of proportionality regarding the Global Code. The proportionality applies to all market participants and refers to how the Code may apply to the market participant depending on their underlying activities. The central bank members will make further effort in regards of buy-side-involvement and will highlight that a lot of principles in the code do not apply to them. Status of this work will be reported at the next SFXC-meeting

Summary of market developments in the Scandinavian FX market

Developments in Danish kroner (DKK):

- DKK has continued to trade on the strong side of the central parity rate since the beginning of 2022. In September and October, Danmarks Nationalbank intervened and bought EURDKK to counter increased demand for Danish kroner.
- Following the previous months of intervention, the level of interest rates was raised by 15 bps less than ECB late October, thereby expanding the monetary policy spread vs EUR.
  Initially, the change weakened DKK, however demand for DKK has since resumed causing the currency to strengthen towards the level before the rate cut.
- Liquidity in FX Spot has gradually deteriorated during the review period. The daily trading range remains fairly stable with most activity stemming from domestic participants.
- EURDKK may fluctuate by up to 2.25 per cent on either side of the central rate. However, Danmarks Nationalbank ensures that the fluctuations are far smaller in practice. This reflects that Danmarks Nationalbank takes consistent action as the krone exchange rate starts drifting away from the central rate.

Developments in Swedish Kroner (SEK):

- The development for the Swedish Krona (SEK) since June has generally been closely related to global risk sentiment. In early autumn the SEK recorded the weakest levels on a trade weighted basis since the GFC. The 100 b.p hike from the Riksbank on the 20th of September had no positive impact on SEK. It has however strengthened somewhat since, but rather on the back of positive risk sentiment. In the beginning of November Philip Morris announced their plan to acquire Swedish Match for a total of roughly SEK 170 bln. That had some initial positive impact on SEK, which strengthened somewhat for a couple of days.

- Reportedly from the sell-side community the depth of liquidity in SEK varies quite a lot from day to day, and even intraday. Both realized and implied volatility are presently at average levels. Somewhat elevated levels were observed in September/October, but has since decreased.

Developments in Norwegian Kroner (NOK):

- In the period since the GFXC-meeting In June there has been significant moves in the Norwegian krone. However, all in all the krone measured against an import-weighted index is fairly unchanged.
- The Norwegian krone is a risk sensitive currency and there has been a close correlation between the developments in the risk sentiment in financial markets and the developments in the krone exchange rate. The krone typically appreciates when risk sentiment improves and depreciates when risk sentiment deteriorates. In the period since the last GFXC-meeting the krone has also been affected by the huge swings in oil and gas prices and the fall in the interest rate differential against our trading partners.
- The liquidity in the market for the Norwegian krone has at times been more challenging than we have generally experienced in the period since the pandemic in 2020. This has contributed to large intraday trading ranges.

SINGAPORE FOREIGN EXCHANGE MARKET COMMITTEE

SUMMARY OF CONDITIONS IN THE SINGAPORE FX MARKET (DECEMBER 2022)

Key Drivers. Over the past six months, the key regional and domestic FX market drivers were:

- Global tightening of monetary policy. Tightening of monetary policy continued apace in 2H 2022 amidst still high inflation in many DM and EM economies, bringing interest rates to levels not seen in more than a decade. Differential rates of tightening underpinned increased capital outflow pressures from EM bond markets, and currency weakness relative to a broadly stronger USD, prompting further tightening by some EM central banks to rein in imported inflation.

- Headwinds to global growth. The outlook for global and regional growth weakened significantly, as tighter financial conditions coincided with other shocks to growth, including Europe's energy crunch, China's property market slump, and rising geopolitical tensions. Most institutions now expect the advanced economies to slip into recession in 2023 and global growth to slow considerably, albeit with possible upside risks from a potential reopening of China's economy and further measures to support the property sector.

- Singapore's monetary policy. In October 2022, MAS re-centered upwards the mid-point of the Singapore dollar nominal effective exchange rate (S$NEER) policy band. This followed a series of policy tightening decisions starting pre-emptively since October 2021, over which time MAS had both increased the rate of appreciation and re-centred upwards the S$NEER policy band. The latest policy shift in October 2022, building on past tightening moves, will further reduce imported inflation and help curb domestic cost pressures. The policy stance will dampen inflation in the near-term and ensure medium-term price stability as the basis for sustainable economic growth.

Asian FX Markets. Asian currencies weakened against a broadly stronger USD in Q3 2022 before retracing some of their losses in Q4 2022, as a possible peak in DM inflation sparked hopes of an imminent pivot in the monetary policy tightening cycle and a peaking of US interest rates in the first half of 2023. Asian currencies were also supported by a slight easing in geopolitical uncertainty following a constructive Xi-Biden meeting on the side-lines of the G20 summit in Indonesia.

Singapore Dollar FX (SGD). The SGD has weakened slightly against a broadly stronger USD, while appreciating significantly against most other currencies globally, and on a nominal effective exchange rate (NEER) basis (Figure 1). USD/SGD FX implied volatilities were stable from June to September but rose in October as the USD rose sharply against most currencies (Figure 2). The SGD FX market has remained liquid and functioning, with offshore-onshore SGD forward spreads narrowing (Figure 3), and bid-ask spreads (Figure 4) and USDSGD spot turnover volumes (Figure 5) broadly stable.

Key funding markets. SGD interest rates continued to rise in 2H 2022, in line with increases in global interest rates, particularly USD rates (Figure 6). Since the end of Q2, SORA has risen by around 252bps to 3.23% on average in November. SGS yields also rose, by 39bps since Q2 2022, with a widening discount to US Treasury yields (Figure 7), in line with interest rate parity conditions amidst increasing steepness of the FX policy band. Domestic and regional USD funding conditions remained stable, with the widening of basis swaps in Q3 2022 easing after October (Figure 8).

FX Global Code. MAS renewed its Statement of Commitment to the updated FX Global Code on 31 August 2022, reaffirming its adherence to the principles of the Code as a market participant, and the alignment of its internal practices and processes with these principles. In a media release, MAS strongly encouraged all wholesale FX market participants in Singapore as well as all its counterparties to adhere to the latest version of the Code, in order to promote the integrity and effective functioning of the global FX market. To further expand the outreach, the Singapore Foreign Exchange Market Committee (SFEMC) has also strongly urged its members to renew their Statement of Commitment.

Fig. 1: USD/SGD and S$NEER movements

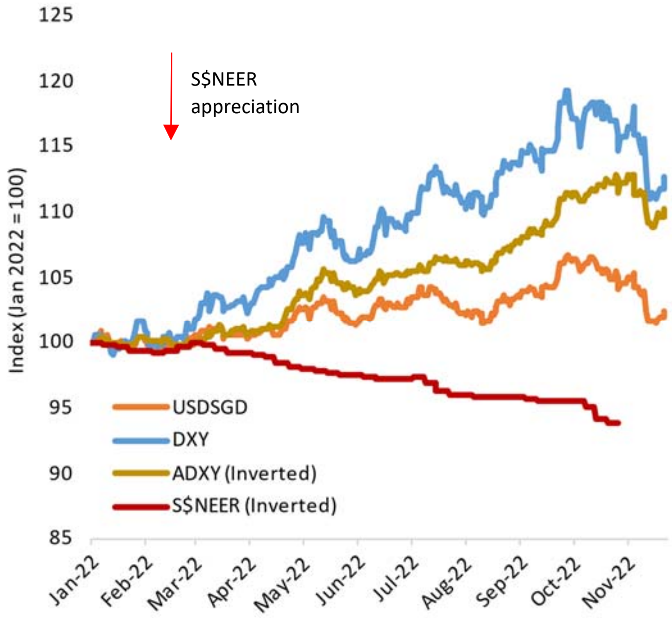


Fig. 2: USD/SGD Volatility and Risk Reversal

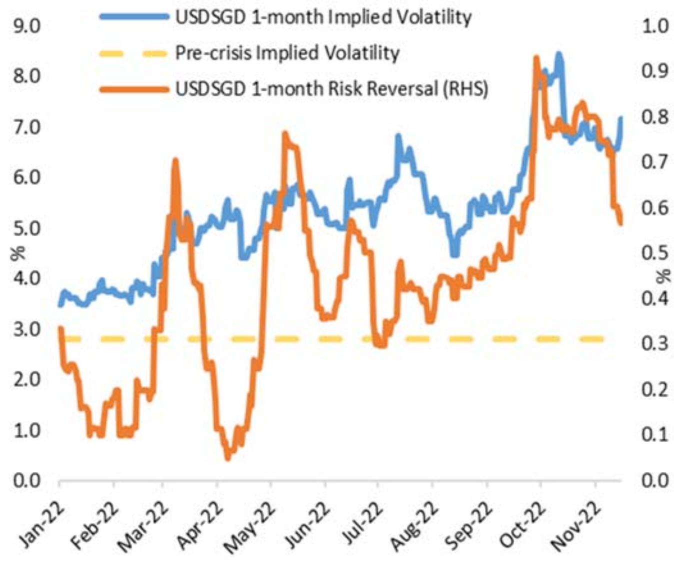


Fig. 3: 6M Offshore-Onshore SGD Forward Spread

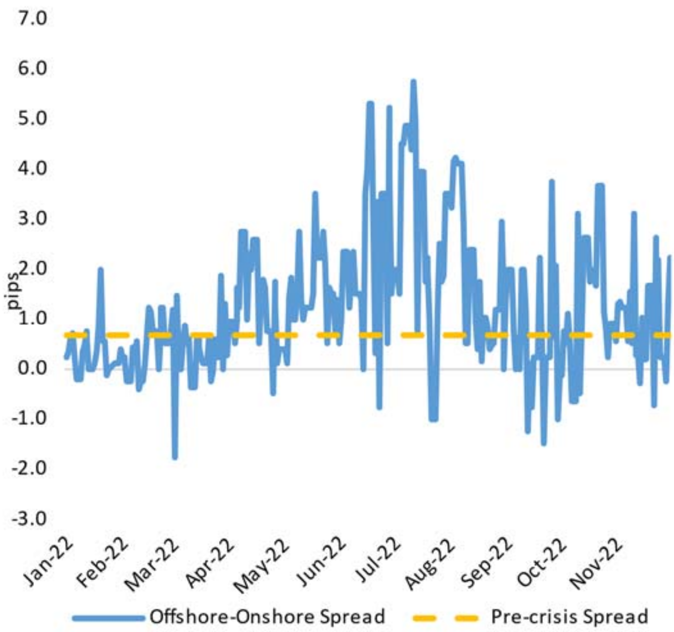


Fig. 4: USD/SGD Bid-Ask Spread

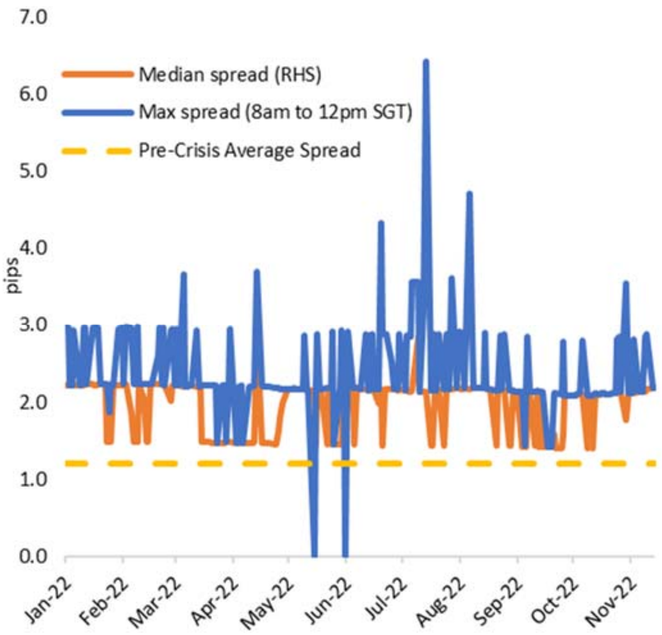


Fig. 5: USD/SGD Volume

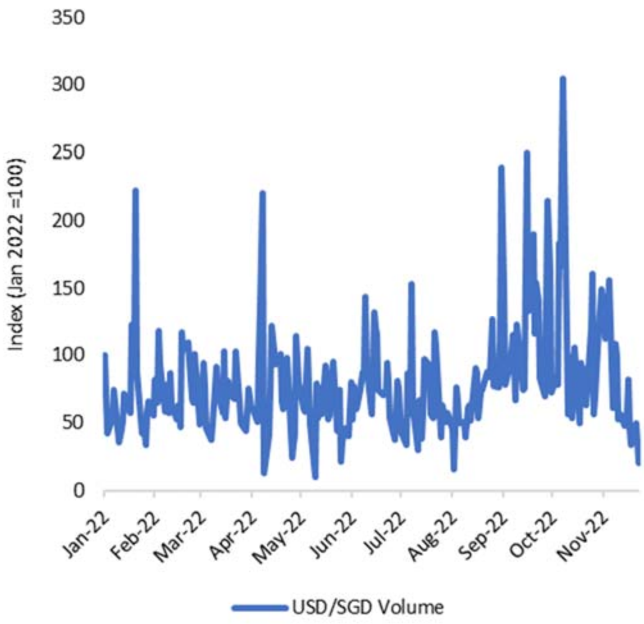


Fig. 6: SORA vs Fed Funds Rate & SOFR

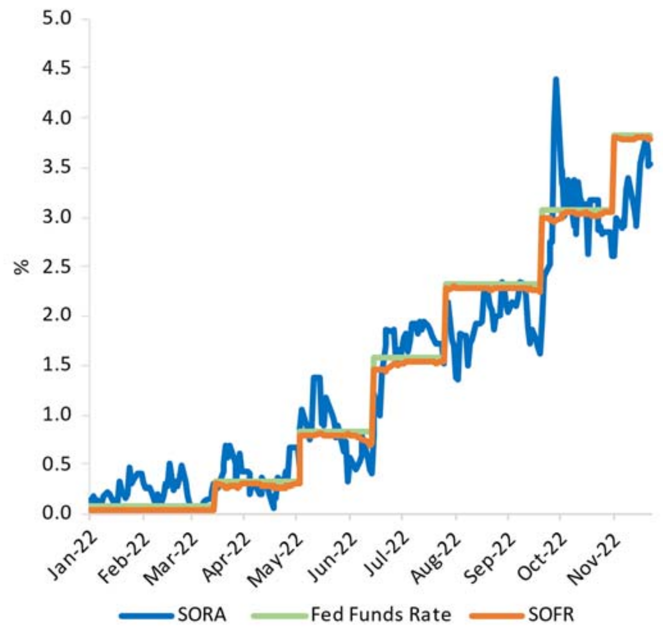


Fig. 7: 10Y UST and SGS Yield movements

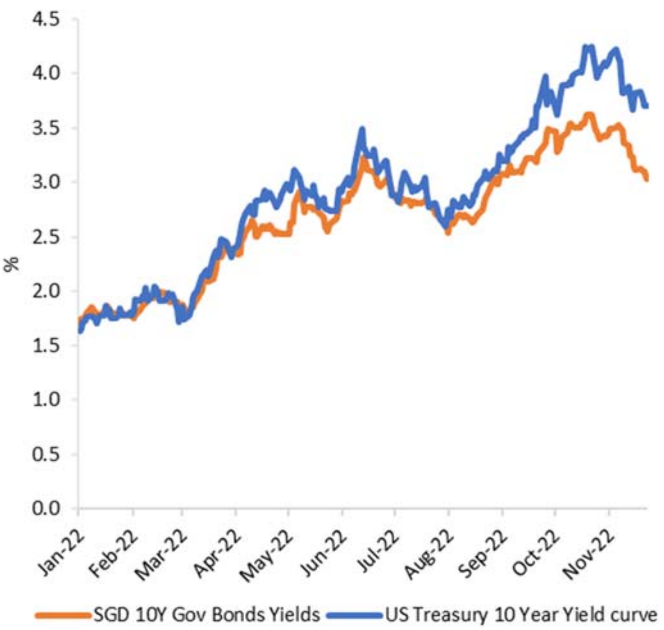
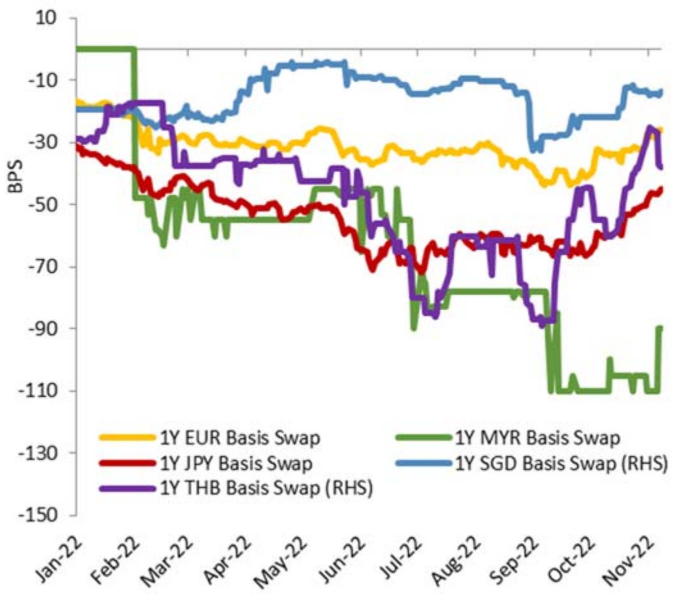


Fig. 8: Regional Term USD Funding Rates (1Y)



Zurich, 22 November 2022

Swiss FX Committee's updates on FX market conditions and Code outreach work

FX Spot

- The Swiss franc has appreciated by 2,5% since June 2022 on a trade-weighted basis amidst elevated volatility, reflecting developments in monetary policy expectations and interest rate differentials. Following the Swiss National Bank's (SNB's) 50bp policy rate hike in June 2022, the franc appreciated by as much as 5% as expectations for further monetary policy tightening in Switzerland and abroad built up over the Northern Hemisphere's summer. However, the franc's earlier appreciation partially reversed after the SNB's September policy meeting, at which it raised the policy rate by a smaller-than-expected magnitude of 75bp leading expectations for further SNB rate hikes to diverge from those of other major central banks.
- EURCHF fell below parity in late June and reached a new post-2015 low of 0.9410 at the end of September, before rebounding to currently 0.9820. USDCHF rose in sympathy with the broad-based US-Dollar appreciation since mid-August but reversed following a lower U.S. CPI print for October and is currently trading almost unchanged than at end-June around 0.9550.
- Market conditions in EURCHF and USDCHF on the primary interbank venue EBS Market remained fragile with top-of-book spreads above historical averages in recent months. Market liquidity deteriorated at end of September following the Bank of Japan's FX interventions and the announcement of the UK government's Growth Plan amidst high trading volumes and large intraday trading ranges.

Option Markets

- Implied volatilities in the CHF-pairs followed a similar pattern as other G10 currency pairs, rising after mid-August in response to shifting monetary policy expectations and subsequently peaking in late September amidst heightened uncertainty and volatility in FX and asset markets. Implied volatilities have consolidated somewhat in recent weeks, but remain at high levels compared with previous years.

FX Swaps

- In the CHF FX Swap market, the focus was on a widening of the FX-OIS basis following the SNB's monetary policy decision in September. CHF implied interest rates derived from EURCHF or USDCHF FX Swaps remained close to or slightly above 0% for maturities not covering the year-end, around 30-45bp below benchmark SARON OIS or repo rates. The implied CHF basis of -30-45 basis points is rather wide by historical standards.

- The FX-OIS basis in USDCHF is currently markedly wider than in other G10 currency pairs and, therefore, may reflect CHF specific factors like the SNB's system of tiered remuneration, rather than broad USD-funding stress. Since the SNB raised its policy rate above 0% in September, sight deposits held at the SNB up to a threshold are remunerated at the SNB policy rate and sight deposits above this threshold at 0%. Market participants with limited or no access to the CHF Money Market or the SNB's liquidity absorbing operations (Reverse Repos, SNB Bills) appear to lend excess CHF balances into the FX Swap market or to place them at the SNB at 0%. This may explain why implied rates derived from FX Forwards remained close to 0%.
- USD-funding over year-end is currently more expensive vis-à-vis CHF, but also the EUR and JPY, than in the previous years and similar to levels last seen in 2018/2019. Market participants attribute this to regulatory changes (G-SIB scores, SA-CCR) as well as tighter liquidity conditions in USD.

Chart 1: FX Spot developments

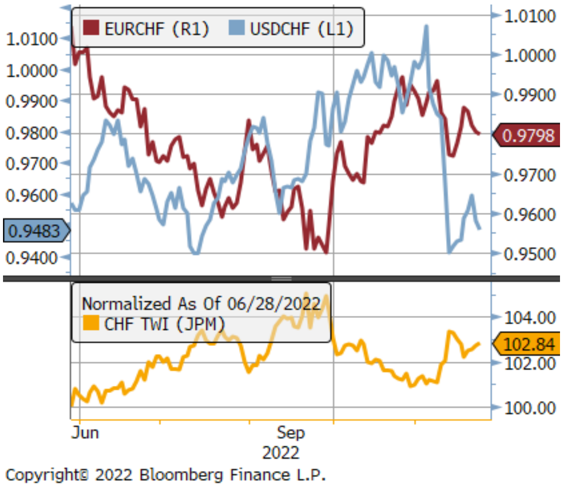
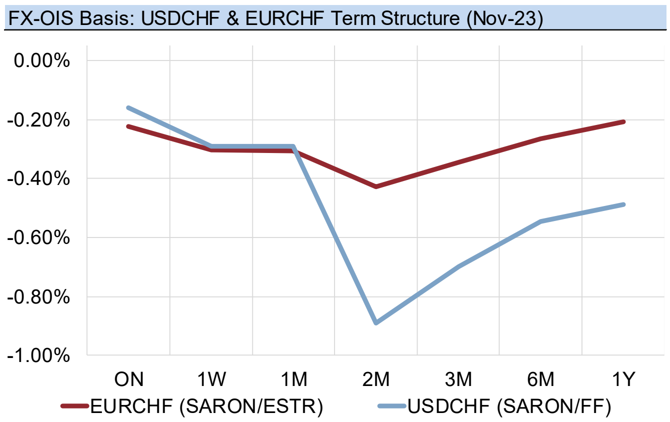


Chart 2: Short-Term Rates



Outreach work

- Two events were held to promote the Code, one for banks in Liechtenstein, the other for multinational enterprises in Switzerland.
- To attract more institutions to sign the Code, the committee launched an initiative in May 2022 where each member was tasked to approach a peer with the aim for them to become a signatory of the Code. The exchange of views at the November meeting showed that it is a challenge to recruit new signatories as many market participants, particularly on the buy-side, still see no need to do so. However, some members reported that their outreach was received positively and that they are optimistic that the number of signatories will continue to increase.

- The condition for (renewed) membership of the committee (which enters its third term with the November meeting) was that applicants signed the Statement of Commitment (SoC) to the revised Code after July 2021. This resulted in numerous resigning of the SoCs, but not to new signatories.

GFXC Videoconference – December 2022

Update on FX market Conditions

London Foreign Exchange Joint Standing Committee (FXJSC)

Market update

The key theme in FX markets at present is whether USD has reached an inflection point following its significant rise this year. The DXY peaked in September roughly 20% higher on the year. Lower than expected US CPI numbers for October, alongside a potential shift away from the zero COVID policy in China, changed the narrative in markets. The DXY has now retraced roughly half its gains year to date. Uncertainty remains as participants consider the potential slower global growth and lower inflation story, against the future pace of tightening of policy rates, particularly in the US.

Events in both sterling and the yen injected volatility in FX markets.

Sterling fell sharply during the Far Eastern market session on 26 September following the Chancellor's fiscal event on September 23rd. Although the move in GBP/USD was large (8% over 2 days) and bid-offer spreads were momentarily wider, trading was continuous and levels stabilised during the London morning. Extreme moves in UK Gilts created a selling spiral in the long-end of the gilt market that required the Bank to intervene on financial stability grounds. Although the political and fiscal landscape has now stabilised, some FXJSC members consider the UK economy faces headwinds, as inflation continues to remain consistently high despite the weak growth outlook. Despite this, sterling has recovered 16% against the dollar since its all-time low in September and is back to trading within its summer range. Gilt markets have similarly retraced moves following a volatile period throughout October and September.

Since the start of the year, the Japanese Yen has depreciated as much as 30% against the US dollar. Yen weakness has been driven by the strong US Dollar and the increasingly widening policy stance between the FOMC and the Bank of Japan. This culminated in the Ministry of Finance (MoF) intervening in support of the yen for the first time since 1998. The scale of the operation exhausted counterparty credit lines leaving prices temporarily inverted. USDJPY has since fallen roughly 8% since its peak in October amidst broader dollar weakness.

Market Functioning

G10 FX markets functioning remained good despite the increased level of volatility this year. Implied and event volatility are generally high compared to historical averages while bid-offer spreads widened during periods of stress. Conditions have now eased relative to September with bid-offer spreads and volumes returning to levels seen before the announcement of the UK Government's fiscal event on 23 September.

Unplanned bank holidays

Contingency arrangements were in focus earlier in H2 following the unplanned bank holidays announced by the UK and other countries, with a particular focus on settlement. Most banks amended deals to settle for the next good business day, without revising the forward rate. Any other amendments were discussed between counterparties on a bilateral basis.

Innovation/CBDCs

The role and scope of Central Bank digital currencies (CBDCs) have become a topic of interest with several practical experiments currently in train around the world. Work is currently ongoing to consider how CBDC's might help to support central bank's balance sheets going forward.

foreign exchange committee

FXC

November 30, 2022

- Overall, liquidity conditions across major currency pairs this year have been largely stable, with bid-ask spreads, volumes, and market depth within historical ranges.

- Although bid-ask spreads have widened somewhat this year amid an increase in market volatility, liquidity in the FX market has reportedly been better when compared to that in rates markets. In some cases, market feedback indicate liquidity has improved somewhat when controlling for the increased levels of volatility. However, larger trade sizes (ex. 50-100 million) in the British pound, Swiss franc, and Japanese yen have reportedly had greater market impacts than they have in the past.

- As per the April 2022 North American FX Volume Survey, average daily volume in total OTC foreign exchange instruments (including spot, outright forward, foreign exchange swap, and option transactions) was $956.8 billion in April 2022, which was 3.3 percent lower than in the October 2021 survey period. Volumes decreased by 1.0 percent when compared to the prior year.

- The theme of declining primary market volume continues to persist, which is viewed as impacting overall price discovery in cash markets. For instance, during periods of elevated volatility (such as during Japanese yen intervention in the fall), certain currency pairs were briefly quoted at inverted spreads on EBS and at notably different levels compared to other venues.

- Overall risk appetite has appeared to decline in recent weeks, as investors are reluctant to hold large positions amid heightened FX volatility and in advance of year-end.

- Year-end FX swap-implied dollar premiums are at the higher end of the range seen in recent years. Dealers continue to cite regulatory factors including the implementation of the SA-CCR rules and the GSIB capital surcharge as impacting balance sheet capacity. Additionally, contacts report heightened rate volatility driven by global monetary policy uncertainty has limited the risk appetite of arbitrageurs that would normally take advantage of such attractive levels.

- In addition to monitoring market conditions, the NYFXC further examined the potential impacts of the U.S. Securities and Exchange Commission's (SEC) proposed changes to shortening settlement times to T+1 for most broker-dealer transactions in securities; discussed highlights of the BIS CPMI's July 2022 consultative report on facilitating increased adoption of "payment vs. payment" settlement; and reviewed results of the BIS 2022 FX Triennial Survey.

- Buyside adoption of the FX Global Code continued to progress in the U.S. A total of $36 trillion in asset under management among top U.S. asset managers is code adherent. A new effort was also launched among the North American central banks (Canada, Mexico and U.S.) to further buyside adoption, through joint participation at industry conferences and FX events. This is slated to begin in early 2023.

33 Liberty Street, 9th Floor • New York, NY 10045 • 212-720-6651 • Fax: 212-720-1655 • nyfx.committee@ny.frb.org • http://www.newyorkfed.org/fxc