GLOBAL FOREIGN EXCHANGE COMMITTEE

SUMMARY OF MARKET CONDITIONS

IN GFXC MEMBER COMMITTEES

MATERIAL FOR 23 SEPTEMBER 2020 GFXC MEETING

Since June, both volatility and liquidity conditions in foreign exchange markets – including that for the Australian dollar – have normalised to a large extent. For the AUD, gauges of market liquidity (such as bid-offer spreads, impact of large-sized trades, volatility-to-volume measures), which had deteriorated in the first half of the year, have continued to recover in recent months. Most AFXC members assessed overall liquidity as close to – but still a little below – normal. On average, the bid-ask spread in primary venues for AUD/USD is around 1.0-1.5 pips, marginally wider than normal but well below spreads seen at the height of the market dislocations in March. Across a broader array of venues, members saw bid-offer spreads as approximately 20 per cent wider than normal. Despite improvements in liquidity, current low levels of volatility meant that market liquidity had not been tested recently, with some participants suggesting measures of AUD liquidity were correlated with the performance of equities. Locally, it was noted that bid-offer spreads in the AUD/NZD cross had demonstrated brief episodes of weak liquidity, likely driven by heavier client positioning in the NZD.

Consistent with the Australian dollar experience, liquidity in most G10 currencies had improved to be close to – but a little below – normal. Some members noted GBP liquidity in the Asian session had shown some episodes of weaker liquidity, likely due to renewed Brexit uncertainties. Regarding emerging market currencies, members pointed to disparities in liquidity across the region; CNH turnover and liquidity had proven to be strong, while Indonesian rupiah liquidity had diminished more recently.

Members noted clients had returned to using a broad mix of trading methodologies, from voice to electronic. One noteworthy development was an increased use of electronic trading via mobile phone applications, reflecting ongoing work-from-home for a number of clients.

One member noted the WM/R AUD fix was proving difficult to replicate on occasion. This led to a discussion of the benchmark methodology, with members noting further liaison with the benchmark administrator was required.

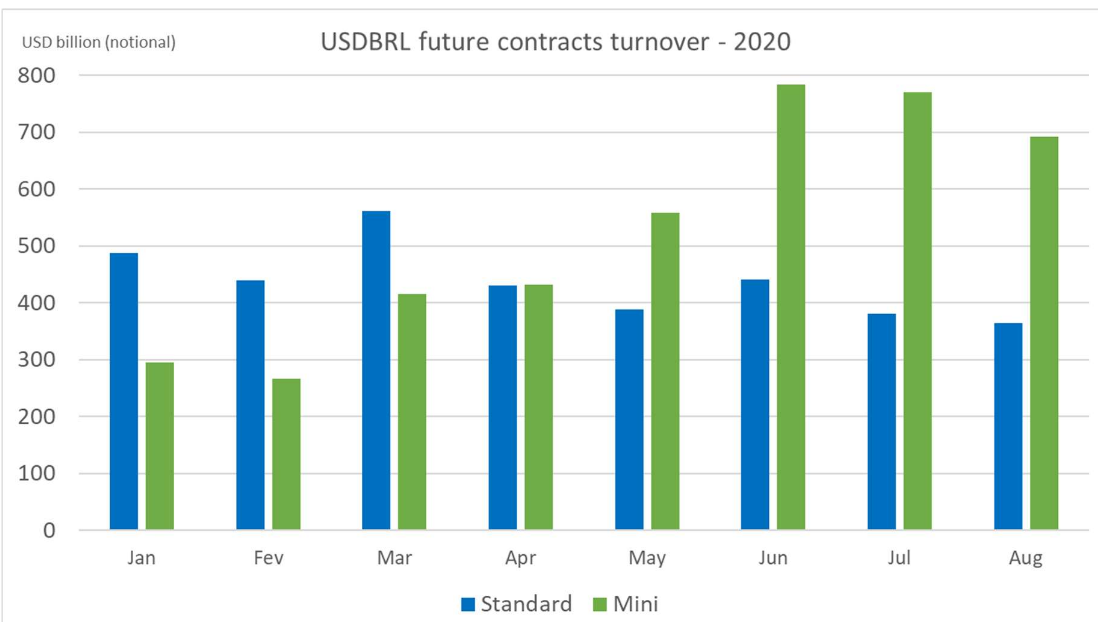
As with conditions in the spot market, liquidity in the AUD forwards has largely recovered from the marked deterioration earlier in the year. Bid-offer spreads are extremely narrow across the entire curve, and transactions are able to be conducted in reasonable parcel sizes in either direction. This improvement in liquidity in recent months reflects continued stable pricing in short-tenor AUD forwards (and broader AUD money market rates), as well as large liquidity provision from central banks globally.

Global FX Committee Conference
23 September 2020

The Brazilian FX market in 2020

In terms of market structure, the Brazilian FX market has experienced an important change in 2020 in the derivatives market. In Brazil, the FX futures market is much more liquid than the spot market. While the daily average turnover for spot transactions is USD 6.9 billion in 2020, the futures market turnover is currently USD 41 billion. Because of that, the BRL exchange rate is discovered in the derivatives market and is then passed on to the spot market by forward point differences – or *casado* trades, as they are called locally. Up to the first months of 2020, most of the turnover was executed in trades with the first standard USD future contract, which has a notional of USD 50,000 and has a minimal trade size of 5 contracts. Since March, however, there has been a significant increase in the mini USD future contract, which has a notional of USD 10,000 and minimal trade size of 1 contract. This can be seen in the graph below, which shows the total turnover for each month.

The BCB and other market participants have been analyzing these data to explain the motivation for such a change and if this could be a source for the increase in volatility in the Brazilian FX market. Such studies have shown different results.



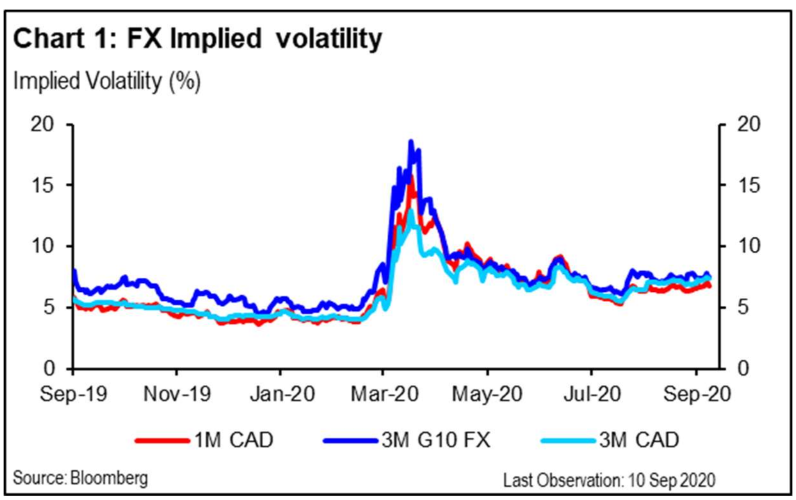
Canadian Foreign Exchange Committee
September 15, 2020

Update on the Canadian Dollar for September 23 GFXC Meeting

The Canadian Dollar has appreciated by about 2.5% versus the USD since the last GFXC meeting. The currency has been supported by higher commodity prices, narrowing real yield differentials relative to the US, and a broadly weaker US dollar. The Canadian dollar has however underperformed other major currencies and commodity currencies[1], likely reflecting the Canadian economy's high dependence on the US economy. CFTC futures positioning indicates net short Canadian dollar positions. Looking ahead, the direction of the Canadian dollar will likely be determined by the broad US dollar trend and the path of the global economic recovery.

CAD implied and realized volatility remain low, despite an increase in political uncertainty in Canada (chart 1). The Finance Minister was replaced and the risk of an election in Q4 has increased. Reaction to the political news has been muted.

Liquidity conditions in the CAD spot and forward market have been good. Bid-offer spreads have generally returned to pre-COVID-19 crisis level (approximately 1 pip for spot and 3 pips for 3-month forwards). There have been no signs of strains in CAD funding markets either.



[1] The CAD is down about 0.5% on a trade-weighed basis against a basket of non-USD currencies.

Market Conditions Update from China FX Committee

I. Economic fundamentals support the sound operation of China's FX market, with main indicators basically returning to pre-COVID-19 levels.

Since 2020 Q2, the global FX market has quickly recovered from the impact of COVID-19, with market liquidity increasing and volatility falling. Globally, U.S. dollar funding strains have been eased, market sentiment has improved, prices of various assets have been recovered, most currencies have rebounded significantly against the U.S. dollar, and the U.S. Dollar Index has fallen sharply.

With COVID-19 in control, China has been one of the first to see economic recovery in the world. China's GDP rebounded strongly in 2020 Q2, which grew by 3.2% year-on-year, making China the only major economy in the world recording positive growth. China's economy is expected to achieve positive growth throughout the year.

1. Supported by the economic fundamentals, China's FX market has recovered rapidly since 2020 Q2, with major indicators such as trade volume, volatility, and liquidity returning to pre-COVID-19 levels.

Since June, China's interbank FX market has recovered rapidly， with an average daily trade volume of more than US$110 billion, exceeding the level of the same period last year.

The implied volatility of USD/CNY 1M options has remained stable, and gradually declined after reaching its peak in mid-March. Currently, volatility has returned to the level of the beginning of 2020.

In August, the bid/ask spreads of USD/CNY 1M swaps are better than those of January, and spot spreads are close to those of January.

2. The RMB exchange rate has remained resilient, and market participants' exchange rate expectations remain stable.

Due to China's successful control of COVID-19, effective resumption of its economy, and the capital account and current account surplus, the RMB exchange rate has remained resilient, appreciating about 1.4% from the year start. The CFETS RMB Index, which measures the RMB exchange rate against a basket of currencies, was 92.79 as of the end of August, appreciating slightly from the beginning of 2020. Since 2020, annualized volatility of USD/CNY has been around 4.5%, equivalent to major currencies.

3. FX swap points have been pushed higher.

As the Fed maintains its quantitative easing policy, the USD funding strains at the end of March have been eased and its liquidity remains ample. At the same time, China has effectively controlled COVID-19 and shown economic resilience in Q2. Its prudent monetary policy becomes more flexible, and banking liquidity remains reasonably sufficient. The widened China-U.S. interest rate spreads have pushed up the swap points. In addition, foreign investors have been attracted to invest in China's bond market, which generated demands for FX swaps to hedge currency risks. The USD/CNY 1Y swap points rose from around 220 in early Q2 to as high as 1550.

II. Cross-border capital flows remain generally stable, and international investors have actively participated in China's financial markets.

Since 2020, China's cross-border capital flows have remained generally stable, with the international balance of payments maintained basic equilibrium. From January to August, China's stock market has seen capital inflows of 126.5 billion RMB through Shanghai Stock Connect and Shenzhen Stock Connect, and foreign investors have increased their holdings of Chinese bonds by 601.5 billion RMB, an increase of 4.9 billion RMB and 296.9 billion RMB respectively year-on-year.

III. Recent Work of the China FX Committee

Recently, the China FX Committee (CFXC) has followed up the GFXC discussions on topics such as algo trading and disclosures, carrying out research and collating good market practices to provide guidance for our market participants. At the same time, the CFXC continues revising the China FX Code and promoting Code adoption via consultation services, Code adoption assessments and publicity, with the aim of encouraging more market participants to sign the Statement of Commitment, and helping them better implement the Code.

Looking ahead, the CFXC will continue to monitor COVID-19 developments and the measures taken by various FXCs and regulatory authorities, work and communicate closely with the GFXC to promote sound development of FX market.

CFXC

FX Settlement Risk Arrangements Update from China FX Committee

Although CNY is a non-CLS currency, FX settlement risks are mitigated in China via netting arrangements and local PVP facilities. Specifically, Shanghai Clearing House provides CCP clearing services for trades in China's interbank FX market, while the China Foreign Exchange Trade System (CFETS) developed the local PVP infrastructure based on the China National Advanced Payments System (CNAPS) and the Bank of China's global payment network, and launched the PVP settlement services for CNY/RUB trades in 2017.

Currently, about 50% of China's FX market trades are netted (including CCP clearing or bilateral netting) and settled via the PVP services, which reduces FX settlement risk exposures, and supports the sound operation of China's FX market.

In the future, based on the BIS recommendations, China will accelerate the development of PVP facilities and expand the coverage of PVP settlement services to further reduce FX settlement risks while leveraging the current netting arrangements. Communications and collaboration with post-trade infrastructure providers in the global FX market such as CLS will also be explored to mitigate global FX settlement risks.

EUROPEAN CENTRAL BANK

EUROSYSTEM

Foreign Exchange Contact Group

Frankfurt am Main, Monday, 14 September 2020

SUMMARY OF THE DISCUSSION ON FX MARKET CONDITIONS AND OUTLOOK

The Group discussed recent evolution of market indicators in comparison with their levels prevailing before the outbreak of Covid-19 in February 2020. Members confirmed that spot trading volumes had declined below their pre-Covid 19 levels for both G10 and Emerging Market (EM) currencies, but much more for the latter. Bid-offer spreads remained wider compared to February, especially for EM currencies. Some members assessed that G10 FX market liquidity tended to evaporate quickly around key market events but returned back to normal equally fast. In general markets were felt to react quicker and more forcefully to news. This could be possibly explained by the participation of execution algos, particularly when the bid-offers were wide in Q2-2020, but it also seems to reflect longer-term trend. Members mentioned that the market had been structurally evolving toward a more concentrated trading activity around news releases and other events, including month and quarter-end fixings.

Regarding major market themes, the general depreciation of the US dollar since March 2020 was highlighted, with one of the drivers being the increased debt stimulus and also the introduction of US dollar swap lines by major central banks, which helped alleviate dollar funding pressures and restore market confidence during the Covid-19 crisis. Moreover, the erosion of the real yield advantage in the US, the declining hedging costs for USD assets and the partial reversal of investment flows away from the US were seen contributing factors for the US dollar weakness. A more detailed look showed that the US dollar depreciation occurred broadly against G10 currencies, contrasting with a more mixed performance against EM currencies. On the latter, the more orthodox monetary response of EM central banks to the growth shock resulting from Covid-19, i.e. currently favouring policy rate cuts over currency stability, was perceived to have made EM FX relatively unattractive and resulted in subdued investor inflows into EM.

Regarding the euro, its recent resilient performance was considered related to the removal of two key tail risks by the introduction of the EU Recovery Fund and the positive outcome in the German Constitutional Court case on the ECB's Public Sector Purchase Program. This was also shown in the shift of market positioning from a sizable short to a sizable long EUR positioning from the beginning of 2020 until now.

Looking ahead, elevated positioning in some G10 currency pairs indicates potential higher volatility in the near term. Similarly, the FX options market is pricing a significant increase in volatility in the near term. The FX option expiries in several major currencies indicate that implied volatility is concentrated on four key market events (e.g. the US Presidential election, the October EU Council meeting, the central bank meeting week in early December and the year-end deadline for the Brexit transition period) with a calmer picture otherwise.

The Group discussed also market developments on gold, crypto assets and stablecoins. Gold as an investment option has enjoyed a growing interest from multiple investor categories, with a notable pick-up in participation by the retail community. Stablecoins have also experienced a brisk growth in trading volumes during Q2-Q3 2020 and have been increasingly used *inter alia* to facilitate cross-border payments and settlement in US dollars.

<u>GFXC Conference Call September 2020 – Hong Kong FX Market Update</u>

Hong Kong Dollar continued to be resilient in Q3 this year, and stayed at the strong side of the peg of 7.75 most of the time. Similar to the first half of the year, HKMA has acted in defense of the peg several times in the last three months, and our Aggregate Balance, representing all banks' settlement account balances kept at HKMA, further increased. HIBOR rates remain low and steady, and the HKD and USD rates differential has narrowed to less than 25bps most of the time since June, compared to over 100bps we once witnessed in April.

Since our June conference call, HKMA has intervened by selling HKD in the market for another 22 times, our Aggregate Balance now stands at USD 26 billion, a USD 10 billion increase from June. The strength of HKD is most notably due to the surging capital inflows to the local stock market recently. Similar to the first half of the year, we continue to see busy IPO pipelines in Hong Kong for the last few months, driving conversion demand of HKD. US-listed Chinese companies continue to have dual-list interest on the Hong Kong Stock Exchange, and on top of that, we had some of the most popular IPO deals recently, such as the listing of Chinese water and beverage company Nongfu Spring this month with over 1000 times oversubscription.

A second reason that sucked in capital was the rebalancing of Hong Kong's benchmark Hang Seng Index. Effective on 7th September, Chinese technology champions such as Alibaba and Xiaomi will be added to the Hang Seng index, marking one of the biggest revamps in the benchmark index's 50-year history. The move affects tens of billions of dollars in pension fund assets and ETFs that track the index. In addition, Hang Seng TECH Index was unveiled by Hang Seng Indexes in July to capitalize on the increasing number of big-name tech companies that are choosing to list in Hong Kong, and ETFs tracking the index was launched in August allowed investors to gain exposure to the fast-growing Chinese technology sector.

With blockbuster IPOs in the pipeline, such as Ant Group, the affiliate payment company of Alibaba, we anticipate strong support for HKD will continue for the rest of the year.

Market conditions – India

Updates for 23rd September 2020 GFXC meeting

1. RBI Measures and trends in INR

i. INR continued its recovery from the pandemic induced stress as global conditions stabilized, domestic economy started opening up and FPI inflows resumed. While in the July the inflows were subdued, August saw strong inflows, mainly in the equity segment. As the domestic currency recovered more than 4% from the lows touched in April, RBI has been judiciously adding to the forex reserves to reduce the appreciating pressure on INR. Towards the end of the month, Fed's announcement of shift to a policy of "average inflation targeting" decreased the appeal for US assets and provided an impetus to INR. However, rising coronavirus infection numbers, bouts of US-China tensions and the recent geopolitical tensions between China and India continue to act as downside risks to the currency.

ii. As evident from available data, forex market liquidity has improved in recent months with average daily traded volumes in onshore deliverable market in July being close to 90% of pre-Covid levels. Average ticket size during the same period has also gone up by almost 50% of average ticket size during the year 2019-20.

iii. RBI, as mentioned during the last meeting, has been proactive in coming out with measures to contain the negative effects of COVID-19 on the overall market including forex market. RBI has also communicated to stakeholders that it intends to continue monitoring evolving conditions closely and carry out liquidity management operations effectively, including through additional liquidity management tools, in line with the stance of monetary policy.

2. India Foreign Exchange Committee (IFXC) related developments

(i) **Launch of the IFXC website**: IFXC continues to engage with among its members and RBI for progressing towards launching its own website which will take over the IFXC related issues from the FEDAI website (which at present is hosting the IFXC material). However, Covid related dislocations have slowed down the pace of the work related to development of the website.

(ii) **Engaging buy-side participants**: All the current corporate members of the IFXC have already signed the Statement of Commitment (SoC) to the FX Global Code. Efforts are being made to encourage other buy-side participants to adopt the FX Global Code and sign the SoC.

3. Forex related regulatory developments

a. RBI announced that a framework for exchange of initial and variation margin for non-centrally cleared derivative contracts will be put in place. Such exchange of margin shall be facilitated by the adoption of the legislation for bilateral netting of qualified financial contracts as announced in the Union Budget 2020-21. Draft guidelines for Variation Margin for Non-Centrally Cleared Derivatives listing entity scope, calculation and exchange of variation margins, eligible collateral and haircut were released.

b. RBI has also rolled out revised Forex hedging guidelines w.e.f. September 01, 2020. The revised direction sets out a unified set of rules for accessing the foreign exchange markets for both residents and nonresidents. The rules have been made simpler and principle based. RBI also intends to review the Directions on Interest Rate Derivatives with a view to easing access, removing segmentation between onshore and offshore markets and improving transparency.

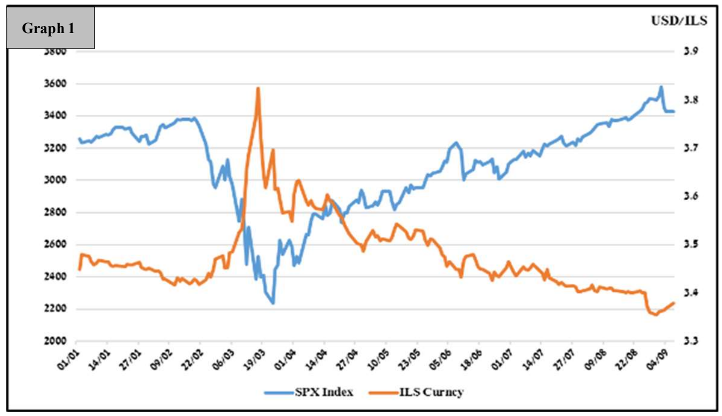
c. The broad policy approach has been re-oriented towards a principle-based regulatory framework with emphasis on market surveillance and intelligence to ensure that financial markets operate in fair, efficient and transparent manner. The endeavor of the Reserve Bank has been to build a principle-based regulatory framework and maintaining orderly conditions in the financial markets while adhering to international best practices and market infrastructure.

Bank of Israel
Market Operations Department
Tal Biber
Head of Division

בנק ישראל
חטיבת השווקים
טל ביבר
מנהל אגף

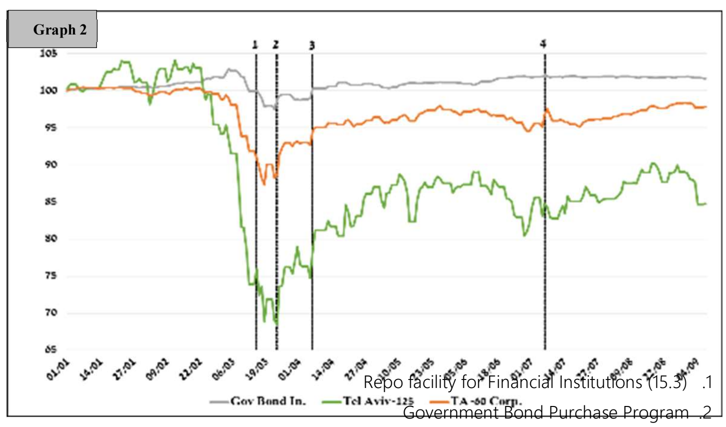
15th September 2020

Recent Conditions in the Israeli FX Market[1]



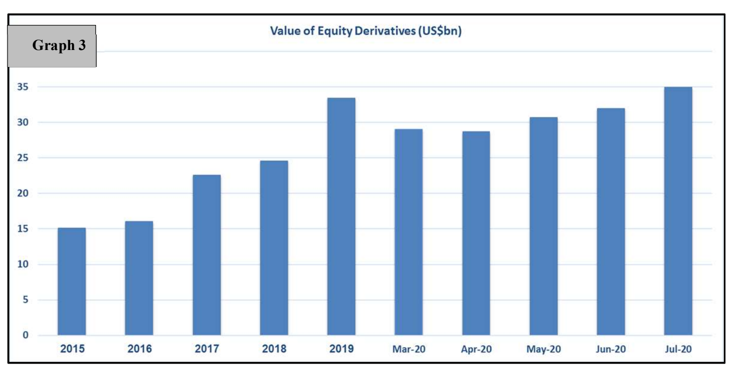
The Israeli Shekel (NIS) had been appreciating in the final quarter of 2019 and the first two months of 2020 to levels that the Bank of Israel (BoI) regarded as inconsistent with economic fundamentals and therefore the BoI purchased FX under its discretionary intervention program during this period.

The Covid 19 crisis started to impact Israeli financial markets in the latter part of February with the NIS depreciating (Graph 1) and local equity and bond markets selling off (Graph 2).



1. Repo facility for Financial Institutions (15.3)
2. Government Bond Purchase Program (23.3)

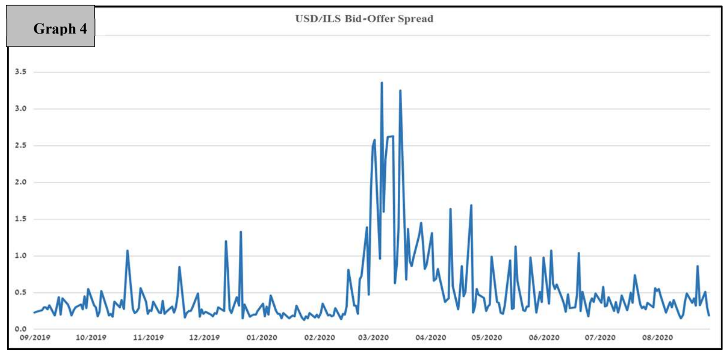
The fact that local pension funds invest a share of their foreign equity investments through derivatives (Graph 3) meant that the sudden fall in foreign equity markets resulted in sizeable margin calls. Pension funds' demand for FX liquidity caused an increase in the US$ borrowing rates in the swap market and spilled over to the spot



[1] *Background note submitted for the GFXC Teleconference, September 2020*

market causing a sudden depreciation (Graph 1) and a widening of bid/offer spreads (Graph 4).

In consequence, the BoI injected US$ liquidity in March by introducing initially one week US$/NIS swaps and thereafter announcing a swap program of up to US$15bn for up to three months maturity with the domestic banking sector. As a result, the US$ funding rate in the domestic swap market declined markedly and the spot NIS rate appreciated. As a complementary step, the BoI provided NIS liquidity directly to financial institutions through repo transactions.



Other steps taken by the BoI during this period include a reduction of the base rate to 0.1%, a government bond purchase program and a corporate bond purchase program.

Market Conditions in Tokyo FX Markets

September 16th, 2020

- Trading Activities in the Tokyo Foreign exchange market slowed down during summer, however, compared to April and May when Japan was at the state of emergency, market liquidity and depth recovered, and market is functioning normally though not fully to the pre-pandemic level. Market volatility has also become stable. Support by monetary policy and fiscal policy in various countries including Japan suppressed risk premium. Financial intermediation function is also being maintained.

- Status of flow in Japan is different across entity. Although flow from corporate is gradually returning as business resumes, this is still overall being suppressed according to the decline in volatility. On the other hand, flow from institutional investors is recovering in accordance with investment and hedging activities. Although under thorough financial liquidity, we would like to continue to keep close attention to market conditions through September to December.

- The WFH status of liquidity providers in Tokyo market has not changed substantially. The number of employees in the office is approximately 50%, however, there are no special concerns raised regarding to the operation of liquidity providers and conditions are stable.

- There are some concerns towards corona infection and lowering momentum of fundamental improvement from fall, however, there are no special impacts being identified towards market conditions in Tokyo as of current.

Evolution of Conditions in the Mexican Peso Market

GFXC Meeting – September 15th, 2020

Since the previous meeting at the end of June, operating conditions in the Mexican peso have shown significant improvement, although they've yet to reach pre-COVID levels. To a certain extent, the summer season acted as a constraint for further improvement in peso operating conditions as many participants are less active in the market.

Nevertheless, in terms of overall liquidity metrics, peso liquidity has stabilized around what could be described as neutral territory in terms of historic data. In that sense, it appears that liquidity is not optimal but revolves around levels that the market seems somewhat comfortable with. Top of book spreads are roughly around 80% above the levels that were seen on this same time period last year while depth metrics are more than 2 times higher than what was observed a year ago. Trading volumes in both primary venues and the local market have shown some recovery, although they continue to be somewhat muted. Finally, implied volatility in peso options has continued to decline, along with risk reversal, although both metrics are above pre-COVID levels with implied volatility almost twice as large as last year's average.

Turning towards other aspects of the FX market, improvement has also been seen in USD funding markets. Basis points for cross currency swaps have remained low and stable in the past weeks as implied rates in FX forwards have persisted along levels close to the OIS curve. As evidence of this perceived renewed health in USD funding markets, Banco de Mexico conducted two USD financing auctions on the back of its swap line agreement with the Federal Reserve at the end of June for USD 11 bn, with the market expressing interest for less than 45% of the amount offered. Even more so, on September 15th, Banco de Mexico conducted another USD financing auction in which less than 20% of the USD 5 bn offered by the bank was demanded by the market. To that matter, participants were vocal in expressing they no longer required USD funding from the central bank as other market alternatives had become available again. However, we believe that the Federal Reserve's initiative to extend the maturity of its swap line agreement with central banks to March 31, 2021 could provide a relevant backstop for hampered market dynamics in case a new episode of funding constraint was endured in the near future.

Leaving market conditions aside, the peso has appreciated about 6.2% since the previous GFXC meeting, outshining all of its EM peers with exception of the Chilean peso. Peso performance has been driven by a mix of factors, particularly by improvements in the global backdrop such an extension of the equity rally and overall dollar weakness, although some idiosyncratic elements have also played a part. Market participants have expressed that macroeconomic fundamentals, such as, a conservative fiscal stance in comparison to its peers, and market speculation over a more cautious stance by the Central Bank going forward, could provide certain support to the currency in a context of light investor positioning, as evidenced by CFTC data. Going forward, if the current trend of declining volatility continues, market participants might be willing to reengage carry trades with Mexican assets poised to benefit as domestic interest rates remain relatively elevated. Particularly, because investors probably hold surplus liquidity and are potentially incentivized by a search for yield mentality, now that the summer season is over.

Market Conditions in FX Markets in Singapore (since June 2020)

1. **Risk sentiment has remained relatively well supported since June**, when the GFXC last met virtually. Regional equities generally built on or held on to levels from the sharp rebounds in 2Q 2020, but remained below levels at the start of the year (before the COVID-19 crisis).

   (a) The key drivers included ongoing fiscal and central bank stimuli, particularly the Federal Reserve's zero for longer policy, and central bank bond purchases by some Asian central banks. Other drivers included periodic COVID-19 vaccine-related news, and positive earnings and economic data surprises (relative to low expectations) in China and other regional Asian economies. However, second or third round of COVID-19 related lockdowns in some regional countries meanwhile weighed on risk sentiment.

   (b) Debt and equity inflows to EM Asia resumed, with more than US$30 billion observed from June to August[1]. Notable drivers, apart from the broad recovery in risk sentiment and search for yield, included flows in anticipation of the inclusion of Chinese bonds in the WGBI in late-September.

2. **Regional currencies generally appreciated amid broad USD weakness and positive risk sentiment**. Since the last meeting, the SGD appreciated in line with other regional currencies by 2.4% against the dollar, recovering most of its losses in the earlier half of the year. On a trade-weighted (S$NEER) basis, the currency has remained stable. Market participants observed hedge fund interest to enter into trades when the S$NEER appreciates/depreciates past certain levels on their models, adding to stability in the index. Implied volatilities in the SGD and other regional currencies continued to trend downward as well since June.

3. **Liquidity conditions in FX markets continued to normalise**.

   (a) **FX liquidity indicators continued generally to improve for most regional currencies**. Volumes increased in the June/July period, but eased in August, typical of the summer holiday period in the northern hemisphere. Bid-ask spreads continued to recover, but remained slightly wider relative to pre-crisis levels. The recovery in liquidity in EM (including EM Asia) currencies also appeared to be slower than for the major currencies, while some gapping in prices in certain regional currencies continued to occur. Another notable observation has been the extremely wide spreads observed in late-New York / early-Asian hours, which market participants attributed to electronic price engines shutting off during

[1] From Institute of International Finance (IIF)'s September 2020 Capital Flows Tracker.

these hours, and general cautiousness, as well as work from home arrangements, which contributed to a lower level of activity in the early hours of the day. Trading during the main Asian trading hours has, however, resumed normal levels of activity.

(b) In the USDSGD FX swaps market, bid-ask spreads have returned to pre-COVID levels, while USDSGD FX spot spreads are still slightly elevated relative to pre-COVID-19 but significantly lower than levels seen in March when market conditions were strained).

4. Work from home arrangements have stabilised across most banks in Singapore. Most maintain some form of work from home arrangements (anecdotal feedback indicated that about 20-50% of staff were still working from home), while split office arrangements have continued for firms with multiple sites. For the front office / FX dealing desks, work from home arrangements have worked quite well for sales staff, while some traders have expressed a preference for working from the office due to access to technology and benefitting from market buzz.

5. Market participants are watchful of key event risks ahead e.g. US Presidential elections, as well as other geo-political and COVID-19 developments. With FX volatility remaining relatively low, buy-side participants have also been observed to increase long positions on options volatility ahead of these events.

GFXC Sep 2020

Item 2: Market conditions discussion, input from SFXC

SEK FX Market

The Swedish krona has continued to appreciate since the most recent meeting of the Global FX Committee, held on June 23, 2020. In trade-weighted terms, the krona has strengthened almost three per cent since then. On a bilateral basis, the krona is more than five per cent stronger v. the US dollar, while the appreciation v. the euro has been significantly more moderate. In generally, most of the krona appreciation occurred during the 1-month period immediately after the GFXC meeting, while the krona has thereafter been mostly stable or slightly depreciating.

Taking a longer perspective, the krona is the best performing G10 currency YTD. After weakening during the acute turbulence in March, the krona has appreciated 7.5 per cent in trade-weighted terms since the end of the first quarter. The appreciation has come against the backdrop of a **normalization of risk appetite** in the financial markets and of noticeably **lower interest rate differentials** with many other currencies, which previously weighed on the Swedish krona. In particular, market contacts see risk appetite as a main driver of FX markets at present.

Implicit volatility for options on most Swedish krona currency crosses fell during the early part of summer, but has in recent weeks begun to rise somewhat again. In historical comparison, however, volatility is still fairly low. Market contacts moreover note that month-end moves have been larger than usual recently, and see a possible connection to larger monthly rebalancing needs after large moves in equity markets.

Market contacts report that turnover in the market decreased considerably from its peak in March of this year to reach a low in July. Lately however it has begun to increase again. To some extent, off course, this is due to seasonality, but the decreased turnover from March was significant. In line with this improvement in turnover, bid/offer spreads in the markets have narrowed as well, something which market contacts attribute to both improved liquidity and increased sell-side competition, with the return of many market-participants that backed off significantly during March.

Settlement risk

There is continued demand for settlement (CLS) and matching services such as Finastra/Harmony. The use of STP solutions for immediate confirmation and bookings are also being used more frequently and consistently in both Corporates and Institutions (BBG CNF, Reuter Treasury Center etc). All in all, market participants' ability to prevent and detect errors and discrepancies is constantly evolving.

DKK FX Market

- **DKK has generally strengthened since March 2020 and trades on the strong side of the central rate**. Since the change in interest rate middle of March the DKK has strengthened and now trades at the strongest level in 3 years.
- **Market participants are reporting an unchanged liquidity in the market**. The situation in the EURDKK spot and swap market has not changed significantly since May/June.
    - The daily trading ranges have increased a little during the summer.
    - Activity seems more evenly split between domestic and foreign market participants.
- **Implied DKK fwd rates increased** (EUR/DKK curve went positive) because of lower than anticipated net position due to DKK tax payment deferrals not being as high as the market had originally implied.

- The **DKK FX market is characterized by a few big domestic participants and a number of smaller banks**. The Pension sector in Denmark is big and changes in the pension portfolios can have a substantial impact on the FX flows as seen in the market during March 2020.
- The **EURDKK may fluctuate by up to 2.25 per cent on either side of the central rate**, but in practice Danmarks Nationalbank ensures that the fluctuations are far smaller. This reflects that Danmarks Nationalbank takes consistent action as the krone exchange rate starts drifting away from the central rate.

NOK FX Market

Since reaching record weak levels against euro, US dollars and the import-weighted krone exchange rate in March, the Norwegian krone has appreciated significantly. **The appreciating trend continued during the summer, helped by an increase in the oil price and a somewhat improved risk sentiment**. The krone appreciation since June has been particularly significant against a broadly weakening US dollar. The krone measured against the import-weighted krone exchange rate is more or less back to the levels seen before the outbreak of Covid-19. **The recent fall in the oil price has dampened the appreciation somewhat.**

Implied volatility has come down from record high levels in March, but is still higher than before the outbreak of Covid-19. **Liquidity in the market for Norwegian kroner has normalized compared to March**, but the market for Norwegian krone is small, and at times liquidity can be poor.

BANK OF KOREA

The Current Trend of FX market in South Korea

September 17, 2020

☐ USD/KRW exchange rate(won) has decreased mainly due to USD weakness, investor sentiment improvement caused by expectation for development of COVID-19 vaccine and extension of dollar-bilateral currency swap arrangement despite concerns over the re-proliferation of COVID-19 and conflict between the U.S. and China.

* USD/KRW Rate(won): 1,203.0 end of June → 1,191.3 end of July → 1,187.8 end of August → 1,179.0 on Sep. 15

☐ In FX swap market, USD liquidity condition has improved somewhat mainly due to continued easing monetary policies in major economies, investor sentiment improvement caused by extension of dollar-bilateral currency swap arrangement in spite of demand for foreign currency from domestic institutional investor for overseas investment purposes.

* Swap basis(3M, bp): -61 end of June → -52 end of July → -54 end of August → -45 on Sep. 15

☐ As USD liquidity condition in Korea has improved, the BOK has not conducted competitive US dollar loan facility auctions using the proceeds of swap transactions since early May.

☐ In the future, if volatility in the FX market increases due to mass spread of COVID-19, the condition of conflicts between U.S. and China, global political events and so on, the BOK may conduct appropriate measures including additional auctions of USD loan after consultation with the Fed.

Zurich, 16 September 2020

Swiss FX Committee (SFXC) view on FX market conditions

1. Operational set-up

Most market participants continue to operate with a split team arrangement, working from different locations (primary site, recovery site, teleworking from home) and/or alternating between those on regular basis. The share of people in the markets units at sell side firms currently working at their primary site is reported between 50% and 75%.

2. FX market conditions in Switzerland

Since the last GFXC call in June, FX markets functioned normally. The CHF has mostly traded sideways in nominal trade weighted terms (chart 1). Liquidity conditions were good with competitive spreads.

FX swap market conditions have normalised and the USD funding stress that occurred at the outset of the crisis has receded (chart 2). Since end-July 2020, there was practically no demand in the SNB's US dollar auctions.

Some banks are advising their clients to spread out their month-, quarter- and year-end flows in order to avoid potential bottlenecks. As a result, some participants have seen these flows occurring over several days, with less volume concentrated on the last trading day of the period.

Looking at risk events ahead, the FX options market focuses on the US elections in November. The USD/CHF O/N volatility for 3 November remains at levels above 25%, slightly up from July.

Chart 1: CHF spot market

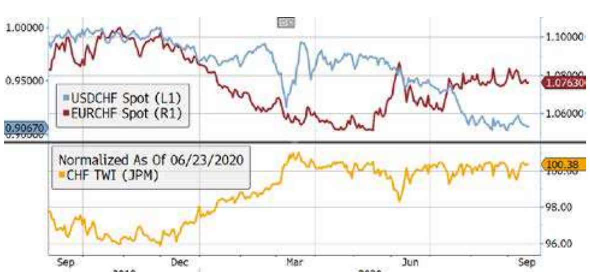
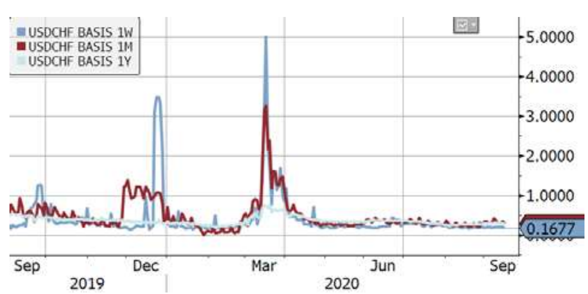


Chart 2: CHF FX swap market (% pts)*



*Calculated using OIS rates

GFXC Conference Call – 23 September 2020

Update on FX Market Conditions

London Foreign Exchange Joint Standing Committee (FXJSC)

In the first six months of 2020 the impact of Covid-19 was the key lens through which market functioning was analysed. There has been some normalisation of market function observed in Q2, the pandemic and working-from-home remain important factors in market developments. Two key themes have arisen over the course of Q3.

Trends in USD

The FXJSC discussed the recent perception of USD weakness since mid-2020.

- Members noted that levels of USD realised volatility were significantly higher than they have been over the past 24 months (excluding the peaks of the spring of 2020). However, on a trade-weighted basis the depreciation of the USD was slight, with the USD trading at close to its levels of early 2020.

- Members observed that the depreciation of the USD versus EUR was taking place in a context of the US economy outperforming the Eurozone economy, making growth differentials a less appealing explanation for USD weakness. The news from the Eurozone, including the European Recovery Fund did not yet seem to feeding into growth forecasts for the Eurozone.

- One additional explanation - risk sentiment – was not considered to be an obvious driver of variations in EUR/USD. Flight-to-safety played some part in explaining USD movements relative to EM currencies in 2020, but did not seem as suited to explain movements of EUR/USD.

Emerging market (EM) vs Developed market (DM) currencies

The FXJSC discussed recent functioning in EM and comparisons with DM.

- Members highlighted that the capacity of many EMs to engage in debt-driven support for their economies was limited, driving differentials in the trading patterns of EM and DM currencies. It was noted that Governments that are fiscally constrained have a reduced ability to stimulate economic recovery.

- Some other factors that may amplify pressure on EMs were mentioned, including a higher reliance on foreign direct investment (FDI) and external demand, reduced demand for cyclical assets due to a preference for liquidity, central bank policies reducing the yield advantage that EMs previously held, and reduced volumes leading to reduced liquidity.

- Traded volumes for major currency pairs were reported to have risen compared to the early months of 2020, whereas volumes for EM currencies had not increased.

foreign exchange committee

FXC

September 16, 2020

The following summarizes the NY FXC's discussions on themes and conditions in FX markets since the last GFXC meeting.

USD Performance

- The broad depreciation of the US dollar over recent months was attributed to a number of inter-connected factors, including ample liquidity, the inverse correlation between the dollar and risk assets, a general reach for yield, the decline in US real interest rates, and an unwinding of COVID-related appreciation earlier in the year, leaving the dollar little changed on the year, and still relatively high from a longer term perspective. The dollar's performance has varied, however, depending on the category of currency or commodity of reference.
- It was suggested that the outlook for US monetary policy, including low-for-long policy rates, and ongoing balance sheet expansion could continue to encourage investors to allocate out of the dollar towards higher yielding currencies.
- The dollar depreciation was also discussed in the context of a large increase in supply of dollar-denominated fixed income assets, such as Treasuries and corporates.
- The euro's notable appreciation against the dollar was largely attributed to the positive sentiment driven by the EU's recovery fund program, which is particularly expected to benefit peripheral countries.
- Main points of uncertainty for the dollar going forward discussed included the trajectory of COVID cases in the US, potential inflation risks, the potential unwind of unhedged US asset positions by foreign investors, and the implications of November's US presidential election.

Liquidity Conditions

- Members noted that overall conditions have improved markedly since the height of the COVID-induced volatility earlier in the year, though overall still appear approximately 20 percent below longer-run norms, by some measures.

- Liquidity conditions in G10 currency pairs has mostly returned close to pre-COVID levels, whereas conditions in several EM currencies vary, but still remain thinner on a relative basis. At the extreme end, members discussed the implications of new financial regulations in Turkey, which contributed to significant impairment of liquidity in the lira.

- Overall, top-of-book bid-ask spreads are tighter (albeit for smaller size and shorter periods of time) than the deeper in the order book. While this is normally how order books function, it appears that trades still reach 'mid book' much sooner and at wider spreads than pre-COVID.

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- Members also discussed some recent trends in activity on various trading platforms. In particular, it was noted that there has been a greater degree of (mostly passive) bank activity on the primary markets, evidenced by the increase in iceberg orders (larger trades broken up via algorithms into multiple smaller orders, with the intent of masking total order size). Additionally, some noted that full amount trading on ECNs has returned closer to pre-COVID levels, as many traders broke up their orders into smaller sizes during the crisis amid the poorer liquidity conditions.