

FX Insight

SGDNEER Preview: Mitigating “Sticky” Inflation

SGDNEER Largely Remained in Our Projection Range Recently

Back in mid-Oct (see [here](#)), we had maintained a modest bullish bias on the SGDNEER although we cautioned that the risk-reward to a tactical long SGDNEER was a tad asymmetric. We also saw continued likely support for SGD from “haven” characteristics versus its peers in a period of elevated uncertainty. Our Taylor Rule implied SGDNEER model showed that a potential re-centering was necessary to contain the inherent upwards pressures on the SGDNEER. The SGDNEER has since largely remained in the +1% region above the mid-point of the policy band (average: +1.21%), amid a lower USDSGD (1.4260 levels in mid Oct, vs 1.33 levels recently) as the market adjusted to the possibility that the Fed hiking cycle could be coming to an end. Moreover, concerns about the US banking system after Silicon Valley Bank’s collapse weighed on the USD and provided greater credence to the end-cycle narrative.

MAS Could Re-center the Policy Band this April

The house view is for MAS to re-center the policy band to the prevailing level in mid-April (likely 14 Apr), given elevated inflation pressures. Core inflation remains sticky at levels well above MAS’ comfort zone, with the latest Feb core CPI print coming at +5.5% YoY, with broad price increases across food, retail and services following a 1% hike in GST in Jan 2023 and a persistently tight labour market. This will be the sixth tightening move by MAS since Oct 2021. Our economists do not expect a “double move” (both steeper slope and re-centering) because of the rising risks of recession. In addition, they see this as the potential final move as economic prospects worsen and growth is expected to slow in 2024. Market expectations are tilted towards an MAS stand pat, given the responses to the latest MAS survey. We think that any tightening, be it in the form of a re-centering or steepening, would therefore be supportive of SGDNEER, given that neither are fully priced at this point and could induce a >1% gain in the SGDNEER if a tightening does materialize. The SGDNEER is currently estimated at +1.5% above the implied mid-point. **Our base case expectations for a re-centering could result in a tentative post-announcement trading range of +0% to +1.0% above the new (higher) policy mid-point.**

Underpinning Our Core View for Lower USDSGD

Singapore’s robust macro fundamentals such as ample fiscal space, current account surpluses, healthy labour market and political stability etc., will continue to impart SGD some “safe haven” appeal. The Fed also looks to be coming to the end of the tightening cycle amid US financial stability woes that have weighed on the USD. In line with a stronger SGDNEER from MAS’ tightening and an anticipated boost for Asian currencies from China’s reopening, we look for USDSGD to end the year lower around 1.2850 levels.

Analysts

Saktiandi Supaat
(65) 6320 1379
saktiandi@maybank.com.sg

Shaun Lim
(65) 6320 1371
shaunlim@maybank.com

Fiona Lim
(65) 6320 1374
fionalim@maybank.com.sg

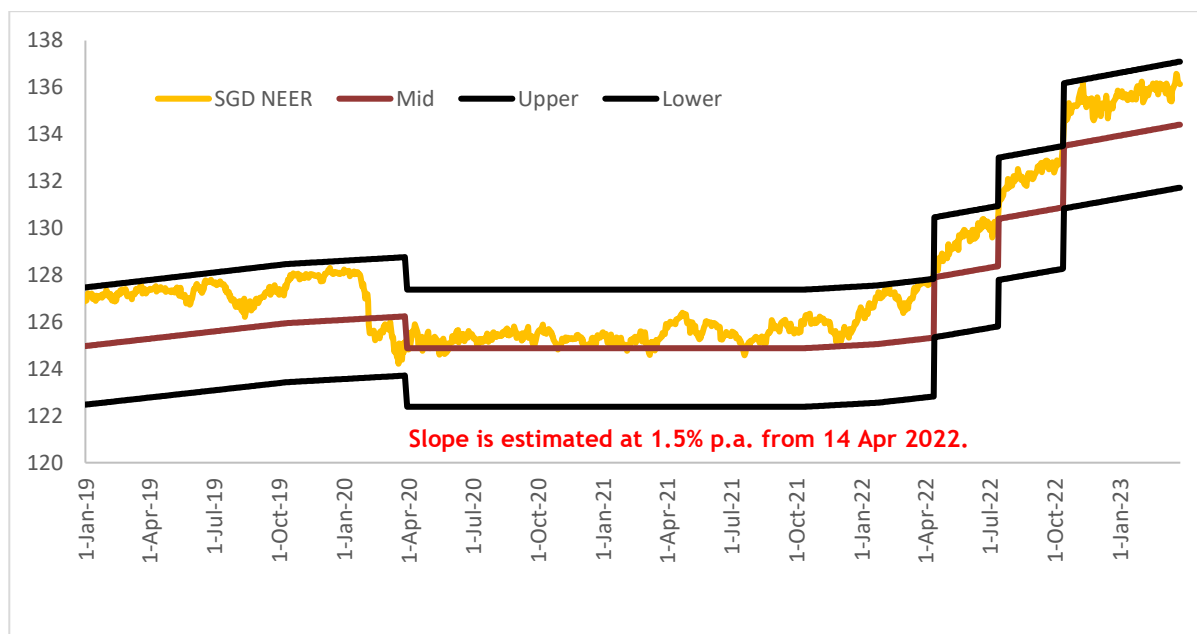
Alan Lau
(65) 6320 1378
alanlau@maybank.com

SGDNEER Traded Between +0.6% to +1.9% above the Mid-point since the Oct MAS Re-centering

In Oct, MAS re-centered the SGDNEER in a move that was widely expected. The decision then was predicated on lingering inflation risks although economic growth was expected to slow. MAS' Oct policy statement noted that core inflation was likely to remain at around 5% for the rest of 2022 and 2023. At the same time, growth momentum was likely to slow on softening global growth prospects and demand. Therefore, MAS projected below trend growth into 2023, expecting a mildly positive output gap to reverse. MAS also highlighted upside risks to inflation forecasts, including fresh shocks to global commodity prices and second-round effects associated with a prolonged period of high inflation.

Immediately post MAS decision, we had maintained a modest bullish bias on SGDNEER (see [here](#)) and cautioned against the tad asymmetry in risk-reward of a tactical long of the SGDNEER. We remained hopeful of the likely support for SGD from “safe haven” characteristics versus peers in this period of elevated external uncertainties. The path of the SGD and SGDNEER has largely been in line with these expectations, with the SGDNEER trading between +0.5% to +1.9% above the mid-point of the policy band (Chart 1). However, we did not expect USDSGD to come off by as tremendously as it has, with USDSGD at 1.4260 on 14 Oct and at 1.33 levels recently.

Chart 1: SGDNEER Largely Staying higher than +1.0% above Par in Oct to March



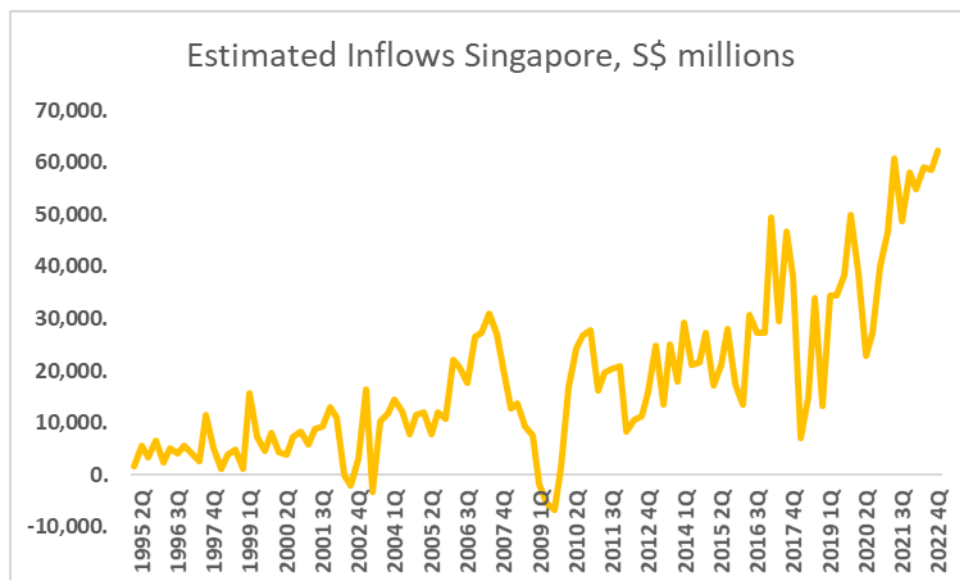
Source: Bloomberg, Maybank FX Research & Strategy

Looking at actual outturns, SGDNEER traded at +0.73% the day of the policy decision. The SGDNEER has remained well-above the mid-point of the policy band since. Over mid-Oct to early Mar, the SGDNEER has mostly stayed above +1.00% (average: +1.21%) above implied mid-point (Chart 1).

Over the period, we noticed that the SGD exhibited “safe-haven” characteristics in that it tended to be resilient on both a bilateral as well

as a trade-weighted basis against most other currencies. Estimated gross inflows have increased over this period of time (Figure 2), underscoring the “safe-haven” properties of the SGD. This contributed to the strength in the SGDNEER as the SGD was a generally more stable store of value than other currencies amid market fluctuations (Chart 3). We think that Singapore’s robust macro fundamentals and the credibility of MAS’ unique exchange rate based monetary policy have contributed to this. In particular, the lack of an explicit interest rate policy and a strong correlation of SG rates to US rates sheltered the SGD from the widening yield differential issue that had plagued many other currencies in the Fed tightening cycle. The SGD was also further supported by the positive crawl (estimated at +1.5%) against the peers in the SGDNEER basket. We also note that the crawl has at worst been set at 0% and has never been negative, which adds credibility to MAS’ policy and contributes to investor confidence in the SGD (Chart 2, 3).

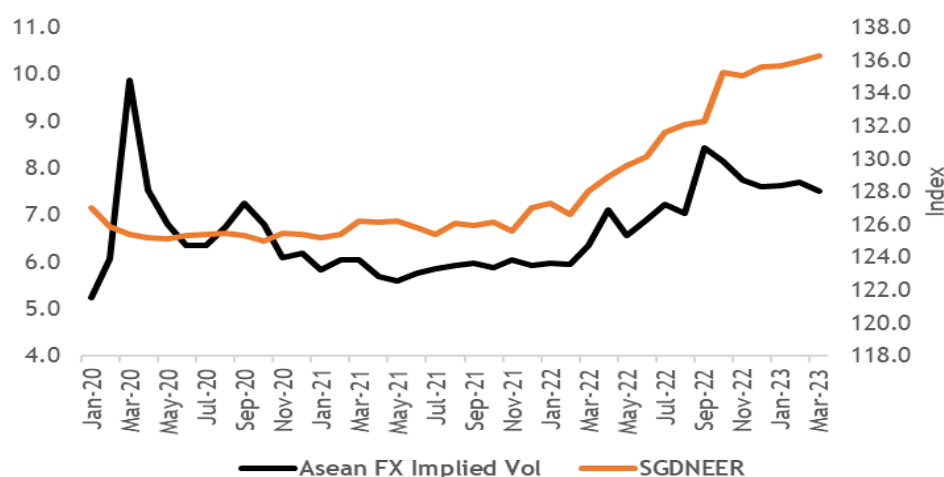
Chart 2: Recent Inflows Underscore SGD “Safe-Haven” Properties



Source: Singstat, Maybank FX Research & Strategy

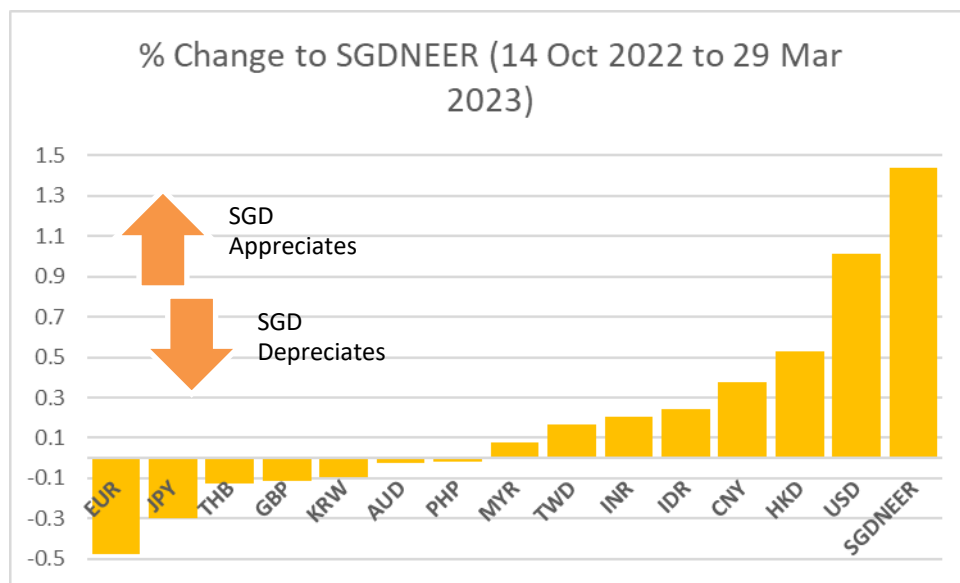
Note: Quarterly Balance of Payments data from Singstat used as a proxy for gross inflows includes direct investment, portfolio investment and financial derivatives

Chart 3: SGDNEER (RHS) Rises in Times of Elevated ASEAN FX Volatility



Source: Bloomberg, Maybank FX Research & Strategy

Chart 4: Since Mid-Oct, SGDNEER appreciation was mainly due to USD, HKD, CNY and was moderated by EUR, JPY, THB



Source: Bloomberg, Maybank FX Research & Strategy

Since the Oct MAS policy decision, the SGDNEER has appreciated mainly due to the SGD strengthening against the USD, HKD and CNY. Over the same period, the strength in the SGDNEER has mainly been moderated by the SGD weakening against the EUR and JPY (Chart 4).

MAS Could Re-center the Policy Band This April (Likely 14 April)

Our house view is for the MAS to re-center the policy band to the prevailing level, given persistently high core inflation that stays well above MAS' comfort zone. This will be the sixth tightening shift since Oct 2021 and could potentially be the final one as growth prospects slow significantly due to weakening external demand.

Data releases saw Sep-Feb Core CPI Inflation remain persistent at elevated levels. In the light of the recent surprise OPEC production cuts, MAS could become more inclined to tighten given the potential inflationary effects of the rise in oil prices on Singapore. The implication of this is that inflation could be even stickier than initially thought. Our economists now forecast average core inflation at 4.5% in 2023 (up from 4% previously) and headline inflation at 6.0% (unchanged). MAS will likely raise its 2023 core inflation forecast to 4% to 5% (from 3.5% to 4.5%) and maintain headline inflation forecast at 5.5% to 6.5%. Core inflation remains sticky at levels well above MAS' comfort zone, with the latest Feb core CPI print coming at +5.5% YoY, with broad price increases across food, retail and services following a 1% hike in GST in Jan 2023 and a persistently tight labour market. Our economists also expect a chance that the expansion of the Progressive Wage Model to food services could fan food price pressures. On the other hand, our economists also think the global banking turmoil could exert a deflationary impact on growth and prices if inflation falls more quickly than expected amid tightening global credit conditions and rising short-term interest rates that dampen investment and consumer

spending. This implies that MAS may not have to tighten at the subsequent Oct policy meeting.

On growth, our economist team expects Flash 1Q22 GDP to come in at around +1.1% on a YoY basis. On a QoQ SA basis, GDP is expected to print at +0.5% (vs. +0.1% in 4Q 2022), skirting on a technical recession. The downturn is mainly due to a sharp manufacturing contraction and slowdown in the external-oriented services sectors, as global demand weakens.

Singapore's GDP growth has historically been highly correlated to US growth. Against a backdrop of recession risks in the US having risen significantly in the wake of the US banking crisis, with the probability of a US recession at 58% over the next 12 months, the probability of a Singapore recession has risen to 30%. These are based on our economists' estimates based on the 3M-10Y US yield curve and 3M-10Y yield curve spread for Singapore. However, China's reopening, while not having had a meaningful impact on manufacturing or exports thus far, is expected to have a more visible impact on growth from 2Q onwards, and our economist expect that this will help to cushion the impact of slowing US economy and decouple Singapore from a US recession. This is in line with our view for China's reopening to benefit Asian currencies broadly and the SGD specifically.

While rising risks of a recession have yet to spill over to sentiment for the SGD, our house projection for 1.7% growth in 2023, and worsening prospects for future growth should be enough to discourage MAS from a double-tightening (i.e., slope increase + re-centering). That said, both our economists and us see MAS tightening via a re-centering given elevated inflationary pressures that keeps MAS' core inflation above the comfort zone.

Table 1: MAS Survey of Professional Forecasters (% of respondents)

| MAS Actions | December Survey | | March Survey | |
|------------------|-----------------|----------|--------------|----------|
| | 2023 April | 2023 Oct | 2023 Apr | 2023 Oct |
| Increase slope | 33.3 | 11.1 | 23.8 | 0.0 |
| Reduce slope | 0.0 | 0.0 | 0.0 | 0.0 |
| Flatten slope | 0.0 | 0.0 | 0.0 | 5.6 |
| Unchanged | 66.7 | 88.9 | 76.2 | 94.4 |
| Re-center higher | 11.1 | 0.0 | 23.8 | 0.0 |
| Re-center lower | 0.0 | 5.6 | 0.0 | 0.0 |
| Unchanged | 88.9 | 94.4 | 76.2 | 100.0 |
| Widen band | 0.0 | 0.0 | 0.0 | 0.0 |
| Narrow band | 0.0 | 0.0 | 0.0 | 0.0 |
| Unchanged | 100.0 | 100.0 | 100.0 | 100.0 |

Source: MAS, Maybank FX Research & Strategy

Market expectations appear to be tilted towards MAS standing pat (Table 1). In the latest MAS Survey of Professional Forecasters, 23.8% of April 3, 2023

respondents expect a tightening of monetary policy by MAS via a steepening and 76.2% of respondents expect MAS to stand pat (contrast to 33.3% steepen and 66.7% unchanged in Dec 2022). In a separate poll in the same survey, 23.8% of respondents expect a tightening of monetary policy by MAS via a re-centering and 76.2% of respondents expect MAS to stand pat (contrast to 11.1% re-center and 88.9% unchanged in Dec 2022). If we assume that no one is expecting a double tightening, i.e. the groups that expect MAS to tighten are mutually exclusive, then at the very least 52.4% of respondents expect MAS to stand pat. Should there be respondents that expect a double tightening from MAS, then correspondingly a larger percentage of respondents are expecting MAS to stand pat. In summary, it appears that the respondents have shifted to view MAS as being more dovish or coming to the end of the tightening cycle in the March survey. This is in contrast to the December survey, where a larger percentage of respondents thought that some form of tightening was necessary in April and saw MAS tightening through to even October. This is in line with the general market consensus that most central banks in the world are coming to an end of their tightening cycle.

We think that any tightening, be it in the form of a re-centering or steepening, would therefore be supportive of SGDNEER, given that neither are fully priced at this point and could induce a >1% gain in the SGDNEER if a tightening does materialize. The SGDNEER is currently estimated at +1.5% above the implied mid-point. **Our base case expectations for a re-centering could result in a tentative post-announcement trading range of +0% to +1.0% above the new (higher) policy mid-point.**

Table 2: Past Episodes of Re-centering (Upwards) & Estimated Impact on SGD

| Past Episodes of Re-centering Higher | 1-Day | | 1-Week (5 Trading Days) | | 1-Month (21 Trading Days) | |
|--------------------------------------|--------------------|-------------------|----------------------------|-------------------|------------------------------|-------------------|
| | Chg in SGDNEER (%) | Chg in USDSGD (%) | Chg in SGDNEER (%) | Chg in USDSGD (%) | Chg in SGDNEER (%) | Chg in USDSGD (%) |
| Oct-22 | 0.7 | -0.3 | 1.0 | -0.5 | 1.6 | -4.1 |
| Jul-22 | 0.3 | 0.0 | 0.7 | -0.8 | 1.5 | -2.5 |
| Apr-22 [^] | 0.5 | -0.4 | 0.5 | 0.1 | 1.0 | 2.5 |
| Apr-11* | 0.7 | -0.8 | 1.0 | -1.5 | 0.9 | -1.4 |
| Apr-10 | 1.2 | -1.4 | 1.3 | -1.3 | 2.1 | -0.9 |
| Apr-08 | 1.3 | -1.4 | 1.6 | -1.8 | 1.4 | -0.3 |

* Re-centred below prevailing level of the SGDNEER.

[^] Double-tightening involving slope steepening (estimated 1.0% p.a. increased to 1.5% p.a.).

Note: Changes are estimated versus SGDNEER or USDSGD levels just before the policy shift.

Source: Bloomberg, Maybank FX Research & Strategy Estimates

From Table 2, we see potential for about 1.0% or greater boost to SGD in the case of re-centering higher in the policy band, to prevailing level, although it may take time for this support to fully emerge. Notably in the most recent and more anticipated episode of re-centering on Oct-22 we saw the SGDNEER trade 1.6% higher one month after MAS' policy

decision. We therefore think that our expectations for a stronger SGDNEER, given that this tightening would be less anticipated, are not unreasonable.

In the case of a slight (50bps) steepening, which we view as more unlikely given prevailing concerns about growth and MAS' mandate to achieve non-inflationary sustained economic growth, we think that effect on the SGDNEER would be more sustained over a period of time than in the case of a re-centering.

Table 3: Past Episodes of "Slight" (50bps) Steepening & Estimated Impact on SGD

| Past Episodes of 50bps Steepening | 1-Day | | 1-Week (5 Trading Days) | | 1-Month (21 Trading Days) | |
|-----------------------------------|----------------------|-------------------|-------------------------|-------------------|---------------------------|-------------------|
| | Chg in SGDNEER R (%) | Chg in USDSGD (%) | Chg in SGDNEER R (%) | Chg in USDSGD (%) | Chg in SGDNEER R (%) | Chg in USDSGD (%) |
| Apr-22 [^] | 0.5 | -0.4 | 0.5 | 0.1 | 1.0 | 2.5 |
| Jan-22 | 0.2 | -0.2 | 0.1 | 0.4 | 0.0 | -0.1 |
| Oct-21 | 0.1 | -0.2 | 0.2 | -0.6 | -0.1 | 0.2 |
| Oct-18 | -0.1 | 0.1 | -0.2 | 0.4 | 0.0 | 0.2 |
| Apr-18 | 0.0 | 0.0 | 0.1 | -0.1 | -0.3 | 1.8 |
| Apr-12 ^{**} | 0.5 | -0.5 | 0.3 | -0.2 | 0.5 | -0.1 |
| Oct-10 [*] | 0.3 | -0.6 | 0.1 | 0.0 | 1.0 | -1.1 |

[^] Double-tightening involving slope steepening (estimated 1.0% p.a. increased to 1.5% p.a.).

^{*} Band also widened to accommodate volatility

^{**} Band also narrowed from earlier widened band to accommodate volatility

Note: Changes are estimated versus SGDNEER or USDSGD levels just before the policy shift.

Source: Bloomberg, Maybank FX Research & Strategy Estimates

Looking at past episodes of 50bps steepening (Table 3), we see that the immediate impact on the SGDNEER tends to be smaller in magnitude than in episodes of re-centering (Table 2). This is in line with our expectations given that a slope steepening affects the daily crawl of the SGDNEER, which should have a less immediate impact than that of a re-centering but a more prolonged sustained impact over time. This is in line with MAS' justifications for slope steepening as addressing more persistent structural shifts in inflation. On the other hand, re-centerings could be viewed as one-off level changes to alleviate immediate price pressures. **To reiterate, we do not view a slope steepening as likely given the growth concerns.**

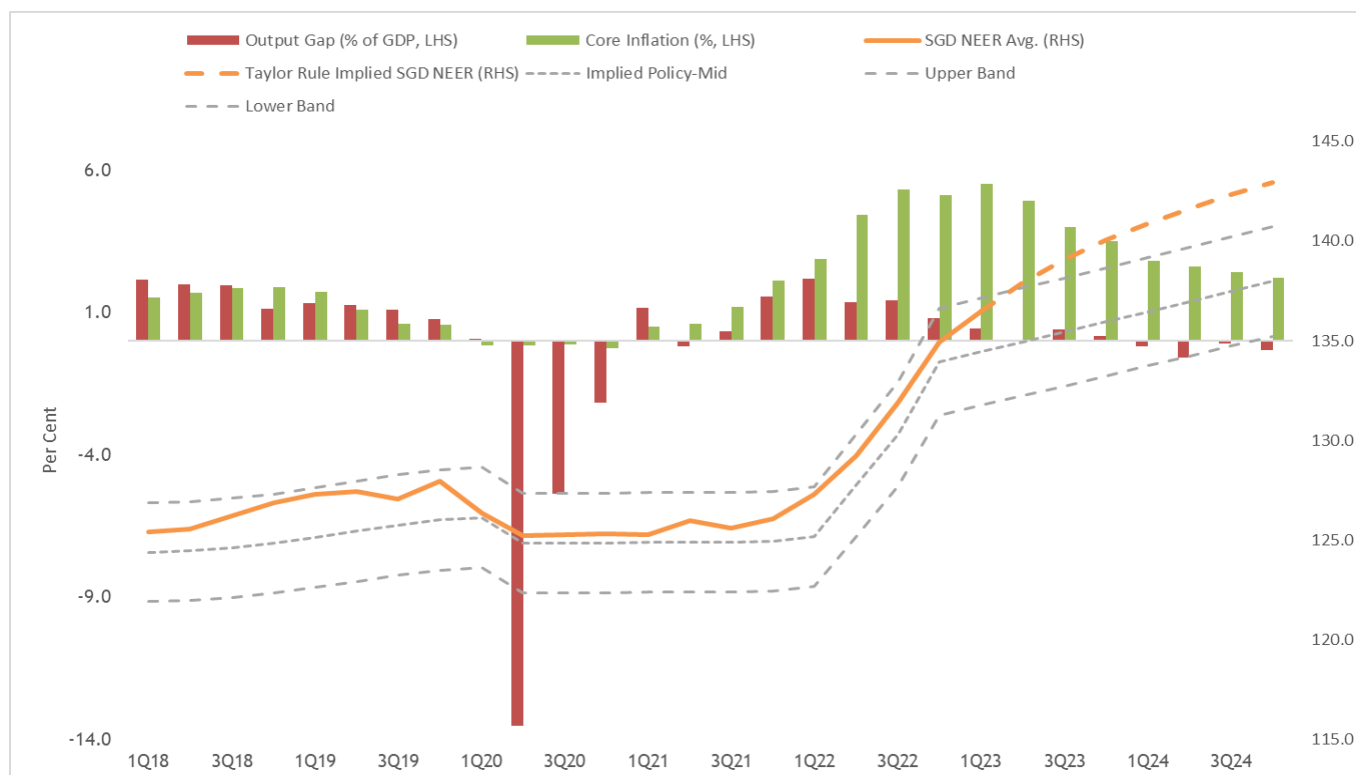
Lastly, while we think a double move is even less likely than a slope steepening, such a move could have an outsized market impact on the SGDNEER given its more hawkish signature. The market effect of such a move could be even more egregious considering the market views MAS as more dovish or coming to the end of a tightening cycle. Double moves also tend to be rarer as MAS tends to opt for policy calibrations that do not cause unnecessary market volatility. **Given that the market does not expect a double tightening move, and as the same growth concerns apply together with the more hawkish signature of a double move, we think that it is even less likely than a slope steepening.**

Although it is likely that USDSGD trades lower should MAS tighten, we remain cautious of being too certain on the USDSGD trajectory on the day of the policy announcement, given that the USDSGD is usually driven by broader USD biases at the point of time and could also be driven by MAS intervention should it feel the need to guide the market back to an appropriate level. Recall that MAS' primary tool for managing the SGDNEER is by intervening in the spot FX market and the preferred intervention pair is USDSGD. Also, we note that from [MAS' monograph](#) that MAS refrains from intervening unnecessarily as far as possible. At this point, we see good two-way price action in USDSGD and should current macro narratives hold till the policy announcement we should see USDSGD trade within a 1.32 to 1.3350 range. Should broad USD-weakness themes drive FX, we see USDSGD as low as 1.30 and if USD-strength themes come into play we see USDSGD trade at up to 1.35 levels.

For a check on the potential trajectory for SGDNEER going forward, we turn to our Taylor rule model to derive an implied SGDNEER (Chart 5). Given the drags on growth, the current mildly positive output gap (red bars) are expected to turn mildly negative in 2024. Core inflation (green bars) has exceeded 2% since Dec 2021 and looks to remain sticky above 2% till 2024. Our economist team's latest forecasts for core inflation and headline inflation in 2024 are 2.5% and 2.8%, respectively.

Given these macro conditions, our Taylor rule implied SGDNEER estimates (dotted orange line in Chart 5 below) suggest that SGDNEER is likely to continue seeing upward pressures in the coming quarters. Notably, our estimates imply that **the current upper bound of the policy band may not be able to contain the inherent upward pressures on SGDNEER and therefore provide further justification for a re-centering.**

Chart 5: SGDNEER Could See Upward Pressures to 2024 (Taylor Rule Estimates)



Source: Bloomberg, Maybank FX Research & Strategy Estimates

As mentioned earlier, we do see the potential for a lower USDSGD on announcement day should MAS choose to tighten. Robust macro fundamentals in Singapore such as ample fiscal space, current account surpluses, healthy labour market and political stability etc., will continue to impart SGD some “safe-haven” appeal, and this is still likely to be reflected in SGDNEER strength. However, we also see the Fed coming to an end of the tightening cycle and are looking for the USD to weaken gradually through the year as the market pares back on USD assets. In addition, we expect China’s reopening effects to be beneficial for Asian currencies and specifically for the SGD, with its close trade linkages to China. This is in line with our economists views that a China recovery later in the year could potentially decouple Singapore’s growth prospects from a possible recession in the US. In addition, we are expecting MAS to tighten and for this to underpin SGD strength vs its peers in the basket, which includes the USD. We therefore maintain our bearish view on the USDSGD and our USDSGD forecasts. We see USDSGD lower at 1.2850 levels at the end of the year (Table 4).

Table 4: Quarterly USDSGD Forecasts

| Forecast | 2Q 2023 | 3Q 2023 | 4Q 2023 | 1Q 2024 |
|----------|---------|---------|---------|---------|
| USDSGD | 1.3000 | 1.2900 | 1.2850 | 1.2850 |

Source: Maybank FX Research & Strategy Estimates

DISCLAIMER

This report is for information purposes only and under no circumstances is it to be considered or intended as an offer to sell or a solicitation of an offer to buy the securities or financial instruments referred to herein, or an offer or solicitation to any person to enter into any transaction or adopt any investment strategy. Investors should note that income from such securities or financial instruments, if any, may fluctuate and that each security's or financial instrument's price or value may rise or fall. Accordingly, investors may receive back less than originally invested. Past performance is not necessarily a guide to future performance. This report is not intended to provide personal investment advice and does not take into account the specific investment objectives, the financial situation and the particular needs of persons who may receive or read this report. Investors should therefore seek financial, legal and other advice regarding the appropriateness of investing in any securities and/or financial instruments or the investment strategies discussed or recommended in this report.

The information contained herein has been obtained from sources believed to be reliable but such sources have not been independently verified by Malayan Banking Berhad and/or its affiliates and related corporations (collectively, "Maybank") and consequently no representation is made as to the accuracy or completeness of this report by Maybank and it should not be relied upon as such. Accordingly, no liability can be accepted for any direct, indirect or consequential losses or damages that may arise from the use or reliance of this report. Maybank and its officers, directors, associates, connected parties and/or employees may from time to time have positions or be materially interested in the securities and/or financial instruments referred to herein and may further act as market maker or have assumed an underwriting commitment or deal with such securities and/or financial instruments and may also perform or seek to perform investment banking, advisory and other services for or relating to those companies whose securities are mentioned in this report. Any information or opinions or recommendations contained herein are subject to change at any time, without prior notice.

This report may contain forward looking statements which are often but not always identified by the use of words such as "anticipate", "believe", "estimate", "intend", "plan", "expect", "forecast", "predict" and "project" and statements that an event or result "may", "will", "can", "should", "could" or "might" occur or be achieved and other similar expressions. Such forward looking statements are based on assumptions made and information currently available to us and are subject to certain risks and uncertainties that could cause the actual results to differ materially from those expressed in any forward looking statements. Readers are cautioned not to place undue relevance on these forward looking statements. Maybank expressly disclaims any obligation to update or revise any such forward looking statements to reflect new information, events or circumstances after the date of this publication or to reflect the occurrence of unanticipated events.

This report is prepared for the use of Maybank's clients and may not be reproduced, altered in any way, transmitted to, copied or distributed to any other party in whole or in part in any form or manner without the prior express written consent of Maybank. Maybank accepts no liability whatsoever for the actions of third parties in this respect. This report is not directed to or intended for distribution to or use by any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation.

APPENDIX I: TERMS FOR PROVISION OF REPORT, DISCLAIMERS AND DISCLOSURES

DISCLAIMERS

This research report is prepared for general circulation and for information purposes only and under no circumstances should it be considered or intended as an offer to sell or a solicitation of an offer to buy the securities referred to herein. Investors should note that values of such securities, if any, may fluctuate and that each security's price or value may rise or fall. Opinions or recommendations contained herein are in form of technical ratings and fundamental ratings. Technical ratings may differ from fundamental ratings as technical valuations apply different methodologies and are purely based on price and volume-related information extracted from the relevant jurisdiction's stock exchange in the equity analysis. Accordingly, investors' returns may be less than the original sum invested. Past performance is not necessarily a guide to future performance. This report is not intended to provide personal investment advice and does not take into account the specific investment objectives, the financial situation and the particular needs of persons who may receive or read this report. Investors should therefore seek financial, legal and other advice regarding the appropriateness of investing in any securities or the investment strategies discussed or recommended in this report.

The information contained herein has been obtained from sources believed to be reliable but such sources have not been independently verified by Maybank Investment Bank Berhad, its subsidiary and affiliates (collectively, "Maybank IBG") and consequently no representation is made as to the accuracy or completeness of this report by Maybank IBG and it should not be relied upon as such. Accordingly, Maybank IBG and its officers, directors, associates, connected parties and/or employees (collectively, "Representatives") shall not be liable for any direct, indirect or consequential losses or damages that may arise from the use or reliance of this report. Any information, opinions or recommendations contained herein are subject to change at any time, without prior notice.

This report may contain forward looking statements which are often but not always identified by the use of words such as "anticipate", "believe", "estimate", "intend", "plan", "expect", "forecast", "predict" and "project" and statements that an event or result "may", "will", "can", "should", "could" or "might" occur or be achieved and other similar expressions. Such forward looking statements are based on assumptions made and information currently available to us and are subject to certain risks and uncertainties that could cause the actual results to differ materially from those expressed in any forward looking statements. Readers are cautioned not to place undue relevance on these forward-looking statements. Maybank IBG expressly disclaims any obligation to update or revise any such forward looking statements to reflect new information, events or circumstances after the date of this publication or to reflect the occurrence of unanticipated events.

Maybank IBG and its officers, directors and employees, including persons involved in the preparation or issuance of this report, may, to the extent permitted by law, from time to time participate or invest in financing transactions with the issuer(s) of the securities mentioned in this report, perform services for or solicit business from such issuers, and/or have a position or holding, or other material interest, or effect transactions, in such securities or options thereon, or other investments related thereto. In addition, it may make markets in the securities mentioned in the material presented in this report. One or more directors, officers and/or employees of Maybank IBG may be a director of the issuers of the securities mentioned in this report to the extent permitted by law.

This report is prepared for the use of Maybank IBG's clients and may not be reproduced, altered in any way, transmitted to, copied or distributed to any other party in whole or in part in any form or manner without the prior express written consent of Maybank IBG and Maybank IBG and its Representatives accepts no liability whatsoever for the actions of third parties in this respect.

This report is not directed to or intended for distribution to or use by any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation. This report is for distribution only under such circumstances as may be permitted by applicable law. The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Without prejudice to the foregoing, the reader is to note that additional disclaimers, warnings or qualifications may apply based on geographical location of the person or entity receiving this report.

Malaysia

Opinions or recommendations contained herein are in the form of technical ratings and fundamental ratings. Technical ratings may differ from fundamental ratings as technical valuations apply different methodologies and are purely based on price and volume-related information extracted from Bursa Malaysia Securities Berhad in the equity analysis.

Singapore

This report has been produced as of the date hereof and the information herein may be subject to change. Maybank Research Pte. Ltd. ("MRPL") in Singapore has no obligation to update such information for any recipient. For distribution in Singapore, recipients of this report are to contact MRPL in Singapore in respect of any matters arising from, or in connection with, this report. If the recipient of this report is not an accredited investor, expert investor or institutional investor (as defined under Section 4A of the Singapore Securities and Futures Act), MRPL shall be legally liable for the contents of this report, with such liability being limited to the extent (if any) as permitted by law.

Thailand

Except as specifically permitted, no part of this presentation may be reproduced or distributed in any manner without the prior written permission of Maybank Securities (Thailand) Public Company Limited. Maybank Securities (Thailand) Public Company Limited ("MST") accepts no liability whatsoever for the actions of third parties in this respect.

Due to different characteristics, objectives and strategies of institutional and retail investors, the research products of MST Institutional and Retail Research departments may differ in either recommendation or target price, or both. MST reserves the rights to disseminate MST Retail Research reports to institutional investors who have requested to receive it. If you are an authorised recipient, you hereby tacitly acknowledge that the research reports from MST Retail Research are first produced in Thai and there is a time lag in the release of the translated English version.

The disclosure of the survey result of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information. The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey may be changed after that date. MST does not confirm nor certify the accuracy of such survey result.

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, MST does not confirm, verify, or certify the accuracy and completeness of the assessment result.

US

This third-party research report is distributed in the United States ("US") to Major US Institutional Investors (as defined in Rule 15a-6 under the Securities Exchange Act of 1934, as amended) only by Maybank Securities USA Inc ("MSUS"), a broker-dealer registered in the US (registered under Section 15 of the Securities Exchange Act of 1934, as amended). All responsibility for the distribution of this report by MSUS in the US shall be borne by MSUS. This report is not directed at you if Maybank IBG is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that MSUS is permitted to provide research material concerning investments to you under relevant legislation and regulations. All U.S. persons receiving and/or accessing this report and wishing to effect transactions in any security mentioned within must do so with: Maybank Securities USA Inc, 400 Park Avenue, 11th Floor, New York, New York 10022, 1-(212) 688-8886 and not with, the issuer of this report.

UK

This document is being distributed by Maybank Securities (London) Ltd ("MSUK") which is authorized and regulated, by the Financial Conduct Authority and is for Informational Purposes only. This document is not intended for distribution to anyone defined as a Retail Client under the Financial Services and Markets Act 2000 within the UK. Any inclusion of a third party link is for the recipients convenience only, and that the firm does not take any responsibility for its comments or accuracy, and that access to such links is at the individuals own risk. Nothing in this report should be considered as constituting legal, accounting or tax advice, and that for accurate guidance recipients should consult with their own independent tax advisers.

DISCLOSURES**Legal Entities Disclosures**

Malaysia: This report is issued and distributed in Malaysia by Maybank Investment Bank Berhad (15938-H) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets and Services License issued by the Securities Commission in Malaysia. **Singapore:** This report is distributed in Singapore by MRPL (Co. Reg No 198700034E) which is regulated by the Monetary Authority of Singapore. **Indonesia:** PT Maybank Sekuritas Indonesia ("PTMSI") (Reg. No. KEP-251/PM/1992) is a member of the Indonesia Stock Exchange and is regulated by the Financial Services Authority (Indonesia). **Thailand:** MST (Reg. No.0107545000314) is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission. **Philippines:** Maybank Securities Inc (Reg. No.01-2004-00019) is a member of the Philippines Stock Exchange and is regulated by the Securities and Exchange Commission. **Vietnam:** Maybank Securities Limited (License Number: 117/GP-UBCK) is licensed under the State Securities Commission of Vietnam. **Hong Kong:** MIB Securities (Hong Kong) Limited (Central Entity No AAD284) is regulated by the Securities and Futures Commission. **India:** MIB Securities India Private Limited ("MIBSI") is a participant of the National Stock Exchange of India Limited and the Bombay Stock Exchange and is regulated by Securities and Exchange Board of India ("SEBI") (Reg. No. INZ000010538). MIBSI is also registered with SEBI as Category 1 Merchant Banker (Reg. No. INM 000011708) and as Research Analyst (Reg No: INH000000057) **US:** Maybank Securities USA Inc is a member of/and is authorized and regulated by the FINRA - Broker ID 27861. **UK:** Maybank Securities (London) Ltd (Reg No 2377538) is authorized and regulated by the Financial Conduct Authority.

Disclosure of Interest

Malaysia: Maybank IBG and its Representatives may from time to time have positions or be materially interested in the securities referred to herein and may further act as market maker or may have assumed an underwriting commitment or deal with such securities and may also perform or seek to perform investment banking services, advisory and other services for or relating to those companies.

Singapore: As of 3 April 2023, Maybank Research Pte. Ltd. and the covering analyst do not have any interest in any companies recommended in this research report.

Thailand: MST may have a business relationship with or may possibly be an issuer of derivative warrants on the securities /companies mentioned in the research report. Therefore, Investors should exercise their own judgment before making any investment decisions. MST, its associates, directors, connected parties and/or employees may from time to time have interests and/or underwriting commitments in the securities mentioned in this report.

Hong Kong: As of 3 April 2023, MIB Securities (Hong Kong) Limited and the authoring analyst do not have any interest in any companies recommended in this research report.

India: As of 3 April 2023, and at the end of the month immediately preceding the date of publication of the research report, MIBSI, authoring analyst or their associate / relative does not hold any financial interest or any actual or beneficial ownership in any shares or having any conflict of interest in the subject companies except as otherwise disclosed in the research report. In the past twelve months MIBSI and authoring analyst or their associate did not receive any compensation or other benefits from the subject companies or third party in connection with the research report on any account what so ever except as otherwise disclosed in the research report.

Maybank IBG may have, within the last three years, served as manager or co-manager of a public offering of securities for, or currently may make a primary market in issues of, any or all of the entities mentioned in this report or may be providing, or have provided within the previous 12 months, significant advice or investment services in relation to the investment concerned or a related investment and may receive compensation for the services provided from the companies covered in this report.

OTHERS**Analyst Certification of Independence**

The views expressed in this research report accurately reflect the analyst's personal views about any and all of the subject securities or issuers; and no part of the research analyst's compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in the report.

Reminder

Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assuming the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility and the credit quality of any issuer or reference issuer. Any investor interested in purchasing a structured product should conduct its own analysis of the product and consult with its own professional advisers as to the risks involved in making such a purchase.

No part of this material may be copied, photocopied or duplicated in any form by any means or redistributed without the prior consent of Maybank IBG.

Published by:



Malayan Banking Berhad
(Incorporated In Malaysia)

Foreign Exchange**Singapore**

Saktiandi Supaat
Head, FX Research
saktiandi@maybank.com.sg
(+65) 6320 1379

Fiona Lim

Senior FX Strategist
Fionalim@maybank.com.sg
(+65) 6320 1374

Alan Lau

FX Strategist
alanlau@maybank.com
(+65) 6320 1378

Shaun Lim

FX Strategist
shaunlim@maybank.com
(+65) 6320 1371

Indonesia

Juniman

Chief Economist, Indonesia
juniman@maybank.co.id
(+62) 21 2922 8888 ext 29682

Myrdal Gunarto

Industry Analyst
MGunarto@maybank.co.id
(+62) 21 2922 8888 ext 29695

Fixed Income**Malaysia**

Winson Phoon
Head, Fixed Income
winsonphoon@maybank.com
(+65) 6340 1079

Se Tho Mun Yi

Fixed Income Analyst
munyi.st@maybank-ib.com
(+60) 3 2074 7606

Sales**Malaysia**

Zarina Zainal Abidin
Head, Sales-Malaysia, Global Markets
zarina.za@maybank.com
(+60) 03- 2786 9188

Singapore

Janice Loh Ai Lin
Head of Sales, Singapore
jloh@maybank.com.sg
(+65) 6536 1336

Indonesia

Endang Yulianti Rahayu
Head of Sales, Indonesia
EYRahayu@maybank.co.id
(+62) 21 29936318 or
(+62) 2922 8888 ext 29611

Shanghai

Joyce Ha

Treasury Sales Manager
Joyce.ha@maybank.com
(+86) 21 28932588

Hong Kong

Joanne Lam Sum Sum
Head of Corporate Sales Hong Kong
Joanne.lam@maybank.com
(852) 3518 8790

Philippines

Angela R. Ofrecio
Head, Global Markets Sales
Arofrecio@maybank.com
(+632 7739 1739)