standard chartered

Wealth Management Chief Investment Office
4 March 2022

Weekly Market View

The three red lines around Ukraine

→ The Ukraine conflict has led to a humanitarian crisis on a scale not seen in Europe for decades. For investors, though, history suggests geopolitical conflicts usually do not have a lasting impact on risk assets. So far, only one of the three ‘red lines’ have been crossed, in our view.

→ Hence, we believe investors are better off with a diversified allocation that reflects their risk tolerance and, instead, hedge against near-term risks. Seeking refuge in cash is likely to hurt long-term returns, especially given inflation today, as investors are likely to miss the upturn when it comes.

→ Investors concerned about further near-term downside risks have several options to hedge, while maintaining long-term foundation allocations. Gold has historically performed well during geopolitical crises; energy assets are likely to outperform in the current inflationary times; Chinese government bonds have emerged as an ‘anti-fragile’ asset class over the past decade.

How will the Ukraine conflict affect the performance of various equity sectors and regions?

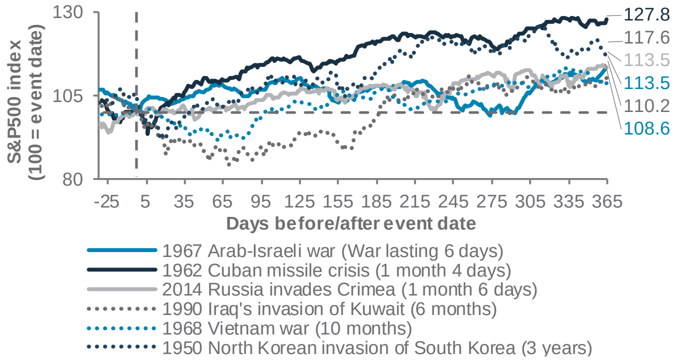
Should we adjust our exposure to Emerging Market USD bonds following the recent pullback?

Is a Dollar Cost Averaging strategy appropriate for the current environment?

Charts of the week: Contextualising the market impact of geopolitics

History suggests market impact of geopolitical crises is fleeting; this points to opportunities in several beaten-up assets

Performance of S&P500 index through past geopolitical crises



Performance (Z-score*) of assets in Feb 2022 relative to history

Source: CFRA, Bloomberg, Standard Chartered; *Z-score is a standardisation measure; in this case, the chart shows the size of each asset class' total returns in February 2022 in terms of standard deviation away from its average monthly total returns for all months since July 2009.

Editorial

The three red lines around Ukraine

The Ukraine conflict has led to a humanitarian crisis on a scale not seen in Europe for decades. For investors, though, history suggests geopolitical conflicts usually do not have a lasting impact on risk assets. Hence, we believe investors are better off with a diversified allocation that reflects their risk tolerance and hedge against near-term risks. Seeking refuge in cash is likely to hurt long-term returns, especially given inflation today, as investors are likely to miss the upturn when it comes.

The financial implications of the Ukraine crisis can be assessed, in our view, in terms of **three red lines**: 1) The severity of Western economic and financial sanctions following Russia's invasion; 2) the extent of disruption to oil and gas flows from Russia; and 3) whether conflict spills beyond Ukraine's borders. Over the past week, the first of the three red lines has been crossed after the US and Europe imposed wide-ranging sanctions against Russia, including taking extremely rare measures to remove major Russian banks from the SWIFT payment messaging system and freezing the reserves of Russia's central bank. These steps have led to a sharp decline in the RUB and Russian assets. However, Russian assets have only marginal weights in global equity and bond indices. Thus, the global impact of the SWIFT step is likely to be manageable.

Russia's impact on oil and gas markets, metals (palladium, nickel, copper, platinum) and agricultural crops (wheat) – marking the second red line – is greater. There are reports that oil and gas flows from Russia, while not directly sanctioned, are slowing as importers struggle to finance the transactions. This explains the 16% jump in oil prices in the past week. However, Russian oil flows to Asia is continuing for now, with countries taking advantage of discounted prices to boost inventory. Gas flows to Europe were slowing even before the latest escalation.

Meanwhile, we see a low probability that the third red line will be crossed soon, given Russia's singular focus on Ukraine and that it would imply a much bigger Russia-NATO conflict.

The above framework leaves us with two main scenarios. In our base case, Russian oil and gas continue to flow to Asia and Europe. Also, major OPEC producers, such as Saudi Arabia and the United Arab Emirates (and potentially Iran), and developed countries are likely to replenish any lost supplies by lifting output and releasing more stockpiles. In this case, oil prices are likely to fall back below USD100/bbl over the next 6-12 months and the broader impact on global markets is likely to be limited. Under this scenario, risk assets are likely to rebound as the market refocuses on the gradual global economic recovery, including in China (where policy continues to ease), and robust fundamentals in the US, as seen from the latest PMI and private payrolls data. Europe, meanwhile, is likely to benefit from a significant increase in fiscal spending on defence and energy infrastructure as a direct fallout of the Russian crisis.

Risk assets will likely be further supported by major central banks dialling back their hawkishness – markets are pricing over five Fed rate hikes this year, including a 25bps hike in March, versus up to seven earlier. Fed Chair Powell told the US Congress he remains focussed on tackling inflation, but recognises the rising uncertainty posed by Ukraine's crisis. The global outlook could, of course, brighten further if Russia and Ukraine reach a truce. The following pages lay out our preferred assets that would benefit from a revival of risk appetite.

The alternative scenario, where oil and gas flows from Russia are severely curtailed and OPEC and/or OECD countries are unable to replenish the lost supplies, would raise the risk of stagflation (characterised by stagnating output and rising inflation), especially in Europe. History suggests gold is the best hedge against stagflation; energy-related assets are also likely to benefit, since oil and gas prices would be a primary driver. Finally, Chinese government bonds (CGB) could also be a key beneficiary given they have emerged as one of the most 'anti-fragile' assets through the past decade's geopolitical conflicts.

— Rajat Bhattacharya

The weekly macro balance sheet

Our weekly net assessment: On balance, we see the past week's data and policy as negative for risk assets in the near term

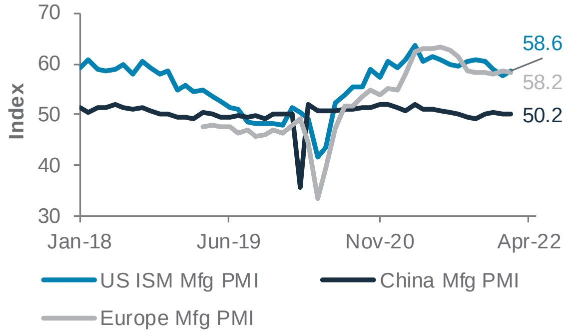
(+) factors: Strong manufacturing, sharp drop in US, EU COVID cases

(-) factors: Ukraine crisis, weak US consumer sentiment services PMI, rising EU inflation, still-hawkish Fed

	Positive for risk assets	Negative for risk assets
COVID-19	• Cases plunged in the US, Europe, Latam and India • Japan, South Korea, Thailand & Malaysia easing restrictions, border rules • US health officials relaxed mask guidance	• Hong Kong plans universal testing as cases surge • Cases in Singapore, parts of Asia near record highs • US warned against travelling to Vietnam and Hong Kong
	Our assessment: Neutral – Falling cases in the US, Europe, easing restrictions vs Hong Kong lockdown, record high cases	
Macro data	• US Manufacturing PMI (ISM) beat expectations • China official PMI unexpectedly rose • China Caixin Manufacturing PMI unexpectedly rose • US private payrolls (ADP) rose more than expected	• US ISM Services PMI fell more than expected • US Michigan Consumer Sentiment at decade-low, despite beating consensus • Euro area inflation rose more than foreast to 5.8%; PMI rose less than forecast
	Our assessment: Modestly positive – Strong US, China manufacturing, US private payrolls vs rising Europe inflation	
Policy developments	• China said it would prioritise energy and commodity supply security • Bank of Canada started its rate hiking cycle with a 25bps increase, despite Ukraine uncertainty	• Fed's Powell reiterated rate hikes starting in March as tackling inflation is priority, despite Ukraine uncertainty • Russian central bank doubled policy rate to 20%, imposed capital controls to contain the RUB's fall
	Our assessment: Negative – Fed remains hawkish	
Other developments	• China deplored Ukraine conflict and called for a negotiated settlement • Russia-Ukraine holds second round of talks • US, others to release oil from reserves	• Russian troops invaded several Ukrainian cities; Ukraine said its largest nuclear plant was attacked • US, EU imposed stricter sanctions on Russia's financial sector and froze central bank reserves
	Our assessment: Negative – Escalating geopolitical tensions	

Manufacturing sector confidence remains robust in the US and the Euro area, despite slowing from last year's peaks

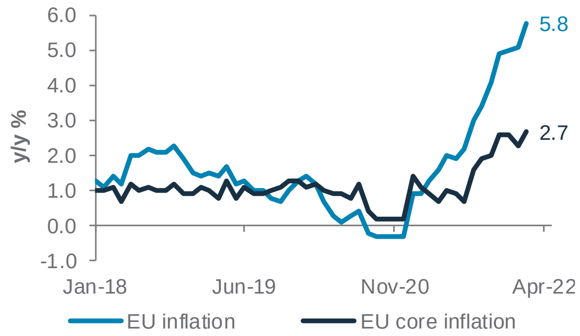
US, Euro area and China manufacturing sector PMIs



Source: Bloomberg; Standard Chartered

Euro area inflation continued to accelerate, challenging policymakers as growth likely slows due to the impact of the Ukraine crisis

Euro area headline and core consumer inflation



Source: Bloomberg, Standard Chartered

The continued flattening of the US yield curve reflects investor concern about growth; we expect the Fed to tone down its hawkishness by H2

US government bond yield curve (difference in US 10y and 2y Treasury yields)

Source: Bloomberg, Standard Chartered

Top client questions

How will the Russia-Ukraine conflict affect the performance of major equity sectors and regions?

We believe the energy and materials sectors, along with gold, are likely to stay well-bid given they are viewed as natural hedges against the risks of any further escalation of this conflict. High commodity prices are likely to add upward pressure to inflation, adding to rate hike momentum by the Fed and other major central banks. This, in turn, is likely to add downside risks to Growth sectors, such as technology, through rising bond yields, which could hurt the sector's valuations.

In terms of regions, we expect Asia ex-Japan to outperform global equities. China has been easing its monetary policy and regulatory risks are likely increasingly priced in by the markets. This is in stark contrast to the Fed's hawkish stance. Being growth sector-heavy, the US equity market is likely to face greater relative headwinds from higher yields, while the proximity of the conflict to Europe, physically and via its financial sector, is likely to cloud the outlook for European equities in the short term.

— **Daniel Lam, CFA,** *Senior Cross-asset Strategist*

Energy sector equities still have potential upside, in our view, as they still lag the rise in crude oil

Performance of global energy sector equities and crude oil (rebased to 100, as of March 2018)

Source: MSCI, Bloomberg, Standard Chartered

Why did we change our preferred equity sectors from Technology to Energy and Financials?

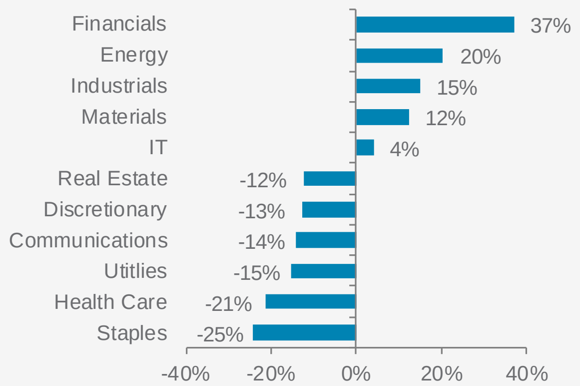
We downgraded the technology sector in the US and Europe after a poor start to the year. We expect investors' concern with the sector's valuation premium to persist as bond yields continue to climb and act as a headwind on stocks with high valuations. Our preferred view on financials and energy (across the US, Europe and China) reflects a likely higher bond yield and inflationary environment.

We upgraded Financials to preferred; this is the sector most correlated to likely rise in bond yields in the US and Europe. Monetary policy is easing in China, but we believe growth stabilisation should ease credit concerns. The Energy sector is upgraded to preferred; while we expect oil prices to ease when geopolitical tensions soften, they are still likely to stay elevated (above USD 90/bbl in the next 1-3 months) given the ongoing recovery in demand and oil producer discipline. Energy equities have lagged oil prices significantly, and we see a catch-up opportunity even if the oil price drops back below USD 100/bbl. The valuations of Financials and Energy sectors compared with the broader market remain very attractive relative to history.

— **Fook Hien Yap,** *Senior Investment Strategist*

Financial and Energy sectors are most likely to outperform amid rising bond yields

Correlation of US sectors' relative performance to US 10-year bond yields over the last five years



Source: Bloomberg, Standard Chartered

Top client questions (cont'd)

What is your view of ASEAN equity markets under the current geopolitical situation?

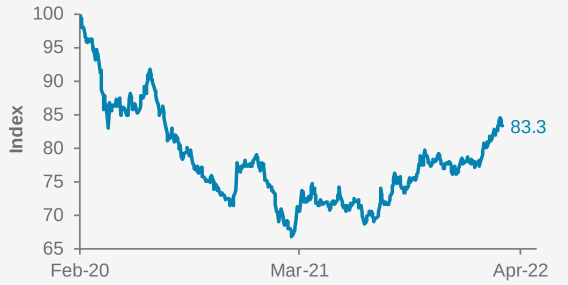
We view Asia ex-Japan equities as preferred and do not see geopolitical risks standing in the way of the region's equities outperforming global equities. Our view on Asia ex-Japan is led by a preferred view on Chinese equities on the back of growth-stabilisation policies, subdued inflation pressures and more supportive valuations.

ASEAN markets are a part of Asia ex-Japan equities. The sub-region's equities have outperformed Asia ex-Japan since February 2021. ASEAN equities have a 12-month forward P/E ratio of 16x, a 25% premium compared with Asia ex-Japan. This is more expensive than their historical average premium of 11%. With geopolitical tensions driving a spike in oil prices, ASEAN equities face a small tailwind compared with other sub-regions in Asia ex-Japan due to their higher exposure to energy equities (the energy sector forms 5% of ASEAN, 3% of Asia ex-Japan and 4% of global equities). Nevertheless, ASEAN equities should still benefit from stabilising growth in China given they are dominated by the financial sector (36% of the ASEAN index) amid supportive loan growth, easing credit concerns and rising capital markets and financial activities.

— **Fook Hien Yap,** *Senior Investment Strategist*

ASEAN stocks have shown strong resilience within the region lately; they have outperformed Asia ex-Japan equities since February 2021

Performance of MSCI ASEAN vs MSCI Asia ex-Japan (rebased to 100, as of Feb-20)



Source: Bloomberg, Standard Chartered

Is a Dollar Cost Averaging strategy appropriate under the current market volatility caused by economic tensions and interest rate hikes?

Investing is never easy, especially during the times of uncertainty. Whether you have extra cash on the side lines or are second-guessing your investment strategy, your decisions can easily be affected by hindsight bias or the fear of losses. In such instances, we believe that a dollar-cost averaging (DCA) strategy can be an effective way to deploy your money while mitigating the risks (and fear) of investing at the wrong time.

DCA is the strategy of spreading out our investments across different periods. This can be determined by time (eg, every month or quarter) or market drawdowns (eg, every time markets correct by 5%).

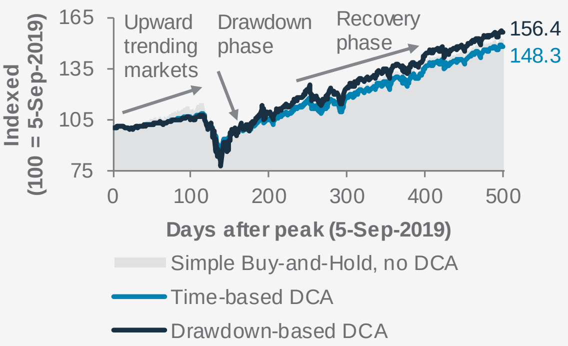
To quantify the benefits of DCA strategies, we compare a buy-and-hold strategy with time-based and drawdown-based DCA strategies through the COVID-19 crisis:

- A time-based DCA can be superior to a buy-and-hold strategy if one believes further pullbacks are likely. However, the performance of this strategy tends to lag a buy-and-hold strategy in upward trending markets.
- A drawdown-based DCA can be more effective to a buy-and-hold strategy if a market decline is sharp and swift, allowing investors to capture opportunities in a timely manner. Hence, this strategy tends to outperform during the recovery phase.

— **Trang Nguyen,** *Portfolio Strategist*

A drawdown-based Dollar Cost Averaging (DCA) strategy can be more effective than a time-based DCA strategy or a buy-and-hold strategy in the event of a sharp market decline

Relative performance of a drawdown-based DCA strategy, a time-based DCA strategy vs a buy-and-hold strategy (Index: 100 = 5 Sep 2019)



Source: Bloomberg, Standard Chartered

Top client questions (cont'd)

Should we adjust our exposure to EM USD bonds in light of the recent pullback?

The yield premium over Treasuries on Emerging Market (EM) USD bonds has surged by nearly 80bps in the last two weeks to 479bps, a level that was last seen in June 2020. This has been driven by risk-off sentiment amid the Ukraine crisis. While returns across most regions were modestly negative over this period, yield premiums of EM Europe USD bonds (which comprise about 14% of the asset class) soared by 578bps, given the proximity to Russia and Ukraine risks. Middle East bonds, on the other hand, delivered positive returns, with yield premium down by 10bps over the same period amid rising oil prices.

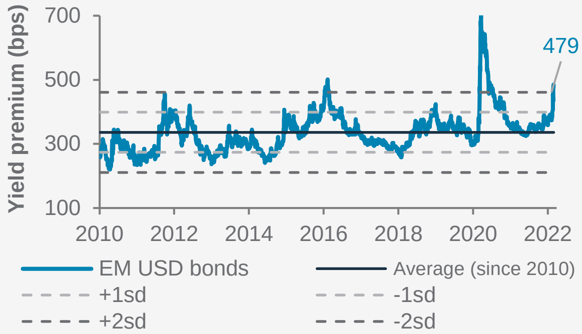
The well-diversified nature of the asset class (Russia has a marginal weight in EM USD bond indices), the attractive yield and currently attractive valuations after the sell-off are positives for the asset class. However, EM USD bonds' relatively high sensitivity to changes in US bond yields is a risk given the likely upcoming Fed rate hiking cycle. Also, the potential broader impact of any further sanctions on Russia on EM USD bonds remains a risk.

Hence, we believe staying invested with a core holding view remains appropriate for EM USD government bonds for now, even if a calming of Ukraine tensions is likely needed before the asset class volatility fully subsides.

— **Cedric Lam,** *Senior Investment Strategist*

Valuation of EM USD bonds has turned more attractive following the recent sell-off

EM USD government bond yield premium over Treasuries



Source: Bloomberg, Standard Chartered

How low can the EUR go?

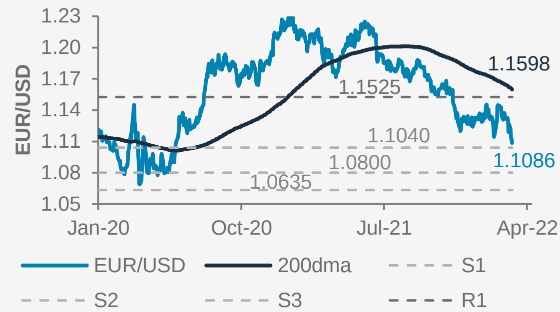
Positive Euro area economic surprises, rising inflationary pressure and an ECB poised to begin policy normalisation constituted a platform for expected EUR gains until Russia's invasion of Ukraine sent the EUR reeling and presented the ECB a tricky "trilemma" to navigate – potentially higher inflationary pressure, weaker growth and financial stability concerns.

This implies policy normalisation, and the resulting start of EUR strength, is at the risk of a delay. Our bullish 12-month view notwithstanding, near-term EUR/USD price action is likely to be driven by how quickly Ukraine risks can be stabilised. Until then, uncertainty is expected to weigh on the EUR, and any escalation, especially a disruption to energy supply, would likely see the EUR fall further. What could eventually create a safety net, of course, is that any sign of financial market instability could trigger concerted market intervention, eventually limiting EUR/USD downside risk.

Short-term technicals suggest imminent support for EUR/USD at 1.1000-1.0040, but a break lower could see a decline towards 1.0800 and the 2020 low at 1.0635. Signs of stability in Ukraine, though, could trigger a relief rally towards 1.1400, but only a sustained break above 1.1525-1.1550 would imply the EUR uptrend is under way.

War in Ukraine has set back our timeline for a EUR/USD rally. Any escalation may see a test of the 2020 low, while stabilisation could trigger a relief rally

EUR/USD



Source: Bloomberg, Standard Chartered

Top client questions (cont'd)

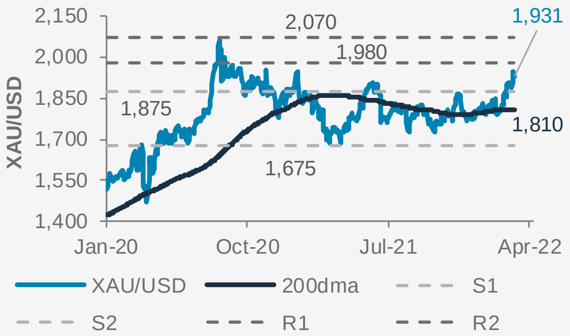
What is your expectation of gold prices in 6-12 months, given the geopolitical risks?

Gold is expected to perform strongly in the next 6-to-12 months and the 2020 high of around USD 2,070/oz could be surpassed. This is because (i) we expect the USD to peak in the coming months, and a weaker USD is a tailwind for gold; (ii) we anticipate the economies of China and India, key physical markets for gold, will see reasonable growth as the pandemic recedes and China begins to deploy more growth stimulus; (iii) nominal US interest rates are expected to rise over the next 12 months, but real (net-of-inflation) rates are likely to remain low and should not pose a significant headwind for gold.

We also see gold's role as a risk hedge being amplified going forward. Recent sanctions on the Russian central bank's assets and Switzerland's compliance with individual account sanctions may accelerate a trend to diversify how, and where, wealth is stored. Gold has also once again proven to be an effective hedge against geopolitical risk over the past days. Near-term volatility in gold is possible, but given the overall upward trend, any corrective pullback should be limited by technical support near 1,875.

Aside from the usual drivers for a higher price, Gold is currently proving its value as a portfolio risk hedge at a time of geopolitical stress

Gold price, USD/oz



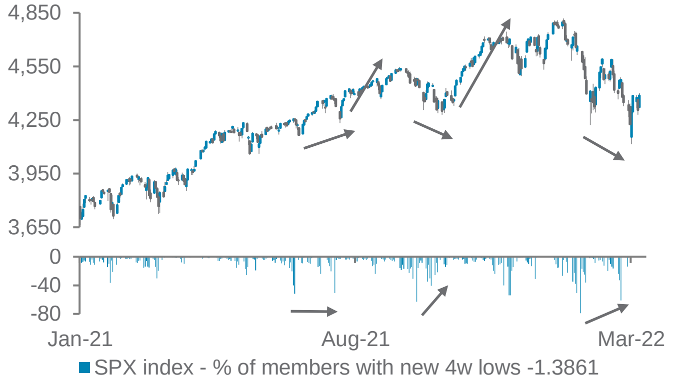
Source: Bloomberg, Standard Chartered

Technical charts of the week

Manish Jaradi
Senior Investment Strategist

S&P500: An interim floor

S&P500 index daily chart, with percentage of members at new four-week lows

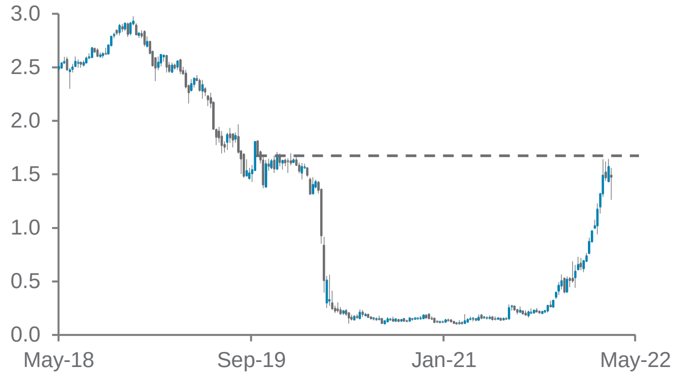


Source: Refinitiv, Standard Chartered

> Sentiment and breadth market indicators suggest that the index may have hit a temporary floor. However, this would not necessarily imply a resumption of the uptrend – it could well settle in a range. For the downward pressure to fade, the index needs to break above immediate resistance at the early February high of 4,600 (5% from Thursday's close).

US 2-year government bond yield: Pause could extend

US Treasury 2y yield weekly chart



Source: Bloomberg, Standard Chartered

> The retreat in recent days from key resistance at the end-2019 high of 1.70%-1.80% from extreme overbought conditions raises the risk of an extended pause, given the pace and the extent of the rise in recent months. However, there is no change in the medium-term upward trajectory – the yield is well above the 200-DMA (now at 0.52%).

Crude oil: Path towards the 2008 high solidifies

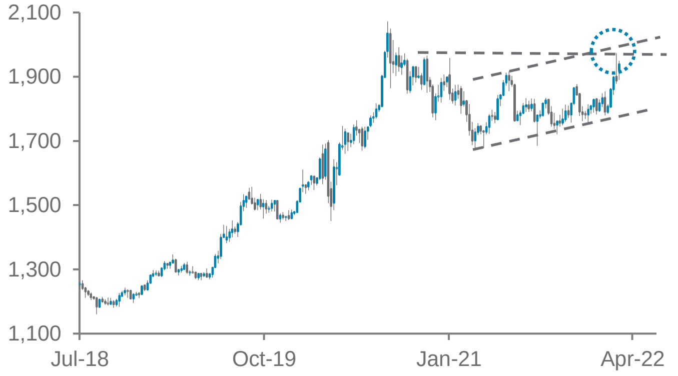
WTI Crude oil futures continuous contract weekly chart

Source: Refinitiv, Standard Chartered

> Crude oil has met target resistance at 112-115, which we highlighted last month. Still, there is no sign of a reversal as it meets the hurdle. While a minor pause cannot be ruled out, the path towards a retest of the 2008 record high of 147 appears to be solidifying. On the downside, initial/minor support is at 105.20.

Gold: Continues to shine

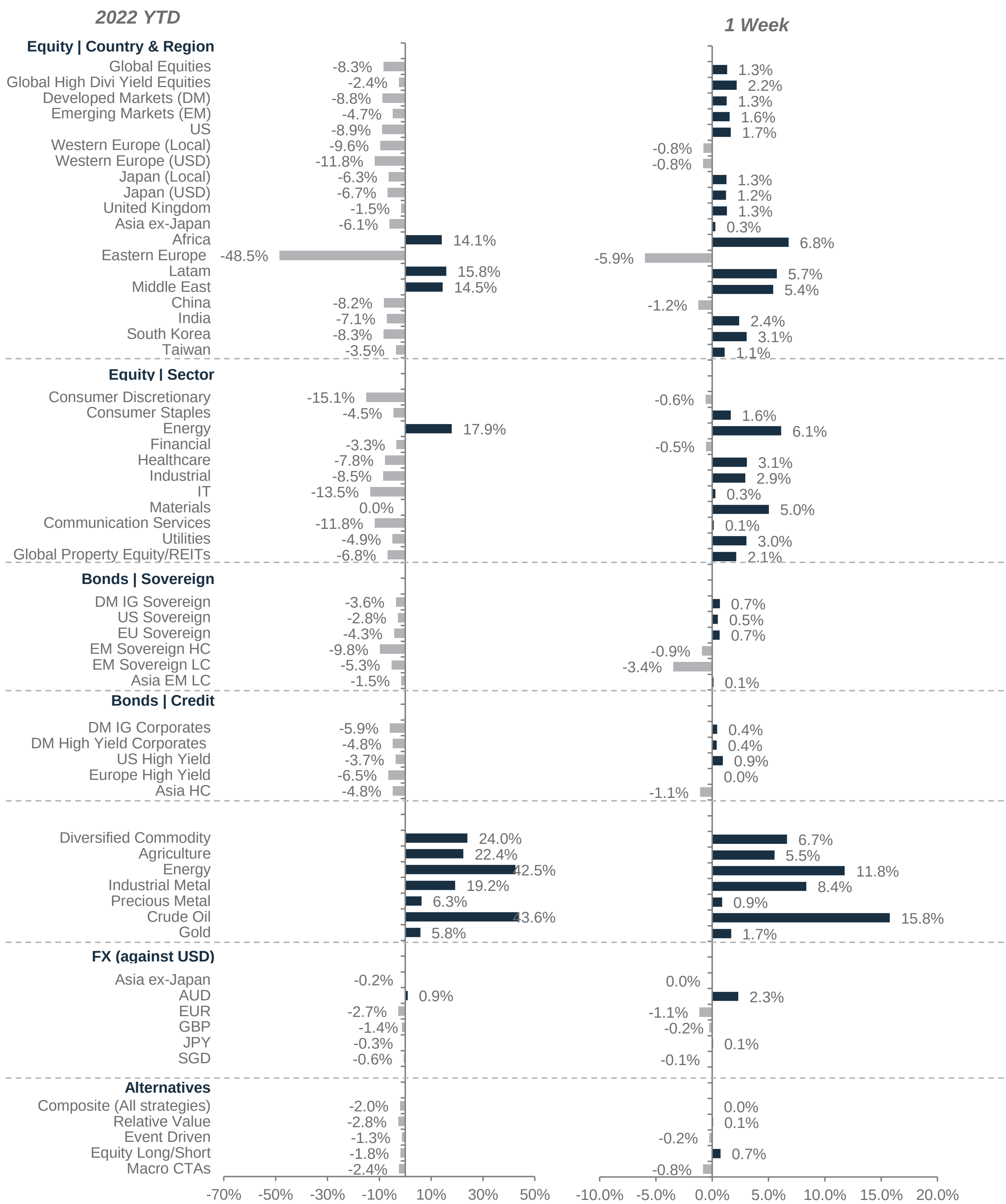
XAU/USD weekly chart



Source: Refinitiv, Standard Chartered

> A bearish candle on the weekly chart last week at key converged resistance at the late 2020 and early 2021 highs of 1,960-1,965 raises the chance that the yellow metal's rally is losing steam. However, the broader uptrend remains intact, so any loss of momentum could well imply a pause (and not a reversal) before the next leg higher.

Market performance summary *



Sources: MSCI, JP Morgan, Barclays Capital, Citigroup, Dow Jones, HFRX, FTSE, Bloomberg, Standard Chartered

*Performance in USD terms unless otherwise stated, 2022 YTD performance from 31 December 2021 to 03 March 2022; 1-week period: 24 February 2022 to 03 March 2022

Our 12-month asset class views at a glance

Asset class			
Equities	▲	**Alternatives**	◆
Euro area	◆	Equity hedge	▲
US	◆	Event-driven	◆
UK	◆	Relative value	▼
Asia ex-Japan	▲	Global macro	◆
Japan	◆		
Other EM	◆	**Cash**	◆
		USD	▼
Bonds (Credit)	▼	EUR	▲
Asia USD	▲	GBP	▲
Corp DM HY	▲	CNY	▲
Govt EM USD	◆	JPY	◆
Corp DM IG	▼	AUD	▲
		NZD	▲
Bonds (Govt)	▼	CAD	▲
Govt EM Local	◆		
Govt DM IG	▼	**Gold**	▲

Source: Standard Chartered Global Investment Committee

Legend: ▲ Most preferred | ▼ Less preferred | ◆ Core holding

Economic and market calendar

	Event	Next week	Period	Expected	Prior
MON					
TUE	US	Trade Balance	Jan	-$87.2b	-$80.7b
WED	CH	PPI y/y	Feb	8.6%	9.1%
WED	CH	CPI y/y	Feb	0.8%	0.9%
WED	US	JOLTS Job Openings	Jan	10968k	10925k
WED	CH	New Yuan Loans CNY	Feb	1425b	3980b
WED	CH	Money Supply M2 y/y	Feb	9.5%	9.8%
THUR	EC	ECB Main Refinancing Rate	10-Mar	–	0.0%
THUR	EC	ECB Deposit Facility Rate	10-Mar	–	-0.5%
THUR	US	CPI y/y	Feb	7.9%	7.5%
THUR	US	CPI Ex Food and Energy y/y	Feb	–	6.0%
FRI/SAT	UK	Industrial Production y/y	Jan	–	0.4%
FRI/SAT	US	U. of Mich. Sentiment	Mar P	–	62.8
5-Mar to 15-Mar	CH	National People's Congress	Mar	–	–

Source: Bloomberg, Standard Chartered
Prior data are for the preceding period unless otherwise indicated. Data are % change on previous period unless otherwise indicated
P - preliminary data, F - final data, sa - seasonally adjusted, y/y - year-on-year, m/m - month-on-month

The S&P500 index's next support is 1% below current level

Technical indicators for key markets as on 03 March 2022

Index	Spot	1st support	1st resistance
S&P500	4,363	4,318	4,398
STOXX 50	3,742	3,665	3,894
FTSE 100	7,239	7,155	7,406
Nikkei 225	26,577	26,365	26,817
Shanghai Comp	3,481	3,459	3,496
Hang Seng	22,467	22,285	22,708
MSCI Asia ex-Japan	741	738	746
MSCI EM	1,173	1,169	1,177
Brent (ICE)	110.5	101.3	116.3
Gold	1,936	1,902	1,958
UST 10Y Yield	1.84	1.72	1.96

Source: Bloomberg, Standard Chartered
Note: These short-term technical levels are based on models and may differ from a more qualitative analysis provided in other pages

Investor diversity has significantly narrowed in crude oil

Our proprietary market diversity indicators as of 02 March

Level 1	Diversity	1-month trend	Fractal dimension
Global Bonds	◐	↓	1.32
Global Equities	●	→	1.61
Gold	◐	↓	1.33
Equity			
MSCI US	●	→	1.72
MSCI Europe	●	↓	1.52
MSCI AC AXJ	●	→	1.50
Fixed Income			
DM Corp Bond	◐	↓	1.33
DM High Yield	◐	↓	1.46
EM USD	◐	↓	1.32
EM Local	◐	↓	1.42
Asia USD	◐	↓	1.37
Commodities			
WTI crude oil	○	↓	1.19

Source: Bloomberg, Standard Chartered; **Fractal dimensions below 1.25 indicate extremely low market diversity/high risk of a reversal**

Legend: ● High | ◐ Low to mid | ○ Critically low

Disclosures

This document is confidential and may also be privileged. If you are not the intended recipient, please destroy all copies and notify the sender immediately. This document is being distributed for general information only and is subject to the relevant disclaimers available at https:// www. sc. com/en/regulatory-disclosures/#market-commentary-disclaimer. It is not and does not constitute research material, independent research, an offer, recommendation or solicitation to enter into any transaction or adopt any hedging, trading or investment strategy, in relation to any securities or other financial instruments. This document is for general evaluation only. It does not take into account the specific investment objectives, financial situation or particular needs of any particular person or class of persons and it has not been prepared for any particular person or class of persons. You should not rely on any contents of this document in making any investment decisions. Before making any investment, you should carefully read the relevant offering documents and seek independent legal, tax and regulatory advice. In particular, we recommend you to seek advice regarding the suitability of the investment product, taking into account your specific investment objectives, financial situation or particular needs, before you make a commitment to purchase the investment product. Opinions, projections and estimates are solely those of SCB at the date of this document and subject to change without notice. Past performance is not indicative of future results and no representation or warranty is made regarding future performance. Any forecast contained herein as to likely future movements in rates or prices or likely future events or occurrences constitutes an opinion only and is not indicative of actual future movements in rates or prices or actual future events or occurrences (as the case may be). This document must not be forwarded or otherwise made available to any other person without the express written consent of the Standard Chartered Group (as defined below). Standard Chartered Bank is incorporated in England with limited liability by Royal Charter 1853 Reference Number ZC18. The Principal Office of the Company is situated in England at 1 Basinghall Avenue, London, EC2V 5DD. Standard Chartered Bank is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and Prudential Regulation Authority. Standard Chartered PLC, the ultimate parent company of Standard Chartered Bank, together with its subsidiaries and affiliates (including each branch or representative office), form the Standard Chartered Group. Standard Chartered Private Bank is the private banking division of Standard Chartered. Private banking activities may be carried out internationally by different legal entities and affiliates within the Standard Chartered Group (each an “SC Group Entity”) according to local regulatory requirements. Not all products and services are provided by all branches, subsidiaries and affiliates within the Standard Chartered Group. Some of the SC Group Entities only act as representatives of Standard Chartered Private Bank and may not be able to offer products and services or offer advice to clients. #ESG data has been provided by Sustainalytics. Refer to https://www.sustainalytics.com/esg-data for more information.

Market Abuse Regulation (MAR) Disclaimer

Banking activities may be carried out internationally by different branches, subsidiaries and affiliates within the Standard Chartered Group according to local regulatory requirements. Opinions may contain outright “buy”, “sell”, “hold” or other opinions. The time horizon of this opinion is dependent on prevailing market conditions and there is no planned frequency for updates to the opinion. This opinion is not independent of Standard Chartered Group’s trading strategies or positions. Standard Chartered Group and/or its affiliates or its respective officers, directors, employee benefit programmes or employees, including persons involved in the preparation or issuance of this document may at any time, to the extent permitted by applicable law and/or regulation, be long or short any securities or financial instruments referred to in this document or have material interest in any such securities or related investments. Therefore, it is possible, and you should assume, that Standard Chartered Group has a material interest in one or more of the financial instruments mentioned herein. Please refer to https://www.sc. com/en/banking-services/market-disclaimer.html for more detailed disclosures, including past opinions/ recommendations in the last 12 months and conflict of interests, as well as disclaimers. A covering strategist may have a financial interest in the debt or equity securities of this company/issuer. This document must not be forwarded or otherwise made available to any other person without the express written consent of Standard Chartered Group.

Country/Market Specific Disclosures

Botswana: This document is being distributed in Botswana by, and is attributable to, Standard Chartered Bank Botswana Limited which is a financial institution licensed under the Section 6 of the Banking Act CAP 46.04 and is listed in the Botswana Stock Exchange. **Brunei Darussalam:** This document is being distributed in Brunei Darussalam by, and is attributable to, Standard Chartered Bank (Brunei Branch) | Registration Number RFC/61. Standard Chartered Bank is incorporated in England with limited liability by Royal Charter 1853 Reference Number ZC18 and Standard Chartered Securities (B) Sdn Bhd, which is a limited liability company registered with the Registry of Companies with Registration Number RC20001003 and licensed by Autoriti Monetari Brunei Darussalam as a Capital Markets Service License Holder with License Number AMBD/R/CMU/S3-CL. **China Mainland:** This document is being distributed in China by, and is attributable to, Standard Chartered Bank (China) Limited which is mainly regulated by China Banking and Insurance Regulatory Commission (CBIRC), State Administration of Foreign Exchange (SAFE), and People's Bank of China (PBOC). **Hong Kong:** In Hong Kong, this document, except for any portion advising on or facilitating any decision on futures contracts trading, is distributed by Standard Chartered Bank (Hong Kong) Limited ("SCBHK"), a subsidiary of Standard Chartered PLC. SCBHK has its registered address at 32/F, Standard Chartered Bank Building, 4-4A Des Voeux Road Central, Hong Kong and is regulated by the Hong Kong Monetary Authority and registered with the Securities and Futures Commission ("SFC") to carry on Type 1 (dealing in securities), Type 4 (advising on securities), Type 6 (advising on corporate finance) and Type 9 (asset management) regulated activity under the Securities and Futures Ordinance (Cap. 571) ("SFO") (CE No. AJI614). The contents of this document have not been reviewed by any regulatory authority in Hong Kong and you are advised to exercise caution in relation to any offer set out herein. If you are in doubt about any of the contents of this document, you should obtain independent professional advice. Any product named herein may not be offered or sold in Hong Kong by means of any document at any time other than to "professional investors" as defined in the SFO and any rules made under that ordinance. In addition, this document may not be issued or possessed for the purposes of issue, whether in Hong Kong or elsewhere, and any interests may not be disposed of, to any person unless such person is outside Hong Kong or is a "professional investor" as defined in the SFO and any rules made under that ordinance, or as otherwise may be permitted by that ordinance. In Hong Kong, Standard Chartered Private Bank is the private banking division of Standard Chartered Bank (Hong Kong) Limited. **Ghana:** Standard Chartered Bank Ghana PLC accepts no liability and will not be liable for any loss or damage arising directly or indirectly (including special, incidental or consequential loss or damage) from your use of these documents. Past performance is not indicative of future results and no representation or warranty is made regarding future performance. You should seek advice from a financial adviser on the suitability of an investment for you, taking into account these factors before making a commitment to invest in an investment. To unsubscribe from receiving further updates, please click here. Please do not reply to this email. Call our Priority Banking on 0302610750 for any questions or service queries. You are advised not to send any confidential and/or important information to the Bank via e-mail, as the Bank makes no representations or warranties as to the security or accuracy of any information transmitted via e-mail. The Bank shall not be responsible for any loss or damage suffered by you arising from your decision to use e-mail to communicate with the Bank. **India:** This document is being distributed in India by Standard Chartered Bank in its capacity as a distributor of mutual funds and referrer of any other third-party financial products. Standard Chartered Bank does not offer any 'Investment Advice' as defined in the Securities and Exchange Board of India (Investment Advisers) Regulations, 2013 or otherwise. Services/products related securities business offered by Standard Charted Bank are not intended for any person, who is a resident of any jurisdiction, the laws of which imposes prohibition on soliciting the securities business in that jurisdiction without going through the registration requirements and/or prohibit the use of any information contained in this document. **Indonesia:** This document is being distributed in Indonesia by Standard Chartered Bank, Indonesia branch, which is a financial institution licensed, registered and supervised by Otoritas Jasa Keuangan (Financial Service Authority). **Jersey:** The Jersey Branch of Standard Chartered Bank is regulated by the Jersey Financial Services Commission. Copies of the latest audited accounts of Standard Chartered Bank are available from its principal place of business in Jersey: PO Box 80, 15 Castle Street, St Helier, Jersey JE4 8PT. Standard Chartered Bank is incorporated in England with limited liability by Royal Charter in 1853 Reference Number ZC 18. The Principal Office of the Company is situated in England at 1 Basinghall Avenue, London, EC2V 5DD. Standard Chartered Bank is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and Prudential Regulation Authority. The Jersey Branch of Standard Chartered Bank is also an authorised financial services provider under license number

44946 issued by the Financial Sector Conduct Authority of the Republic of South Africa. Jersey is not part of the United Kingdom and all business transacted with Standard Chartered Bank, Jersey Branch and other SC Group Entity outside of the United Kingdom, are not subject to some or any of the investor protection and compensation schemes available under United Kingdom law. **Kenya:** This document is being distributed in Kenya by, and is attributable to Standard Chartered Bank Kenya Limited. Investment Products and Services are distributed by Standard Chartered Investment Services Limited, a wholly owned subsidiary of Standard Chartered Bank Kenya Limited (Standard Chartered Bank/the Bank) that is licensed by the Capital Markets Authority as a Fund Manager. Standard Chartered Bank Kenya Limited is regulated by the Central Bank of Kenya. **Malaysia:** This document is being distributed in Malaysia by Standard Chartered Bank Malaysia Berhad. Recipients in Malaysia should contact Standard Chartered Bank Malaysia Berhad in relation to any matters arising from, or in connection with, this document. **Nigeria:** This document is being distributed in Nigeria by Standard Chartered Bank Nigeria Limited ("the Bank"), a bank duly licensed and regulated by the Central Bank of Nigeria. The Bank accepts no liability for any loss or damage arising directly or indirectly (including special, incidental or consequential loss or damage) from your use of these documents. You should seek advice from a financial adviser on the suitability of an investment for you, taking into account these factors before making a commitment to invest in an investment. To unsubscribe from receiving further updates, please click the link at the bottom of this email or send an email to clientcare.ng@sc.com requesting to be removed from our mailing list. Please do not reply to this email. Call our Priority Banking on 01-2772514 for any questions or service queries. The Bank shall not be responsible for any loss or damage arising from your decision to send confidential and/or important information to the Bank via e-mail, as the Bank makes no representations or warranties as to the security or accuracy of any information transmitted via e-mail. **Pakistan:** This document is being distributed in Pakistan by, and attributable to Standard Chartered Bank (Pakistan) Limited having its registered office at PO Box 5556, I.I Chundrigar Road Karachi, which is a banking company registered with State Bank of Pakistan under Banking Companies Ordinance 1962 and is also having licensed issued by Securities & Exchange Commission of Pakistan for Security Advisors. Standard Chartered Bank (Pakistan) Limited acts as a distributor of mutual funds and referrer of other third-party financial products. **Singapore:** This document is being distributed in Singapore by, and is attributable to, Standard Chartered Bank (Singapore) Limited (Registration No. 201224747C/ GST Group Registration No. MR-8500053-0, "SCBSL"). Recipients in Singapore should contact SCBSL in relation to any matters arising from, or in connection with, this document. SCBSL is an indirect wholly owned subsidiary of Standard Chartered Bank and is licensed to conduct banking business in Singapore under the Singapore Banking Act, Chapter 19. Standard Chartered Private Bank is the private banking division of SCBSL. IN RELATION TO ANY SECURITY OR SECURITIES-BASED DERIVATIVES CONTRACT REFERRED TO IN THIS DOCUMENT, THIS DOCUMENT, TOGETHER WITH THE ISSUER DOCUMENTATION, SHALL BE DEEMED AN INFORMATION MEMORANDUM (AS DEFINED IN SECTION 275 OF THE SECURITIES AND FUTURES ACT, CHAPTER 289 ("SFA")). THIS DOCUMENT IS INTENDED FOR DISTRIBUTION TO ACCREDITED INVESTORS, AS DEFINED IN SECTION 4A(1)(a) OF THE SFA, OR ON THE BASIS THAT THE SECURITY OR SECURITIES-BASED DERIVATIVES CONTRACT MAY ONLY BE ACQUIRED AT A CONSIDERATION OF NOT LESS THAN S$200,000 (OR ITS EQUIVALENT IN A FOREIGN CURRENCY) FOR EACH TRANSACTION. Further, in relation to any security or securities-based derivatives contract, neither this document nor the Issuer Documentation has been registered as a prospectus with the Monetary Authority of Singapore under the SFA. Accordingly, this document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the product may not be circulated or distributed, nor may the product be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons other than a relevant person pursuant to section 275(1) of the SFA, or any person pursuant to section 275(1A) of the SFA, and in accordance with the conditions specified in section 275 of the SFA, or pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. In relation to any collective investment schemes referred to in this document, this document is for general information purposes only and is not an offering document or prospectus (as defined in the SFA). This document is not, nor is it intended to be (i) an offer or solicitation of an offer to buy or sell any capital markets product; or (ii) an advertisement of an offer or intended offer of any capital markets product. Deposit Insurance Scheme: Singapore dollar deposits of non-bank depositors are insured by the Singapore Deposit Insurance Corporation, for up to S$75,000 in aggregate per depositor per Scheme member by law. Foreign currency deposits, dual currency investments, structured deposits and other investment products are not insured. This advertisement has not been reviewed by the Monetary Authority of Singapore. **Taiwan:** Standard Chartered Bank ("SCB") or Standard Chartered Bank (Taiwan) Limited ("SCB (Taiwan)") may be involved in the financial instruments contained herein or other related financial instruments. The author of this document may have discussed the information contained herein with other employees or agents of SCB or SCB (Taiwan). The author and the above-mentioned employees of SCB or SCB (Taiwan) may have taken related actions in respect of the information involved (including communication with customers of SCB or SCB (Taiwan) as to the information contained herein). The opinions contained in this document may change, or differ from the opinions of employees of SCB or SCB (Taiwan). SCB and SCB (Taiwan) will not provide any notice of any changes to or differences between the above-mentioned opinions. This document may cover companies with which SCB or SCB (Taiwan) seeks to do business at times and issuers of financial instruments. Therefore, investors should understand that the information contained herein may serve as specific purposes as a result of conflict of interests of SCB or SCB (Taiwan). SCB, SCB (Taiwan), the employees (including those who have discussions with the author) or customers of SCB or SCB (Taiwan) may have an interest in the products, related financial instruments or related derivative financial products contained herein; invest in those products at various prices and on different market conditions; have different or conflicting interests in those products. The potential impacts include market makers' related activities, such as dealing, investment, acting as agents, or performing financial or consulting services in relation to any of the products referred to in this document. **UAE:** DIFC - Standard Chartered Bank is incorporated in England with limited liability by Royal Charter 1853 Reference Number ZC18.The Principal Office of the Company is situated in England at 1 Basinghall Avenue, London, EC2V 5DD. Standard Chartered Bank is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and Prudential Regulation Authority. Standard Chartered Bank, Dubai International Financial Centre having its offices at Dubai International Financial Centre, Building 1, Gate Precinct, P.O. Box 999, Dubai, UAE is a branch of Standard Chartered Bank and is regulated by the Dubai Financial Services Authority ("DFSA"). This document is intended for use only by Professional Clients and is not directed at Retail Clients as defined by the DFSA Rulebook. In the DIFC we are authorised to provide financial services only to clients who qualify as Professional Clients and Market Counterparties and not to Retail Clients. As a Professional Client you will not be given the higher retail client protection and compensation rights and if you use your right to be classified as a Retail Client we will be unable to provide financial services and products to you as we do not hold the required license to undertake such activities. For Islamic transactions, we are acting under the supervision of our Shariah Supervisory Committee. Relevant information on our Shariah Supervisory Committee is currently available on the Standard Chartered Bank website in the Islamic banking section at: https://www .sc. com/en/banking/ islamic-banking/islamic-banking-disclaimers/ **UAE:** For residents of the UAE – Standard Chartered Bank UAE does not provide financial analysis or consultation services in or into the UAE within the meaning of UAE Securities and Commodities Authority Decision No. 48/r of 2008 concerning financial consultation and financial analysis. **Uganda:** Our Investment products and services are distributed by Standard Chartered Bank Uganda Limited, which is licensed by the Capital Markets Authority as an investment adviser. **United Kingdom:** Standard Chartered Bank (trading as Standard Chartered Private Bank) is an authorised financial services provider (license number 45747) in terms of the South African Financial Advisory and Intermediary Services Act, 2002. **Vietnam:** This document is being distributed in Vietnam by, and is attributable to, Standard Chartered Bank (Vietnam) Limited which is mainly regulated by State Bank of Vietnam (SBV). Recipients in Vietnam should contact Standard Chartered Bank (Vietnam) Limited for any queries regarding any content of this document. **Zambia:** This document is distributed by Standard Chartered Bank Zambia Plc, a company incorporated in Zambia and registered as a commercial bank and licensed by the Bank of Zambia under the Banking and Financial Services Act Chapter 387 of the Laws of Zambia.