



standard
chartered



InvesTips

Navigating volatility

As we entered 2024, investors were still nervous that the US economy would head into recession. While you might not realise, global equities chalked up the best first quarter return (up nearly 8%) over the last 5 years this year.

This performance was particularly impressive, given it came against the economic backdrop of upside surprises to inflation which reignited the “higher for longer” inflation and interest rate fears, pushing the 10-year US government bond yield significantly higher.

The markets turned less calm since the second quarter of 2024, on the back of a series of retaliatory responses between Iran and Israel in the first three weeks of April. WTI crude oil prices soared past \$85/ barrel. Equity volatility spiked by 50% at one point from near-historical low levels, triggering a 5% drawdown in US equities during the period.

However, since then, global equities have once again rallied strongly, pushing us to all-time highs.

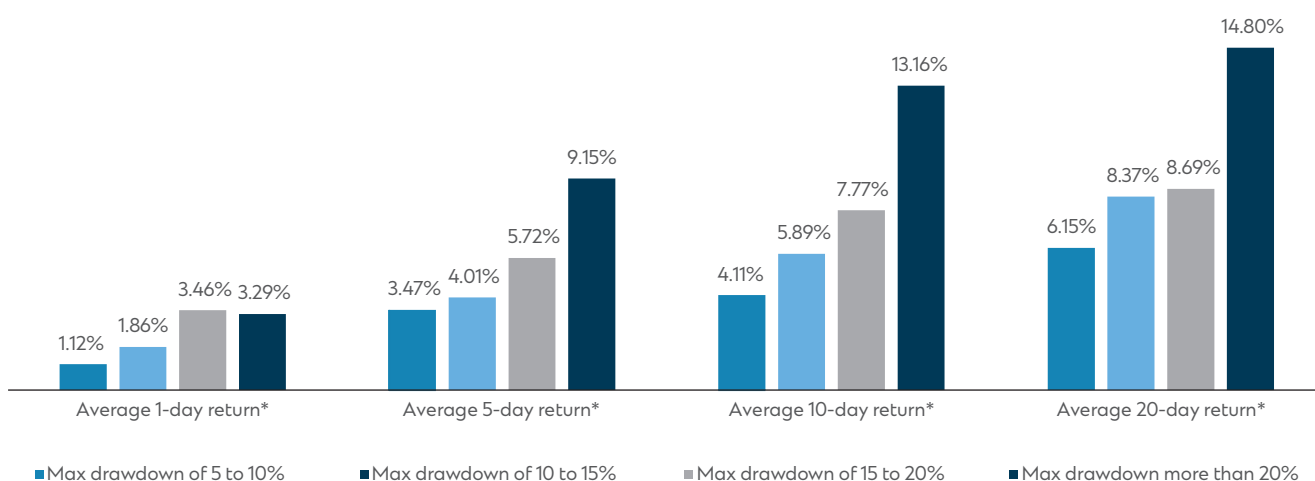
So what is the lesson for investors? It is that volatility is a normal part of investing and how you respond to this volatility is a critical determinant of your success as an investor.

It is important to remind ourselves that a market drawdown of up to 10% is not uncommon during non-recession times. History shows that if investors stayed calm and sat through some of those significant drawdowns, their portfolios would register favourable returns over the ensuing days – indeed, the longer the holding period, the higher the incremental returns. (Figure 1). This speaks to the power of spending time in the market, not trying to time the market. Panic-selling in times of sell-offs is likely to be detrimental to long-term investment performance because you will, more than likely, miss some of the best days in the markets and underperform a buy-and-hold strategy.

How we as investors behave, build and manage our portfolios plays a crucial role on portfolio performance. For us to better navigate volatility, it is paramount to understand the common sources of volatility and apply the proper time-tested guideposts to build an all-weather long-term portfolio.

Fig. 1

Time in the market matters more than timing the markets – the longer the holding period post notable drawdowns, the better the returns



Source: Bloomberg, Standard Chartered
 *Average subsequent trading day returns following a trough in prices

Steve Brice
 Global Chief Investment Officer

Raymond Cheng
 Chief Investment Officer,
 North Asia

Manpreet Gill
 Chief Investment Officer,
 Africa, Middle East & Europe
 (AMEE)

Common sources of market volatility

There is no exhaustive list of sources of market volatility. Apart from idiosyncratic factors such as a well-held company's earnings or outlook disappointment, here are some common sources:

1. Dramatic monetary policy tightening
2. Geopolitics and black swans
3. Recessions

The recent incidents in 2024 ticked two items off the list of these common sources of market volatility - excessive monetary tightening response/worries and geopolitics.

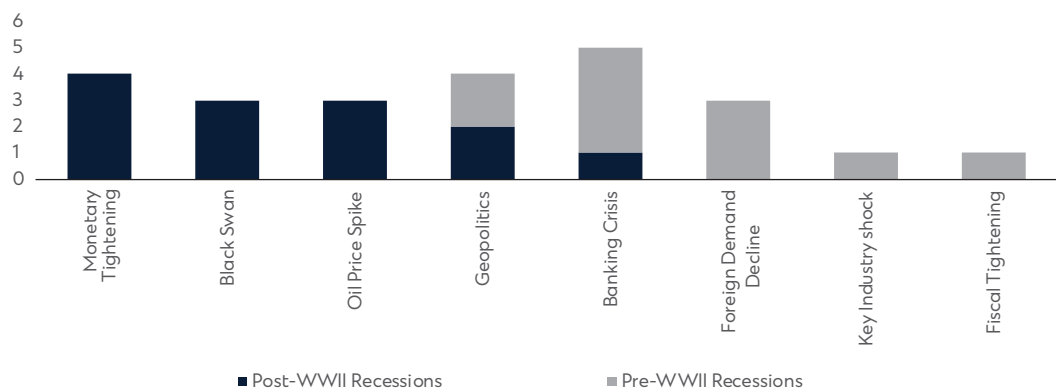
Dramatic monetary policy tightening

Historical experiences of the Fed hiking too much to combat inflation proved to be the most important culprit behind US recessions since WWII (Figure 2). Any increased fears of a more hawkish Fed can trigger a pick-up in bond market volatility, which in turn can create volatility in other asset classes such as equities and currencies (Figure 3). A case in point happened on 10 April 2024, when the March CPI data came in above forecast, stirring worries that the Fed pivot towards policy easing would be delayed. The MOVE bond market index marked the highest daily move for the year, prompting the largest uptick in the 10-year US government bond yield and close to 1% decline in the S&P 500 equity market index.

Fig. 2

Excessive monetary tightening was a leading cause of recessions

Causes of recessions Pre- and Post-World War II

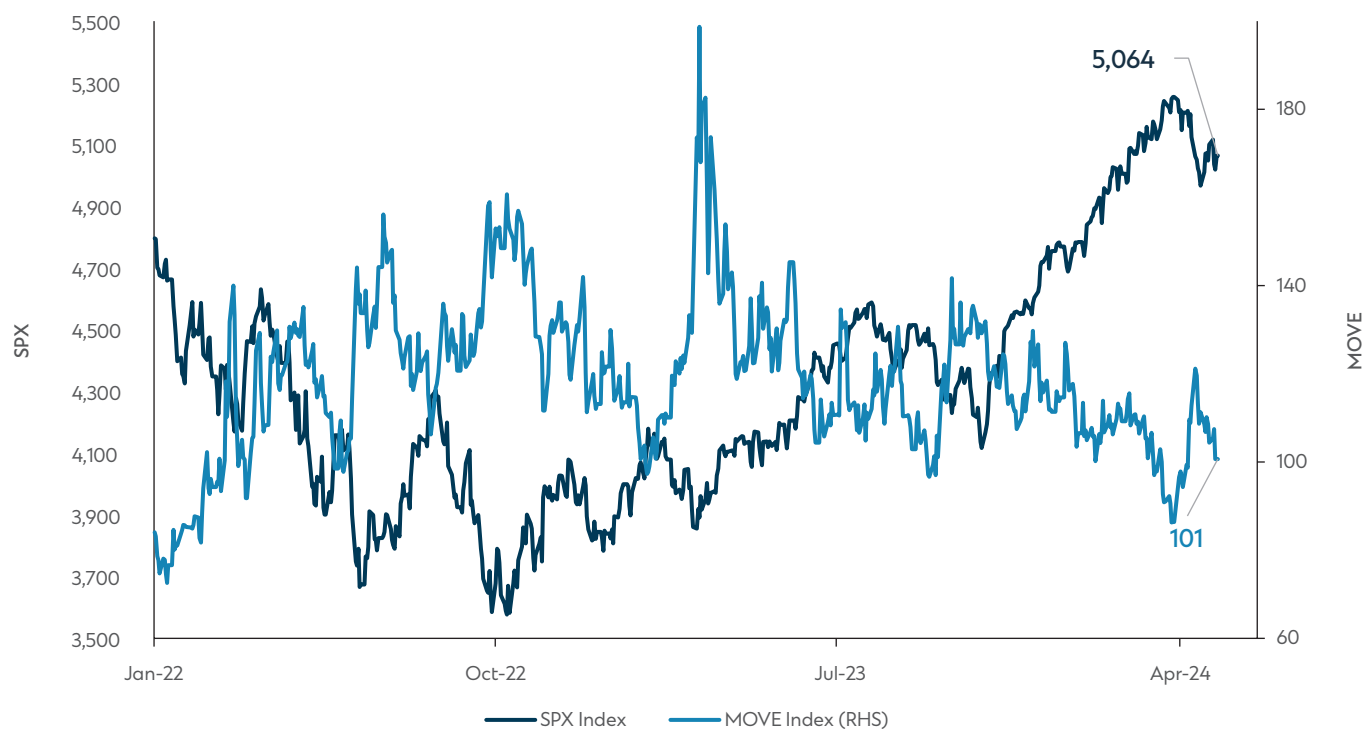


Source: Bloomberg, Standard Chartered

Fig. 3

Expectations of a hawkish Fed could trigger a spike in MOVE (bond yield volatility) and a slump of the S&P 500, albeit temporary

MOVE index vs. SPX index



Source: Bloomberg, Standard Chartered

Geopolitics and black swans

Geopolitics and black swans are multifaceted. Geopolitics entail important dimensions ranging from military conflicts to elections to trade tensions, while other types of black swans include the pandemic and asset bubble bursts. Starting with geopolitics, military conflicts sound intuitively very disruptive to the market. History since 1940, however, shows that while volatility often spikes with a notable pullback in the initial days of the conflicts, the market drawdown normally moderates quickly (Figure 4). Unless a US recession occurred in the ensuing months, the S&P 500 index recouped all their losses in 2 months on average. US equities shrugged off these war impacts, mainly because post WWII, these conflicts were “not in my backyard” and investors focused more on the US economic implications, which were largely limited.

This same line of thinking has played out this year. The Israel-Iran friction escalated into a few retaliatory attacks, which compounded by inflationary concerns in the US, led the VIX equity market volatility index to skyrocket and the S&P 500 to decline over 5%. However, the contained responses of Iran and Israel averted a full-scale confrontation. What’s more, the coincident US Q1 earnings season came in largely better than feared, hence reversing the trends of VIX and markets back to pre-April levels.

Fig. 4

Wartime periods were prone to short-term pullback, while long-term performance remained robust

Start date	End date	War event	Index return since war began				
			1-week	2-month	3-month	6-month	Whole period
10-May-1940	25-Jun-1940	Battle of France*	-15.4%	-15.2%	-12.7%	-4.5%	-16.6%
7-Dec-1941	7-Dec-1941	Pearl Harbor Attack*	-6.3%	-5.0%	-12.4%	-10.2%	0.0%
25-Jun-1950	27-Jul-1953	Korean War*	-7.6%	-3.1%	1.5%	4.9%	25.8%
29-Oct-1956	7-Nov-1956	Suez Crisis*	2.6%	0.3%	-3.6%	-1.4%	1.5%
16-Oct-1962	29-Oct-1962	Cuban Missile Crisis*	-6.3%	9.6%	13.3%	21.1%	-2.4%
5-Jun-1967	10-Jun-1967	Six Day War*	4.1%	8.4%	6.5%	7.7%	3.5%
30-Jan-1968	23-Sep-1968	Tet Offensive	-1.1%	-2.9%	5.1%	5.2%	10.1%
6-Oct-1973	25-Oct-1973	Yom Kippur War	1.4%	-14.0%	-10.0%	-15.3%	0.6%
2-Aug-1990	28-Feb-1991	Gulf War	-3.3%	-10.3%	-11.3%	-2.4%	4.4%
20-Mar-2003	15-Dec-2011	Iraq War*	-0.8%	5.0%	13.7%	18.3%	38.8%
20-Feb-2014	21-Mar-2014	Crimean Crisis*	0.8%	1.4%	1.8%	8.0%	1.5%
8-Apr-2017	12-Jun-2018	North Korea Crisis*	-1.1%	3.3%	3.0%	8.2%	18.3%
24-Feb-2022		Russia-Ukraine*	1.7%	-0.4%	-8.1%	-3.4%	-
7-Oct-2023		Israel-Hamas*	0.4%	6.4%	9.0%	20.8%	-
13-Apr-2024		Iraq-Isreal*	-3.0%				-
Average			-2.3%	-1.2%	-0.3%	4.1%	7.1%
Average (*only for conflicts without US recession following)			-2.6%	1.0%	1.1%	6.3%	7.8%

Source: Bloomberg, Standard Chartered

Military conflicts aside, the market implications of the upcoming November US presidential election and any possible trade war that could emerge from another Trump presidency are top of minds these days.

The good news is that election years have generally been good years for the US stock market (Figure 5). Of course, this time feels different. Trump, as the Republican presidential candidate, has been advocating a 60% tariff on China imports. This is reminiscent of the years of 2018-19 during his trade war with China which led to significant spikes in stock market volatility during the period. Of course, this did not get in the way of a 30% rally in the US stock market between Trump's election and the COVID-induced sharp recession, leading to the strong outperformance of US equities vs. China (Figure 6).

Fig. 5

S&P 500 historically performed well in election years

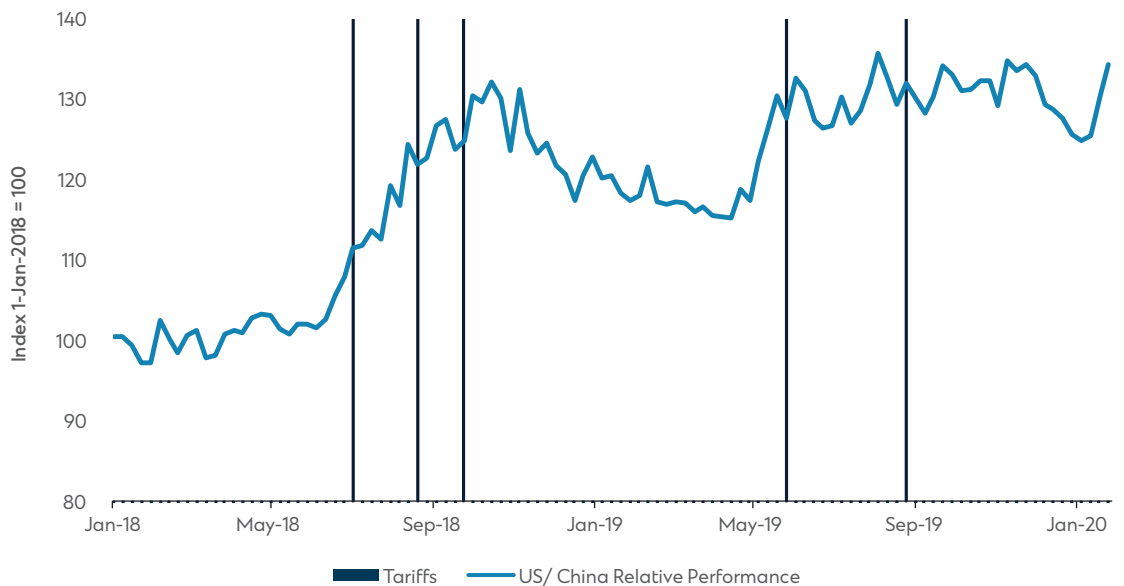
Average election year returns/change since 1928*

Incumbent	Elected	Average Returns				Average Change (bps)
		S&P 500	US Treasuries	US dollar	EM equities	Fed Funds Rate*
Republican	Republican	13.2%	8.3%	3.8%	28.7%	96.8
Republican	Democrat	-2.7%	10.2%	2.7%	-9.9%	-137.5
Democrat	Republican	8.9%	6.7%	4.2%	-11.6%	175.0
Democrat	Democrat	10.4%	2.3%	1.7%	9.5%	-12.5
Unconditional		7.5%	7.6%	3.3%	2.6%	25.9

Source: Bloomberg, Standard Chartered Global Chief Investment Office. *Calculations for average returns are based on the availability of data for the underlying. S&P 500 (1928-2020), US Treasuries (1976 - 2020), US dollar (1968 - 2020), EM equities (1988 - 2020), Fed Funds Rate (1972 - 2020)

Fig. 6

US' imposition of tariffs to China led to US equity outperformance



Source: Bloomberg, Standard Chartered

Recessions

Recessions are the most painful source of market volatility, in the sense that the associated drawdowns were larger in magnitude and longer in duration (Figure 7). Recessions could result from one driver, or a combination of the factors, discussed above. In addition, it is worth noting that three of the latest US recessions could be caused by “black swans” - namely, the COVID pandemic in 2020, the Global Financial Crisis in 2007, and the bust of the dot.com era in 2001.

Fig. 7

Recessions: Greater volatility and drawdown if recession was triggered

Average Drawdown							-31.2%
Average Drawdown Duration (in Days)							206
Name	Peak date	Trough date	Drawdown	Drawdown duration	Recovery date*	Recovery duration	
Monetary tightening, Inflation, Energy crisis, Geopolitics	1-Nov-1973	3-Oct-1974	-42.2%	336	21-Sep-1976	719	
Monetary tightening, Inflation, Energy Crisis	13-Feb-1980	27-Mar-1980	-17.1%	43	14-Jul-1980	109	
Monetary tightening, Inflation, Energy Crisis	11-Aug-1981	12-Aug-1982	-23.5%	366	11-Oct-1982	60	
Monetary tightening, Inflation, Geopolitics	16-Jul-1990	11-Oct-1990	-19.9%	87	13-Feb-1991	125	
Black Swan – Dot com	21-May-2001	21-Sep-2001	-26.4%	123	2-May-2006	1684	
Black Swan – GFC	10-Dec-2007	9-Mar-2009	-55.4%	455	8-Feb-2013	1432	
Black Swan – Covid	19-Feb-2020	23-Mar-2020	-33.9%	33	18-Aug-2020	148	

Source: Bloomberg, NBER, Standard Chartered.

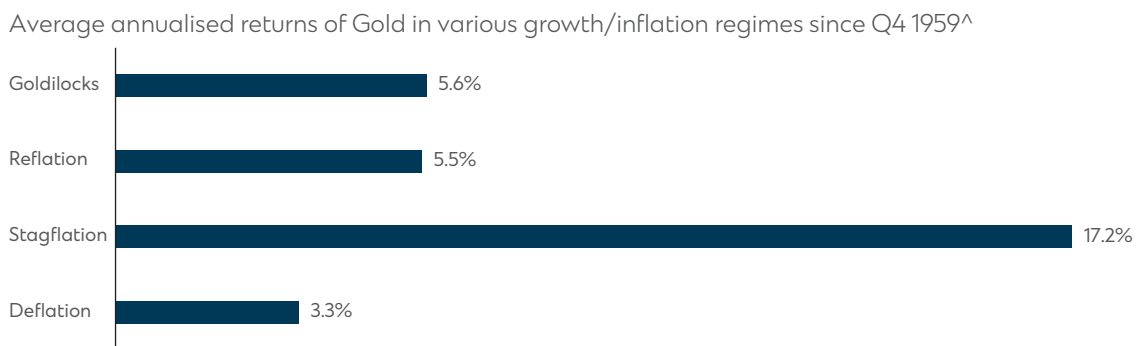
*Recovery date is taken as the date that the index reaches its previous peak.



How to manage volatility?

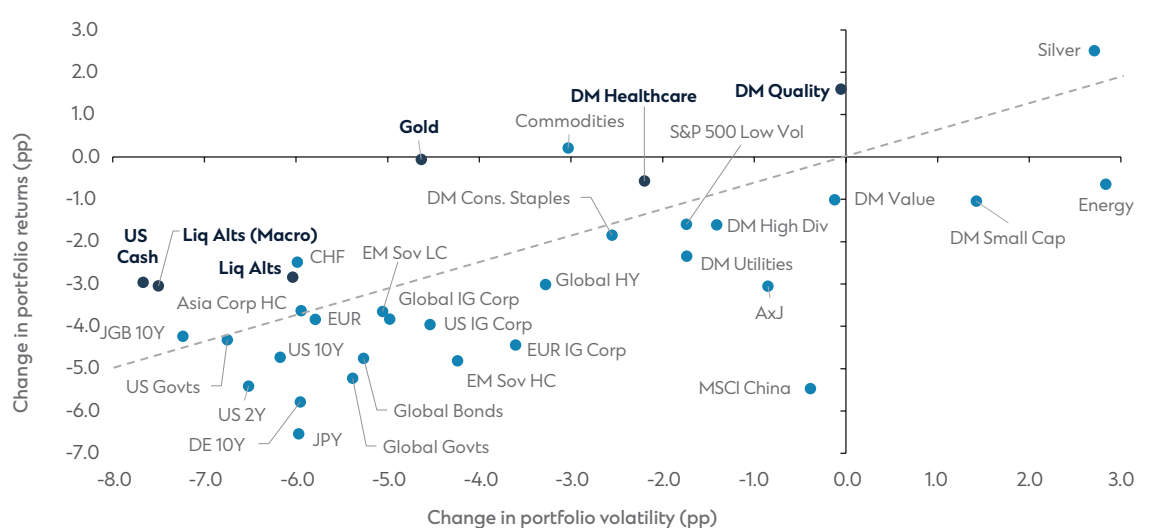
If volatility is triggered by monetary tightening in response to inflationary pressures, gold has delivered superior returns, based on our tracking of different growth/ inflation regimes (Figure 8). Broadly speaking, gold and liquid alternatives provide protection by moderating portfolio volatility when inflation is high (Figure 9).

Fig. 8
Gold delivered superior returns as inflation accelerates



Source: Bloomberg, Standard Chartered
 ^ Goldilocks: Deceleration in inflation, acceleration in growth. Reflation: Acceleration in growth and inflation. Stagflation: Acceleration in inflation, deceleration in growth. Deflation: Deceleration in inflation and growth

Fig. 9
Gold and liquid alternatives improved portfolio volatility when added to a 60/40 portfolio*



Source: Bloomberg, Standard Chartered
 *Change in portfolio returns and volatility from a 100% Global Equities portfolio to a 60% Global Equities/40% Diversifier portfolio, Calculations based on data from Jan 2020 to Nov 2023

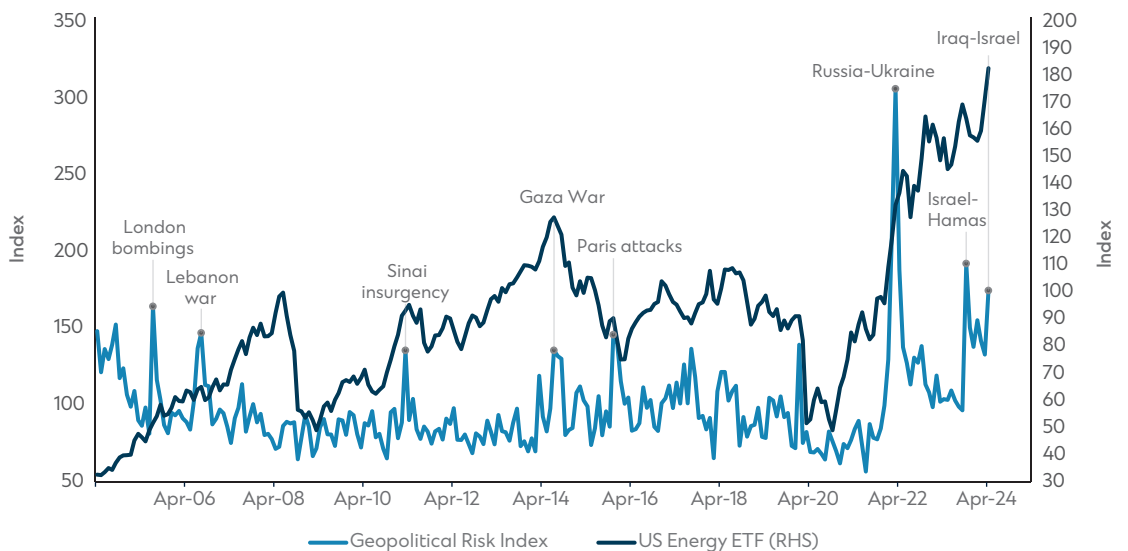


Apart from gold, oil is another key commodity that benefits from heightened geopolitical risk premium. Wars, in general, are inflationary. Tensions in the Middle East threaten the energy supply chain, impeding production and/or transportation of oil products. Therefore, energy ETFs can function as a hedge against inflation upside and geopolitical risks. Given geopolitics tend to have a transitory impact on stocks, investors should be disciplined and stay invested.

Fig. 10

US Energy Sector ETF (XLE) traded well on flare-up in geopolitical tensions

US Energy ETF vs. Geopolitical Risk Index



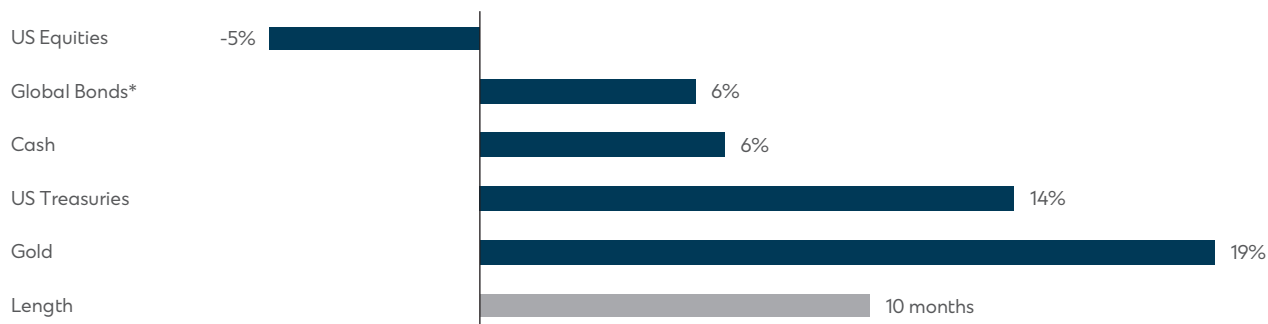
Source: Bloomberg, Standard Chartered

It is intuitive to think “cash is king” when times are bad. The reality is that gold and US government bonds provide effective ballast during recessions, delivering an average positive return of 19% and 14%, respectively (Figure 11). As such, a foundation portfolio diversified broadly across asset classes has proven to outperform a typical 60/40 equity/bond portfolio during economic downturns.

Fig. 11

Gold and US government bonds as effective ballasts during recessions

Annualised average returns of past recessions



Source: Bloomberg, Standard Chartered

Black swans that cause a recession could come in an unpredictable timing and nature, which complicates how we manage our portfolio. A powerful shield to fend off the unknowns is to build and maintain a diversified portfolio well in advance. Figure 12 shows that while no particular asset class can generate outperformance year after year, a strategic asset allocation will help smooth overall portfolio return and volatility.

Fig. 12

No asset class generates outperformance year after year

Performance of asset classes in descending order every year since 2013 (2024 denotes year to 28 May 2024)

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
US Equities 31.8%	US Equities 12.7%	Govt EM 1.2%	Commodities 17.0%	AxJ Equities 41.7%	Global Bonds -1.2%	US Equities 30.9%	AxJ Equities 25.0%	Commodities 28.7%	Commodities 14.6%	US Equities 26.5%	Commodities 11.9%
SAA 9.3%	Govt EM 7.4%	US Equities 0.7%	DM HY 14.3%	US Equities 21.2%	DM HY -4.1%	AxJ Equities 18.2%	US Equities 20.7%	US Equities 26.5%	DM HY -12.7%	SAA 7.7%	US Equities 11.4%
DM HY 7.3%	AxJ Equities 4.8%	SAA -2.7%	US Equities 10.9%	SAA 16.1%	Govt EM -4.3%	SAA 17.8%	SAA 13.9%	SAA 7.9%	SAA -15.7%	DM HY 14.0%	AxJ Equities 9.3%
AxJ Equities 3.1%	SAA 2.5%	DM HY -2.7%	Govt EM 10.2%	DM HY 10.4%	US Equities -5.0%	Govt EM 15.0%	Global Bonds 9.2%	DM HY 1.0%	Global Bonds -16.2%	Govt EM 11.1%	SAA 2.9%
Global Bonds -2.6%	Global Bonds 0.6%	Global Bonds -3.2%	SAA 5.7%	Govt EM 10.3%	SAA -5.6%	DM HY 12.6%	DM HY 7.0%	Govt EM -1.8%	Govt EM -17.8%	AxJ Equities 6.0%	DM HY 2.8%
Govt EM -5.3%	DM HY 0.0%	AxJ Equities -9.2%	AxJ Equities 5.4%	Global Bonds 7.4%	Commodities -14.2%	Commodities 9.5%	Govt EM 5.3%	Global Bonds -4.7%	AxJ Equities -19.7%	Global Bonds 5.7%	Govt EM 1.7%
Commodities -8.0%	Commodities -23.2%	Commodities -29.2%	Global Bonds 2.1%	Commodities 6.6%	AxJ Equities -14.4%	Global Bonds 6.8%	Commodities -10.1%	AxJ Equities -4.7%	US Equities -19.8%	Commodities -14.6%	Global Bonds -3.3%

Source: Bloomberg, Standard Chartered

Strategic Asset Allocation is a long-term investment strategy that denotes how much is allocated to various asset classes in a portfolio. This SAA is key to building healthy foundation portfolios with optimal risk-adjusted returns, as a “through-the-cycle” guide based on one’s financial goals, risk tolerance and investment horizons.

In summary, it is critical for us as investors to prepare for the rainy days, and build a well-diversified foundation portfolio over time to protect our investments against any extreme market volatility.

A holistic approach to managing your wealth Today, Tomorrow and Forever

SC Wealth Select

Has your portfolio had a health check lately?

Keeping in shape is important for good health and well-being. But what about your financial health? Are you ensuring that your portfolio stays financially fit?

Just like you get regular check-ups to stay on top of your health, it is important to give your portfolio regular check-ups to ensure it is in optimal condition for your financial well-being.

To help you stay on track with your financial goals, reach out to our wealth specialists to arrange a portfolio review. Our team follows a holistic approach to ensuring your wealth is managed to suit your Today, Tomorrow and Forever needs. We will guide you using our investment principles and ensure that your portfolio is adjusted to reflect any change in your financial goals.

Everyone approaches their wealth differently. However, what truly matters is that you feel in control of your wealth journey and are well-positioned to secure your financial future. As you plan out your next health review, make sure you undertake a portfolio review too.

Purpose

Today,
Tomorrow,
Forever

Our approach to wealth management is built on your vision of Today, Tomorrow and Forever for yourself, your family and beyond. As you move through life, your needs, life goals and preferences change. However, at every stage, clearly defined goals help to anchor your investment decisions.

Using a 'Today, Tomorrow and Forever' approach, we distinguish the assets intended to be used in the near term (Today) from the assets that are to be used over decades (Tomorrow and Forever), thereby segmenting your portfolio into different strategies that can help you meet your short- and long-term goals.

'Today, Tomorrow and Forever' planning is unique to you. Our specialists partner with you to build well-diversified, long-term Foundation portfolios aligned to your Today, Tomorrow and Forever needs. Opportunistic ideas are added to capture short-term opportunities, and sufficient protection included to address your and your family's objectives.

Today, Tomorrow, Forever Approach

Planning for Today

Requires ensuring liquidity and income flows take centre stage.

Securing Tomorrow

Entails a well-diversified investment and protection portfolio with a focus on growth, while ensuring inflation is accounted for and risks are mitigated.

Building for Forever

Involves greater focus on long-term returns given the time horizon of the portfolio can be measured in decades, and might also include business interests, real estate, collectibles, or charitable funds.

Principles

that stand the test of time

Adhering to time-tested principles, to ensure your investment decisions remain robust and consistently applied, is paramount to your success Today, Tomorrow and Forever. We use five Wealth Principles to guide and guardrail your wealth decisions.

Discipline – Ensure consistency and prudence over your emotions

- Reacting to emotions such as optimism and fear can lead to poor investment decisions at the worst times
- Have a plan and stick to it – this helps you to stay focused on the bigger picture

Diversification – Simply put, don't put all your eggs in one basket

- Reduce risk by holding a variety of financial assets. Multi-asset diversification in your Foundation portfolio is important
- As a guide, make sure your portfolio contains a variety of asset classes and investments that have low correlation with one another

Time in the Market – A more robust strategy than timing the market

- Predicting market sell-offs is challenging, and timing your exit and re-entry is difficult

- Missing out on the best performing days of a market can have a significantly detrimental impact on your portfolio
- 'Time in the market' and buying the market with a longer-term view provide more consistent returns that can ride out bumps along the way

Risk and Return – Make sure the risk is worth the return

- To achieve higher investment returns, you will likely have to accept a greater level of risk in your portfolio
- Therefore, it is important to understand the risks and manage these on an ongoing basis

Protection – Don't let the unexpected catch you unprepared

- Even though you may feel healthy, or financially stable now, protection offers the ability to overcome times of financial uncertainty and mitigate the long-term impact of unforeseen events on your wealth
- A good protection plan not only safeguards your wealth today, but also considers the value of your future earnings over your lifetime, in today's terms

Process

Following a holistic approach to managing your wealth

We follow a rigorous process to ensure your needs and objectives are well-understood, and your portfolio is aligned and managed to deliver on these objectives.

However, markets constantly evolve and your needs change. Hence, we encourage you to undertake regular portfolio reviews to ensure your portfolio remains aligned to your Today, Tomorrow and Forever objectives. This proactive approach includes strategic rebalancing based on insights from our Chief Investment Office.

Learn more

Scan the QR code below to learn more about our SC Wealth Select approach to growing, managing and protecting your wealth.



The five-step process



Please be sure to reach out to your Relationship Manager today to arrange a portfolio review.

Disclosure

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 our Standard Chartered website under Regulatory disclosures. 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 SC 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. The value of investments, and the income from them, can go down as well as up, and you may not recover the amount of your original investment. You are not certain to make a profit and may lose money. 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.

Copyright © 2024, Accounting Research & Analytics, LLC d/b/a CFRA (and its affiliates, as applicable). Reproduction of content provided by CFRA in any form is prohibited except with the prior written permission of CFRA. CFRA content is not investment advice and a reference to or observation concerning a security or investment provided in the CFRA SERVICES is not a recommendation to buy, sell or hold such investment or security or make any other investment decisions. The CFRA content contains opinions of CFRA based upon publicly-available information that CFRA believes to be reliable and the opinions are subject to change without notice. This analysis has not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. While CFRA exercised due care in compiling this analysis, CFRA, ITS THIRD-PARTY SUPPLIERS, AND ALL RELATED ENTITIES SPECIFICALLY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, to the full extent permitted by law, regarding the accuracy, completeness, or usefulness of this information and assumes no liability with respect to the consequences of relying on this information for investment or other purposes. No content provided by CFRA (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of CFRA, and such content shall not be used for any unlawful or unauthorized purposes. CFRA and any third-party providers, as well as their directors, officers, shareholders, employees or agents do not guarantee the accuracy, completeness, timeliness or availability of such content. In no event shall CFRA, its affiliates, or their third-party suppliers be liable for any direct, indirect, special, or consequential damages, costs, expenses, legal fees, or losses (including lost income or lost profit and opportunity costs) in connection with a subscriber's, subscriber's customer's, or other's use of CFRA's content.

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 our Standard Chartered website under Regulatory disclosures 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.

Sustainable Investments

Any ESG data used or referred to has been provided by Morningstar, Sustainalytics, MSCI or Bloomberg. Refer to 1) Morningstar website under Sustainable Investing, 2) Sustainalytics website under ESG Risk Ratings, 3) MCSI website under ESG Business Involvement Screening Research for more information. The ESG data is as at the date of publication based on data provided, is for informational purpose only and is not warranted to be complete, timely, accurate or suitable for a particular purpose, and it may be subject to change. Sustainable Investments (SI): This refers to funds that have been classified as 'Sustainable Investments' by Morningstar. SI funds have explicitly stated in their prospectus and regulatory filings that they either incorporate ESG factors into the investment process or have a thematic focus on the environment, gender diversity, low carbon, renewable energy, water or community development. For equity, it refers to shares/stocks issued by companies with Sustainalytics ESG Risk Rating of Low/Negligible. For bonds, it refers to debt instruments issued by issuers with Sustainalytics ESG Risk Rating of Low/Negligible, and/or those being certified green, social, sustainable bonds. For structured products, it refers to products that are issued by any issuer who has a Sustainable Finance framework that aligns with Standard Chartered's Green and Sustainable Product Framework, with underlying assets that are part of the Sustainable Investment universe or separately approved by Standard Chartered's Sustainable Finance Governance Committee.

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 and Standard Chartered Securities (B) Sdn Bhd | Registration Number RC20001003. Standard Chartered Bank is incorporated in England with limited liability by Royal Charter 1853 Reference Number ZC18. Standard Chartered Securities (B) Sdn Bhd is a limited liability company registered with the Registry of Companies with Registration Number RC20001003 and licensed by Brunei Darussalam Central Bank as a Capital Markets Service License Holder with License Number BDCB/R/CMU/S3-CL and it is authorised to conduct Islamic investment business through an Islamic window. **China Mainland:** This document is being distributed in China by, and is attributable to, Standard Chartered Bank (China) Limited which is mainly regulated by National Financial Regulatory Administration (NFRA), 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. AJ1614). 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 SCBHK, a subsidiary of Standard Chartered PLC. **Ghana:** Standard Chartered Bank Ghana Limited 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 send an email to feedback.ghana@sc.com. 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 Standard Chartered via e-mail, as Standard Chartered makes no representations or warranties as to the security or accuracy of any information transmitted via e-mail. Standard Chartered 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 in its capacity as a distributor of mutual funds and referrer of any other third party financial products. Standard Chartered 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 Chartered 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:** In Jersey, Standard Chartered Private Bank is the Registered Business Name of the Jersey Branch of Standard Chartered Bank. 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 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 ("SCBMB"). Recipients in Malaysia should contact SCBMB in relation to any matters arising from, or in connection with, this document. This document has not been reviewed by the Securities Commission Malaysia. The product lodgement, registration, submission or approval by the Securities Commission of Malaysia does not amount to nor indicate recommendation or endorsement of the product, service or promotional activity. Investment products are not deposits and are not obligations of, not guaranteed by, and not protected by SCBMB or any of the affiliates or subsidiaries, or by Perbadanan Insurans Deposit Malaysia, any government or insurance agency. Investment products are subject to investment risks, including the possible loss of the principal amount invested. SCBMB expressly disclaim any liability and responsibility for any loss arising directly or indirectly (including special, incidental or consequential loss or damage) arising from the financial losses of the Investment Products due to market condition. **Nigeria:** This document is being distributed in Nigeria by Standard Chartered Bank Nigeria Limited, a bank duly licensed and regulated by the Central Bank of Nigeria. Standard Chartered 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 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 02 012772514 for any questions or service queries. Standard Chartered shall not be responsible for any loss or damage arising from your decision to send confidential and/or important information to Standard Chartered via e-mail, as Standard Chartered 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, 1970. 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, 2001 ("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\$100,000 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: SC Group Entity 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 SC or SCB (Taiwan). The author and the above-mentioned employees of SC or SCB (Taiwan) may have taken related actions in respect of the information involved (including communication with customers of SC 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 SC or SCB (Taiwan). SC 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 SC 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 SC or SCB (Taiwan). SC, SCB (Taiwan), the employees (including those who have discussions with the author) or customers of SC 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. 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: In the UK, Standard Chartered Bank is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and Prudential Regulation Authority. This communication has been approved by Standard Chartered Bank for the purposes of Section 21 (2) (b) of the United Kingdom’s Financial Services and Markets Act 2000 (“FSMA”) as amended in 2010 and 2012 only. Standard Chartered Bank (trading as Standard Chartered Private Bank) is also an authorised financial services provider (license number 45747) in terms of the South African Financial Advisory and Intermediary Services Act, 2002. The Materials have not been prepared in accordance with UK legal requirements designed to promote the independence of investment research, and that it is not subject to any prohibition on dealing ahead of the dissemination of investment research.

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.