



standard
chartered

InvesTips

Exploring alternatives

Looking beyond traditional investments

May 2025



WS Global CIO Office

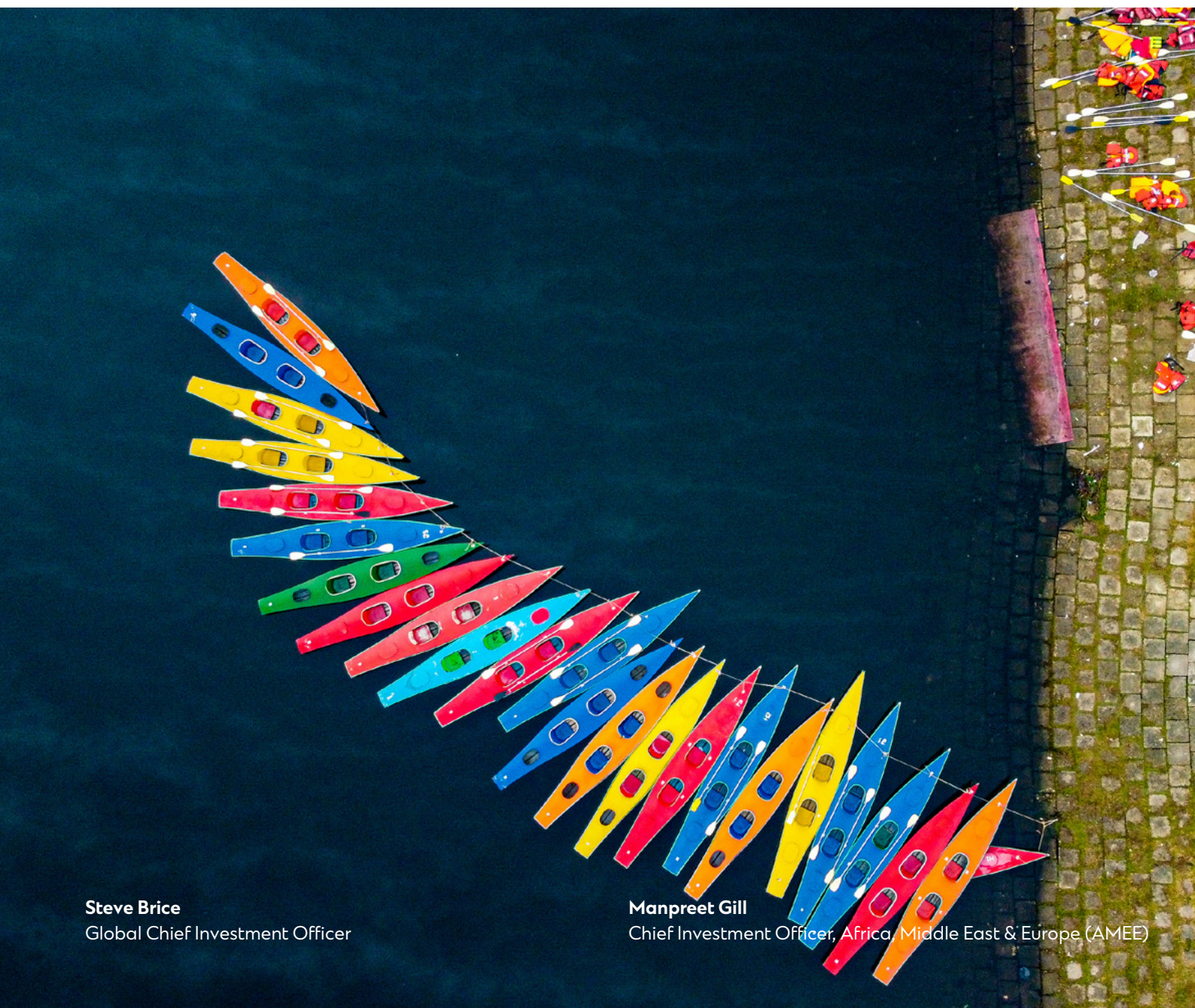
In an investment environment where key market relationships have been challenged in recent years, investors have been looking beyond traditional investments to help achieve their return and risk goals. Alternative investments – asset classes that go beyond the traditional mix of cash, stocks and bonds, such as hedge funds, private equity and digital assets – play an increasingly important role in global investments in this emerging world.

The CAIA's 2024 report estimates global alternative assets under management (AUM) now total USD 22trn, accounting for approximately 15% of total global assets under management. The growing significance of alternative investments stems from their ability to provide more meaningful diversification, optimise risk-adjusted returns and help protect against inflation.

In this report, we discuss alternative investment strategies that can help optimise investment portfolios.

Steve Brice
Global Chief Investment Officer

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



Why consider alternative investments?

Alternative investments ('Alternatives') can add a dimension to investment portfolios that is fundamentally different from that of traditional asset classes.

They have the potential to diversify, modify and mitigate traditional risks. Alternatives are emerging as an interesting option for investors due to their rising liquidity, innovation, reduced concentration risk and lower costs. This notable shift in dynamics reflects both opportunities and challenges in this space.

Shifting dynamics of traditional assets

An FS Investments 2023 report highlights the shift in correlations between stocks and bonds since 2022. Historically, stocks and bonds tended to have a negative correlation, establishing their ability to stabilise a portfolio through offsetting returns.

However, correlation between stocks and bonds has turned positive in recent years, hurting their ability to de-risk a portfolio through diversification. Investors looking for diversifiers have started to look at other options that could help to mitigate risks during market drawdowns.

Fig. 1

Stock-bond correlation has started to turn positive, diminishing the diversification benefits of a stock-bond portfolio

36-month rolling correlation between the S&P500 and Bloomberg US Aggregate Bonds Index



Source: FS Investments Is (2023)

Cross-asset correlations

Examining diversification benefits via cross-asset correlations is a good starting point to examine the potential benefits of investing in alternative assets.

Some alternative assets are negatively correlated to traditional investments and can hence lend meaningful diversification. Others enable outsized returns but entail greater risk. This is illustrated in the table below from the First Sentier Investors' 2022 report that indicates the returns, volatility and correlations for assets based on monthly returns for the 2013-22 period.

For instance, wine and catastrophe bonds exhibit low correlations with traditional assets but can provide meaningful risk reduction. During the same period, Bitcoin and Freight returns offered much higher returns than traditional assets, but this came at the cost of substantial risk (as indicated by historical volatility). Hence, it is important to evaluate the risk-return profile of alternative assets carefully, despite their low or negative correlations with existing assets in a portfolio.

Fig. 2

Cross-asset correlations

Returns, volatility and cross-asset correlations; monthly returns over 2013-2022

Asset classes	Historical return	Historical volatility	Correlations														
			US Equities	World (ex US) Equities	MSCI World Small Cap	Emerging Markets Equities	Global Bonds	US TIPS	US High Yield	USD Cash	Bitcoin	Freight	Timber and Forestry	Frontier Equities	Distressed opportunities	Wine	Catastrophe Bonds
US Equities	13.6%	15.7%	1.00														
World (ex US) Equities	5.3%	14.9%	0.87	1.00													
MSCI World Small Cap	9.5%	17.8%	0.92	0.90	1.00												
Emerging Markets Equities	3.4%	16.5%	0.70	0.80	0.74	1.00											
Global Bonds	2.2%	3.2%	0.18	0.16	0.15	0.21	1.00										
US TIPS	1.7%	4.5%	0.28	0.34	0.29	0.38	0.78	1.00									
US High Yield	3.9%	7.5%	0.76	0.80	0.83	0.73	0.37	0.47	1.00								
USD Cash	0.9%	0.2%	-0.08	-0.07	-0.11	-0.02	0.15	0.07	-0.03	1.00							
Bitcoin	294.2%	1150.2%	0.11	0.08	0.09	0.05	0.05	0.03	0.09	-0.05	1.00						
Freight	70.3%	179.1%	0.07	0.07	0.10	0.10	-0.08	0.02	0.07	-0.05	0.00	1.00					
Timber and Forestry	6.6%	20.8%	0.78	0.80	0.85	0.70	0.08	0.28	0.70	-0.12	0.05	0.02	1.00				
Frontier Equities	4.1%	16.8%	0.67	0.74	0.73	0.70	0.15	0.24	0.73	-0.11	0.11	0.07	0.58	1.00			
Distressed opportunities	4.1%	5.8%	0.66	0.73	0.76	0.57	0.01	0.13	0.71	-0.17	0.13	0.07	0.59	0.68	1.00		
Wine	2.9%	4.6%	0.07	0.06	0.11	0.13	0.01	0.14	0.23	-0.12	-0.06	0.13	0.14	0.08	0.12	1.00	
Catastrophe Bonds	4.8%	3.1%	0.19	0.16	0.18	0.21	0.17	0.14	0.27	-0.13	0.05	0.01	0.21	0.18	0.20	0.15	1.00

Source: First Sentier Investors (2022), Bloomberg, Datastream. To be consistent across the historical data, we restrict data to the shortest history of the alternative assets, being Bitcoin, which is from 28 February 2013 to 30 June 2022.

Past performance is not indicative of future performance. Historical returns are gross performance and do not take into account any fees.

Potential for higher risk-adjusted returns

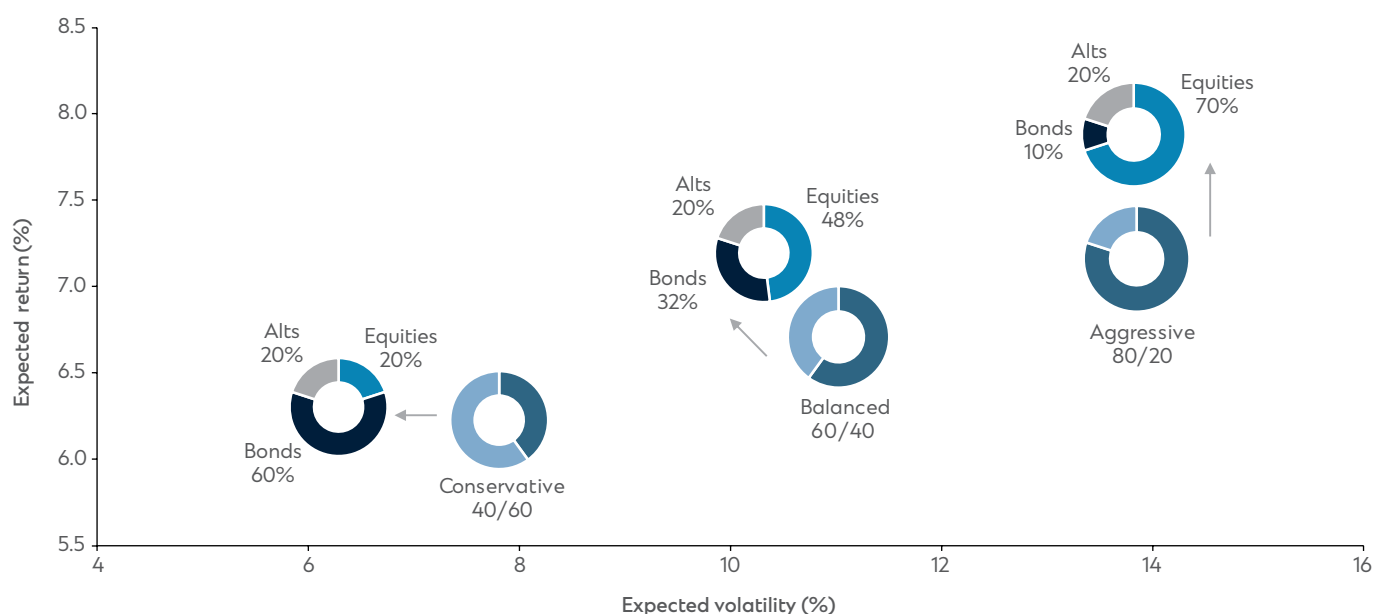
Alternative investments typically require longer investment periods. In return, the longer holding periods tend to be rewarded with higher risk-adjusted returns. JP Morgan's 2024 report compared risk-adjusted returns of three hypothetical traditional portfolios and portfolios with multi-alternatives exposure. The results indicate that alternative investments have the potential to increase returns, reduce volatility and strengthen resilience.

Fig. 3

Alternatives can reduce risk and improve returns

A diversified multi-alternatives allocation may reduce risk, improve returns or balance of both

2024 Long-term capital market assumptions



Portfolio	Expected return (%)	Expected volatility (%)
Conservative	6.5	7.7
Balanced	7.0	10.6
Aggressive	7.4	13.6
Conservative + 20% Alts	6.5	6.2
Balanced + 20% Alts	7.3	10.2
Aggressive + 20% Alts	7.8	13.6

Source: JP Morgan Asset Management (2024)

Types of alternatives

Below are some prominent types of alternative investments that can lend a unique dimension to a classic portfolio.



Hedge funds

These are actively managed strategies that use risky strategies to generate outsized returns. These funds pool money from qualified investors and invest in a range of assets including stocks, bonds, commodities, derivatives, currencies and digital assets, often via very specific types of investment strategies.

Global Market Insights values hedge funds' global AUM at around USD 5.3trn in 2024 and projects a CAGR of about 4% between 2025 and 2034. Increased investments in digital assets and technological advancements have been key drivers for the rapid growth of hedge funds. The rise in quantitative and algorithmic strategies given the backdrop of AI offers nuanced strategy development for optimising portfolio performance.

Typically, the cost associated with hedge funds is high, as they charge management (1% and upwards) and performance (a percentage of profits) fees.

Fig. 4

Major types of hedge fund strategies

	Description	Key features
Long/Short Equity	Buys undervalued stocks while simultaneously shorting overvalued ones to capitalise on price discrepancies	Seeks market-neutral exposure, has lower volatility than long-only equity portfolio
Event-driven strategies	Invests in companies undergoing specific events such as M&A and restructuring	Merger arbitrage and distressed are examples of such strategies
Relative value arbitrage	Leverages price or spread inefficiencies between securities	Fixed income, convertible and statistical are types of arbitrage approaches
Global macro	Invests based on macro and geopolitical trends	Invests across multiple assets and geographies
Managed futures	Invests in future contracts across various assets	Uses systematic trading that relies on technical analysis
Quantitative	Invests in opportunities identified using machine learning algorithms	Employs high-frequency trading and systematic trend trading to generate higher returns
Multi-strategy	Combines various hedge fund strategies	Offers exposure to diverse strategies based on market conditions

Source: Standard Chartered



Cryptocurrencies

A cryptocurrency is a virtual currency that use cryptography for security and operate on decentralised networks based on blockchain technology. Some popular cryptocurrencies are Bitcoin (BTC), Ethereum (ETC), Litecoin (LTC), Ripple (XRP) and Cardano (ADA).

The cryptocurrency market is estimated to increase at a CAGR of 11.1% over 2021-2028. The asset class can offer a wide range of investment opportunities and avoid exposure to traditional currencies. However, volatility has typically been quite high for this asset class; also, several platforms and wallets have been vulnerable to hacking. Regulatory uncertainty looms large over these assets in many countries. It is important to evaluate these aspects carefully before choosing to invest in digital assets.



Commodities

The global AUM of commodities stands at approximately USD 608bn. Gold continues to have a significant presence within the commodities landscape and is a popular hedge against inflation, but other major commodities include:

- **Hard commodities:** Natural resources that are mined or extracted such as precious metals, oil and natural gas
- **Soft commodities:** Agricultural products such as spices, wheat, coffee, sugar and livestock
- **Environmental commodities:** Emission allowances, renewable energy certificates, carbon offsets and water rights

The commodities market is crucial for policymakers as volatility in this market often has an outsized impact on an economy's stability. These markets are complex and affected by numerous factors that require careful analysis for successful investing. In recent years, there has also been a growing emphasis on sustainable practices in commodity production to address climate change challenges.



Private equity

This is one of the many investment options available in the private capital markets category. Here, an investor invests directly (or via private equity funds) in a private company in exchange for equity. These investments are often made by private equity firms, venture capitalists or angel investors.

Investments in private equity have gained traction in recent years due to their historical ability to generate high returns even in a low-interest environment. A report by CalPERS (2024) found that returns from private equity investments over a 5 – 10-year period has outpaced every other asset class. Growing interest in sustainable investing has led several private equity firms to integrate environmental, social and governance (ESG) metrics as part of their evaluation criteria. This has enabled them to attract socially conscious investors. Many firms/investors are also leveraging artificial intelligence and data analytics to scout for opportunities and manage risk effectively.

Fig. 5

Types of private equity strategies

	Structure	Key features
Venture Capital (VC)	Invests in early-stage companies	<ul style="list-style-type: none">– Long term– Capital locked until exit– Potential for very high returns
Leveraged Buyout (LBO)	Acquisition of companies using debt	<ul style="list-style-type: none">– Medium - long term– Capital locked until exit– High leverage– Potential for outsized returns
Growth Equity	Invests in mature companies seeking expansion	<ul style="list-style-type: none">– Longer term– Limited liquidity– Potential for outsized returns
Real estate private equity (REPE)	Invests pooled funds in real estate projects	<ul style="list-style-type: none">– Longer term– Limited liquidity– Higher returns for opportunistic strategies
Fund of funds	Invests in other private equity funds	<ul style="list-style-type: none">– Relatively lower returns due to higher fees– Long term– Limited liquidity

Source: Standard Chartered



Private debt

The global AUM of private debt market is valued at USD 1.62trn as of 2023, reflecting a 17% increase over the previous year. These are loans offered to private companies that have limited access to other forms of capital. The asset class has emerged as an attractive investment for sophisticated investors and institutions as they tend to offer more attractive yields than traditional debt and offer meaningful diversification.

Fig. 6

Types of private debt strategies

	Structure	Key features
Commingled private debt funds	Pooled investments managed by professionals; fixed investment period (1-5 years); limited liquidity	<ul style="list-style-type: none">– Diligent sourcing and underwriting of loans– Provides liquidity
Business development companies	Registered investment vehicles; 5+ years lock-in; public BDCs offer liquidity, private BDCs lower liquidity	<ul style="list-style-type: none">– Focus on small to mid-sized company– Subject to market volatility (for public BDCs)
Middle market collateralised loan obligations	Issued by private debt managers or large credit platforms, less liquid, flexible term	<ul style="list-style-type: none">– Pools various loans into a single security– Minimum requirement is lower
Separately managed accounts	Limited liquidity, flexible term	<ul style="list-style-type: none">– Higher capital outlay– Customisable– Direct relationship with managers
Small business investment companies	Limited liquidity, longer lockup	<ul style="list-style-type: none">– Finances small businesses– Assets rolled into BDC structure for growth

Source: Standard Chartered



Collectibles

Grand View Research values the global collectibles market at approximately USD 295bn in 2023 and expects it to grow at a CAGR of 5.5% over 2024-30. This asset class encompasses many items including sports memorabilia, fine wine, vintage cars, fine art, watches, fine jewellery and designer bags. They often evoke personal memories and sentiments. A survey by Fladgate LLP (2023) indicates that around 68% of investors perceive passion investments to be less volatile than traditional investments. Almost 90% of high-net worth individuals are open to the idea of diversifying their portfolios with passion investments.

Limitations of alternative investments

Alternative investments face a very different set of limitations and risks compared with traditional asset classes. It is important to be aware of them to make an informed decision.

Lack of transparency

Regulation around alternative investments are not always as stringent as those for traditional investments. Usually, registration with a central authority such as the Securities Exchange Commission (SEC) provides more information to investors about an asset, including historical performance, risk factors and deal sheets. This can help to assess the risk-return profile of the asset with greater accuracy. Alternative assets largely lack this type of transparency, though those purchased via alternative investment platforms or indices can be relatively more transparent and regulated.

Valuation challenges

Public investments' market price is determined by demand-supply dynamics and macroeconomic factors. They also have an intrinsic value that can be determined with the financial information available. However, alternative investments' market price and intrinsic value are highly subjective. Given the limited availability of information, valuing them can be quite challenging. The value of assets such as designer bags, contemporary art or classic cars may vary depending on the appraiser. Most alternatives

do not have centralised and regulated benchmarks, but some are easier to appraise as they are actively traded on a recognised exchange.

Illiquidity

Most alternative investments are not actively traded. Many alternatives such as hedge funds, private equity and private debt funds require lock-in of five or more years. Passion investments are often long term in nature, their value appreciates slowly and are often viewed as assets intended to be passed on for generations. However, a few alternatives such as commodities or secondaries (investors buying existing private equity interests from others) that trade on public or private secondary markets provide a reasonable level of liquidity.

High fees

Most investments in this asset class involve more complex fee structures than traditional investments, which can affect overall returns. It is important to assess investments based on post-expense returns.

Fig. 7

Types of alternative asset management fees

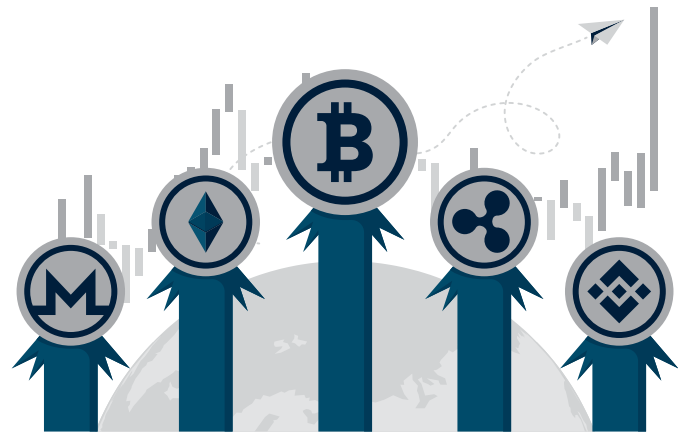
	Description	Typical structure / range
Management fee	Charged as a % of AUM, covers operational costs	Is a % of AUM or committed capital
Performance fee	Charged based on fund's profits over the hurdle rate	Is a % profits more than the hurdle rate
Hurdle rate	Minimum rate to be achieved before performance fee becomes applicable	Usually defined in per annum terms above a specified level
Redemption fee	Any redemptions before lock-in are subject to penalty or fee	Is a % of amount withdrawn
Setup/initial fee	One-time costs to setup fund or investment; includes legal and administrative costs	May depend on type of fund, size and complexity

Source: Standard Chartered

Emerging trends

The alternative investment landscape is evolving rapidly against the backdrop of emerging technology, shifting investor inclinations and macroeconomic circumstances:

There is a growing trend of democratisation of alternative investments through crowdfunding, digital asset exchanges and online investment platforms. The typical entry barriers, such as high minimum investments, are also undergoing a revolution. For example, Masterworks allows investing in art with amounts as low as USD 15,000.



With market capitalisation of cryptocurrencies reaching an all-time high of USD 2trn, it is apparent that the digital asset space is garnering significant attention. The recent regulatory approval by the US to allow Bitcoin as part of mainstream investing funds has resulted in increased inflow to this asset class.

Blockchain technology, artificial intelligence and decentralized finance (DeFi) are transforming the alternatives space. The use of blockchain technology for secure transactions and smart contracts, artificial intelligence for identifying better opportunities and data-analytics driven risk mitigation strategies are some examples of use cases.



Across many economies, regulatory efforts and investor activism are driving rapid integration of ESG practices across asset classes including alternative investments.

Conclusion

Alternative investments are increasingly becoming essential elements of modern investment strategies, especially given the shifting correlation between stocks and bonds.

While they lend meaningful diversification and resilience to the portfolio, they also require meticulous due diligence and risk assessment.

As the alternative investment landscape evolves, it is important to understand the nuances and customise such investments to align with personal goals and risk profiles. Investors can counter market uncertainties and create sustainable wealth by leveraging alternative investments thoughtfully.



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 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 © 2025, 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. All covering strategist are licensed to provide investment recommendations under Monetary Authority of Singapore or Hong Kong Monetary Authority. 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) MSCI website under ESG Business Involvement Screening Research and 4) Bloomberg green, social & sustainability bonds guide 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 'ESG Intentional Investments – Overall' 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 by Bloomberg. 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. Sustainalytics ESG risk ratings shown are factual and are not an indicator that the product is classified or marketed as "green", "sustainable" or similar under any particular classification system or framework.

Country/Market Specific Disclosures

Bahrain: This document is being distributed in Bahrain by Standard Chartered Bank, Bahrain Branch, having its address at P.O. 29, Manama, Kingdom of Bahrain, is a branch of Standard Chartered Bank and is licensed by the Central Bank of Bahrain as a conventional retail bank. **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 and supervised by Otoritas Jasa Keuangan (Financial Service Authority) and Bank Indonesia. **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 in Kenya, 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 (SCB Nigeria), a bank duly licensed and regulated by the Central Bank of Nigeria. SCB Nigeria 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. SCB Nigeria 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. SCB Nigeria 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 UAE ("SC UAE") is licensed by the Central Bank of the U.A.E. SC UAE is licensed by Securities and Commodities Authority to practice Promotion Activity. SC 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.