CIO Academy

Infrastructure's Role in a Multi-Asset Portfolio

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Authored by

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- **In a challenging macroeconomic environment of high inflation and rates such as now, conventional assets like equities and bonds often become positively correlated, losing some diversification benefits in a multi-asset portfolio**. This is what we witnessed in 2022, when both equities and bonds fell in tandem, leading to hefty portfolio drawdowns.
- **In this new market regime, investors need to look for new sources of portfolio diversification**—not just to protect their capital but **also to add new sources of alpha**, in order to achieve their long-term risk/return objectives.
- In addition to **navigating short-term market volatility, investors also need allocations to assets that adapt to structural and thematic changes—that will shape the next decade—**and ensure that **their portfolio benefits from the new opportunities** created by such shifts.
- Infrastructure is one such asset class which not only **offers a low correlation to conventional assets** but also offers **downside protection in an inflationary environment through its long-term contracts and CPI-indexed revenues**.
- **Infrastructure** assets are also a great way to tap into **long-term investment themes like sustainability and digitalisation**. We find attractive opportunities in the build-out of **green and digital infrastructure along with the repair and upgrade of existing physical infrastructure**.
- **Structurally, the trinity of the three D's – Digitalisation, Decarbonisation and De-globalisation** - should drive a huge investment into infrastructure. As of now, it is still in the **early innings of a multi-decade investment cycle,** in our view.

Executive summary

Investing optimally has never been easy. There's a myriad of factors that impact the initial decision-making process and the eventual investment outcome. Add to this already complex mix, the new challenges of the post-COVID investment landscape, and the picture gets murkier.

It is widely accepted now, that in this post-COVID era, we have entered a new market regime of a.) higher than usual inflation, b.) higher for longer rates and c.) greater positive correlation between traditional asset classes like equities and bonds.

These traditional asset classes were once considered enough to build a balanced, well-diversified portfolio (a case in point being the traditional 60-40 portfolio, which suffered huge drawdowns last year). **But as witnessed in 2022, both equities and bonds fell in tandem, as bonds shed some of their traditional portfolio diversification benefits** in the backdrop of very high inflation and fast-rising interest rates.

This investment experience from 2022 drove home a key message: investors need to seek new ways to achieve their risk/return objectives, get additional sources of portfolio diversification and capture new alpha opportunities in a structurally high inflationary environment.

They should also consider an allocation to assets that adapt to structural and thematic changes that will shape-up the next decade and reap portfolio benefits from the new opportunities created by such shifts.

In this regard, there's a greater role for alternatives, particularly, Infrastructure, which is fast becoming an imperative in a multi-asset portfolio. **Infrastructure assets exhibit relatively low correlations with traditional equity and fixed income assets, low sensitivity to market shocks, and insulation from rate hikes and inflation**. Before we discuss the reasons why investors should have an allocation to Infrastructure in their portfolios, let us first clearly define the asset class.

Infrastructure's correlation with other assets

	S&P 500 COMPOSITE - TR IND	FTSE 100 - TR IND	NASDAQ COMPOSITE - TR IND	MSCI AC WORLD U$ - TR IND	S&P GLOBAL INFRA $ - TR IND	US BENCHMARK 10 YEAR DS GOVT. INDEX - TR IND
S&P 500 COMPOSITE - TR INDEX	1.00					
FTSE 100 - TR INDEX	0.81	1.00				
NASDAQ COMPOSITE - TR INDEX	0.93	0.69	1.00			
MSCI AC WORLD U$ - TR INDEX	0.95	0.86	0.90	1.00		
S&P GLOBAL INFRA $ - TR IND	0.79	0.85	0.66	0.87	1.00	
US BENCHMARK 10 YEAR DS GOVT. INDEX - TR IND	-0.33	-0.34	-0.27	-0.32	-0.21	1

Source: Refinitiv Eikon, HSBC Global Private Banking, August 2023

What is Infrastructure?

Infrastructure as an asset class essentially refers to long-life capital assets that impact people's daily lives, from roads, rail, bridges, to electricity, water, fibre optics and telephone networks. The privatisation of assets within the sector in the 1990s marks the formal founding of this asset class, however, since the Global Financial Crisis of 2008, the private infrastructure market has more than tripled in size, with alternatives' investors now owning or operating a large proportion of economic infrastructure globally.

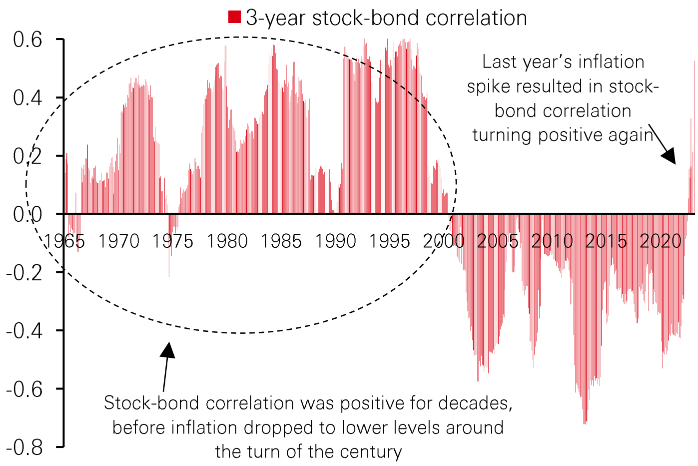
Why do investors need an allocation to Infrastructure to have a well-diversified multi asset portfolio?

To begin answering this question, we would first like to explain **our secular inflation outlook** at the outset.

We think that **the era of post-2008-Global Financial Crisis, of low and stable inflation, is likely behind us**. Whilst headline inflation has come down because of lower energy prices, some elements of core inflation, like core services, remain extremely sticky. We, therefore, expect US inflation to oscillate between 3-4% over the remainder of the year (and average around 3.2% in 2024), which is much higher than the Fed's official 2% inflation target.

Now, in an environment of consistently high inflation, asset class correlations change. As the below 3-year rolling correlation chart shows, with higher inflation and interest rates, listed stocks and bonds have become positively correlated for the first time since the turn of the century, given the forceful Central Banks' tightening. Therefore, both equities and bonds turned negative in 2022.

3-year stock-bond correlation of monthly returns through history



Source: HSBC Global Private Banking, HSBC Asset Management, 3-year stock-bond correlation of monthly returns, August 2023

Even to this day, the stock-bond correlation remains positive, which means that bonds are no longer the traditional diversifiers that they normally are in a low-inflation environment. We would need more stability in Central Banks' policy and inflation expectations before correlations normalise.

So, **we are effectively in a new market regime of a.) higher inflation; b.) higher for longer interest rates; c.) slower growth**. **And, in this new market regime, where the stock-bond correlation is positive, investors need new sources of diversification in their multi-asset portfolios**.

Research shows that an allocation to infrastructure serves as one such diversifier, as **infrastructure assets enjoy a very low correlation with both listed stocks and listed bonds.**

Investing in infrastructure can offer a variety of benefits that can allay many investors' concerns in the current macroeconomic environment and improve a portfolio's risk/return profile. These include:

1.) **Downside protection:** Given the long-term nature of their businesses, infrastructure companies often have long-dated contracts with secure terms, with governments or corporates. With such long-term lock-ins, their revenue streams are stable, have a margin of safety and, therefore, provide resilience in periods of economic turmoil and market disruptions.

2.) **Infrastructure stocks are a good inflation hedge**: An allocation to infrastructure provides access to inflation-linked revenue streams. With CPI indexation of revenues, core infrastructure cash flows and asset values tend to benefit from higher inflation and rising rates.

3.) **Consistency of yield**: Many of these companies benefit from a link (often set by the regulator) between their input costs and the prices they charge, which effectively protects their profits. They can typically pass on rising costs through price adjustments to varying extents depending on sectors and jurisdictions. As a result, infrastructure stocks offer consistency of income and attractive risk-adjusted returns. Such consistency of yield is very attractive in periods of high uncertainty and often acts as a ballast in a multi-asset portfolio.

4.) **Diversification:** As alluded to above, in periods of high inflation and higher rates, the normally negative correlation between equities and bonds often turns positive, and they, therefore, lose some of their diversification benefits in a multi-asset portfolio. Infrastructure as an asset class has a low correlation to both listed equities and bonds and, therefore, acts as a great risk diversifier in a multi-asset portfolio. With different drivers of return and an ability to generate real cash flows, the appeal of infrastructure stocks increases in an environment of higher inflation.

5.) **Exposure to long-life real assets**: an allocation to infrastructure stocks provides exposure to long-life, high-quality real assets. Such high-quality assets normally outperform in an inflationary environment marked by greater uncertainty and market volatility.

6.) **High Return on Equity**: Many infrastructure assets operate in industries with high barriers to entry and enjoy a dominant market position. Through their pricing power, they can maintain a reasonable return on equity.

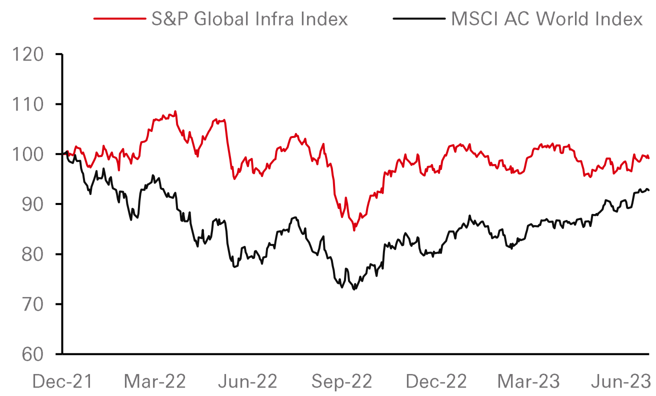
Key Pillars of Infrastructure in Portfolio Context

- **Diversification** - Low correlation to other asset classes
- **Great Inflation Hedge** - Provides access to inflation linked revenue streams; valuations positively correlated to inflation
- **Attractive yield** - Infrastructure offers consistent income and an attractive risk-adjusted return; long term regulated or contracted revenues
- **Downside protection**- Stable cash flows, often generated based on long-term contracts or regulated income
- **Exposure to long-life, high-quality assets**

Source: HSBC Global Private Banking, August 2023

7.) **Outperformance**: Since early 2022, markets have endured an extraordinary period marked by: a.) high inflation; b.) back-to-back Fed rate hikes; and c.) extraordinarily high market volatility, driven by the rates outlook. As can be seen in the below chart, during this period of circa 18 months, the S&P Global Infra Index has consistently and quite comfortably outperformed the MSCI ALL Country world index by a sizeable margin.

Infrastructure stocks have outperformed the overall MSCI World Index since early 2022



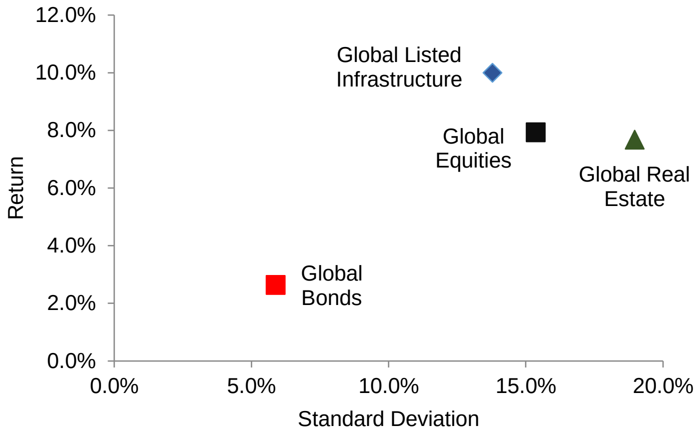
Source: HSBC Global Private Banking, August 2023. Past performance does not predict future returns.

Global listed infrastructure can provide defensive exposure in a multi-asset portfolio

Global listed infrastructure exhibits lower volatility and a superior risk-adjusted return vs. global equities, which is an appealing feature for asset allocators looking to add a defensive building block to a diversified equity portfolio.

The below asset class risk/return comparison confirms its defensive attributes, also considering that global equity managers are often underweight "infrastructure heavy" sectors.

Asset class risk/return comparison



Source: HSBC Global Private Banking, HSBC AM, Bloomberg. Data period: 31/12/2002-31/07/2023. Past performance does not predict future returns. Diversification does not ensure a profit or protect against loss.

Structural drivers boosting infrastructure

Infrastructure stocks are also benefitting from three global trends of **Digitalisation, Decarbonisation** and **De-globalisation,** which will drive infrastructure return potential in the years to come.

- **Digitalisation** – The world is digitising at a fast pace, and several next-generation technologies are being rolled out across several sectors that require investment in digital infrastructure. Global economies are therefore undertaking capex in next-generation connectivity technologies like the deployment of 5G and investing in fibre, mobile towers and communication satellites.

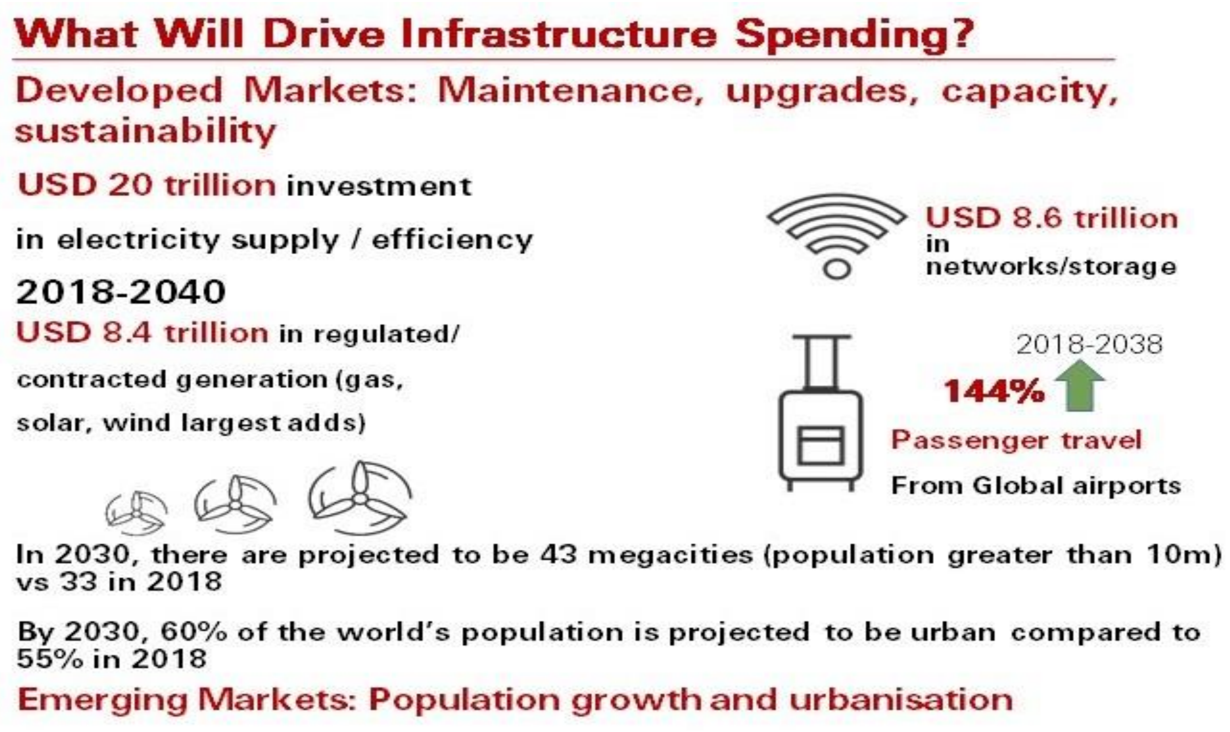
- **De-carbonisation**: Infrastructure has the Net Zero tailwind behind it with a large amount of political and corporate will and commitment to achieving their individual net-zero targets. Huge amount of investment is going into green tech and renewable sources of energy like solar, wind, nuclear and green hydrogen to reduce global carbon emissions. Last year, the US government introduced new fiscal initiatives in the form of the **Inflation Reduction Act (IRA),** allocating $500bn in new fiscal spending and tax breaks to drive the global clean energy economy forward. IRA provides green subsidies for reducing carbon emissions; jump-starting R&D; commercialising new technologies such as carbon capture and storage; and boosting the production of clean energy like 'clean hydrogen'.

  As per a McKinsey study from October 2022, corporates are the biggest recipients under IRA, with an estimated $216bn worth of tax credits designed to catalyse private investment in clean energy, climate mitigation and resilience, and clean transportation, including Electric Vehicles (EV) manufacturing.

- **De-globalisation**: After experiencing severe disruptions to global supply chains in the pandemic era, several governments and corporates are heavily engaged in the **reorientation of supply chains** and are looking to 'near-shore' or 'friend-shore' their suppliers. As a case in point, the US government introduced the **CHIPS and Science Act** in August 2022 to provide roughly $280bn in new funding to boost domestic research, manufacturing of semiconductors and construction of new manufacturing facilities in the United States. The EU has followed suit and approved its own version of the CHIP Act in July 2023 to create better conditions for European countries to get into semiconductor manufacturing, promote research and prepare the continent for any future supply chain crisis.

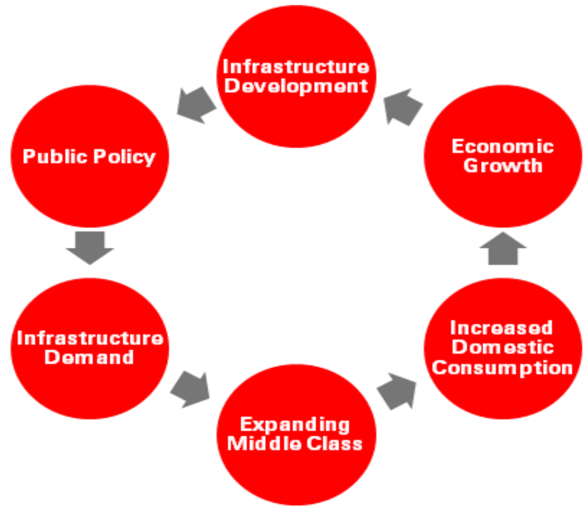
  These regulations will not only spur investment in local infrastructure but also ensure that developed economies are self-reliant when it comes to **supply of microchips for green energy, Internet of Things, Artificial Intelligence and high-performance computing platforms.**

Together, **the three Ds of Digitalisation, De-carbonisation and De-globalisation are structural, multi-decade investment tailwinds** that are boosting investment in infrastructure.



Source: HSBC Global Private Banking, Clearbridge, International Energy Agency, World Energy Outlook, August 2023

The need for infrastructure is a never ending cycle



Source: HSBC Global Private Banking, HSBC Asset Management, August 2023

Infrastructure is in the early innings of a multi-decade investment cycle

In addition to the three Ds discussed above, we think that infrastructure is in the early stages of a multi-decade investment cycle.

Persistent underinvestment by governments worldwide has left global infrastructure overdue for a period of catch-up. Developed economies face the challenges of replacing and upgrading ageing infrastructure while emerging economies need to provide new infrastructure to support rising living standards and rapid urbanisation.

Together, these three global trends create a great positive backdrop for infrastructure to offer attractive sources of return.

Risks of investing in infrastructure

Given the long-term nature of these investments, the asset class is suited for investors with long-term objectives and is commonly seen as a longer-term yield play rather than a short-term investment focused on capital appreciation. Only those investors who have a long-term horizon and can tolerate the investment risk and the illiquidity risk of private investments in infrastructure as part of their diversified portfolio may wish to invest.

There is a risk that the infrastructure needed today may become outdated soon if there is innovation, especially in the digital space, where investment and upgrading needs can be quick and costly. Furthermore, emerging risks from climate change could inflict damage to physical infrastructure and repairing/replacing these may prove to be costly and time-consuming. An active approach is important in order to select investments that actually share the desired economic and risk/return characteristics. For further information, please speak to your relationship manager or investment counsellor.

Risk Disclosures

Risks of investment in fixed income
There are several key issues that one should consider before making an investment into fixed income. The risk specific to this type of investment may include, but are not limited to:

Credit risk
Investor is subject to the credit risk of the issuer. Investor is also subject to the credit risk of the government and/or the appointed trustee for debts that are guaranteed by the government.

Risks associated with high yield fixed income instruments
High yield fixed income instruments are typically rated below investment grade or are unrated and as such are often subject to a higher risk of issuer default. The net asset value of a high-yield bond fund may decline or be negatively affected if there is a default of any of the high yield bonds that it invests in or if interest rates change. The special features and risks of high-yield bond funds may also include the following:

•**Capital growth risk** - some high-yield bond funds may have fees and/ or dividends paid out of capital. As a result, the capital that the fund has available for investment in the future and capital growth may be reduced; and
•**Dividend distributions** - some high-yield bond funds may not distribute dividends, but instead reinvest the dividends into the fund or alternatively, the investment manager may have discretion on whether or not to make any distribution out of income and/ or capital of the fund. Also, a high distribution yield does not imply a positive or high return on the total investment.
•**Vulnerability to economic cycles** - during economic downturns such instruments may typically fall more in value than investment grade bonds as (i) investors become more risk averse and (ii) default risk rises.

Risks associated with subordinated debentures, perpetual debentures, and contingent convertible or bail-in debentures
•**Subordinated debentures** - subordinated debentures will bear higher risks than holders of senior debentures of the issuer due to a lower priority of claim in the event of the issuer's liquidation.
•**Perpetual debentures** - perpetual debentures often are callable, do not have maturity dates and are subordinated. Investors may incur reinvestment and subordination risks. Investors may lose all their invested principal in certain circumstances. Interest payments may be variable, deferred or cancelled. Investors may face uncertainties over when and how much they can receive such payments.
•**Contingent convertible or bail-in debentures** - Contingent convertible and bail-in debentures are hybrid debt-equity instruments that may be written off or converted to common stock on the occurrence of a trigger event. Contingent convertible debentures refer to debentures that contain a clause requiring them to be written off or converted to common stock on the occurrence of a trigger event. These debentures generally absorb losses while the issuer remains a going concern (i.e. in advance of the point of non-viability). "Bail-in" generally refers to (a) contractual mechanisms (i.e. contractual bail-in) under which debentures contain a clause requiring them to be written off or converted to common stock on the occurrence of a trigger event, or (b) statutory mechanisms (i.e. statutory bail-in) whereby a national resolution authority writes down or converts debentures under specified conditions to common stock. Bail-in debentures generally absorb losses at the point of non viability. These features can introduce notable risks to investors who may lose all their invested principal.

Contingent convertible securities (CoCos) or bail-in debentures are highly complex, high risk hybrid capital instruments with unusual loss-absorbency features written into their contractual terms. Investors should note that their capital is at risk and they may lose some or all of their capital.

Changes in legislation and/or regulation
Changes in legislation and/or regulation could affect the performance, prices and mark-to-market valuation on the investment.

Nationalisation risk
The uncertainty as to the coupons and principal will be paid on schedule and/or that the risk on the ranking of the bond seniority would be compromised following nationalization.

Reinvestment risk
A decline in interest rate would affect investors as coupons received and any return of principal may be reinvested at a lower rate. Changes in interest rate, volatility, credit spread, rating agencies actions, liquidity and market conditions may have a negative effect on the prices, mark-to-market valuations and your overall investment.

Risk disclosure on Dim Sum Bonds
Although sovereign bonds may be guaranteed by the China Central Government, investors should note that unless otherwise specified, other renminbi bonds will not be guaranteed by the China Central Government.
Renminbi bonds are settled in renminbi, changes in exchange rates may have an adverse effect on the value of that investment. You may not get back the same amount of Hong Kong Dollars upon maturity of the bond. There may not be active secondary market available even if a renminbi bond is listed. Therefore, you need to face a certain degree of liquidity risk.
Renminbi is subject to foreign exchange control. Renminbi is not freely convertible in Hong Kong. Should the China Central Government tighten the control, the liquidity of renminbi or even renminbi bonds in Hong Kong will be affected and you may be exposed to higher liquidity risks. Investors should be prepared that you may need to hold a renminbi bond until maturity.

Alternative Investments
Hedge Fund - Please note Hedge Funds often engage in leveraging and other speculative investment practices that may increase the risk of investment loss. They can also be highly illiquid, are not required to provide periodic pricing or valuation information to investors, and may involve complex tax structures and delays in distributing important information. Alternative investments are often not subject to the same regulatory requirements as, say, mutual funds, and often charge high fees that may potentially offset trading profits when they occur.
Private Equity - Please note Private Equity is generally illiquid, involving long term investments that do not display the liquid or transparency characteristics often found in other investments (e.g. Listed securities). It can take time for money to be invested (cash drag) and for investments to produce returns after initial losses.

Risk disclosure on Emerging Markets
Investment in emerging markets may involve certain, additional risks which may not be typically associated with investing in more established economies and/or securities markets. Such risks include (a) the risk of nationalization or expropriation of assets;
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(c) higher rates of inflation; (f) less oversight by a regulator of local securities market; (g) longer settlement periods in so far as securities transactions and (h) less stringent laws in so far the duties of company officers and protection of Investors.

Risk disclosure on FX Margin
The price fluctuation of FX could be substantial under certain market conditions and/or occurrence of certain events, news or developments and this could pose significant risk to the Customer. Leveraged FX trading carry a high degree of risk and the Customer may suffer losses exceeding their initial margin funds. Market conditions may make it impossible to square/close-out FX contracts/options. Customers could face substantial margin calls and therefore liquidity problems if the relevant price of the currency goes against them.
The leverage of a product can work against you and losses can exceed those of a direct investment. If the market value of a portfolio falls by a certain amount, this could result in a situation where the value of collateral no longer covers all outstanding loan amounts. This means that investors might have to respond promptly to margin calls. If a portfolio's return is lower than its financing cost then leverage would reduce a portfolio's overall performance and even generate a negative return

Currency risk – where product relates to other currencies
When an investment is denominated in a currency other than your local or reporting currency, changes in exchange rates may have a negative effect on your investment.

Chinese Yuan ("CNY") risks
There is a liquidity risk associated with CNY products, especially if such investments do not have an active secondary market and their prices have large bid/offer spreads.

CNY is currently not freely convertible and conversion of CNY through banks in Hong Kong and Singapore is subject to certain restrictions. CNY products are denominated and settled in CNY deliverable in Hong Kong and Singapore, which represents a market which is different from that of CNY deliverable in Mainland China.

There is a possibility of not receiving the full amount in CNY upon settlement, if the Bank is not able to obtain sufficient amount of CNY in a timely manner due to the exchange controls and restrictions applicable to the currency.

Illiquid markets/products
In the case of investments for which there is no recognised market, it may be difficult for investors to sell their investments or to obtain reliable information about their value or the extent of the risk to which they are exposed.

Environmental, Social and Governance ("ESG") Customer Disclosure
In broad terms "sustainable investments" include investment approaches or instruments which consider environmental, social, governance and/or other sustainability factors to varying degrees. Certain instruments we classify as sustainable may be in the process of changing to deliver improved sustainability outcomes.

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