GRYT Capital

GRYT Capital presents:

Future IM/Pact 2024 National Investment Management Competition

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NSW GOVERNMENT | tcorp

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Through a Total Portfolio Approach TCorp can leverage currency to improve outcomes

1 Macro Strategy & Analysis

- Analysis of global economic indicators and rate differentials to navigate currency dynamics, focusing on **how volatility and offshore exposures impact AUD returns for TCorp**.
- Incorporate forward-looking data, such as labour market health, market trends and regulatory shifts, to refine investment strategies in line with the Total Portfolio Approach.

2 No Currency Hedging

- Implement a no-currency hedging strategy, **treating currency as an independent asset class within the portfolio**.
- Capitalise on the cyclical nature of the AUD, utilising correlation and covariance analyses for strategic understanding of currency dynamics and cross-asset class relationships.

3 Portfolio Management

- Apply **Markowitz's portfolio theory to construct a balanced portfolio**, maximising returns relative to risk.
- Enhance portfolio resilience through strategic diversification and natural hedges across various asset classes and regions.
- Employ selective hedging strategies to protect against severe downside risks at an individual investment level.

4 Investment Outcomes

- Reduced overall portfolio volatility, targeted below 10%.
- Enhance risk-adjusted returns to surpass **TCorpIM Long Term Growth Fund benchmark of CPI + 3.5% p.a.**
- Lower overall portfolio costs and mitigate severe tail risks, prioritising capital preservation, liquidity and diversity.

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Uncertainty in inflation and rate cuts fuels market volatility

General Currency Trends

1 **Increasing Global Integration:** As capital markets become more integrated, asset classes will become more highly correlated with **global currency movements**.

2 **Continued Dominance of the USD** currently accounting for 58% of disclosed currency reserves globally.

3 **ESG and Energy Transition:** Through a combination of policy implementation and technological development, economies are shifting to clean energy significantly impacting trade and exchange rates.

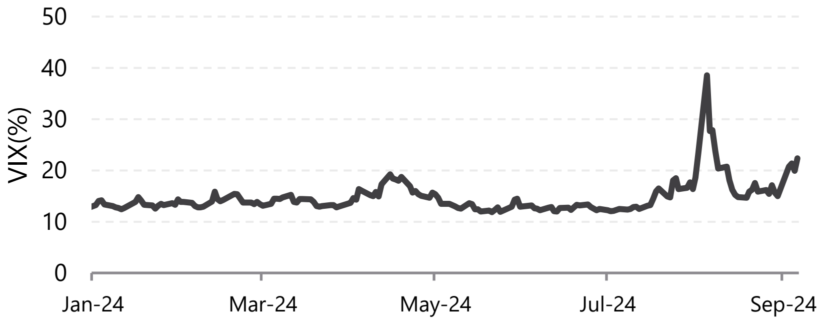
Rising Volatility

Rising tensions in the Middle East and Europe, uncertainty amidst the US election and supply constraints have elevated market unpredictability.

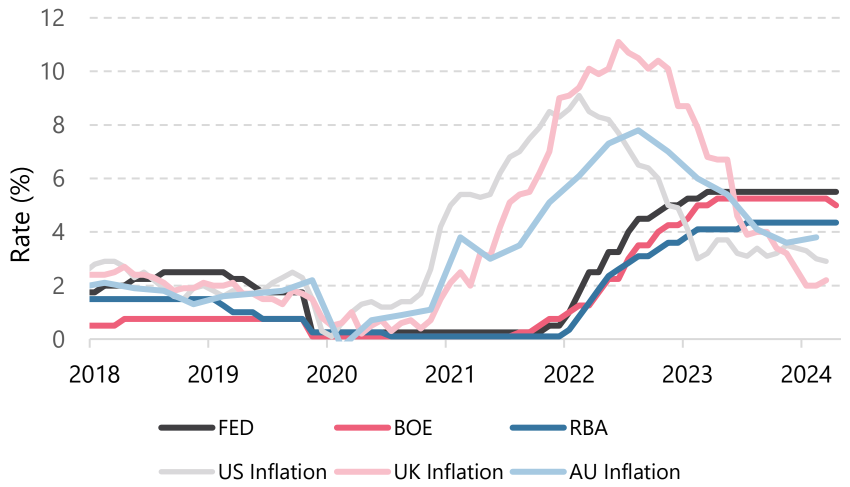
VIX 'fear gauge'

69.55%

Increase this year

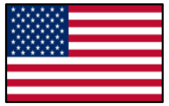


Rate Outlook for Major Banks



- Following hawkish monetary policy, central banks are looking to cut rates as pressures ease within targets.
- However, stubborn services inflation, excessive fiscal spending and supply constraints shed uncertainty on taming price pressures.

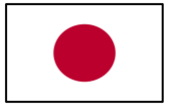
Nation Specific Highlights



Unemployment trended down to **4.2%** in August down from **4.3%** the prior month.

UK monthly **GDP print came in below expectations at 0.2%,** indicating weakness in the economy.

The entire economy grew **1.5%** in FY23-24 whilst household spending on services cooled by **0.3%** in the June quarter.



BOJ has hiked rates to **0.25%** in July as policy makers attempt to stabilise the Yen and achieve 2% inflation target.

Source: GRYT Capital Internal Analysis, Trading View, ABS, Bureau of Labour Statistics, Reuters

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Strategic currency management uncovers opportunities across various asset classes

Equities

- Foreign equity investments benefit from AUD weakness as returns are magnified when converted back.
- The **cyclical nature of AUD provides a natural hedge** for FX exposure.

Fixed Income

- Based on the concept of Interest Rate Parity FX rates and IR differentials are closely linked.
- **Fixed Income is highly sensitive to currency movements.**
- Foreign fixed-income returns have a strong positive covariance with the AUD.

Real Assets

- **Real assets (property & infrastructure) tend to act as a natural hedge against inflation**, thereby protecting value in depreciating economies.
- Less sensitive to short-term FX movements as they are illiquid assets, and their value is derived from physical utility and income.

Gold

- Gold (XAU) is priced in USD, with prices largely determined by risk sentiment and global supply/demand.
- **Gold is a safe-haven asset** during periods of uncertainty or high inflation.

Key Offshore Volatility Drivers

Volatility of Foreign Asset Returns

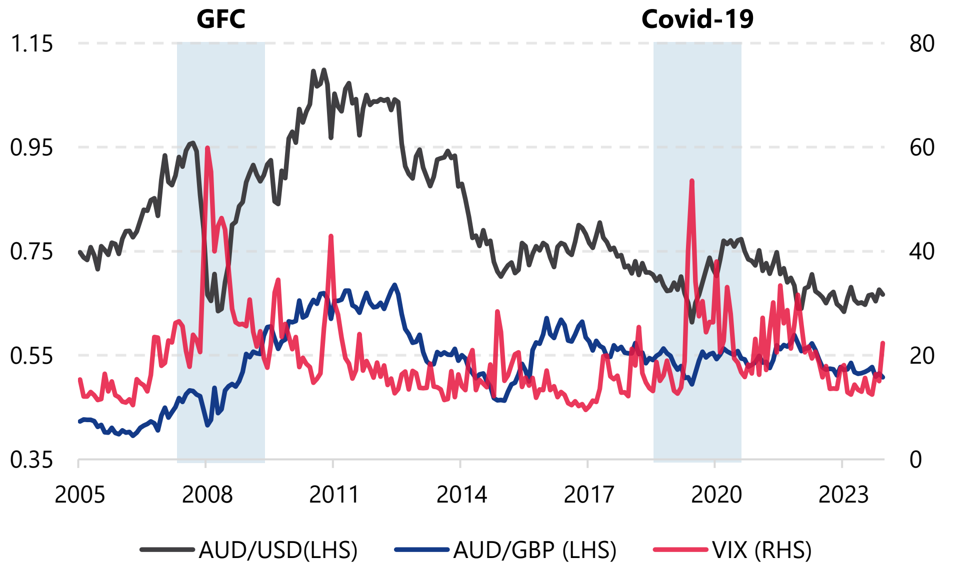
Spot Exchange Rate Volatility

Covariance of Spot Rate and Returns

Key Offshore Return Drivers

Domestic Asset Returns

Fluctuations in Exchange Rate



Amidst periods of heightened volatility equity markets generally experience sell-offs as investors seek safety. In extreme stress periods (shaded) the AUD weakens significantly and then experiences a stable recovery.

Source: GRYT Capital Internal Analysis, Yahoo Finance, FactSet, LGT Crestone

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Leveraging currency dynamics and Markowitz for portfolio optimisation

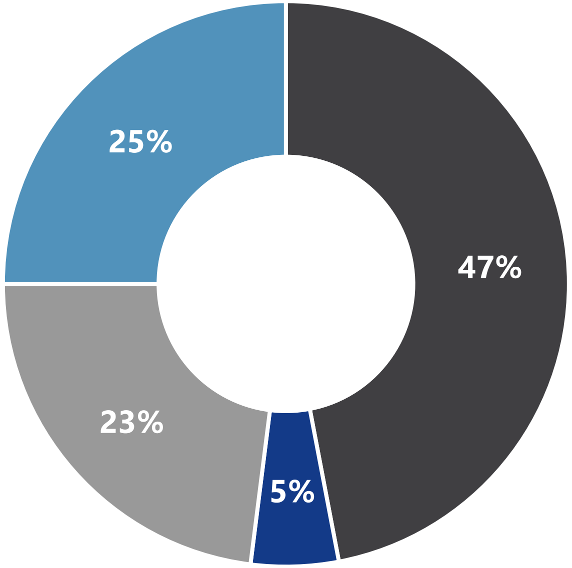
Fixed Income

The Fixed Income Portfolio includes **long positions** in **Treasury and Green Bonds**. TCorp will benefit from stable, high yields and consistent returns.

Real Assets

Real assets offer a reliable investment option by hedging against inflation with low correlation to equities. Investments in **infrastructure and energy** from both markets help reduce portfolio volatility and enhance stability.

Portfolio distribution



Equities

The Equities Portfolio primarily consists of **long positions**. By diversifying across sectors such as **industrials, energy, and mining**, the portfolio reduces volatility and aims to ensure more consistent returns.

Commodities

Long position in gold within the US portfolio serves as a diversifier and acts as a hedge against both inflation and deflation. This strategy helps the portfolio remain resilient and benefit during major market shifts.

US

Our portfolio leverages the US as a global source of growth through equities, however, it also hedges risk by going **long on gold, investing in bonds, and holding real assets**, providing protection against inflation and economic uncertainty.

Currency Allocation

UK

Within the UK, our portfolio adds the stability of the Sterling, with a diversified exposure including long positions in **real assets, fixed income** and **long-short views** on equities.

Note: Allocations were determined using the Markowitz portfolio theorem

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Implications of US economic and currency outlook for portfolio construction

Main Factors

1

Federal Rate Cuts

- Rate cuts addressing the anticipated drop in inflation, projected to reach **2.1%** by 2029.
- Rate cuts of 200 bps by Q3 2025, with each quarter cutting 25 bps.
- The narrowing interest rate differentials between AUD and USD are expected to weaken the USD relative to the AUD.

2

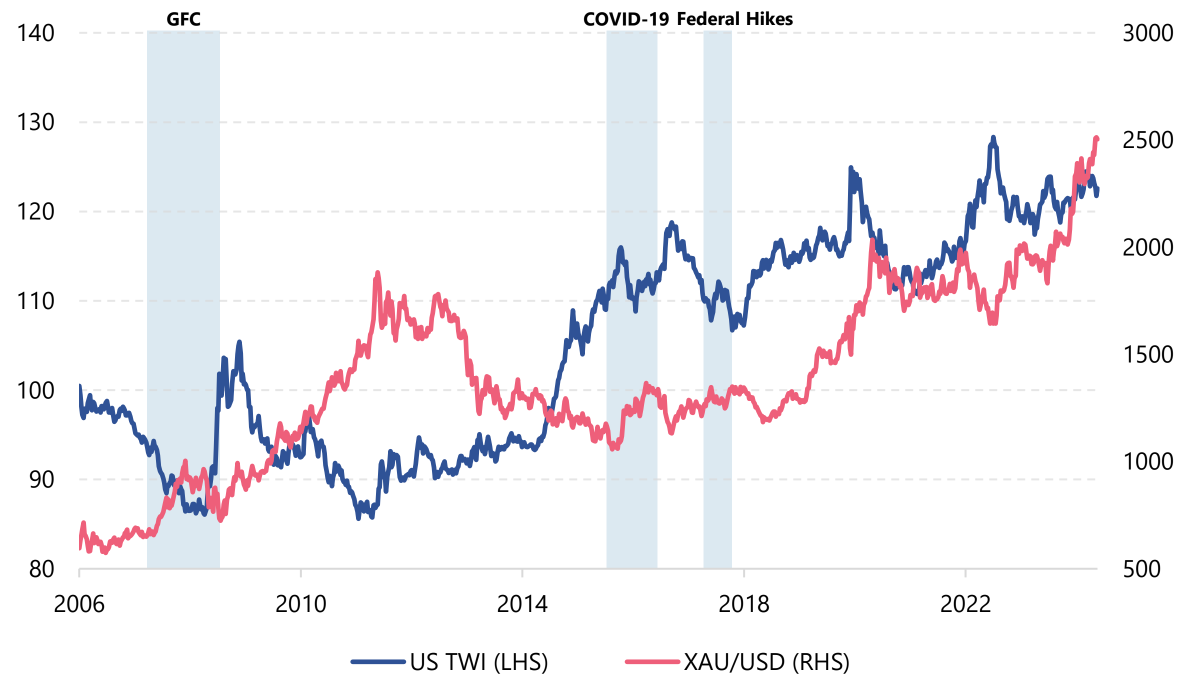
Trade

- The US faces a **two-year high trade deficit** of $78.8 billion, with the agriculture deficit projected to reach $42.5 billion in FY25.
- Exacerbated by China who have recently increased tariffs on steel and aluminium from 7.5%-25%.

3

Political

- **Trump** Administration: plans to **devalue the USD** in hopes of increasing exports and fuel inflation.
- **Harris** Administration: stocks classified as "Trump Trades" are experiencing a **reduction in investment** as Kamala grows in polls.



Historically
USD typically has an inverse relationship with XAU. However, during periods of extreme stress and uncertainty, USD and XAU tend to move together.

Looking forward
Due to increased trade tensions, a shift away from USD from BRICS, and impending rate cuts a divergence is expected between these two assets.

We hold a bearish outlook on the USD

Source: GRYT Capital Internal Analysis, NAB, Reuters, The White House, Bloomberg, Statista

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Optimising portfolio through strategic diversification

Equities – 49%

22%	20%	25%	33%
iShares Industrials ETF	**iShares Energy ETF**	**iShares Healthcare ETF**	**iShares Tech Breakthrough ETF**
52.00 PMI	256.98M	5.6% increase	5.28% CAGR
Forecasted by 2025, from a current level of 47.2	And a 6.26% Y/Y growth in Net Income	In healthcare spending from 2025-31 p.a.	From 2024-30 with the market exceeding U$826b in 2030

Commodities (Gold) – 9%

1. **Safe Haven Asset** – Ability to hold value amid geopolitical uncertainty and economic downturns, acting as a key diversifier of risk.
2. **Currency Hedge** – Acts as a currency hedge due to its inverse relationship with the USD in the short-run given its pricing in terms of the USD.
3. **BRICS Shift** – Led by China, BRICS nations have been the top purchasers of gold since 2022 as they attempt to reduce USD dependence.

Real Assets – 16%

20%

Unlisted Infrastructure
- Have a longer investment life cycle with 11.4% p.a. returns and 3.5% volatility signifying long-term returns insulated from market volatility.
- Under the Infrastructure Investment and Jobs Act, $1.2 trillion has been allocated to infrastructure investments.

80%

Unlisted Energy
- The US is the largest exporter of commercialised LNG with a market value of $145bn.
- Export capacity is expected to double from 11.4Bcf/d to 24.4Bcf/d by the end of 2028.

Fixed Income – 26%

50%

U.S. 7-10y Treasury Bond
- Intermediate duration bonds provide a balance between moderate interest rate sensitivity and enhanced returns.
- Provides stable income and is a safe-haven asset.
- **Risk:** Exposed to mark-to-market loss in the event of rising rates.

50%

US Green Bonds
- Sustainable returns forecasted to reach $4.7-5.6t by 2035 through contributions towards sustainable projects.
- Aligning with our investment principles, this bond invests in sustainable infrastructure and renewable energy.

Source: GRYT Capital Internal Analysis, NAB, RBC AM, Trading Economics, Yahoo Finance, Bloomberg

United Kingdom Outlook

Leveraging UK market trends for strategic portfolio construction

Main Factors

1 Interest Rates

- Interest rates in the UK are expected to decline faster than in Australia, with projections indicating that by the end of 2025, UK rates will reach 4.50%, slightly higher than Australia's 4.35%.
- Narrowing IR differentials signal AUD strength relative to GBP.

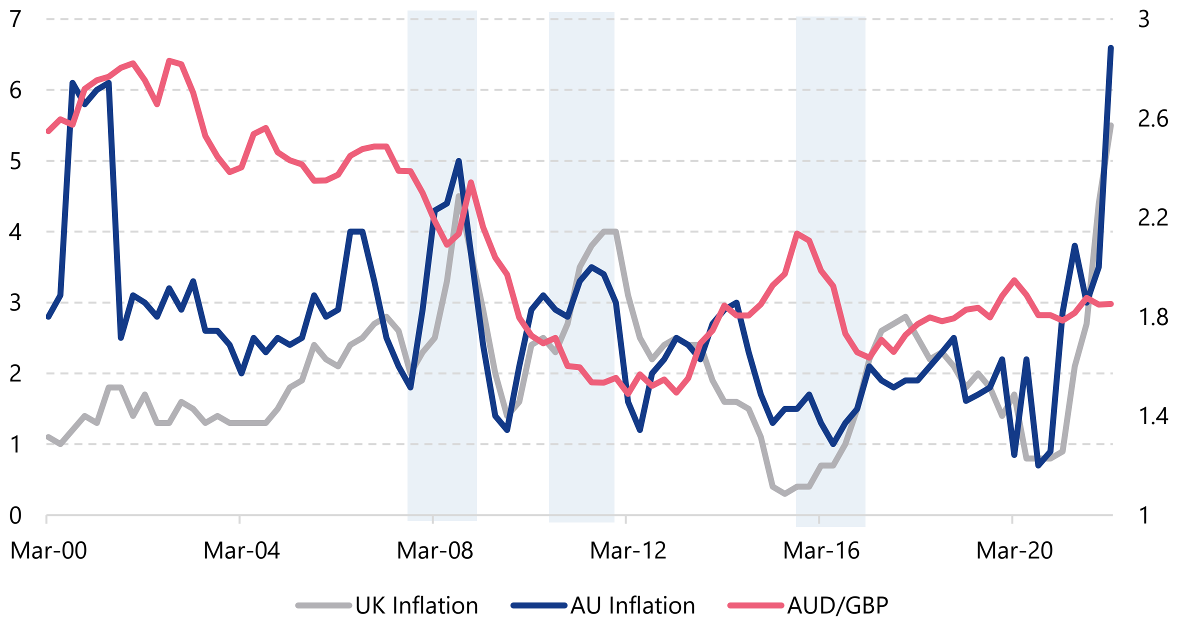
2 Real Wages

- High wage growth levels of 5.7% however, is dampened by inflation resulting in real growth levels of 2.2%.
- Reduced purchasing power making the currency less attractive to investors, hence prompting Sterling weakness.

3 Budget

- Announced that they have achieved a 4.6ppts tax cut since 2010 and will be implementing an additional 4.00ppts cut by 2028-29.
- Inflation is forecast to remain below 2% until Q3 2027, largely due to falling energy prices that are 27% below the price cap.

Inflationary Pressures



The inverse relationship between inflation and currency is seen as the shaded spaces indicate times when general inflation rises, the AUD weakens. With expectations for inflation to decline globally across both economies in the mid-term, the AUD will strengthen against the GBP.

We hold a bearish outlook on the GBP

Source: GRYT Capital Internal Analysis, Citi, Bank of England, Trading Economics, Yahoo Finance

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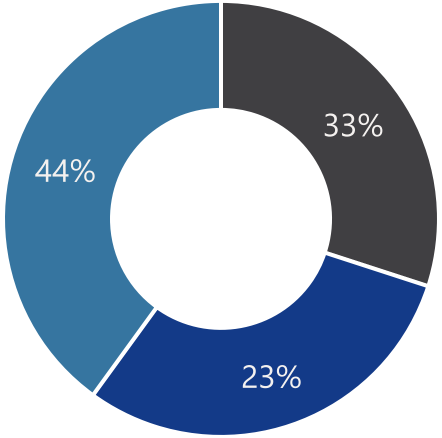
United Kingdom Allocation

Optimising portfolio through strategic diversification

Portfolio Composition

Equities



Real Assets

Fixed Income

Equities

Long	Short
65%	35%

Long

Favoured Stocks (RELX, AAL, GLEN, STAN)

- Data Analytics: 6.6% y/y sector growth from 2024-2029.
- Mining: supply deficit meeting 80% of needs, indicates strong future growth.
- With the current banking sector trading at a 45% discount and a long-run avg of 26% STAN is attractive.

Short

Unfavoured Stock (BRBY): Short

- Stagnant wage growth levels of 2.2% from 2002-24, and a 2.2% fall in disposable income showcases the inability to purchase material objects.

Real Assets

84%

Transport Infrastructure

- £700b injection under the National Infrastructure and Construction Pipeline.
- Expected industry growth of 6-10% in the next 8 years showcasing industry potential.

16%

Renewable Energy Infrastructure

- £960m investment under the Green Industries Growth Accelerator.
- Under recent legislations, £100b private investment will be invested into energy infrastructure.

Fixed Income

Long on UK 10yr GILT

Rate Cut	5.25% Current	5.00% In Aug 2024

- First reduction since March 2020 during COVID-19.

Forecast Cuts	4.30% End of 2025	3.90% End of 2026

- Continued decline of rates will result in mark-to-market increases in bond allocations.

Source: GRYT Capital Internal Analysis, Citi, Bank of England, Trading Economics, Gov UK

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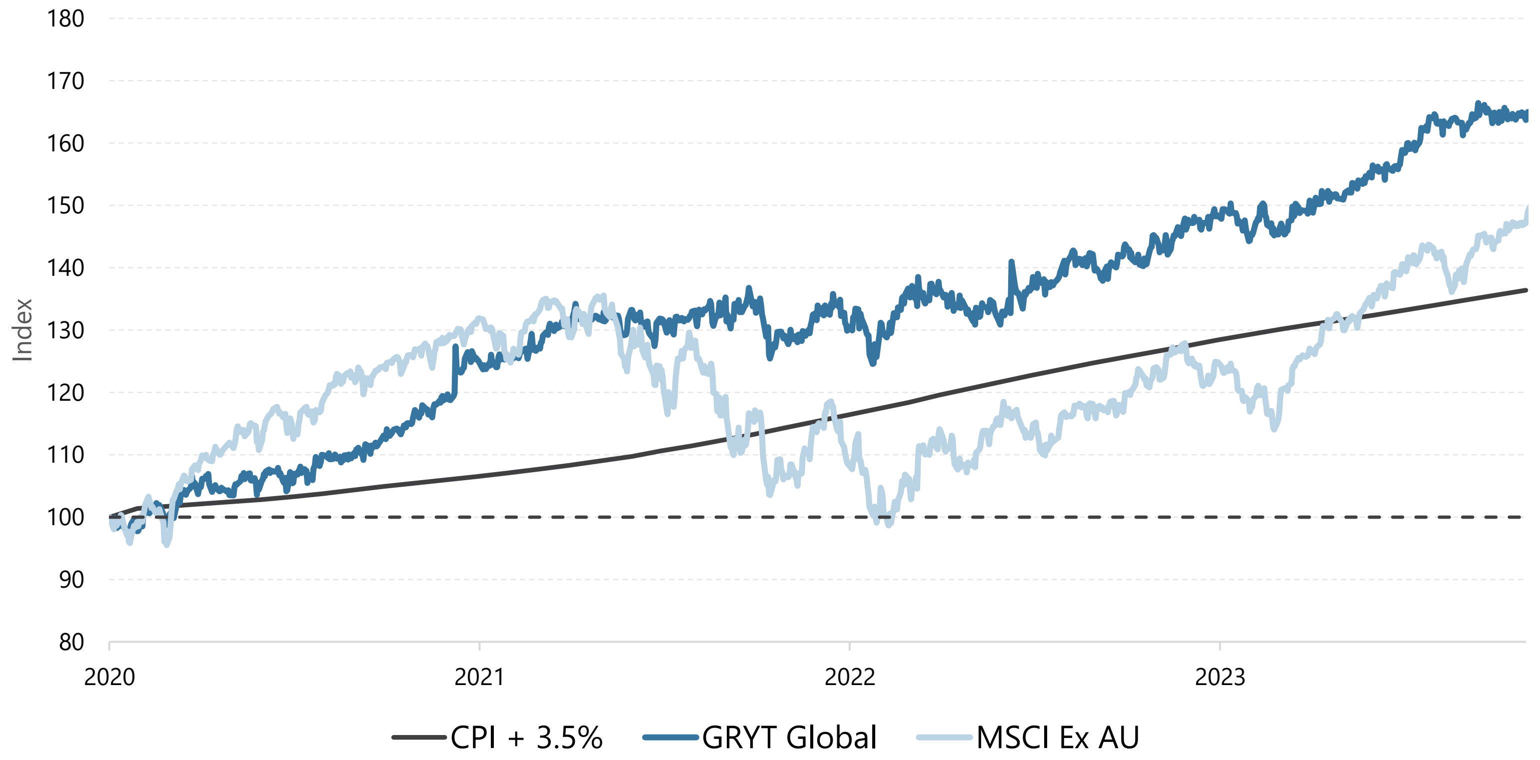
Benchmarking performance highlights the stability of recommended strategy



Performance Metrics			
Historical return (1yr)	9.41%	Benchmark	CPI + 3.5%
Standard Deviation	8.10%	Benchmark Outperformance (1yr)	3.17%
Sharpe Ratio	1.334	Information Ratio	0.68

Commentary

Our current forecasts incorporate, historical trends, broker forecasts, and our macroeconomic assumptions estimate the following annual return:

14.62%

Despite being designed as a dynamic forward-looking allocation, the recommended fund structure outperforms historically delivering attractive returns whilst mitigating volatility.

AUD Unhedged

Aligning with our long-term investment outlook and total portfolio approach we have implemented minimal direct currency hedging for the following reasons:

1. **Cyclicality of the AUD** which naturally hedges offshore investments, based on mean reversion.
2. Strategically allocated assets and positions **diversified** across currencies to benefit across FX scenarios.
3. Extensive **covariance analysis** and selective hedging strategies against specific risks to minimise volatility and provide severe downside protection.

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Protecting against downside risk through selective hedging

Risk	Impact	Hedging Strategy	Hedging Instruments
Adverse Movements in UK Equities	• Concentrated UK equity positions are susceptible to individual fluctuations and significant downside.	**Equity Option Spread** • Cost effective strategy. Provides a symmetric return profile that caps losses whilst allowing for substantial upside.	**Bull Spread** - Long positions • Buy ATM call & sell OTM call with strike equal to the expected 1-year price. **Bearish positions** - Short positions • Buy ATM put & sell OTM put with strike equal to the expected 1-year price.
Stubborn Inflation and Rate Hikes US/UK (Equities)	• Tighter credit environment and slowing economic activity. • Overall equity markets may face downside risk.	**Natural Hedging** • Exposure to defensive allocations such as real assets, healthcare, infrastructure, and Gold. • AUD returns cushioned by strengthening USD or GBP.	**Portfolio Construction**
Stubborn Inflation and Rate Hikes US/UK (Fixed Income)	• Mark-to-market losses on Intermediate Treasuries as yields rise. • Appreciation of domestic currency and increased capital inflows to fixed income.	**Interest Rate Options** • 50% coverage of fixed income allocations to provide downside protection. **Natural Hedging** • AUD returns cushioned by strengthening USD or GBP.	**American Options** • Buy ATM US 10-year Treasury Put Option. • Buy ATM UK 10-year Gilt Put Option. • 50% coverage ratio and exercise based on long-term macroeconomic outlook.
Significant AUD appreciation	• Real AUD returns will decline relative to offshore returns.	**Natural Hedging** • Currency diversification across US and UK – individual asset classes have global revenue exposures.	**Portfolio Construction**

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Network

Presentation

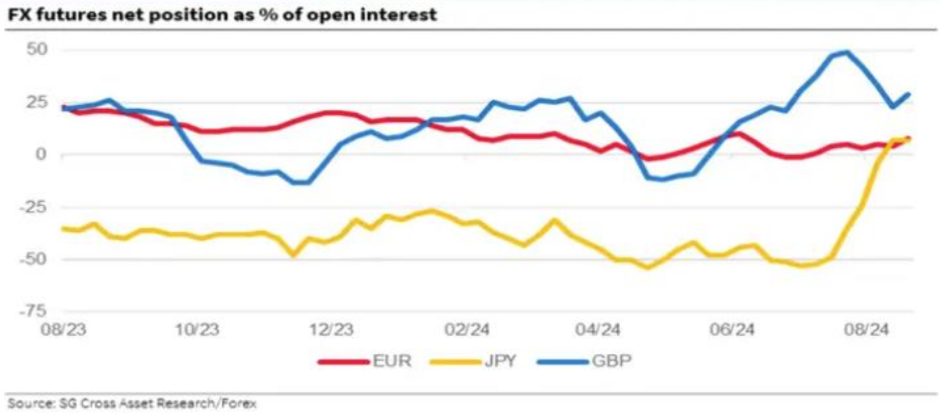
Appendix

Carry Trade – Shifting Currency Volatility

Yen Movement Overview
- The Japanese Yen (JPY) has seen significant volatility in recent years, driven by factors such as shifts in monetary policy, inflationary pressures, and geopolitical uncertainty.
- Despite the Bank of Japan's historically low interest rates, recent inflationary pressures have led to increased speculation about potential policy changes, adding to the Yen's unpredictability.

Carry Trade Overview
- The carry trade involves **borrowing in a low-interest-rate currency (such as the Yen)** to invest in higher-yielding assets in another currency.
- Investors profit from the interest rate differential between the borrowing currency (low-yield Yen) and the investment currency (higher-yield USD, for example).
- The trade relies on the borrowed currency **either depreciating or remaining stable** to lock in gains without facing rising repayment costs.

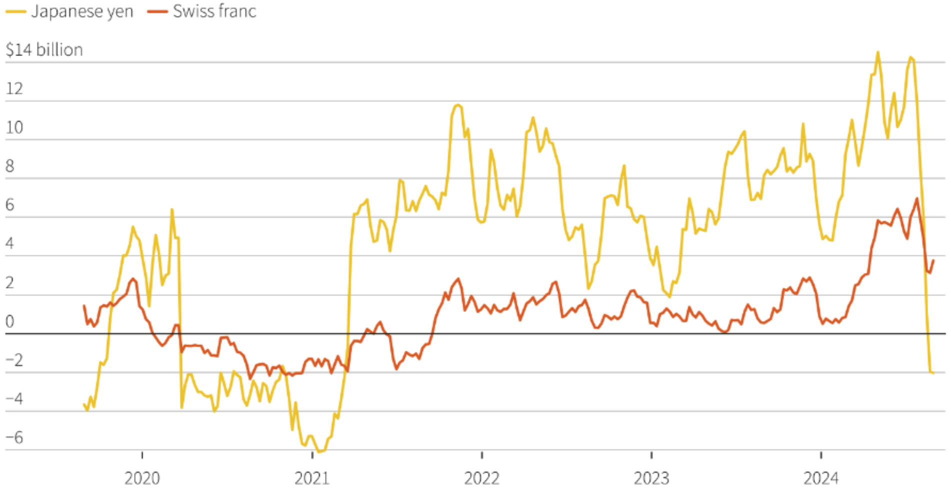
Has the yen carry trade unwound? A lot of speculative short positions have now been closed.



A growing number of investors have closed out their short positions on the Japanese yen.
SocGen

Traders slashed their bets against the yen in early August

Traders still hold a $3.8 billion short position in Swiss franc futures, a metric commonly used by analysts as a sign of use as a funding currency in carry trades



Note: Speculative investors' net positions in dollar-yen and dollar-franc in dollar terms; a positive number represents a short position against the yen or franc while a negative number represents a long position
Source: LSEG, CFTC | Reuters, August 30, 2024 | By Harry Robertson

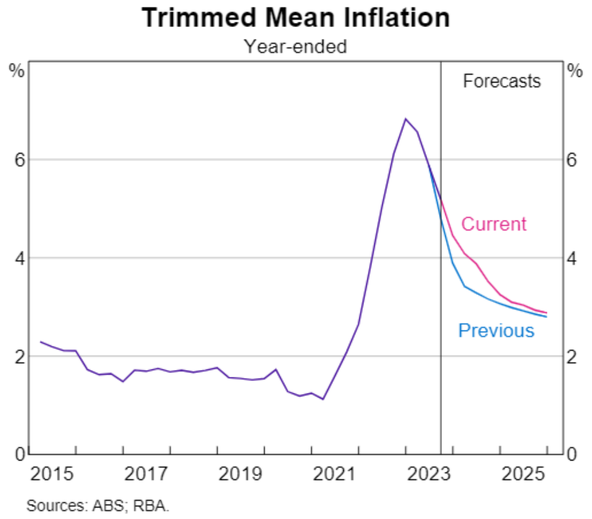
Reuters Graphics

"There is more two-way risk now in the yen than there has been for quite some time," said Bank of America senior G10 FX strategist Kamal Sharma. "The Swiss franc looks the more logical funding currency of choice."

Amidst heightened volatility and long-term uncertainty regarding cheap finance economies (candidates for carry trade), GRYT views this form of international exposure to secure finance as risky introducing excessive FX volatility.

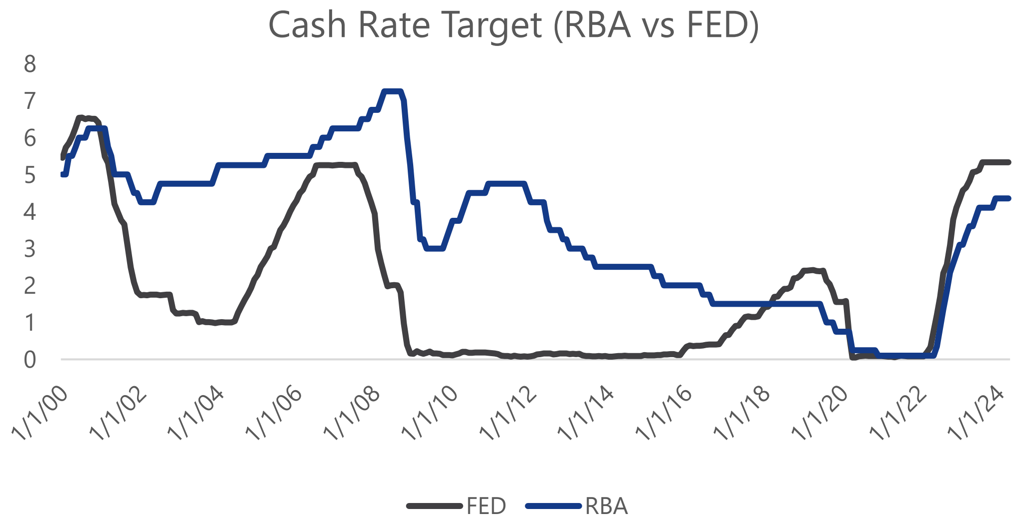
Australian Domestic Outlook

- In Australia, GDP growth has slowed to 0.2% in Q1 2025, driven by declines in investment across several sectors.
- Inflation at currently 3.5% is easing slower than expected, while the labour market remains strong with low unemployment of 4.2%.
- Stern concern from RBA to push inflation lower through a hawkish stance on prolonged rate cuts
- Global recovery continues but sticky core inflation remains a challenge, despite headline inflation peaking in advanced economies.
- Monetary tightening is slowing global growth, yet the risk of a major recession has lessened, with resilient labour markets. .



US/AU 10-Year Bond Yield Spread vs AUD/USD

- US/AU 10-Year Bond Yield Spread and AUD/USD has an inverse relationship
- As interest rate differential decreases, AUD/USD tends to appreciate.
- RBA often follows the Fed in rate cutting.
- As the US is more likely to cut rates before AU, and will have more aggressive rate cuts in later FY25, we will expect the interest rate differentials to decrease, hence appreciating AUD.



Source: GRYT Capital Internal Analysis, RBA, MacroMicro

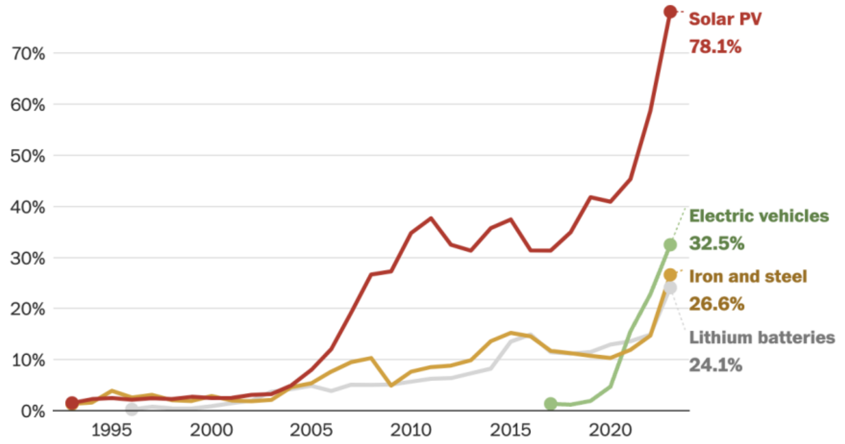
China Economic Outlook

- China's **ambitious economic growth target of 5%** has been fueled by a mass fiscal stimulus with a focus on the property sector
- This is laying the foundations for China to rebound as a global power in the latter half of FY25 with the **manufacturing industry already ramping up production** and a high supply of Evs
- The Chinese government continues to invest heavily in the property sector with a recent US$42.25 billion package to buy unsold, completed apartments and Vanke receiving a $2.8 billion onshore grant
- However, due to the extent of the crisis, likely **new construction will restart in the latter half of FY25** which will drive up demand for Australian commodities and hence demand for the AUD causing an **appreciation of the AUD/USD**
- High prospects for export growth, with a rise in tech, industrials and consumer sectors. They have experienced significant growth in exports over the last 5 years and expected to increase.

China Economy Recovery

China GDP Growth and Industrial Production continues to rebound post-COVID despite ...

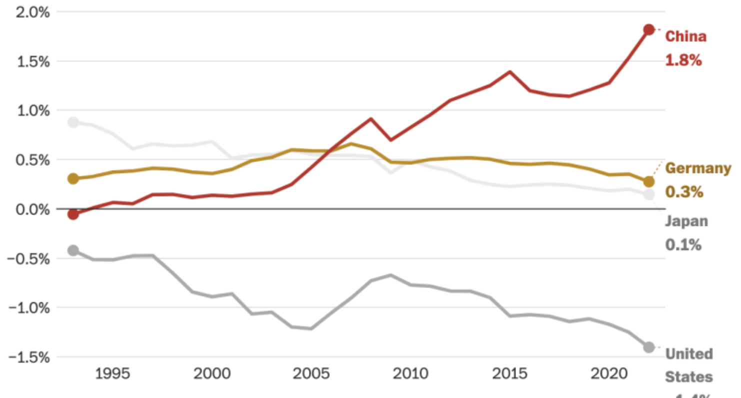
China's share of global exports



Note: Trade data are only available back to 2017 for electric vehicles and back to 1996 for lithium-ion batteries.

Manufactured goods surplus as a share of global GDP

China already exports much more than it imports—and it wants to export even more.



Source: UN Comtrade database, World Bank, Setser et al. 2024

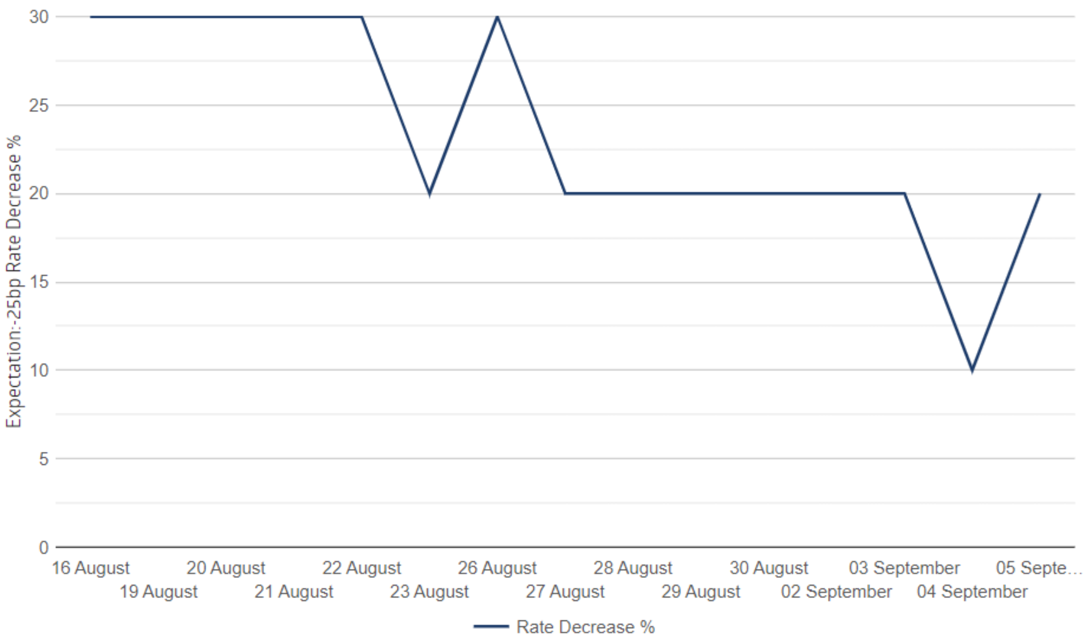
RBA Market Expectations

Market expectations of an interest rate increase at the next RBA Board meeting in recent days.

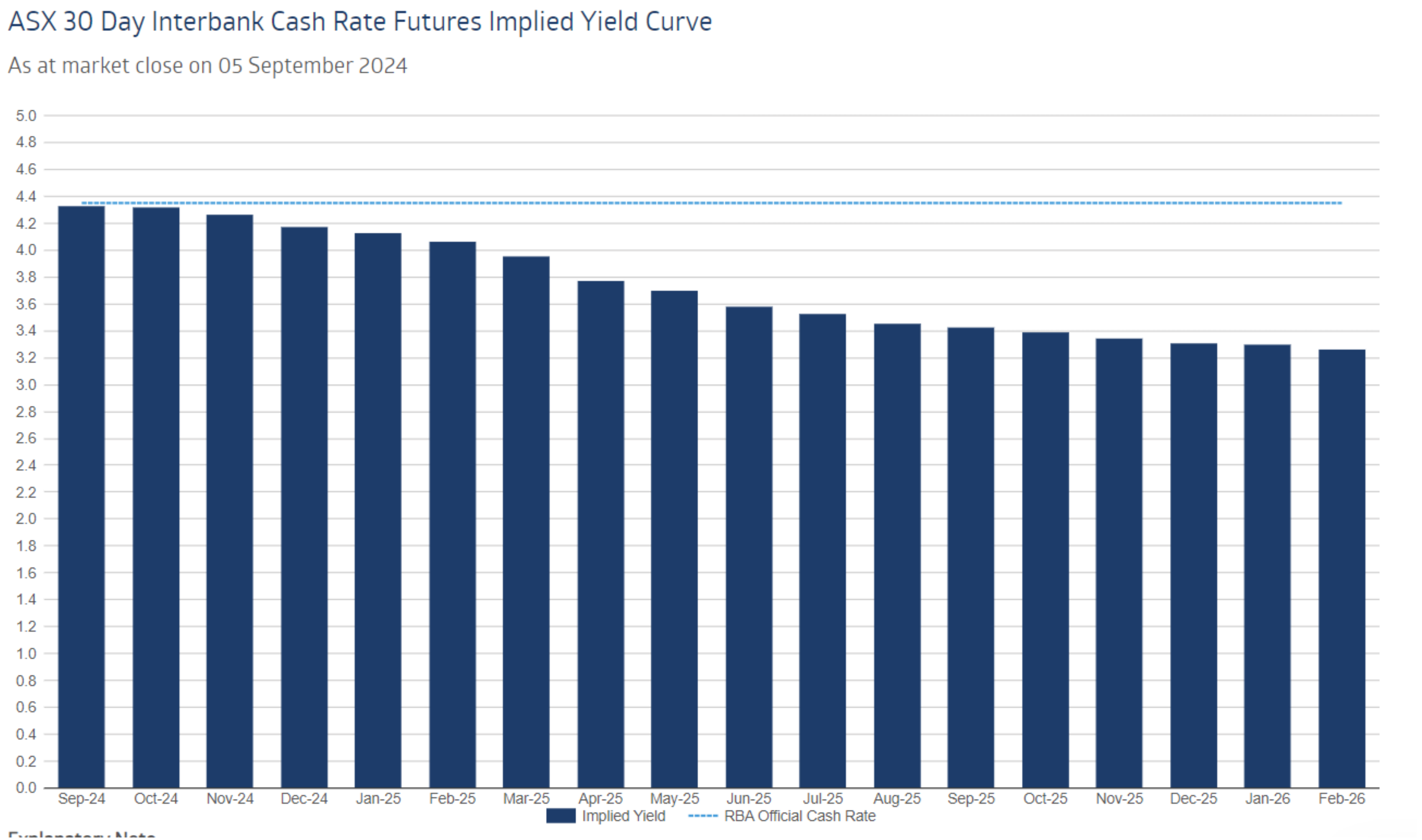
This calculation is predicated based on ASX Rate Indicator calculation

TRADING DAY	NO CHANGE	DECREASE TO 4.10%
23 August	80%	20%
26 August	70%	30%
27 August	80%	20%
28 August	80%	20%
29 August	80%	20%
30 August	80%	20%
02 September	80%	20%
03 September	80%	20%
04 September	90%	10%
05 September	80%	20%

30 Day Interbank Cash Rate Target Implied Expectation of change

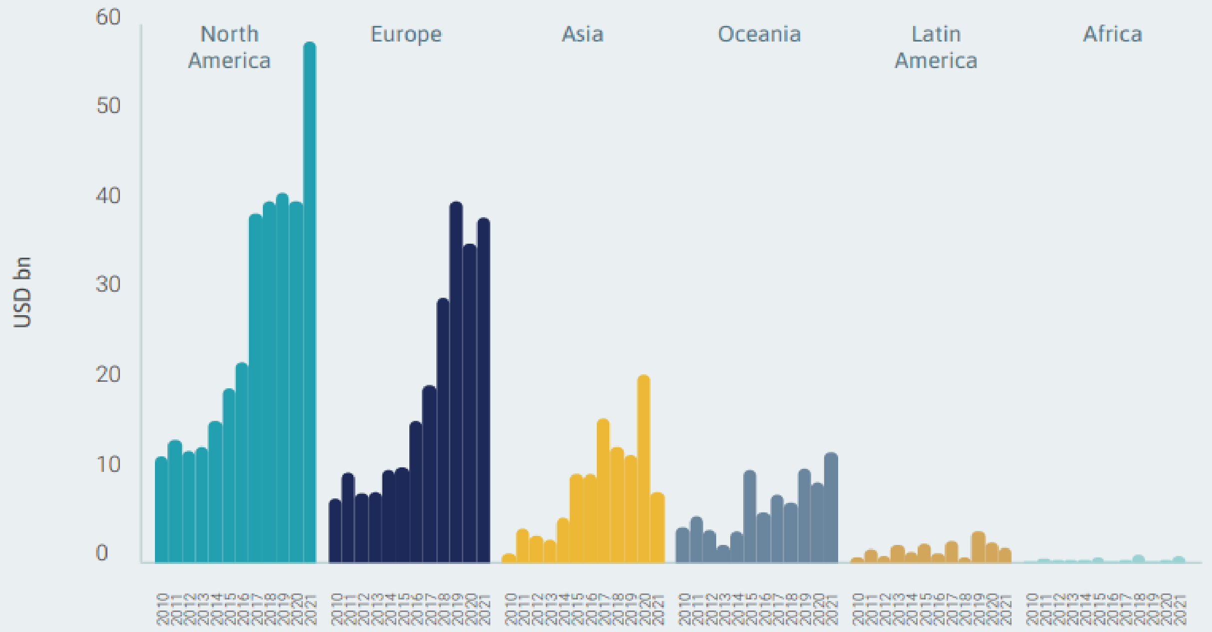


RBA Implied Yield Curve



Real Assets – Need for Private Investment in US Infrastructure

Private infrastructure capital raised by funds, by region of origin, 2010–2021
(USD bn)



Source: Preqin (2022c), data as of 7 July 2022.
Note: The graph excludes multi-regional funds. Region of origin refers to location of the funds' headquarters.

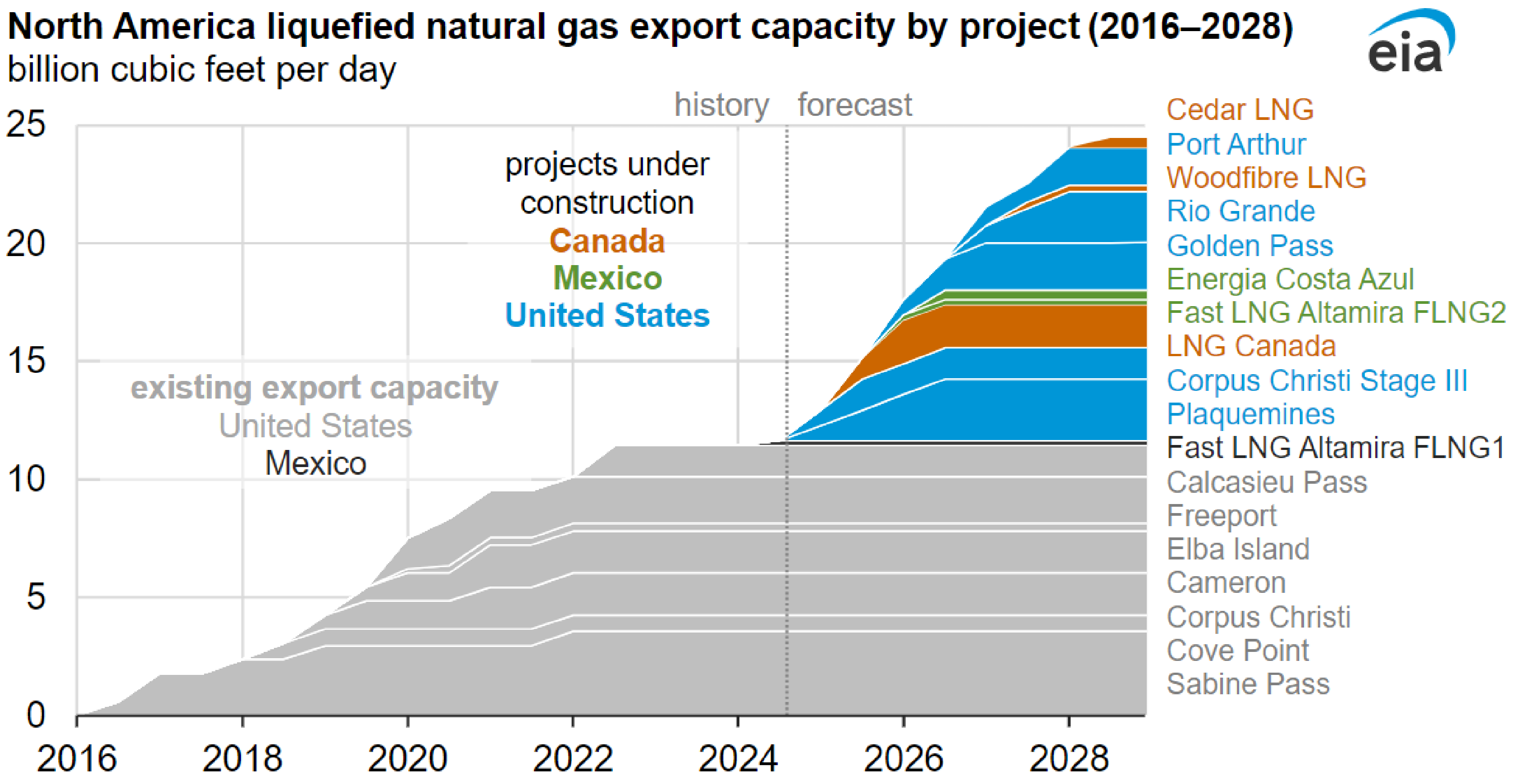
Project Pipeline:
- California High-Speed Rail (US$77bn)
- Sound Transit 3 (US$54bn)
- Las Vegas Convention Center Loop – (US$52.5bn)
- Hudson Yards (US$20bn)

Infrastructure outlook:
American Society of Civil Engineers assigned a grade of C- to existing US infrastructure. They concluded that 43% of US roads are in poor/mediocre condition.

Attractive Megatrends:

US population expected to grow by 8% between 2024-2054.

Real Assets – Need for Private Investment in US Energy



LNG Outlook:

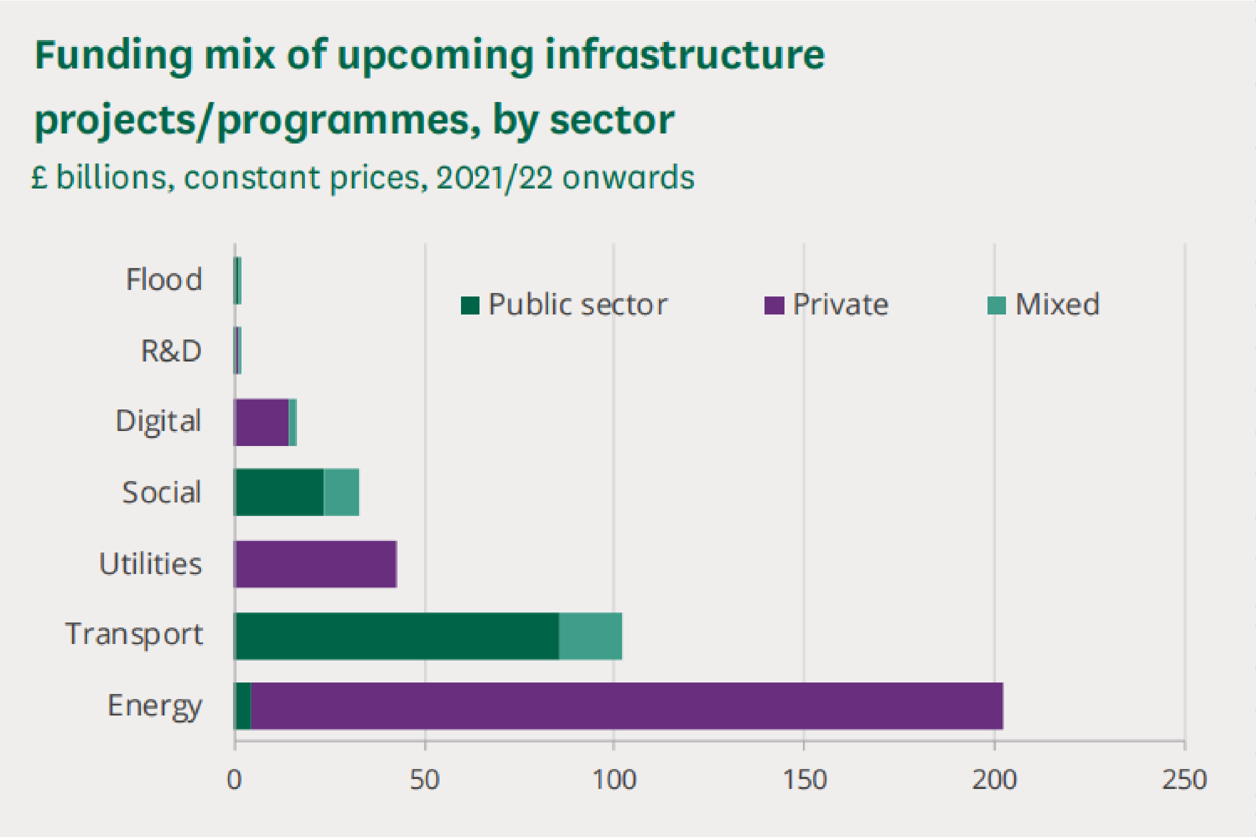
The US is at the forefront of a multi-decade LNG expansion.

According to the EIA, LNG export capacity is expected to more than double by 2028.

Plants under construction:

- Venture Global (Placquemines, CP2 awaiting FID)
- Corpus Christi III
- Golden Pass

Real Assets – Need for Private Investment in UK



Source: HM Treasury, National Infrastructure and Construction Pipeline 2021, September 2021

Project Pipeline:
- M1 Smart Motorway Upgrade (£8bn)
- High Speed 2 (HS2) rail network
- Crossrail 2 (£30bn)
- Heathrow Airport Expansion (£14bn)

Central Bank Borrowing Concerns:
The BOE is facing high borrowing costs, driven by high GILTS yields, which make borrowing more expensive for the government, particularly when it issues new bonds to fund infra projects. Further, UK public debt remains at historically high, increasing concerns about debt sustainability.

Attractive Megatrends:
UK infrastructure expansion is supported by the National Infrastructure & Construction pipeline (£700-775bn).

UK population expected to grow by 10% between 2021-2036.

Total Portfolio Approach

1

Objective:
The fund focuses on leveraging currency relationships to create an optimal international portfolio that outperforms inflation, with a target return of **CPI + 3.5%** and volatility kept under **9%**.

2

Execution Strategy:

- **Hedging to Mitigate Volatility**: Highly tailored and systematic hedging strategies are used to mitigate volatility from currency fluctuations and other risks.
- **Currency Outlooks**: Currency outlooks and economic scenarios inform asset allocation and decision-making.
- **Risk Analysis and Correlations**: Rigorous quantitative analysis of asset correlations and covariances helps address risk at the portfolio level.
- **Natural Hedges and Tailored Hedging Instruments**: Risks are managed through natural hedging strategies, with an emphasis on considering extreme tail risk scenarios.
- **Macroeconomic Outlook Integration**: The portfolio is actively managed based on the macroeconomic outlook and monitored with a focus on liquidity, providing flexibility through hedging instruments.

3

Key Considerations:

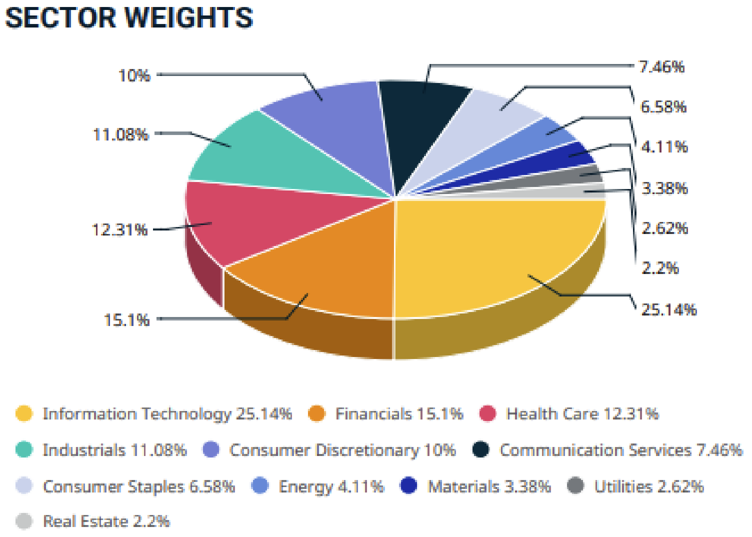
- **Impact of Individual Investments**: The impact of individual investments on the broader portfolio is assessed carefully, with particular attention to natural hedges.
- **Client Risk Framework**: The investment strategy is developed within a **client-focused risk framework**, with emphasis on how investments are hedged against scenarios.
- **AUD vs. USD Risk**: Special emphasis is placed on the AUD risk framework, especially when considering the potential volatility and risk of investments in USD terms.

4

Integrated with Tcorp core values

Equities relative to MSCI ex AU

Industry	GRYT Industry Weighting	MSCI Industry Weighting	Reasoning
Industrials	29.5%	25.1%	• Low correlation with • Growth in both election outcomes • Contractionary PMI numbers, pending growth • Longer-term federal spending
Energy	17.0%	4.1%	• US IRA has boosted uptake in greenfield and brownfield energy expansion. • Both parties have expressed policy in expanding energy capabilities. • Push for sustainable energy alternatives.
Healthcare	12.7%	12.3%	• The sector is bolstered by a growing and ageing population. • Health technology advancements (biotechnology).
Technology	21.1%	25.1%	• High growth sector, driven by AI Boom. • Technology comprises c.30% of the S&P500. • Not economically sensitive. • Overvalued so not weighted more than MSCI.
Consumers	12.7%	10%	• Growing population growing consumption. • E-commerce expansion, through new digital platforms. • Economic recovery pending rate cuts in the short term.



Currency Consideration in Markowitz

1 Incorporation of Currency Risk

- Currency fluctuations directly impact asset returns when investments are held in foreign currencies.
- By converting all foreign asset returns into AUD terms, currency risk is treated as a variable in optimizing the portfolio.

2 Modified Covariance Matrix

- Correlations between asset classes are adjusted to account for currency risk, particularly between AUD and USD/GBP exposures.
- Volatility of exchange rates is considered when calculating covariances.

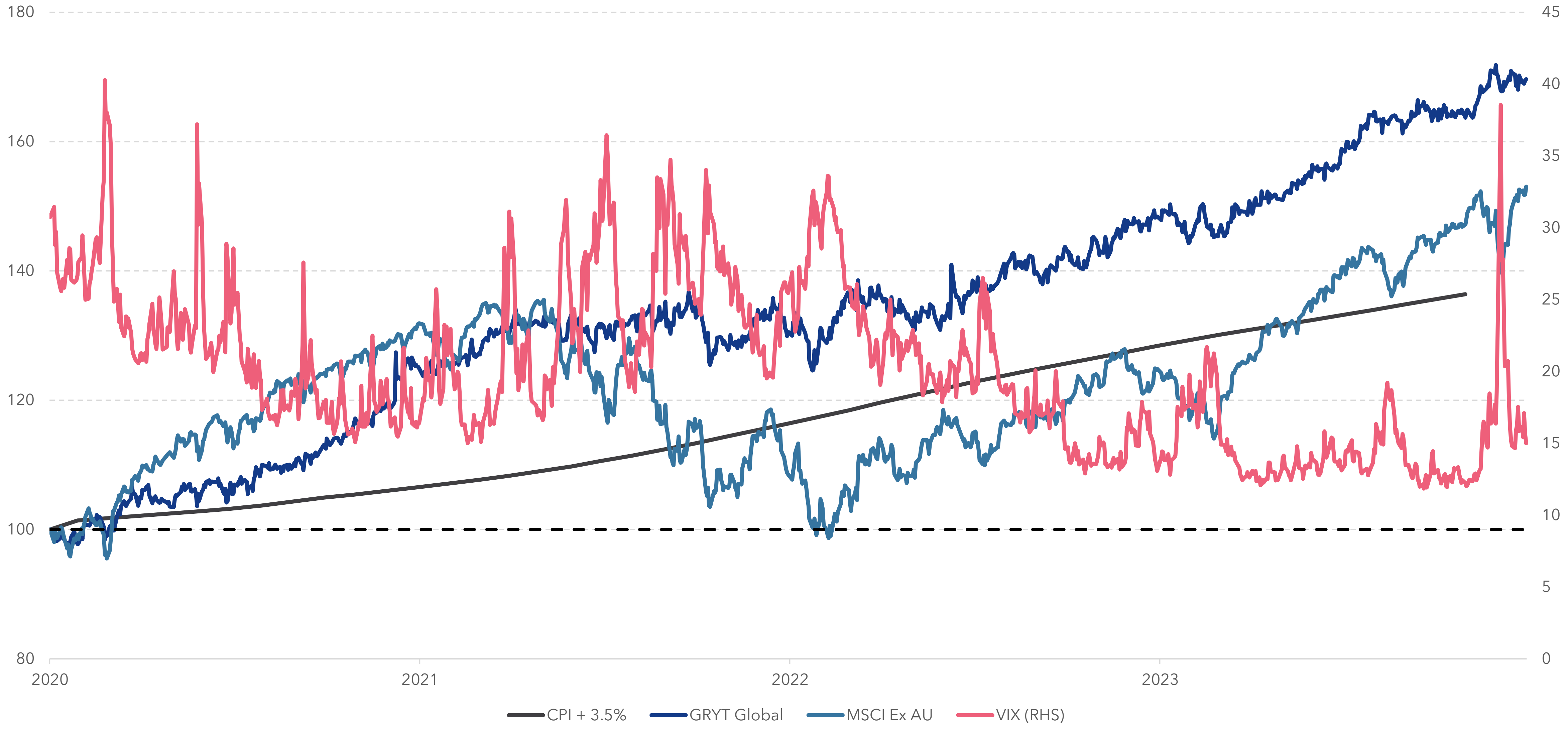
3 Stress Case Analysis

- Stress scenarios, such as the GFC and COVID-19, were considered to observe how currency risk and volatility impact the overall portfolio.
- This analysis allows the identification of the natural hedges and internally opposing nature of assets to protect portfolio capital in periods of stress (Portfolio Performance Charts).

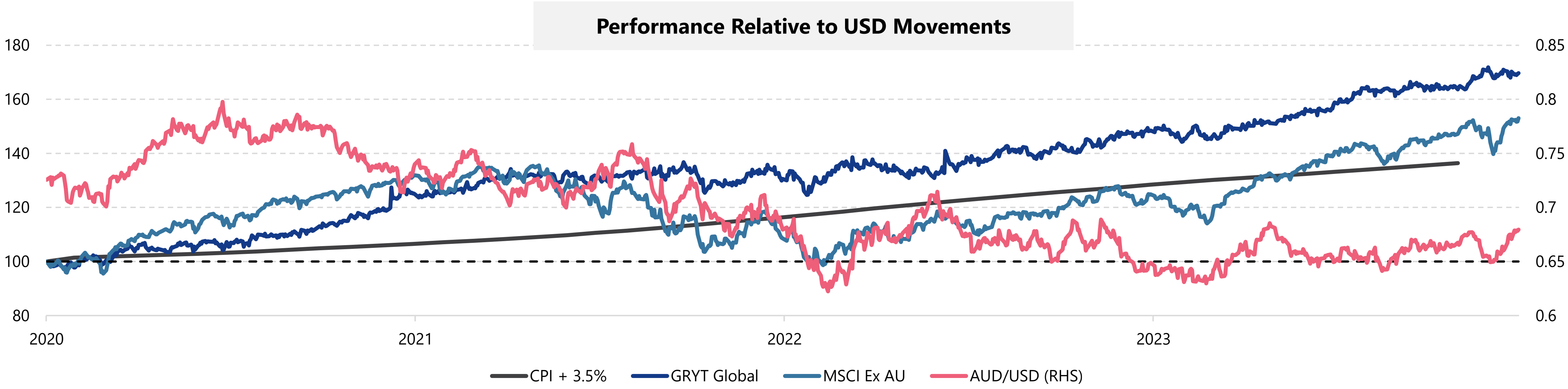
4 Optimisation Modelling

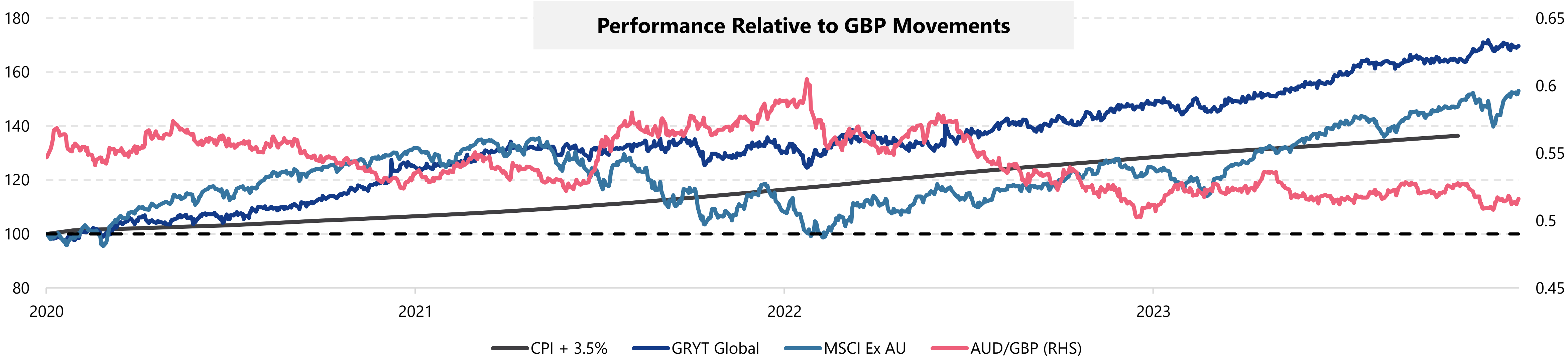
- The portfolio was optimized to balance market and FX risks, aiming to minimize overall risk without sacrificing returns → through SHARPE RATIO Maximisation.
- Based on internal covariances across asset classes, the portfolio was optimised to reduce volatility.

Performance Relative to VIX Volatility Index

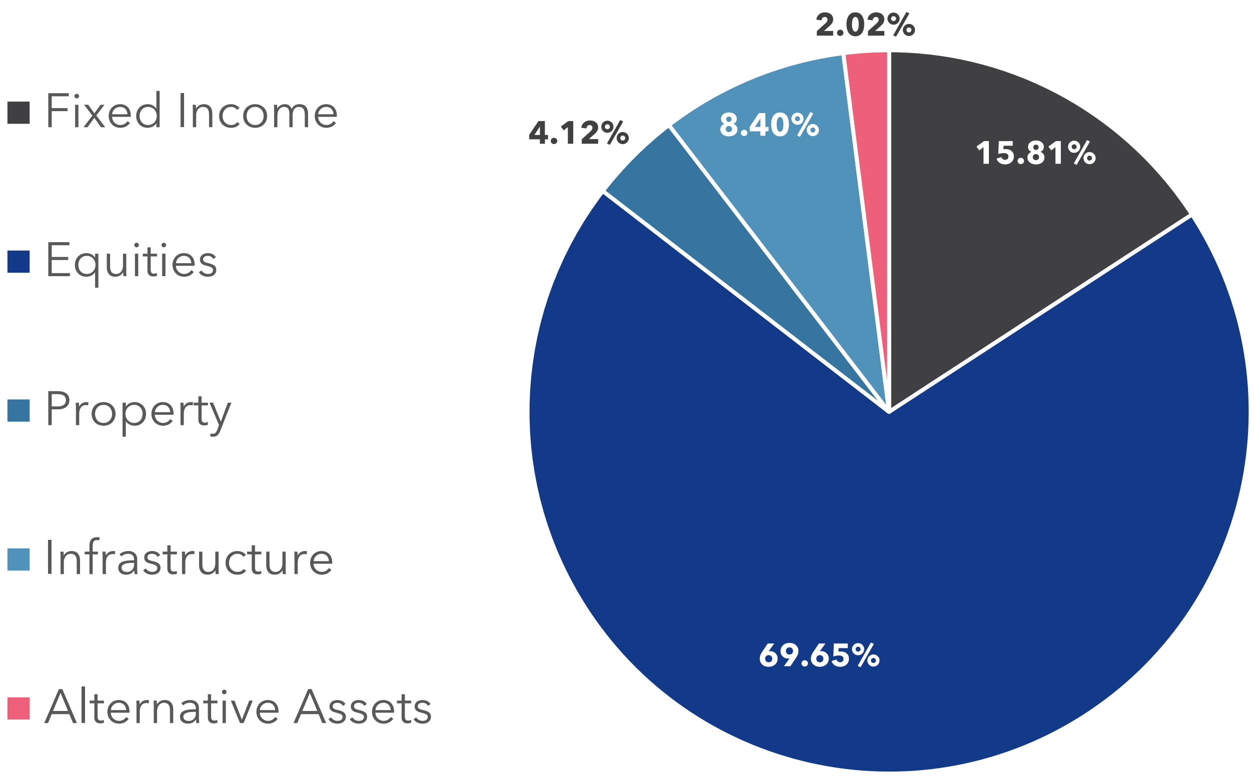


Performance Relative to Benchmarks & Currency





APRA Offshore Fund Investment Allocations



Commentary:

- Australian funds have increased offshore allocations of investment portfolio edging closer to 50% as they seek diversification and attractive risk-adjusted returns, according to NAB Super Insights Report 2023.
- Within this trend there is a growing preference for unlisted assets, particularly infrastructure, private credit and property, which offer less volatile returns.
- A significant portion of offshore investments is also flowing into international equities, particularly in the US and Asian markets, which offer exposure to high-growth sectors like technology, healthcare, and emerging markets.
- Australian funds are increasingly investing in high-growth regions like China, India, and Southeast Asia to capitalise on expanding economies and new opportunities.
- Offshore sustainable investments, particularly in green bonds and sustainable infrastructure, are gaining traction, reflecting global ESG priorities.
- Diversification in Fixed Income: Australian funds seek higher yields and inflation hedges in global bond markets, including high-yield debt and inflation-linked bonds.

Covariance – Currency Analysis

Allocation	AUD/USD Covariance
US Industrials	-0.036019425
US Healthcare	-0.068965036
US Tech Breakthrough	-0.022208099
US Energy	-0.32889761
Gold	-0.057981336
Infra - Index	-0.079889515
LNG	-3.109053332
Green Bond - USD	0.154697829
US T (7-10yrs)	0.375836125
AUD/USD	0.001818173

Allocation	AUD/GBP Covariance
Glencore	0.027686327
Anglo American	6.262288908
Relix	-6.935302428
Stan	-0.843248622
BBRY	2.596223388
Guiness Sustainable Er	0.621174173
Transport	1.163441493
Fixed Income	0.013104421
AUD/GBP	0.000429586

US Commentary:
- US Equity sector-based ETFs, Gold and Infra have very low magnitude negative covariances indicate weak relationship.
- US Treasuries have strong positive covariances with the AUD/USD suggesting a stronger relationship and the need for adequate risk management in these allocations.
- LNG (real asset proxy) additionally has a strong negative covariance with currency → however as our exposure is with a real asset, this risk is mitigated.

UK Commentary:
- Individual Equities have larger magnitude covariances indicating strong relationship with currency → this could largely be attributed to recent volatility in UK equity markets.
- Fixed Income has a low positive covariance however is still substantially high relative to the volatility of the AUD/GBP. Therefore, during periods of heightened volatility in currency markets, UK Fixed Income is likely to become more volatile to an AUD based investor.

Covariance is a statistical measure that indicates the direction of the relationship between two variables or Assets.

* Note analysis conducted, compares returns in AUD terms to currency pairs to provide insights tailored to an AUD investor.

Currency Relationship
- Based on the covariances value between asset returns and currency movements, the relationships between these assets can be understood.
- **Magnitude:** determines the level of dependence between the two assets.
  - **Low Magnitude** implies exchange rate doesn't affect asset returns
  - **High Magnitude** implies exchange rate has stronger impact on asset returns.
- **Direction:** determines the whether two variables move together or in opposite directions,

Covariance – Portfolio Level

Covariance Matrix	US Industrials	US Healthcare	US Tech Breakthrough	US Energy	Gold	Infra - real as	LNG -	Green Bond - USD	US T (7-10yrs)	Glencore	Anglo American	Relix	Stan	BBRY (short)	Clean energy - real assets	Transport -	Fixed Income	AUD/USD	AUD/GBP
US Industrials	0.000175485	0.000117151	0.000179632	0.0001541	6E-05	0.000165433	2E-04	5.48927E-05	4.86712E-05	7.378E-05	8.65713E-05	5E-05	9E-05	-7.98222E-05	0.000114095	5.507E-05	2.15029E-05	-3.08E-05	-1.02E-05
US Healthcare	0.000117151	0.000126895	0.000136029	9.144E-05	6E-05	0.000111739	1E-04	5.17146E-05	4.94544E-05	4.345E-06	2.98264E-05	5E-05	3E-05	-3.79466E-05	6.47696E-05	3.996E-05	2.27072E-05	-2.03E-05	-6.78E-06
US Tech Breakthrough	0.000179632	0.000136029	0.000279605	0.0001156	7E-05	0.000146484	1E-04	6.32748E-05	5.68374E-05	5.671E-06	5.79408E-05	5E-05	5E-05	-6.8294E-05	0.000140804	4.742E-05	3.1713E-05	-4.26E-05	-1.59E-05
US Energy	0.000154134	9.14413E-05	0.000115573	0.0003924	7E-05	0.000183609	3E-04	3.99912E-05	2.97954E-05	0.0002152	0.000185068	2E-05	2E-04	-8.82202E-05	9.81472E-05	5.388E-05	6.96262E-06	3.644E-06	-4.55E-06
Gold	6.13974E-05	5.60387E-05	6.69106E-05	6.855E-05	1E-04	7.05195E-05	7E-05	5.5434E-05	6.09525E-05	4.43E-05	4.78964E-05	8E-06	8E-07	-1.42421E-05	3.66192E-05	2.064E-05	2.63402E-05	-4.09E-05	-1.31E-05
Infra - real assets	0.000165433	0.000111739	0.000146484	0.0001836	7E-05	0.000193502	2E-04	5.64097E-05	5.1658E-05	0.0001017	0.00011208	4E-05	9E-05	-7.70664E-05	0.000116876	6.761E-05	2.42219E-05	-1.68E-05	-8.87E-06
LNG - real assets	0.0001518	0.000100086	0.000126852	0.0003104	7E-05	0.000186591	3E-04	4.77123E-05	4.01012E-05	0.0001648	0.000144742	2E-05	1E-04	-6.73093E-05	0.000106447	6.104E-05	1.82497E-05	6.755E-06	-8.24E-06
Green Bond - USD	5.48927E-05	5.17146E-05	6.32748E-05	3.999E-05	6E-05	5.64097E-05	5E-05	5.73428E-05	5.9837E-05	-1.33E-05	-7.18777E-07	2E-05	9E-07	-1.23357E-05	2.58742E-05	2.195E-05	3.04912E-05	-2.23E-05	-5.6E-06
US T (7-10yrs)	4.86712E-05	4.94544E-05	5.68374E-05	2.98E-05	6E-05	5.1658E-05	4E-05	5.9837E-05	6.83872E-05	-1.92E-05	-6.22718E-06	2E-05	-0	-7.51982E-06	2.25453E-05	2.233E-05	3.68935E-05	-2.38E-05	-6.71E-06
Glencore	7.37779E-05	4.3455E-06	5.67051E-06	0.0002152	4E-05	0.000101663	2E-04	-1.33387E-05	-1.9202E-05	0.002937	0.000371449	2E-05	1E-04	-0.000110117	8.81157E-05	5.059E-05	-1.33406E-05	4.257E-05	7.69E-06
Anglo American	8.65713E-05	2.98264E-05	5.79408E-05	0.0001851	5E-05	0.00011208	1E-04	-7.18777E-07	-6.22718E-06	0.0003714	0.00065426	3E-05	2E-04	-0.00018266	0.000117988	6.001E-05	3.63176E-06	-3.12E-06	-1.47E-05
Relix	5.04923E-05	4.60262E-05	5.43513E-05	1.634E-05	8E-06	4.31246E-05	2E-05	2.10171E-05	2.02472E-05	2.275E-05	3.32294E-05	2E-04	6E-05	-8.82057E-05	4.50564E-05	5.348E-05	2.98089E-05	-1.35E-05	-1.31E-05
Stan	8.54203E-05	3.366E-05	4.67352E-05	0.0001569	8E-07	9.26626E-05	1E-04	9.02477E-07	-9.18808E-06	0.0001397	0.000191233	6E-05	5E-04	-0.000181215	6.81371E-05	7.044E-05	-1.19211E-05	-1.25E-05	-7.62E-06
BBRY (short)	-7.98222E-05	-3.79466E-05	-6.8294E-05	-8.822E-05	-0	-7.7066E-05	-0	-1.23357E-05	-7.51982E-06	-0.00011	-0.00018266	-0	-0	0.000442173	-8.39363E-05	-7.37E-05	-2.28643E-05	-3.09E-05	-3.17E-05
Clean energy - real assets	0.000114095	6.47696E-05	0.000140804	9.815E-05	4E-05	0.000116876	1E-04	2.58742E-05	2.25453E-05	8.812E-05	0.000117988	5E-05	7E-05	-8.39363E-05	0.001428002	6.39E-05	2.52362E-05	2.606E-05	-1.35E-08
Transport - real assets	5.50656E-05	3.99603E-05	4.74158E-05	5.388E-05	2E-05	6.76121E-05	6E-05	2.19494E-05	2.2329E-05	5.059E-05	6.00097E-05	5E-05	7E-05	-7.37188E-05	6.38976E-05	8.771E-05	3.44605E-05	-4.65E-06	-1.08E-05
Fixed Income	2.15029E-05	2.27072E-05	3.1713E-05	6.963E-06	3E-05	2.42219E-05	2E-05	3.04912E-05	3.68935E-05	-1.33E-05	3.63176E-06	3E-05	-0	-2.28643E-05	2.52362E-05	3.446E-05	7.34791E-05	-1.99E-05	-1.73E-05
AUD/USD	-3.08104E-05	-2.03318E-05	-4.25996E-05	3.644E-06	-0	-1.6813E-05	7E-06	-2.23046E-05	-2.38455E-05	4.257E-05	-3.11821E-06	-0	-0	-3.08676E-05	2.60557E-05	-4.65E-06	-1.99146E-05	0.0018193	0.0003771
AUD/GBP	-1.0196E-05	-6.77586E-06	-1.59131E-05	-4.554E-06	-0	-8.8748E-06	-0	-5.60238E-06	-6.71166E-06	7.69E-06	-1.46572E-05	-0	-0	-3.16609E-05	-1.35049E-08	-1.08E-05	-1.7256E-05	0.0003771	0.00043

GRYT Capital

Correlations – Portfolio Level

Correlation Matrix	US Industrials	US Healthcare	US Tech Breakthrough	US Energy	Gold	Infra - real assets	LNG - real assets	Green Bond - USD	US T (7-10yrs)	Glencore	Anglo American	Relix	Stan	BBRY (short)	Clean energy - real assets	Transport - real as	Fixed Income	AUD/USD	AUD/GBP
US Industrials	1	0.785064817	0.810947846	0.587400763	0.414437765	0.897758617	0.65702398	0.547212233	0.444287951	0.102767294	0.255493034	0.298544958	0.290944675	-0.286555227	0.227920717	0.443843989	0.189363037	-0.054529425	-0.037117122
US Healthcare	0.785064817	1	0.722164603	0.409802837	0.444830677	0.713081456	0.509422431	0.60625017	0.530878321	0.007118128	0.103515028	0.320027619	0.134822066	-0.16019703	0.152154461	0.378769905	0.235157436	-0.042316204	-0.029007239
US Tech Breakthrough	0.810947846	0.722164603	1	0.348930141	0.357809089	0.629760558	0.434962432	0.499711077	0.411030865	0.006257458	0.135468116	0.254590129	0.126107423	-0.194229022	0.222832216	0.302774995	0.221249878	-0.059729307	-0.045892929
US Energy	0.587400763	0.409802837	0.348930141	1	0.309438357	0.666355821	0.898380617	0.266612176	0.181893259	0.200439967	0.36526804	0.064595688	0.357394761	-0.211800432	0.131119778	0.290428527	0.041005834	0.00431297	-0.011086344
Gold	0.414437765	0.444830677	0.357809089	0.309438357	1	0.453309837	0.354860396	0.654584822	0.659071527	0.073085889	0.167438937	0.05426493	0.0033088	-0.060562739	0.086651071	0.197111579	0.274767862	-0.085732376	-0.05639398
Infra - real assets	0.897758617	0.713081456	0.629760558	0.666355821	0.453309837	1	0.769088361	0.535514903	0.449062424	0.134855783	0.314998243	0.242821044	0.300559088	-0.263466828	0.222339122	0.518979995	0.203133902	-0.028337258	-0.030766553
LNG - real assets	0.65702398	0.509422431	0.434962432	0.898380617	0.354860396	0.769088361	1	0.361259484	0.278034469	0.174375679	0.324449191	0.106197075	0.2974508	-0.183530086	0.161509177	0.373708988	0.122068127	0.009080504	-0.022780558
Green Bond - USD	0.547212233	0.60625017	0.499711077	0.266612176	0.654584822	0.535514903	0.361259484	1	0.955526748	-0.032502978	-0.003710903	0.217389456	0.005377319	-0.077469236	0.090419627	0.309494036	0.469735702	-0.069057312	-0.035677716
US T (7-10yrs)	0.444287951	0.530878321	0.411030865	0.181893259	0.659071527	0.449062424	0.278034469	0.955526748	1	-0.042845687	-0.029439369	0.191770235	-0.050130964	-0.043243827	0.072144703	0.288303684	0.520452055	-0.067603913	-0.039138745
Glencore	0.102767294	0.007118128	0.006257458	0.200439967	0.073085889	0.134855783	0.174375679	-0.032502978	-0.042845687	1	0.26796134	0.032873243	0.116293934	-0.096629157	0.043026643	0.09967392	-0.028717211	0.018416296	0.00684306
Anglo American	0.255493034	0.103515028	0.135468116	0.36526804	0.167438937	0.314998243	0.324449191	-0.003710903	-0.029439369	0.26796134	1	0.101754139	0.337330402	-0.339603329	0.122067231	0.250504749	0.016563788	-0.002858141	-0.02763382
Relix	0.298544958	0.320027619	0.254590129	0.064595688	0.05426493	0.242821044	0.106197075	0.217389456	0.191770235	0.032873243	0.101754139	1	0.220044286	-0.328552562	0.093389178	0.447268937	0.272375866	-0.024860628	-0.049387944
Stan	0.290944675	0.134822066	0.126107423	0.357394761	0.0033088	0.300559088	0.2974508	0.005377319	-0.050130964	0.116293934	0.337330402	0.220044286	1	-0.388837503	0.08135577	0.339363373	-0.06274838	-0.013253564	-0.01658652
BBRY (short)	-0.286555227	-0.16019703	-0.194229022	-0.211800432	-0.060562739	-0.263466828	-0.183530086	-0.077469236	-0.043243827	-0.096629157	-0.339603329	-0.328552562	-0.388837503	1	-0.105630561	-0.37432765	-0.126846958	-0.034416001	-0.072609085
Clean energy - real assets	0.227920717	0.152154461	0.222832216	0.131119778	0.086651071	0.222339122	0.161509177	0.090419627	0.072144703	0.043026643	0.122067231	0.093389178	0.08135577	-0.105630561	1	0.18054657	0.077907373	0.016165594	-1.72342E-05
Transport - real assets	0.443843989	0.378769905	0.302774995	0.290428527	0.197111579	0.518979995	0.373708988	0.309494036	0.288303684	0.09967392	0.250504749	0.447268937	0.339363373	-0.37432765	0.18054657	1	0.429248386	-0.01164962	-0.055829172
Fixed Income	0.189363037	0.235157436	0.221249878	0.041005834	0.274767862	0.203133902	0.122068127	0.469735702	0.520452055	-0.028717211	0.016563788	0.272375866	-0.06274838	-0.126846958	0.077907373	0.429248386	1	-0.054468261	-0.097078588
AUD/USD	-0.054529425	-0.042316204	-0.059729307	0.00431297	-0.085732376	-0.028337258	0.009080504	-0.069057312	-0.067603913	0.018416296	-0.002858141	-0.024860628	-0.013253564	-0.034416001	0.016165594	-0.01164962	-0.054468261	1	0.426338466
AUD/GBP	-0.037117122	-0.029007239	-0.045892929	-0.011086344	-0.05639398	-0.030766553	-0.022780558	-0.035677716	-0.039138745	0.00684306	-0.02763382	-0.049387944	-0.01658652	-0.072609085	-1.72342E-05	-0.055829172	-0.097078588	0.426338466	1

ESG Consideration

1

Real Assets Core to ESG Allocation

Allocation in US LNG aligns with ESG principles, with the IRA and the Global Energy Transition to boost investment in LNG and other renewable energy sectors.

2

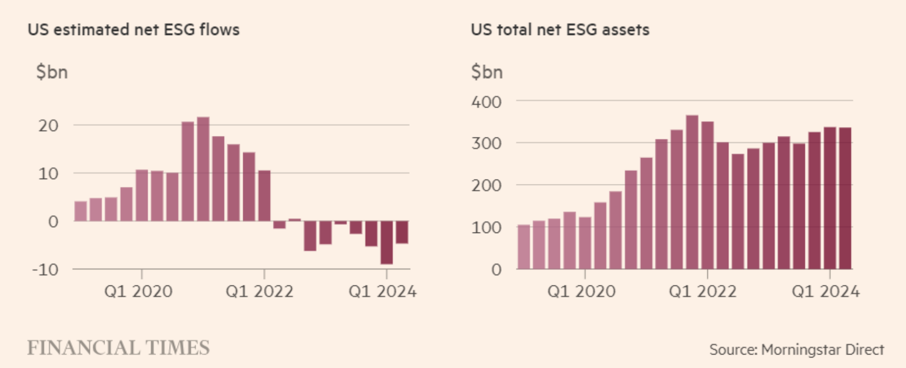
Offsetting Approach

Non-ESG practices in certain allocations are strategically offset by exposures to safer ESG-compliant bonds and investments to balance impact and ensure a positive carbon footprint.

3

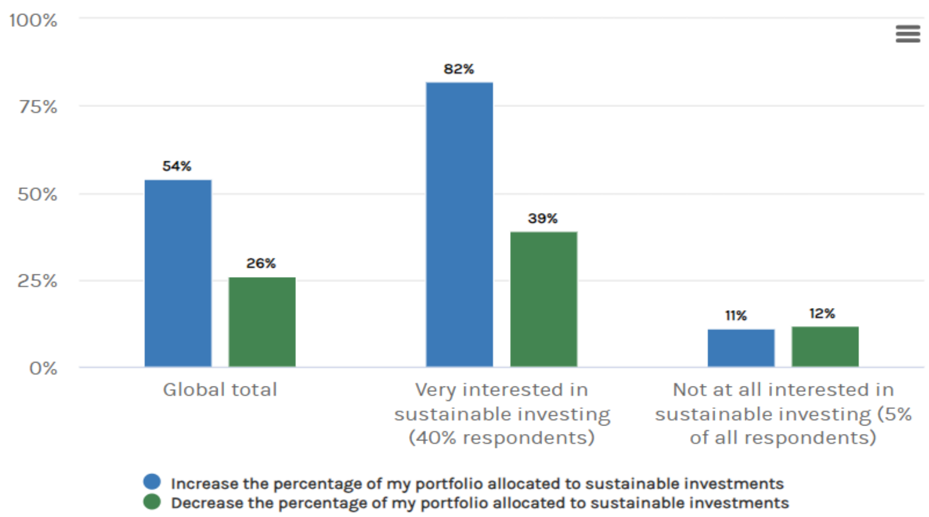
Equity and Fixed Income Diversification

Equity investments target forward-looking sectors like clean energy and innovation, while fixed income green bonds, including renewable projects, providing direct ESG benefits and long-term growth potential.



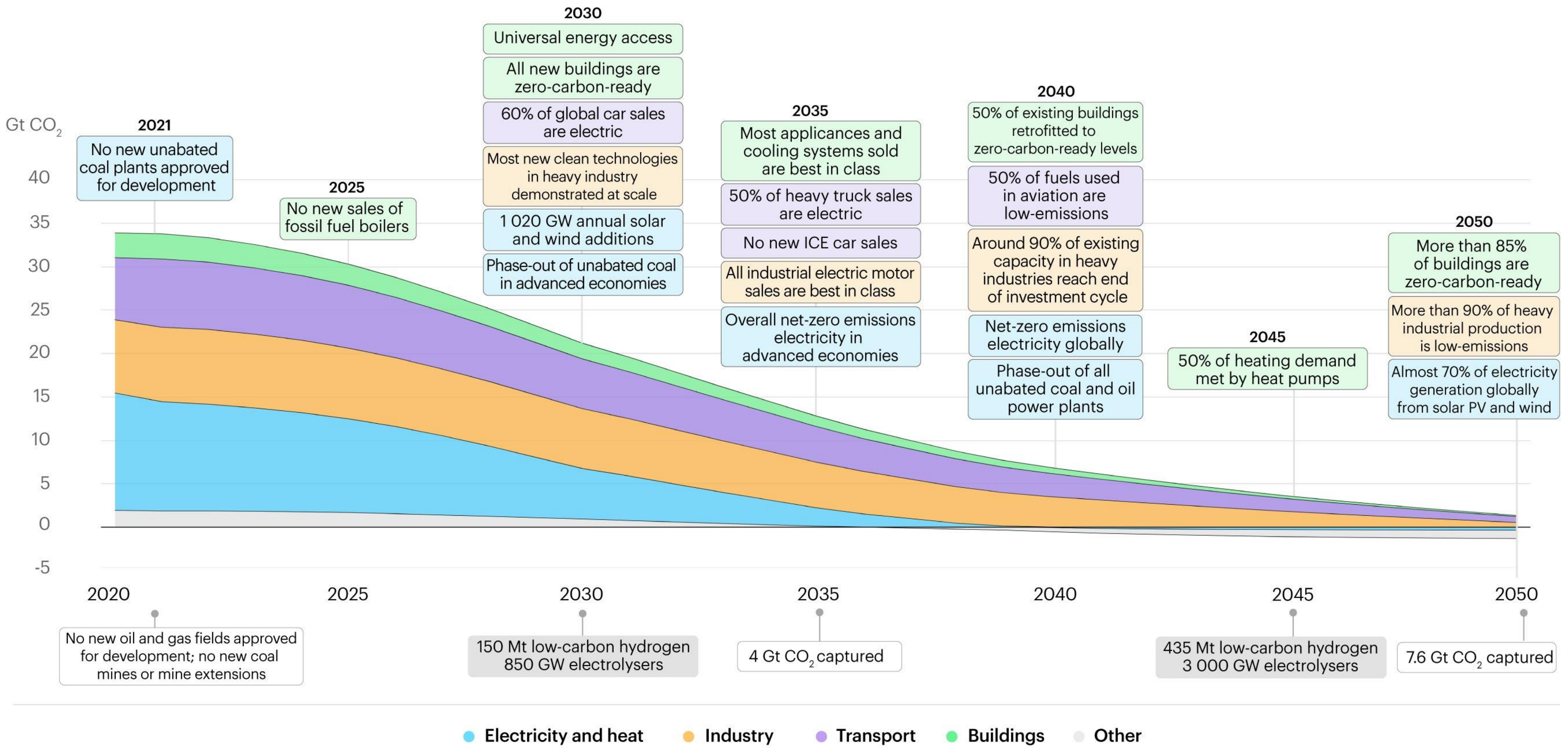
Increasing trend of overly exposed ESG funds, suffering losses. Inherent risks within this new asset class, require strategic and well-positioned allocations to ensure both impact and beneficial outcomes for investors.

More than Half of Investors Say they Plan to Increase Sustainable Investments in Next 12 Months



Source: Morgan Stanley Institute for Sustainable Investing, January 2024

ESG Consideration – the Global Energy Transition



ESG Impact on Currency

Environment

- **Transition to clean energy:** Economies transitioning towards clean energy and away from fossil fuels may see their currencies strengthen due to growing investments in sustainability.
- **Regulatory Impact:** Strong environmental regulations can enhance a country's investment appeal, potentially strengthening the currency due to increased foreign direct investments in green technologies.
- **Risk of non-compliance:** Countries failing to meet international environmental standards may face trade restrictions and sanctions, leading to currency depreciation.
- **Long-term impacts of climate change:** damage to natural industries and resources as well as increased economic costs to account for negative externalities (healthcare and remediation). These practices in the long term will reduce investor confidence and cause the weakening of currencies with poor environmental standards.

Social

- **Income inequality:** High levels of disparity can lead to social unrest, affecting investor confidence and currency stability. In the long term, this can lead to increased fiscal burdens and labour market inefficiencies.
- **Labour practices:** fair and stable labour practices attract investment and strengthen the currency.
- **Human rights record:** Countries with strong human rights records are often seen as safer investments, potentially leading to strengthened currencies.

Governance

- **Corruption levels:** high corruption can deter foreign investment, leading to weaker currency values as investors seek more stable environments.
- **Regulatory quality:** Robust and transparent regulations typically attract investment, supporting the currency, while poor regulatory environments can have the opposite effect.
- **Political stability:** Stable political environments are crucial for attracting and retaining investments, supporting the currency's strength. Unstable regimes often see their currencies depreciate due to heightened risks and capital flights. Polarised nations are generally susceptible to heightened volatility.
- **Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) enhances financial stability in the US.**
- **The UK Bribery Act (2010) and Corporate Governance Code ensure stable and secure financial markets in the UK.**

Relationship between Currency and Equities

Globally Integrated Equities

- "On average exports react twice as strongly and quickly to an appreciation of currency as they do to an depreciation (World Bank, 2024)"
    - **Demand:** establishing new trade relationships is an added cost – international buyers are more likely to do this when export costs increase (relationship is less evident for homogenous goods which are easily interchangeable)
    - **Supply:** ability of an economy to satisfy increased demand generally faces headwinds surrounding the labour market and credit environment,
- Global equities with diversified currency revenue exposures can experience significant volatility depending on FX movements.

Relationship under periods of Stress

- AUD is typically seen as a 'risk-on' currency and thus depreciates in relation to 'safe-haven' currencies like the USD in periods of stress and global uncertainty.
- Amidst shifting views on safety in the STIRLING, the GBP is having a weaker relationship with the USD in periods of stress (relative to AUD)

Volatility

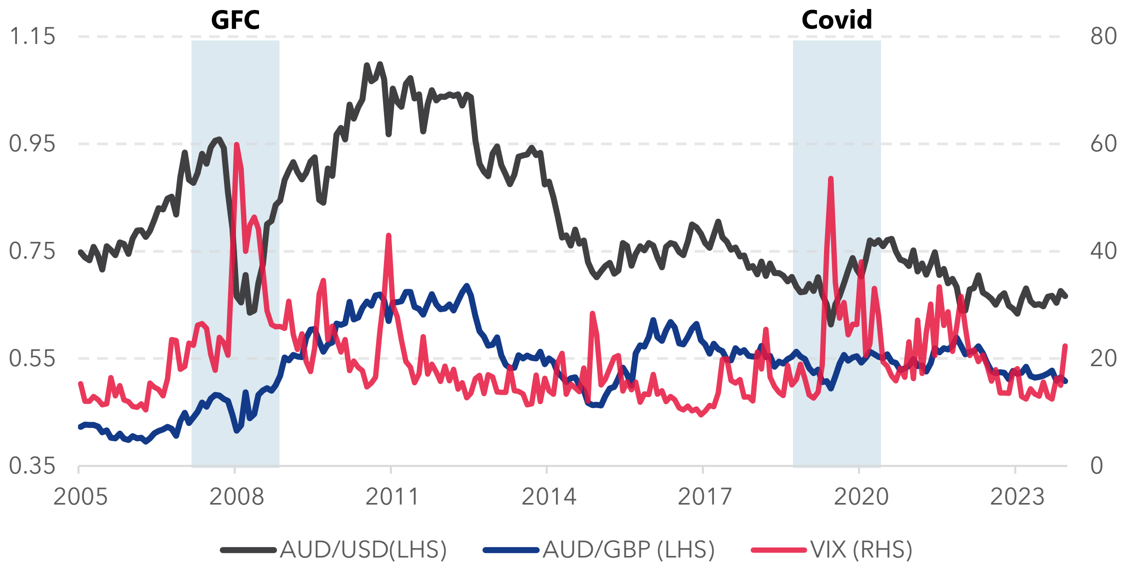
- Amidst periods of heightened volatility equity markets generally experience sell-offs as investors seek safety → in extreme risk case scenarios (see below) the AUD weakens significantly.

Forward Looking Outlook

1 **Increased global integration** through foreign revenue exposures and global supply chains. Thus, the risk to equities from currency movements is trending upwards. Further, with **shifting trade relationships** and tariffs, investors must increasingly ensure diversification across currencies.

2 Exchange rates and equity markets are sensitive to **geopolitical risks** and trade policies. Tariffs, sanctions, or trade agreements can alter global trade flows, which in turn impacts **currency valuations** and the performance of equities in affected industries.

3 **ESG and Sustainable Investing** are growing themes, which are significantly impacting commodity markets amidst the clean energy transition. This will cause structural changes in FX markets as non-renewable driven currencies will weaken unless they can support the transition, with ESG Equities rising.



Relationship between Currency and Fixed Income

Key Drivers

1 **Interest Rate Differentials:** fixed income investments are sensitive to interest rate differentials between countries – When domestic rates rise in one country, currency tends to appreciate because higher rates attract increased investment from foreign lenders.

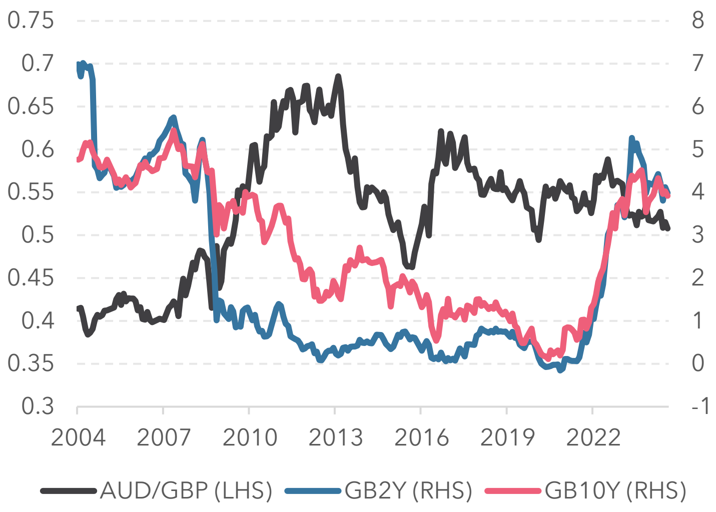
2 **Safe-haven flows to Bond Markets:** In periods of risk aversion, investors often flee to safe-haven currency (USD) → this causes the value of the fixed income assets to increase and the domestic currency to appreciate, whilst yields are pushed downward.

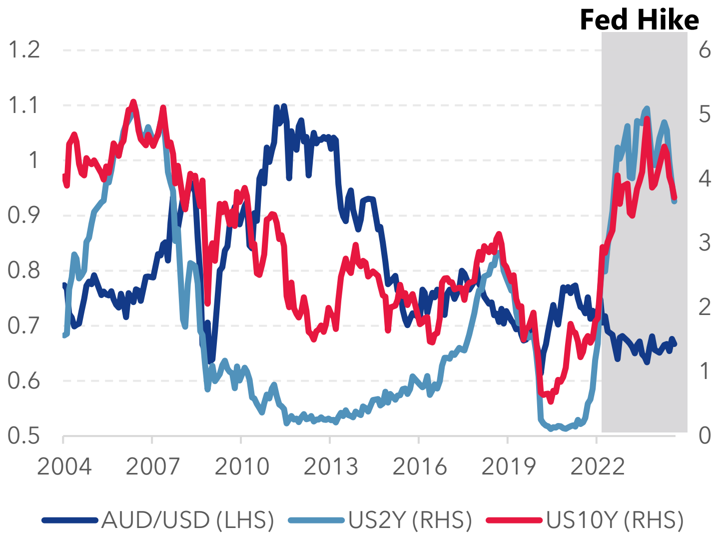
Forward Looking Outlook

1 **Carry Trades** have become increasingly common in recent years as we see monetary policy divergence. Investor seek cheap financing options from low rate (cheap) economies to invest in high-rate economies. Increased leverage in these trades combined with global uncertainty drive volatility as seen in Japan.

2 Amidst rising inflation globally, a key determinant of exchange rates is **inflationary expectations**, and the real yields offered in economies. Economies that have tamed inflation, are generally more attractive to bond investors who seek to preserve capital.

3 **ESG-themed fixed income**, including Green Bonds, are gaining traction. As countries pursue sustainable policies, bonds linked to green projects are becoming a new safe-haven asset class, which is supported by currency strength in economies which are leading the energy transition.





Commentary:

- Prior to Covid the yield curves for both the UK and US have been normal, reflecting increased long-term confidence.
- Since the onset of Covid yield curves have been inverted amidst uncertainty – this has compounded over the last few years as increased geopolitical tensions as price pressures arise.
- Comparatively UK yields are much less volatile, relative to the US this is driven by its safe-haven status which sparks demand during periods of stress and uncertainty.

Duration:

- Duration measures a bond's sensitivity to interest rate changes.
- Longer duration bonds yields (10yrs) tend to also be more volatile given their greater exposure to inflation and uncertainty over the longer term.

Relationship between Real Assets/Commodities and Currency

Commodities Key Drivers

1. Commodities, particularly oil, metals, and agricultural products, are typically **priced in USD**. As a result, fluctuations in the USD significantly affect commodity prices, making them directly linked to currency movements.

2. In periods of heightened uncertainty or economic downturns, commodities like gold are viewed as **safe-haven assets**, leading to increased demand and prices. This directly impacts currency performance, especially for countries with large gold reserves or significant mining activity.

3. Inversely, the value of commodity-producing currencies (e.g., AUD, CAD) is influenced by **shifts in commodity prices**, creating a cyclical relationship between currency and commodity performance.

Commodities Forward Looking Outlook

1. **Commodity Price Fluctuations**: The global economic recovery, coupled with inflationary pressures, is expected to drive **commodity price volatility**, particularly in energy and metals. This will influence currency values, with commodity-exporting nations likely seeing **greater currency appreciation**.

2. **Gold Hedge against Volatility:** With **increased geopolitical risks** and inflation concerns, gold remains a hedge against market uncertainty. The appreciation of gold may continue to support currencies tied to gold-producing economies, while also serving as a hedge for investors.

Real Assets Key Drivers

1. **Inflation Hedge**: Real assets, such as real estate and infrastructure, act as a natural hedge against inflation, maintaining value as inflation erodes currency purchasing power while being less sensitive to short-term currency fluctuations.

2. **Global Infrastructure Investment**: Currency volatility affects project costs and financing in large-scale renewable energy and infrastructure projects, primarily in **emerging markets** with significant exposure to global trade and materials imports.

Real Assets Forward Looking Outlook

1. Real assets are expected to remain **resilient in periods of stress**, providing stability during market volatility. However, currency depreciation in key regions could impact foreign investment and returns.

2. As governments continue to invest in infrastructure for growth, real assets offer long-term value, particularly in countries transitioning to renewable energy, with **currency factors potentially influencing project timelines and funding sources**.

3. The ongoing transition toward **sustainable energy projects** will see an increase in real asset exposure in portfolios. These projects may benefit from **strong ESG policies** and create positive currency impacts in stable, forward-looking economies.

S&P500 vs US TWI

The relationship between the U.S. dollar and the S&P 500 has varied

Source: S&P, Haver Analytics, Barclays Research

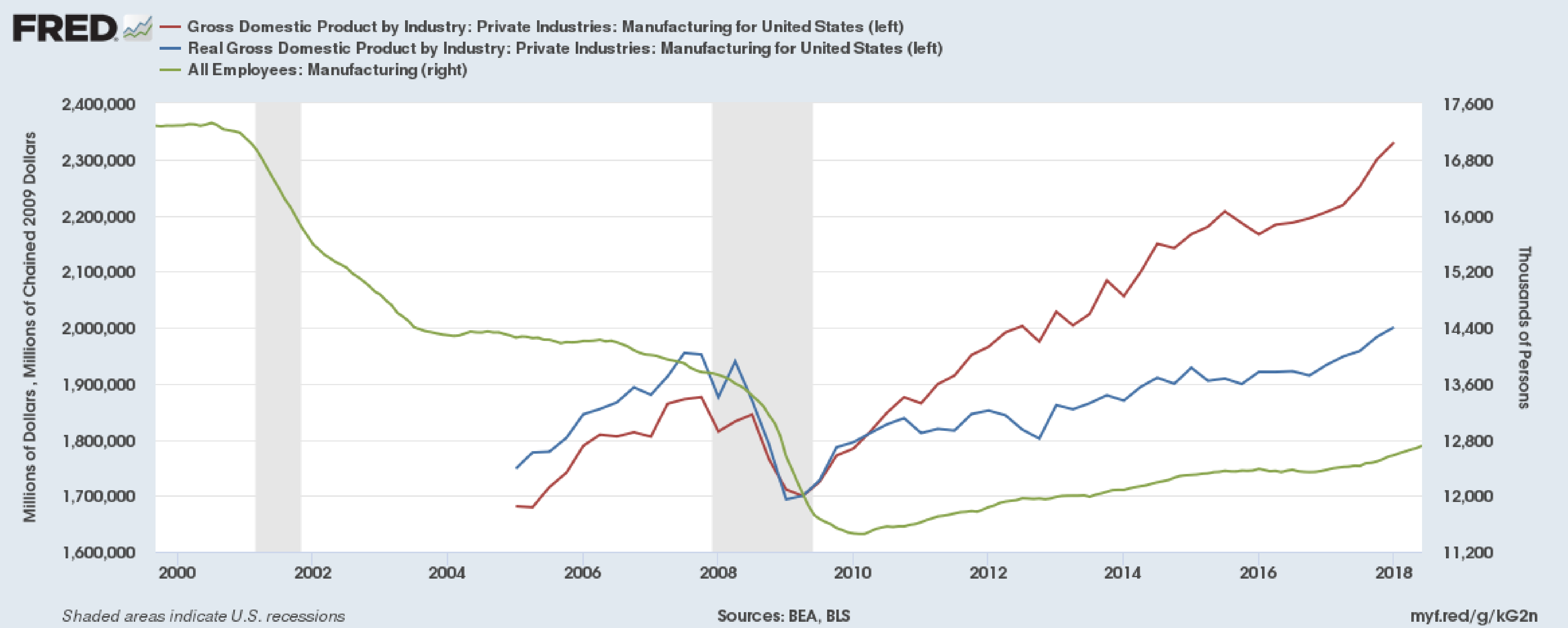
US Portfolio Entry and Exit

Share Name	Entry Price	Target Price	Stop Loss
iShares Industrials ETF	130.26	151.10	127.65
iShares Healthcare ETF	66.38	79.35	65.05
iShares US Tech Breakthrough ETF	50.35	58.91	49.34
iShares Energy ETF	48.04	54.77	47.12
iShares Gold Trust	47.28	52.00	46.33
US Infra Real Assets	45.63	50.19	44.37
US LNG Real Assets	603.80	720.56	591.72
iShares U.S. Treasury Bond 7-10yr ETF	97.07	102.89	95.13
iShares Green Bond ETF	47.88	51.23	46.91

*Note: Entry Level as of 30th August 2024
*Note: Stop losses were assumed 2-5% decline dependent on stock volatility, however is subject to change
*Note: Currency use is USD

US Equities: iShares Industrials ETF

- $1.2 trillion passed in Congress in 2021 to spend on Infrastructure over time
- Kamala: CHIPS Act aims to provide support for strained domestic industrial production to enhance independence against Asian Suppliers
- Trump: hopes to *"reclaim our nation's destiny as the No. 1 manufacturing superpower"* by creating more manufacturing jobs

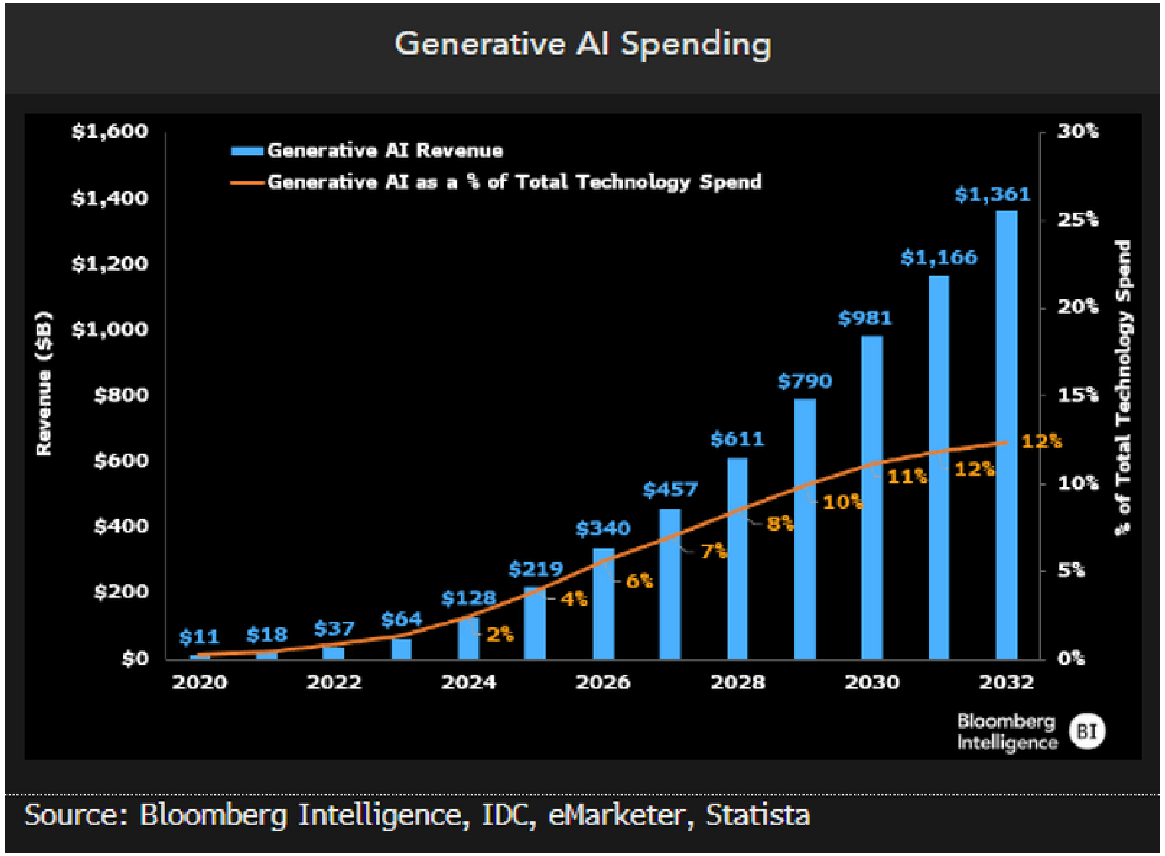


Source: House of Representatives, U.S. Census Bureau, McKinsey

US Equities: iShares US Tech Breakthrough ETF

This share is comprised of companies that engaged in cutting edge research and development of products and services in the areas of robotics and artificial intelligence, cyber security, cloud and data tech, financial technology, and genomics and immunology

- Gen AI will be using 80% as much energy as all data centres signifying its immense growth capacity
- Political: aims to invest into CHIPS by the democrats to expand manufacturing and less regulatory standards from the Trump Administration



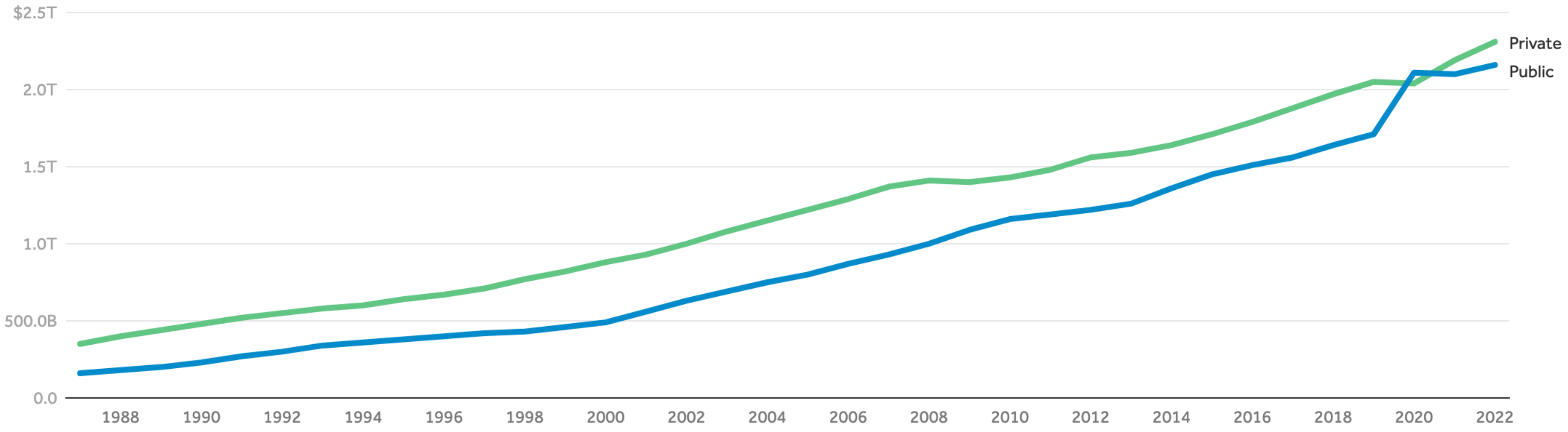
Source: Bloomberg

US Equities : iShares Healthcare ETF

Healthcare

- 7% growth in CAGR from 2022-2027 from $583b to $813b
- Growth in Medicare spending will avg 7.9% p.a. til 2030
- Proportion of individuals older than 65 will increase from 18% in 2024 to 23% by 2054
- Pharmaceutical market is expected to grow from $846.72b in 2022 to $1.2t by 2030, with a CAGR of 5.36%

Total national health expenditures, by public and private payers, 1987-2022



Source: KFF analysis of National Health Expenditure (NHE) data • Get the data • PNG

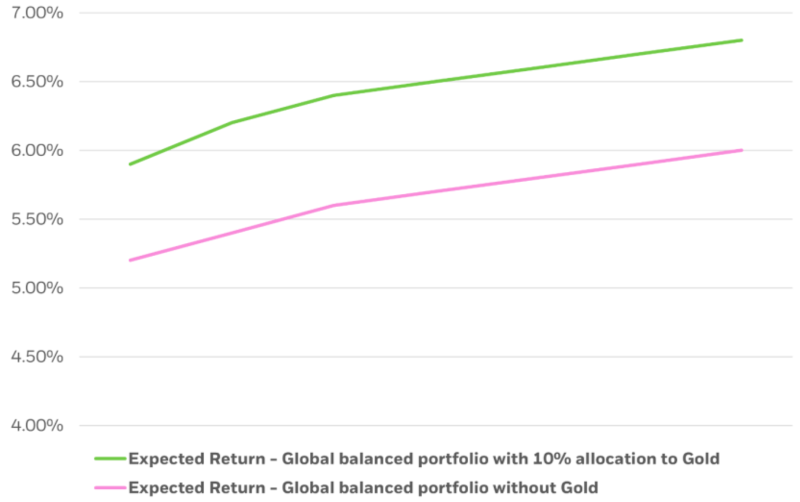
Peterson-KFF **Health System Tracker**

Source: House of Representatives, U.S. Census Bureau, McKinsey

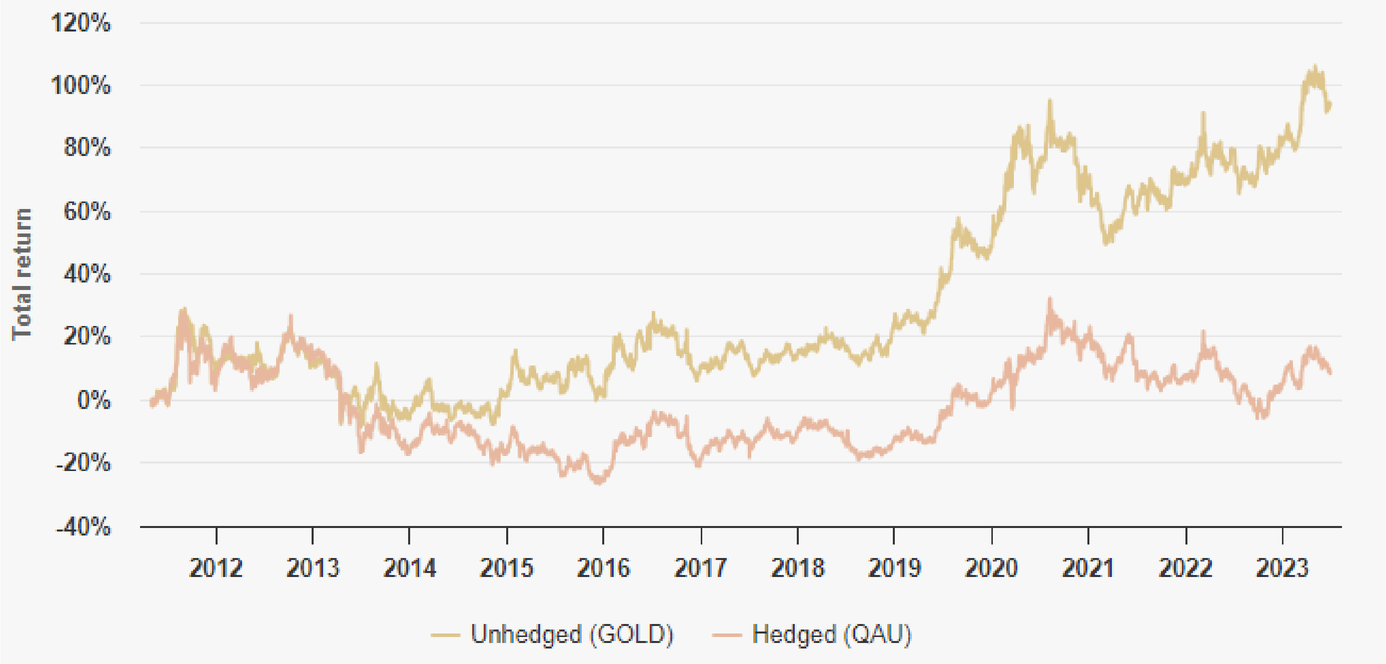
US Commodities: Gold

US 10-Year Yield VS Gold Price

US 10-Year Yield VS Gold Price



Unhdeged gold has outperformed it's hedged alternative by 10x

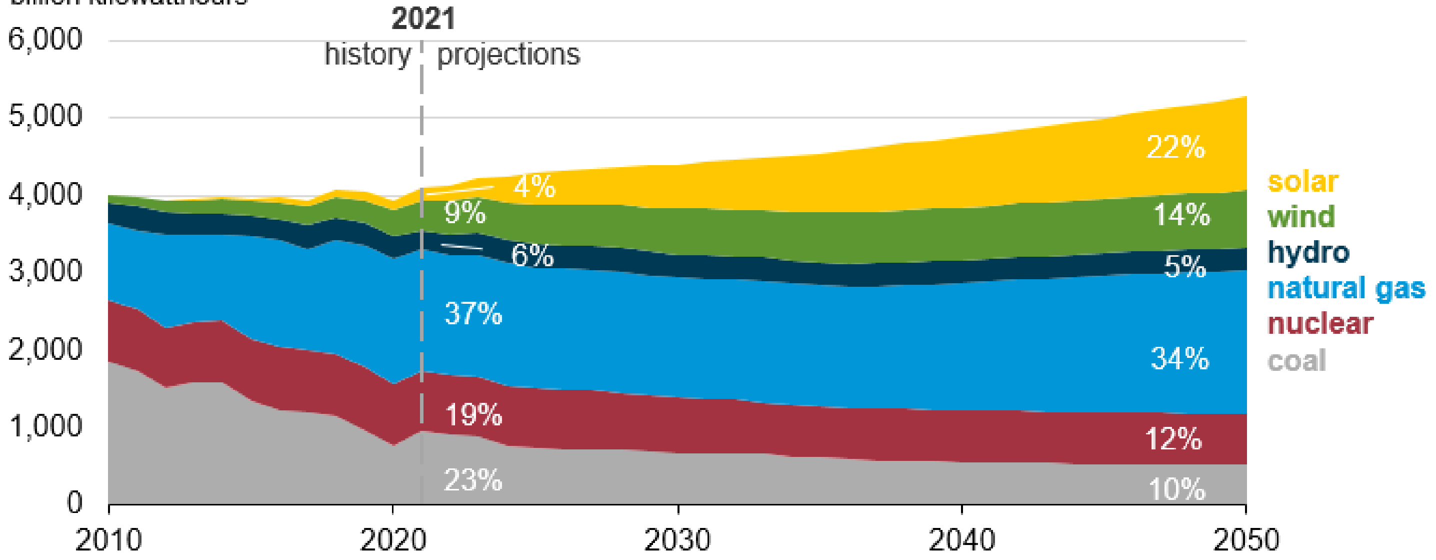


Source: Blackrock, Stockspot

US Energy (Shares US Energy ETF) (Unlisted Energy)

- Residential consumption of energy is expected to increase between 14%-22% from 2022-2050
- Harris Administration announced a $7.3b investment into clean energy om September the 5th 2024 as a part of the Investing into America Agenda

U.S. electricity generation from selected fuels
AEO2022 Reference case
billion kilowatthours



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2022* (AEO2022) Reference case
Note: Solar includes both utility-scale and end-use photovoltaic electricity generation.

Source: US Energy Information Administration, US Rural Development Agriculture

US Real Assets: Unlisted Infrastructure

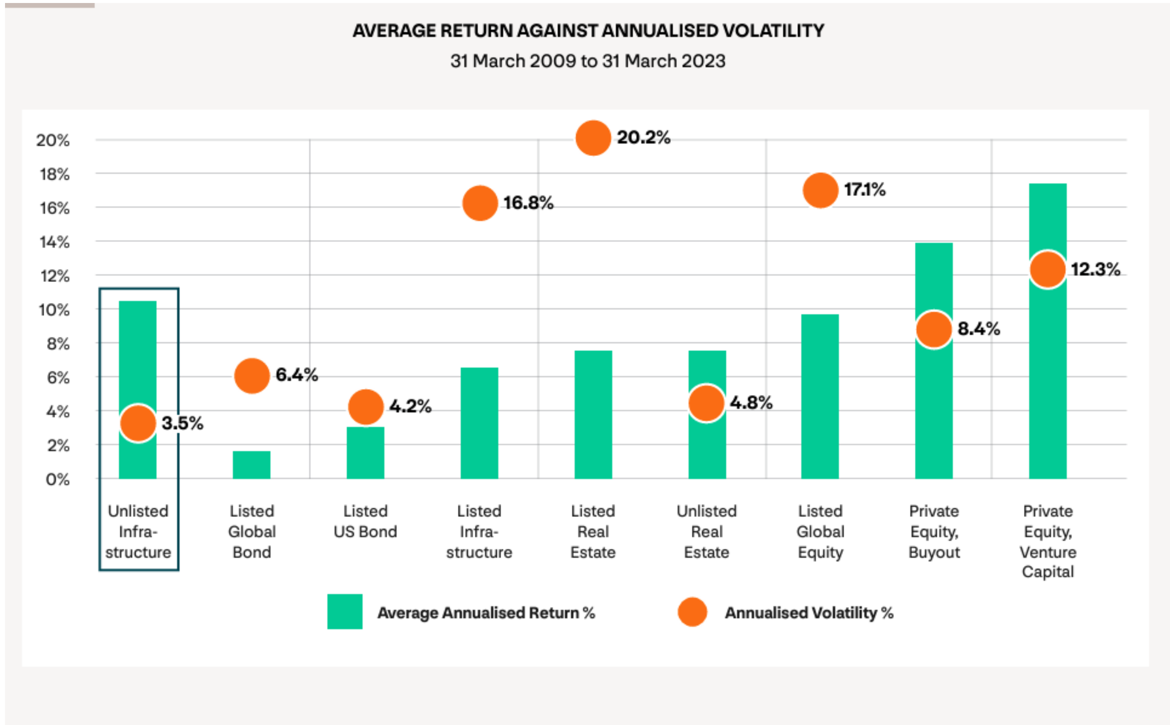
Unlisted Infrastructure

- Infrastructure Construction Market forecasted to grow at 5.00% CAGR from 2023-32

Long holding periods

- Weathers short-term economic downturn with potential for growths in the long term

Low volitility of returns (see graph)

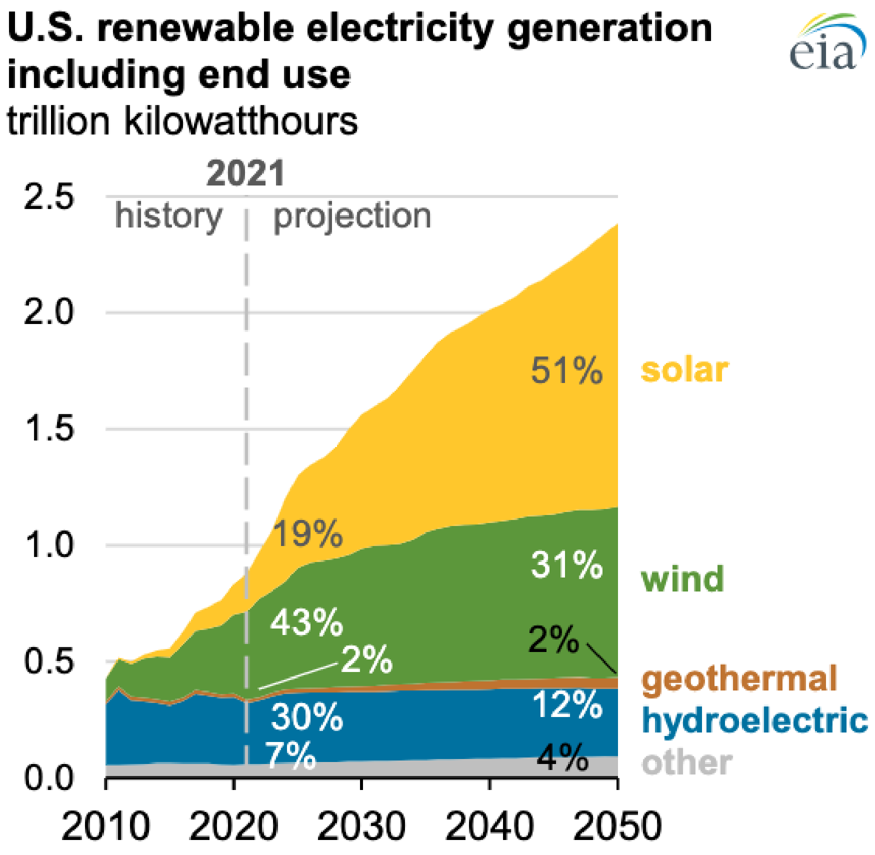


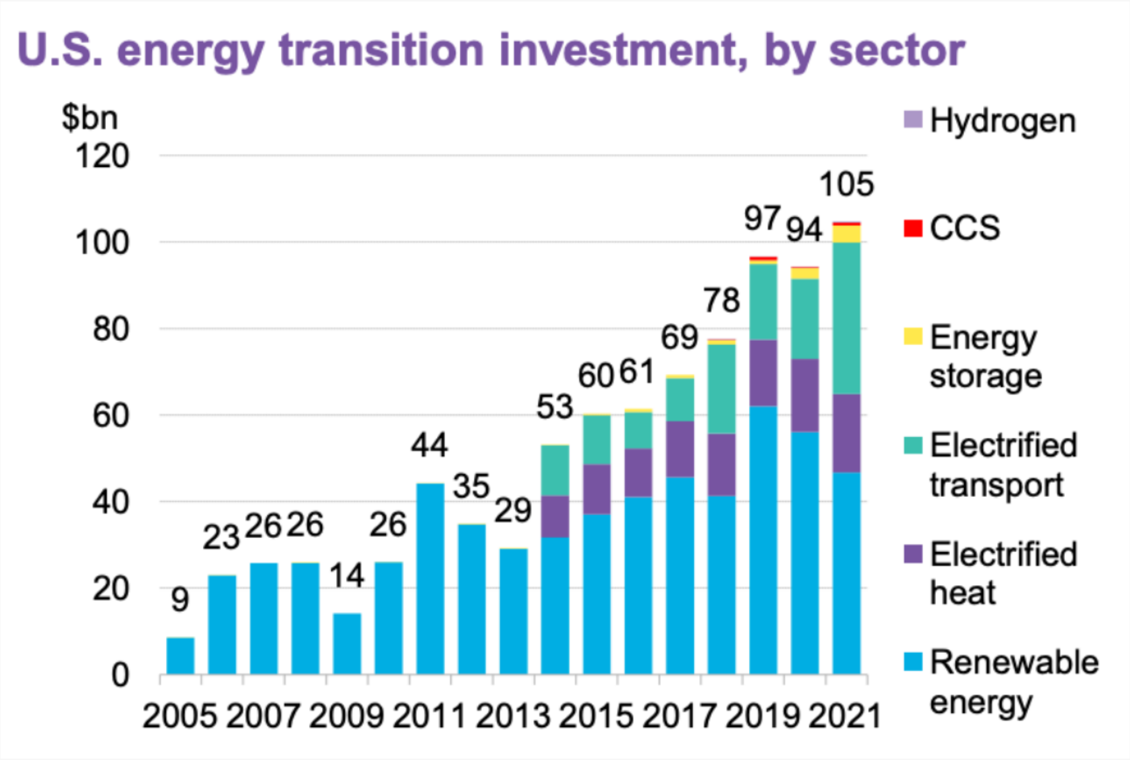
Sources: OECD, MSCI, Bloomberg, Burgiss Universe Analytics.

Source: US Energy Information Administration, US Rural Development Agriculture

US Fixed Income: Green Bond

The green bond is an investment-grade green bonds that are issued by U.S. and non-U.S. issuers to fund environmental projects.
- 35% of the Green Bond ETF is made up of renewable energy, hence the expected growth drives the future bond value





BloombergNEF

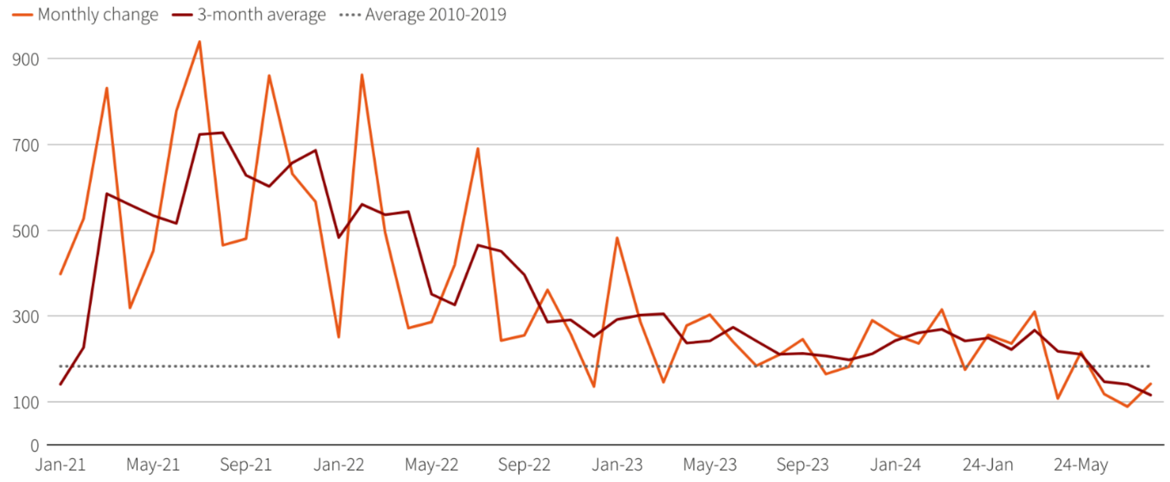
Source: US Energy Information Administration

Fed Outlook

- US Fed states they will cut rates at Sept 17-18 meeting, seen as endorsing a quarter percentage point reduction
- Unemployment rate has increased to 4.2% from 3.5% as the Fed has stopped raising rates
- *"It is now appropriate to dial down the degree of restrictiveness in the stance of policy by reducing the target range for the federal funds rate,"* New York Fed President

- 25bpts cut as the base case for the September meeting but is open to 50 bpts cut at subsequent meetings if the labour market continues to deteriorate
- *"It is clear that the employment market is slowing down, and the Fed has to start to move"* Chief Economist

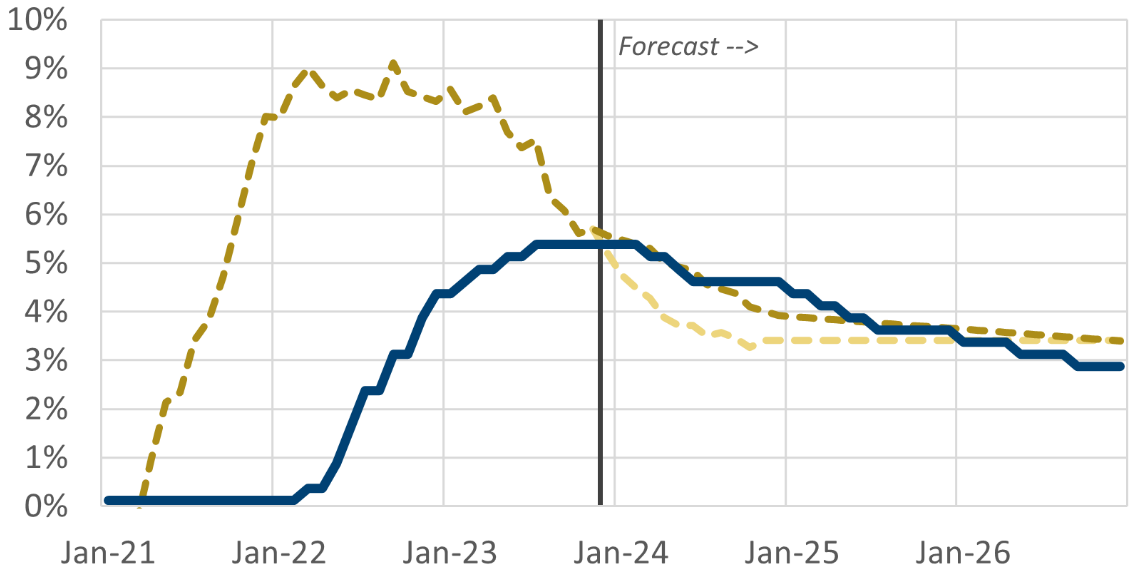
US payroll



Note: Figures in thousands
Source: Bureau of Labor Statistics

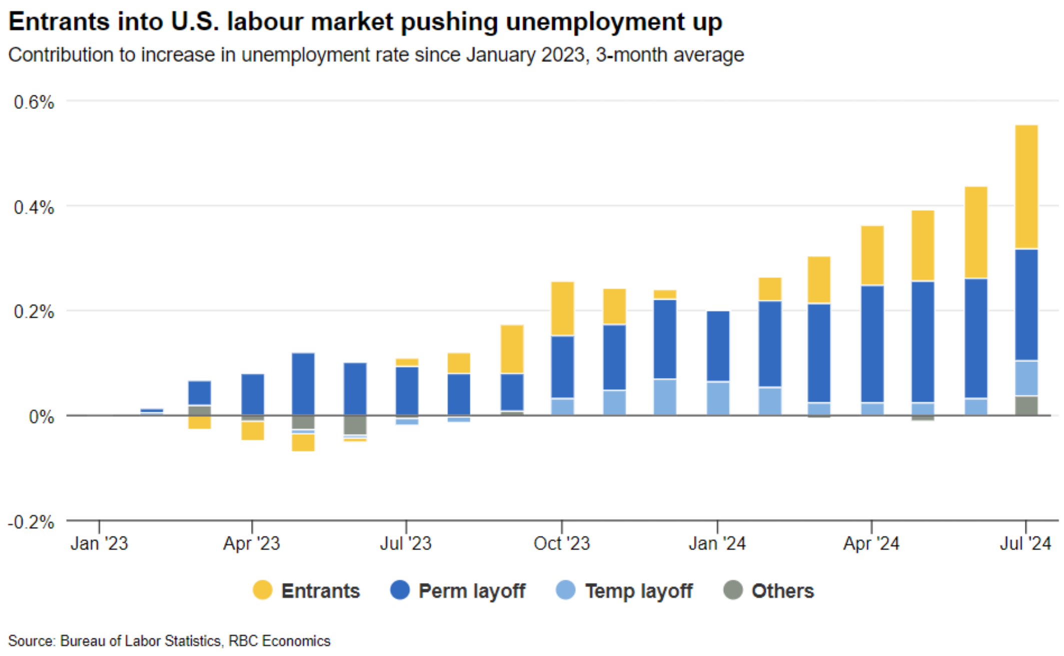
Fed Funds Rate

Fed Funds Rate Target | Taylor Rule (SEP) | Taylor Rule (2% Core PCE)



Latest Data: November 2023
Source: BEA, BLS, Federal Reserve, Renaissance Macro, Oregon Office of Economic Analysis

US Labour Market Outlook



Downside risks lurking in the US Labour Market despite declining headline unemployment. Consumer delinquencies and business bankruptcies have both continued to rise into the summer. Permanent job losses have been a smaller share of rising unemployment to-date but have still been gradually increasing. A larger and more persistent drop in equity prices could spill over to dampen consumer confidence and curb their spending. But markets have calmed significantly following the Friday of the July payroll employment report and are still sharply higher on a year-to-date basis.

US: Positioning for November Election

Responses to 2016 Election Results

Leaders	Mixed Impact	Laggards
Materials	Energy	Staples
Industrials	Discretionary	Technology
Financials	Health Care	Utilities
	Comm Svcs	REITs

Price Return Following Election

Sector	1 Week	2 Week	1 Month	2 Month	3 Month
S&P 500	1.5	3.1	5.2	6.8	7.6
Relative to S&P 500					
Financials	9.5	8.2	12.3	11.3	10.4
Industrials	4.3	3.1	5.0	2.3	2.2
Energy	-1.1	1.2	3.3	2.4	-4.6
Materials	0.8	0.3	3.2	0.8	2.1
Discretionary	-0.5	0.8	1.3	-2.1	-2.9
Comm Svcs	-3.7	-1.7	-1.5	0.5	1.2
Technology	-3.0	-1.1	-2.5	-2.0	2.3
REITs	-2.8	-6.1	-4.2	-2.7	-5.9
Health Care	1.4	-0.8	-5.8	-2.7	-2.7
Staples	-5.6	-6.4	-7.3	-7.4	-6.2
Utilities	-7.5	-7.6	-8.7	-6.6	-7.3

Source: Gryt Capital Analysis, S&P

Responses to Debate & Assassination Attempt

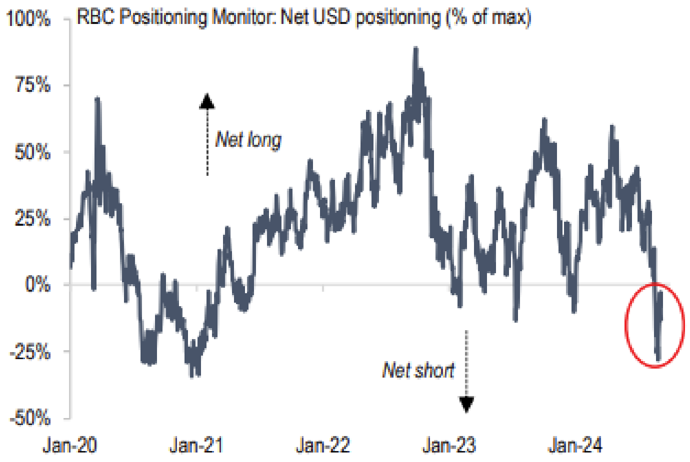
Leaders	Mixed Impact	Laggards
Energy	Materials	Utilities
Industrials	Discretionary	
Financials	Staples	
REITs	Health Care	
	Technology	
	Comm Svcs	

Price Return Following Debate & Assassination Attempt

Sector	Debate	Attack	Combined
S&P 500	-0.4	0.3	-0.1
Relative to S&P 500			
Energy	0.8	1.3	2.1
Financials	0.8	1.1	1.9
REITs	1.01	0.1	1.2
Industrials	0.5	0.4	0.9
Technology	0.0	0.1	0.1
Materials	0.4	-0.6	-0.2
Health Cae	0.3	-0.7	-0.4
Staples	-0.1	-0.9	-0.9
Comm Svcs	-1.2	0.0	-1.2
Discretionary	-1.0	-0.6	-1.5
Utilities	-0.7	-2.7	-3.3

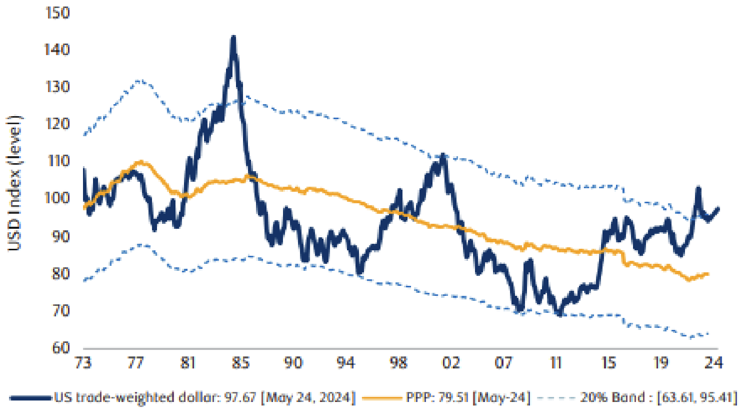
USD Currency Data

1. Largest net USD short since early 2021



Source: RBC Capital Markets, Bloomberg

Exhibit 2: USD – Purchasing Power Parity Valuation



Note: As at May 24, 2024. Source: U.S. Federal Reserve, Bloomberg, RBC GAM

2. UK REER looks expensive on a historical basis

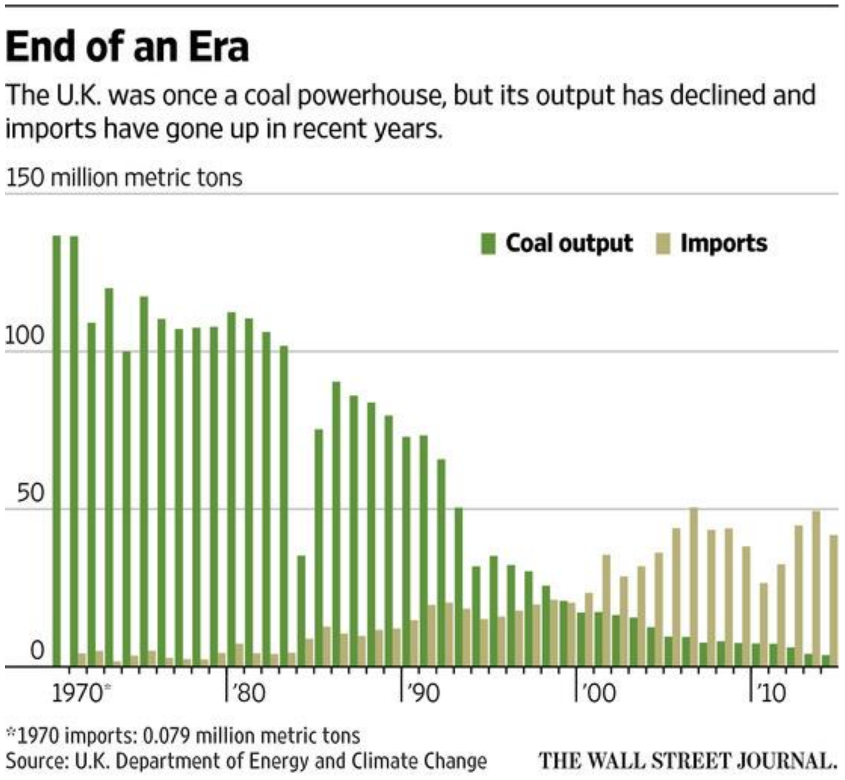
Source: RBC Capital Markets, Bloomberg

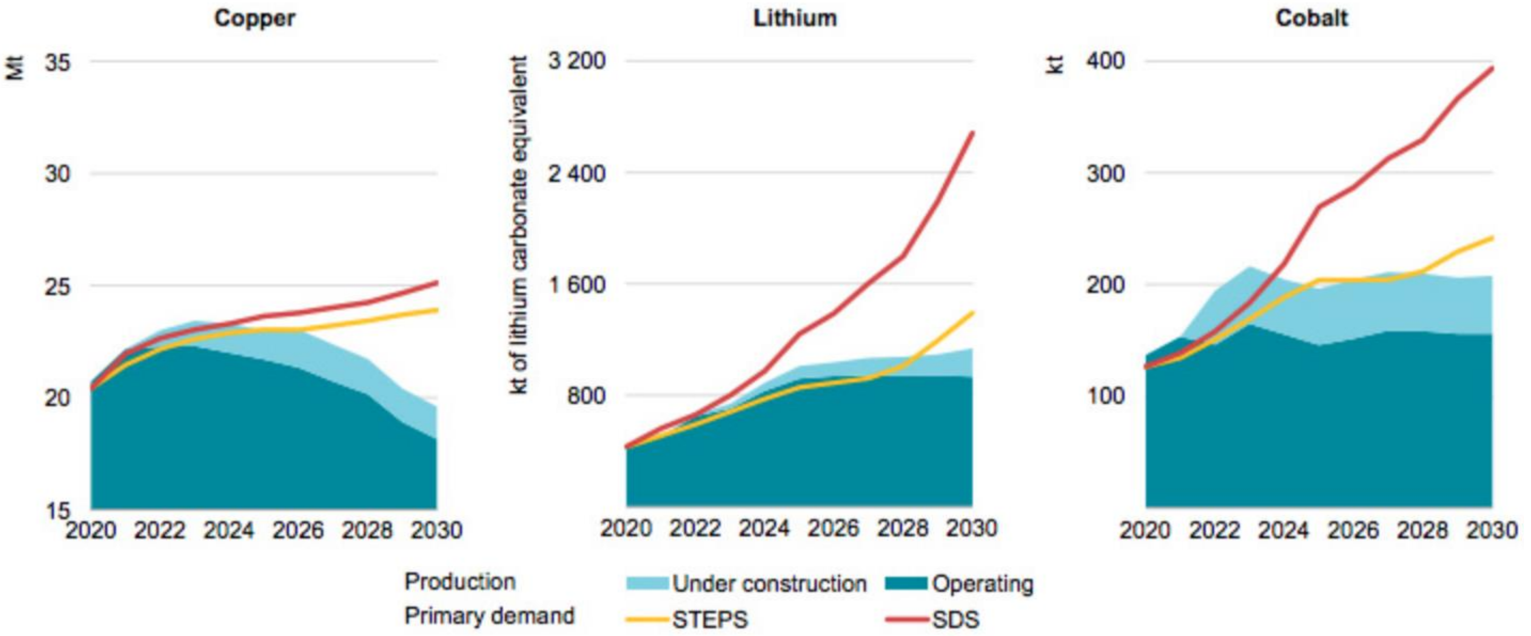
UK Portfolio Entry and Exit

Share Name	Entry Price	Target Price	Stop Loss
RELX	3539.00	4494.53	3432.83
AAL	2209.00	2761.25	2142.73
GLEN	400.80	545.08	388.77
STAN	779.40	927.49	756.02
BRBY (short)	580	477	601.5
Guiness Sustainable Energy	2120.03	2374.43	2056.43
Atlas Infrastructure	13925.95	15597.06	1351.16
iShares Core UK Gilts ETF	10.38	11.21	10.07

*Note: Entry Level as of 30th August 2024
*Note: Stop losses were assumed 2-5% decline dependent on stock volatility, however is subject to change
*Note: Currency use is GBP

UK Equities: AAL, GLEN (Mining)





Source : International Energy Agency

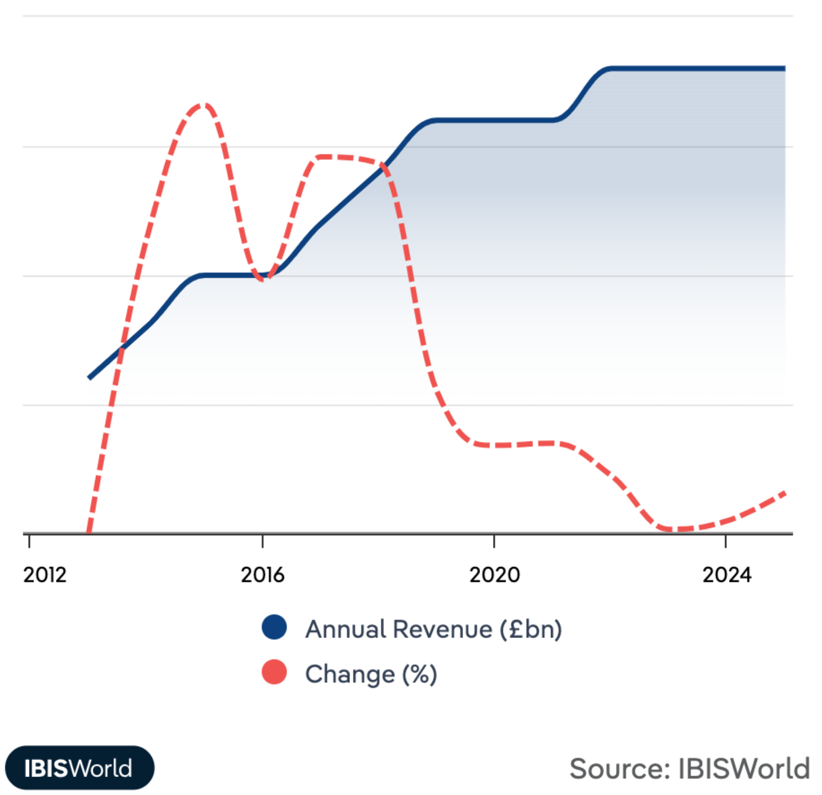
UK Equities: RELX (Data Analytics)

The company operates in 4 key segments including Scientific, Technical & Medical (STM); Risk & Business Analytics; Legal; and Exhibitions. This diversification allows the company to leverage growth opportunities across various sectors and sustain its growth. The company has also made recent acquisitions in risk management, AI, and analytics to expand its capabilities allowing them to enhance its product offerings.

- The data analytics market in UK is expected to reach a projected revenue of US$ 16,968.1 million by 2030

Business Intelligence & Analytics Software Publishing in the UK

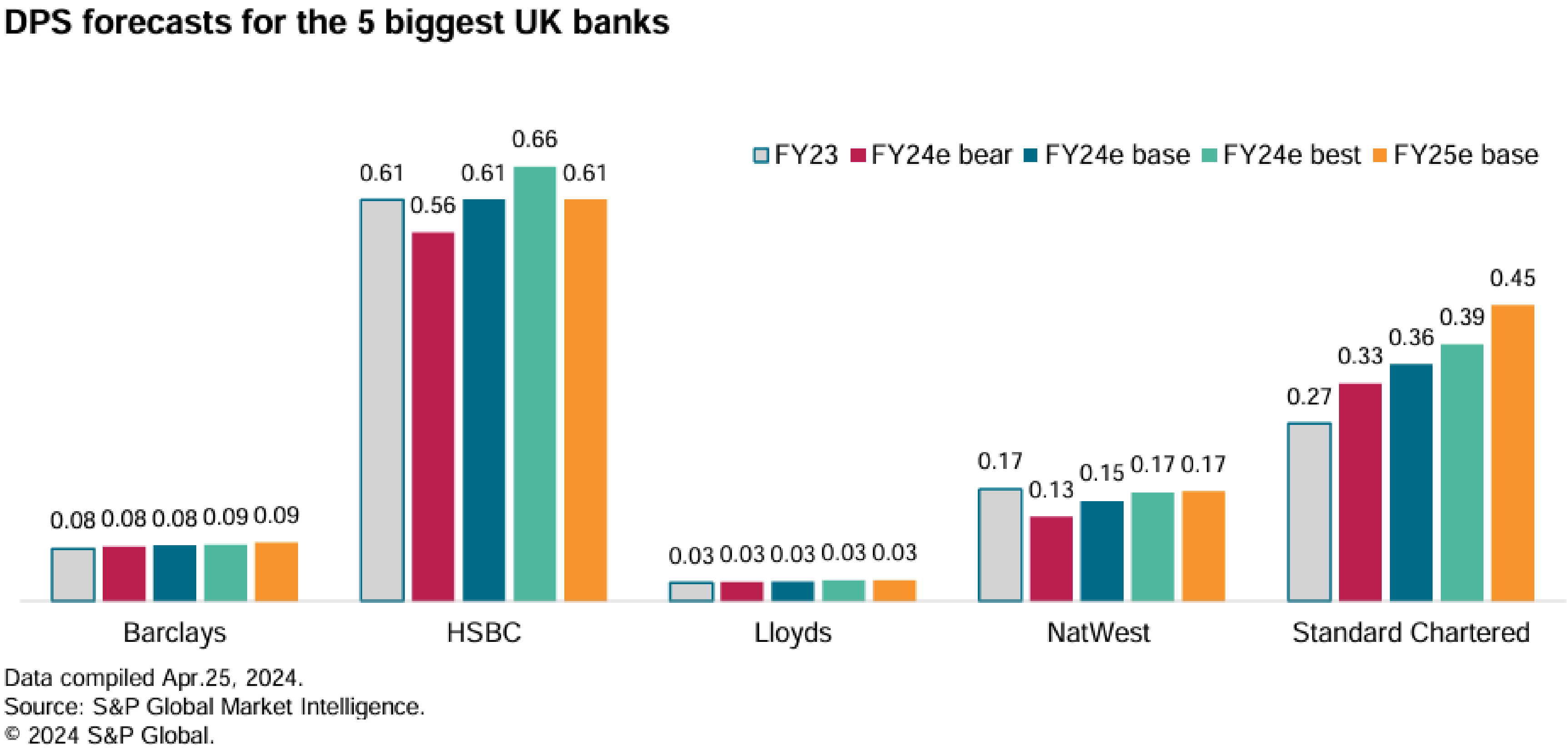
Revenue (2014-2029)



Source: IBISWorld

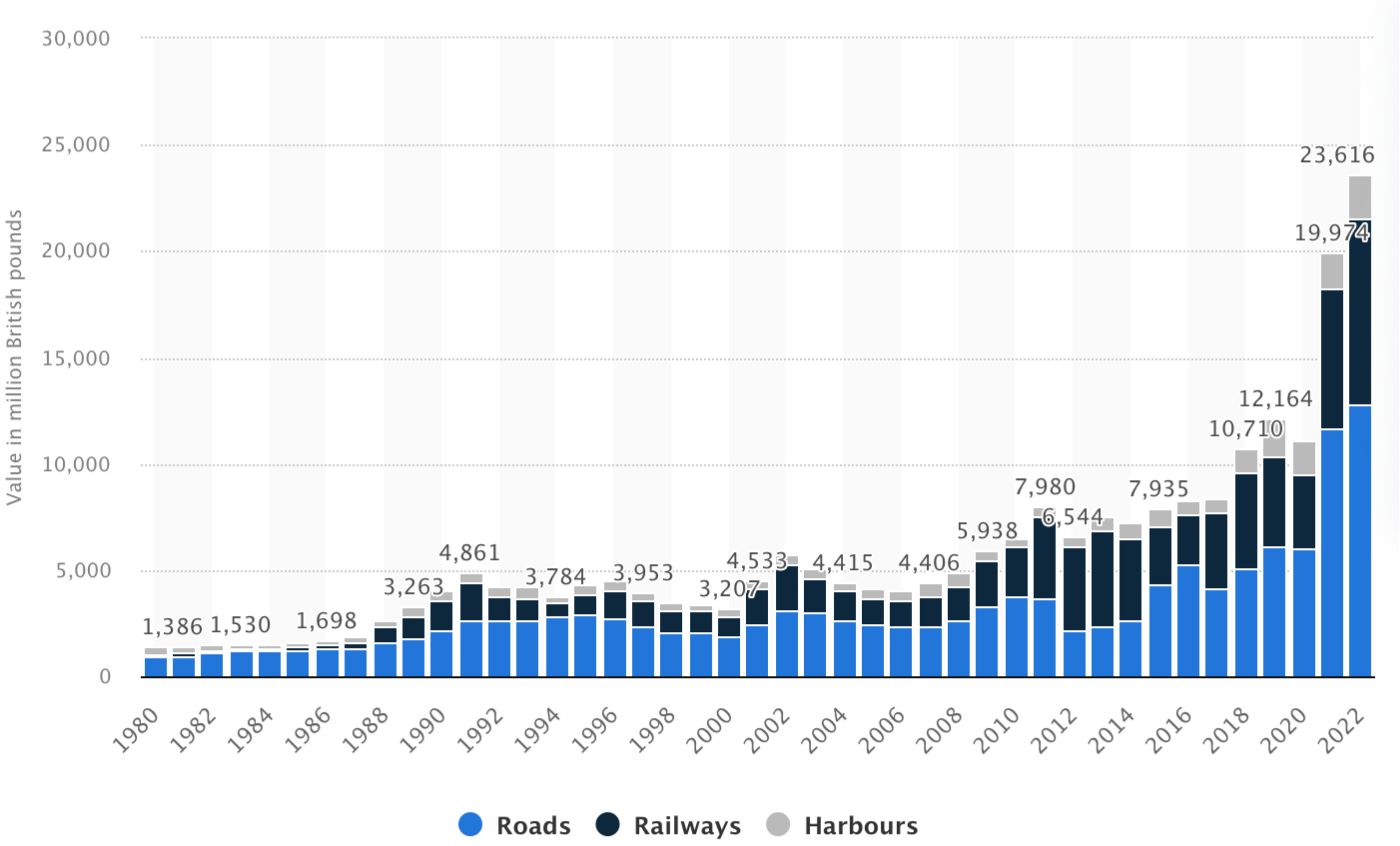
UK Equities: STAN (Banks)

- STAN has a P/S ratio of 0.62 as opposed to an industry average of 1.16 → Undervalued
- STAN has a P/E ratio of 5.16 as opposed to industry average of 8.84 → Undervalued



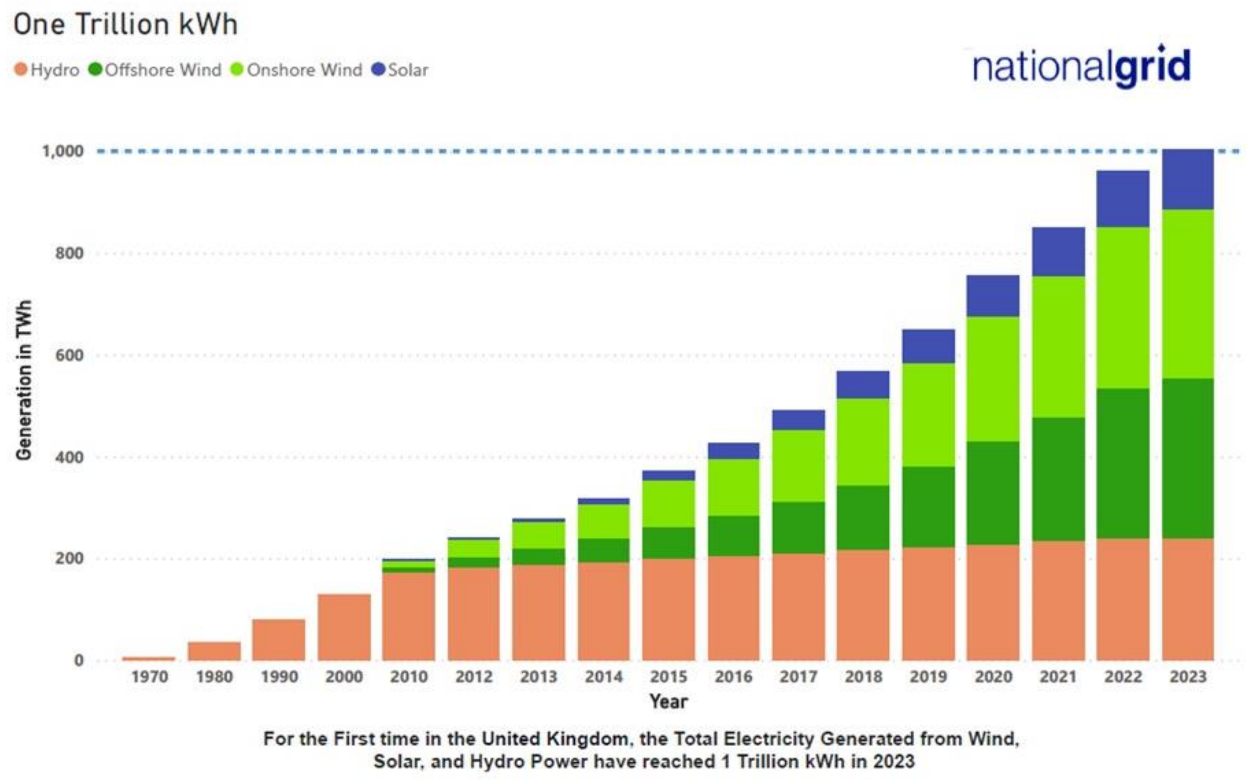
Source : Factset

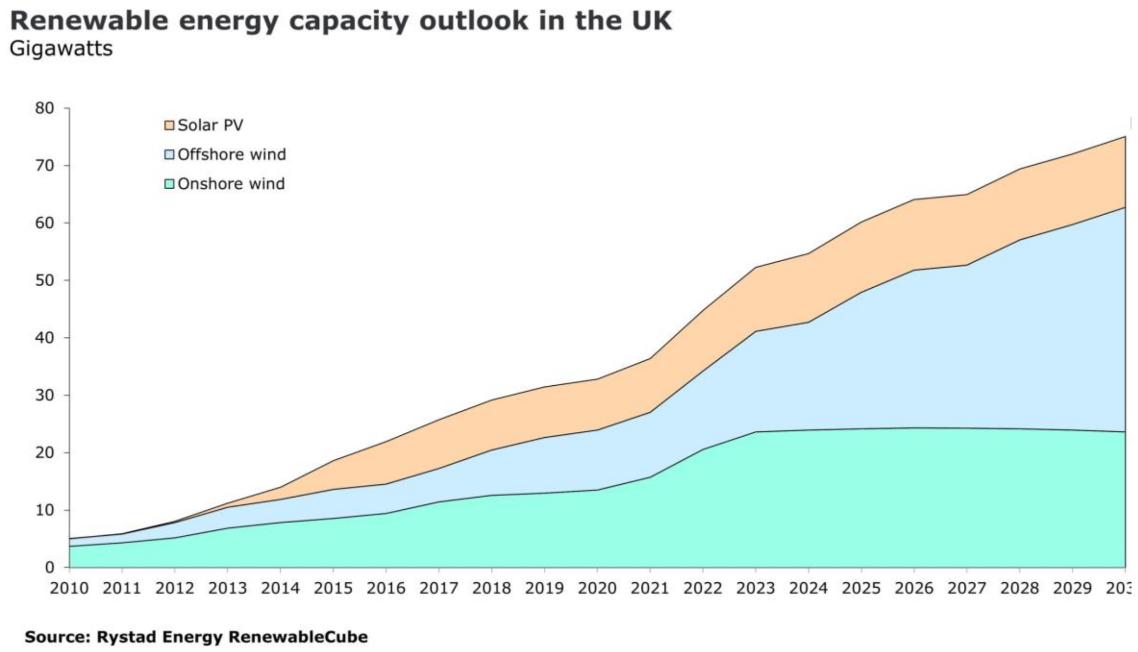
UK Real Assets: Transport Infrastructure



Source : Office for National Statistics

UK Real Assets: Renewable Energy





Source : National Grid

UK Fixed Income

Optimal position on the Yield Curve:
- Often used as the benchmark in the bond market due to its reasonable yield premium over short-term bonds
- Ability to avoid extremely volatile circumstances associated with very long-term bonds
- Typically have the best risk-adjusted return

Interest rate expectations:
- With the expectation of interest rates to decline, a 10-year GILT with higher return will bring in greater yield levels compared to shorter term with lower yield levels

Gilt Yields

NAME	COUPON	PRICE	YIELD	1 DAY	1 MONTH	1 YEAR	TIME (EDT)
GTGBP2Y:GOV **UK Gilt 2 Year Yield**	4.13	100.39	3.95%	+0	+32	-110	8:57 AM
GTGBP5Y:GOV **UK Gilt 5 Year Yield**	4.13	101.52	3.77%	+1	+6	-87	8:57 AM
GTGBP10Y:GOV **UK Gilt 10 Year Yield**	4.25	102.76	3.91%	+2	-3	-51	8:56 AM
GTGBP30Y:GOV **UK Gilt 30 Year Yield**	4.38	98.53	4.46%	+3	-5	-23	8:56 AM

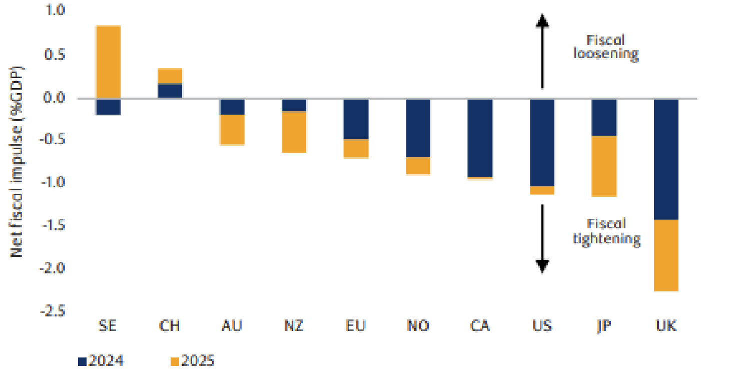
BOE Outlook

- The Bank of England (BoE is expected to cut interest rates once more in November 2024, following a rate reduction in August to 5.00% from 5.25%. This cautious approach aims to bring inflation back to the 2% target, but inflation remains a concern despite significant progress.

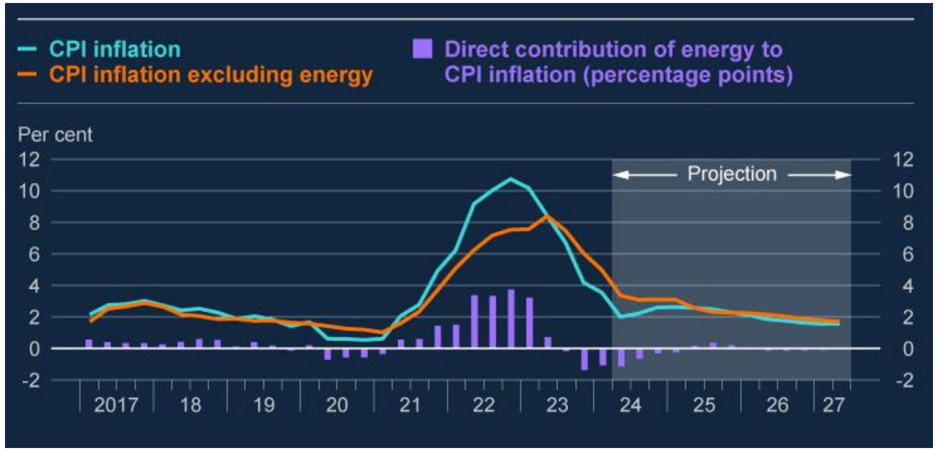
- Inflation, which peaked at 11% in 2022, has dropped to its lowest level since September 2021, currently standing at 3.3% in July 2024. However, service inflation, including rising costs in hotels, restaurants, insurance, and rents, remains elevated above past averages.

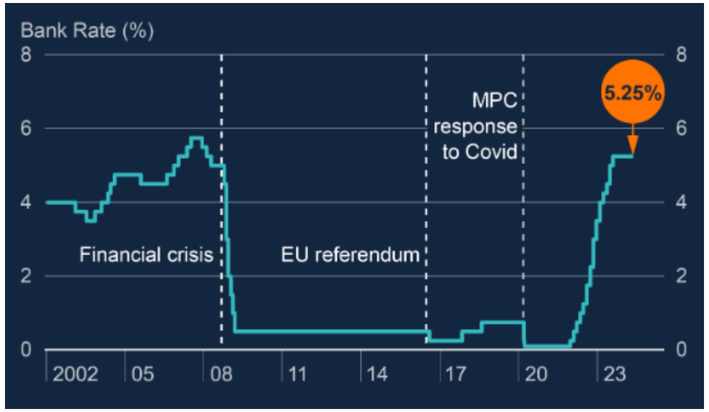
- The BoE expects inflation to continue declining, possibly reaching 2% in the coming months, but warns of potential global shocks, like rising oil prices due to geopolitical events, that could keep service inflation elevated. The bank aims to ensure inflation stabilizes before considering further rate cuts.

Exhibit 12: UK faces largest fiscal headwind among developed-market peers



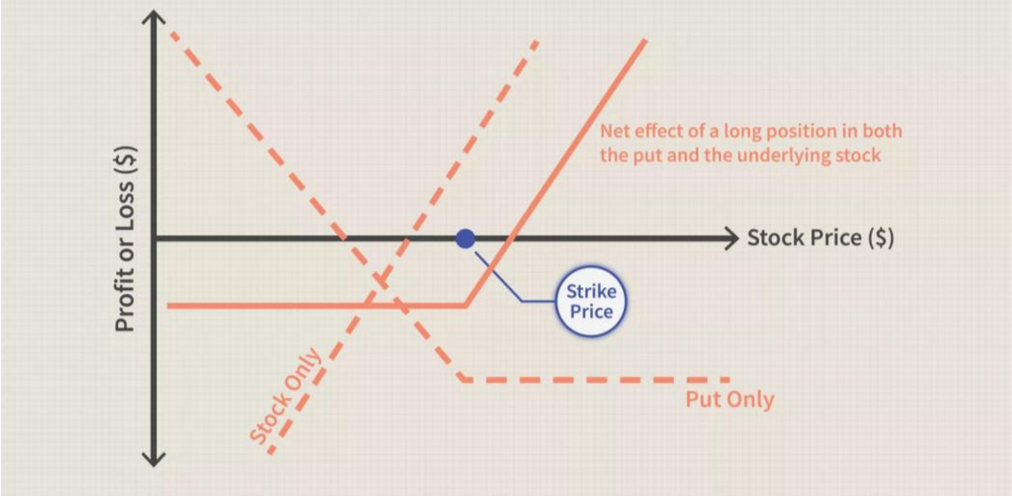
Note: As at March 2, 2024. Change in cyclically adjusted general government balance. Source: OECD, RBC Captial Markets, RBC GAM





Source: Bank of England

Interest Rate Options to Hedge Fixed Income Currency



Theoretical relationship when hedging strategy is engaged. The options contracts will protect downside risk in our Treasury based ETFs which provide diversified exposure to the government bond markets.

Fixed Income allocations generally have a strong positive covariance relationships with the AUD/USD or AUD/GBP compared to other asset classes:

- When the AUD strengthens Fixed Income returns strengthen
- When the AUD weakens Fixed Income returns weaken.

Covariance Matrix	AUD/GBP
Covariance UK Gilts	0.013

Covariance Matrix	AUD/USD
Covariance US Treasuries	0.155
Covariance US Green Bonds	0.378

Rationale

- **Foreign denominated long duration bonds are more sensitive to interest rate movements than AUD** as such during periods of rising yields (declining bond prices), hedging is required to limit downside and cap mark-to-market losses.

Coverage Ratio: 50% Hedged

- Substantially hedged given the positive covariance relationship between the AUD and chosen treasury returns, indicating that should rates rise and AUD depreciate, the depreciation will not be substantial enough to offset the mark-to-market losses on the bonds), translated to the ETF.

Strategy: Buy ATM Treasury American Treasury Put Options with 1 year expiry

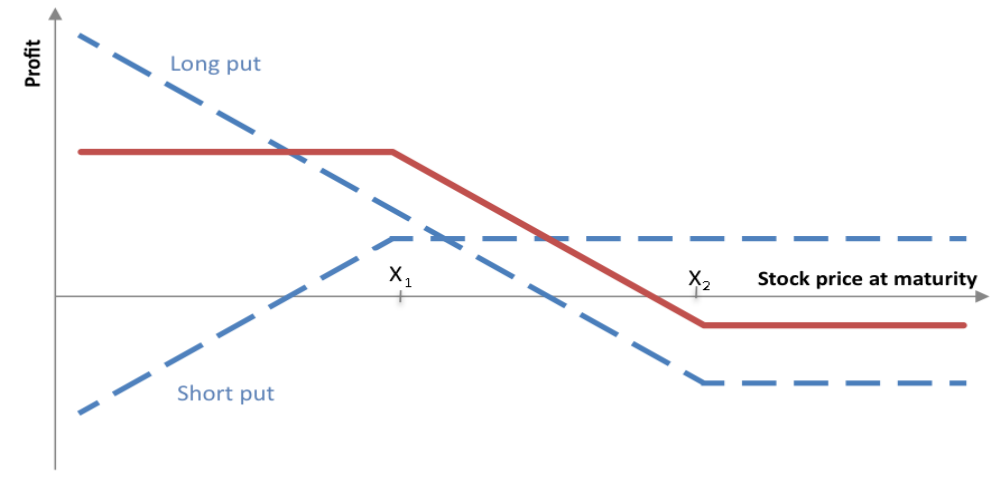
- American options allows for flexibility and ability to exercise based on long-term macroeconomic outlook.

Long-Term Investor Perspective:

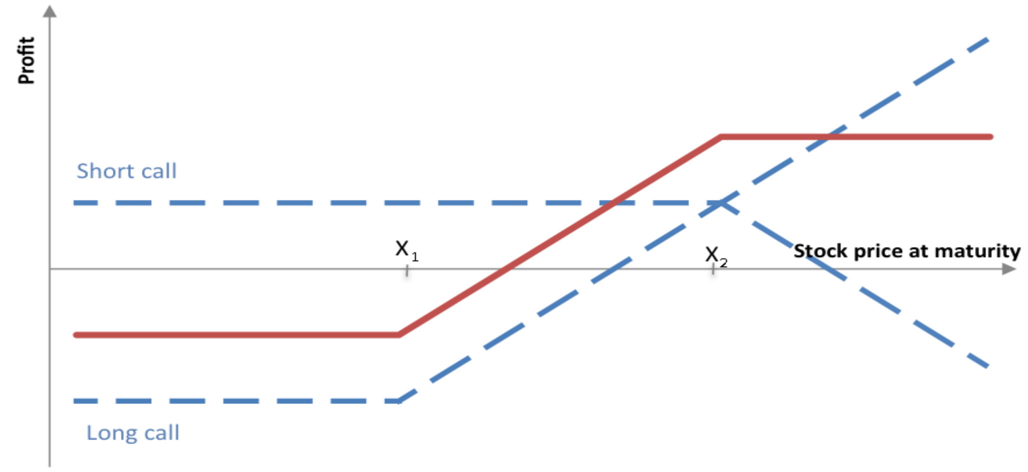
- Currency risk left unhedged due to expected mean reversion of currency fluctuations and related nature of currency and interest rates.
- **Dynamic view** where coverage ratio and extent of hedging can be updated based on ongoing market outlook.

UK Equity Options Strategy

Profit from bear spread using put options



Profit from bull spread using call options



Rationale

- Given our individual high conviction UK equity positions, there is significant volatility and concentration risk present in these positions. To protect against major downside losses hedging is required.

Strategy

- Spread American option strategy allows for a more cost-effective risk-management strategy by buying and selling options at different strike prices.
- **BULLISH TRADE (LONG):**
    1) Buy ATM European Call
    2) Sell OTM European Call at forecasted 1-year stock price
- **BEARISH TRADE (SHORT):**
    1) Buy ATM European Put
    2) Sell OTM European Put at forecasted 1-year stock price
- **Downside** is capped at the net option premium value = Price of ATM option – Price of ATM option
- Upside is capped at the forecasted 1-year stock price minus the net option premium.
- We have assumed a net premium of 1-3% for our hedging strategy
    - ATM option premium of 3-6%
    - OTM option premium of 1-3%
- Given the less liquid nature of UK Option Markets relative to the US/EU we have factored in an illiquidity premium.

Argument for minimal direct currency hedging

Cyclicality of AUD

- AUD is cyclical, meaning it naturally hedges against currency risks over the long term.
- **Selective Hedging** against assets with high covariances of the AUD to mitigate rate risk and volatility strengthens the portfolio against extreme stress scenarios.

Currency Diversity

- Strategically positioned portfolio, with dual currency exposure, and internal multinational currency exposure through global equities provides safety and a natural hedge against adverse currency movements.

Long-Term Horizon Returns

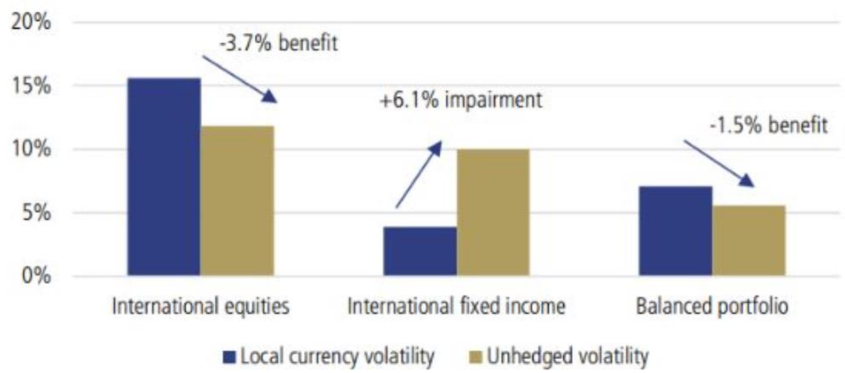
- Over a long-term horizon based on mean-reversion theory, currency fluctuations will even out. As such hedging costs can erode returns and even increase volatility. The constructed portfolio is designed to have inherent currency hedges as such it has inherent protection against currency movements.

Covariance Analysis Volatility

- The impact of hedging on a portfolio is dependent on the size of covariance between the asset and the exchange rate. Through careful covariance analysis, these risks can be managed selectively to minimize volatility and maximise return

Figure 2 – S&P 500 AUD hedged versus unhedged cumulative performance and USD/AUD. Source: Bloomberg

Effect of foreign currency exposure on portfolio volatility over the past 20 years



Sources: Bloomberg, FactSet, LGT Crestone. Includes diversification benefits. Data as at June 2023. Percentage per annum.

Equity performance hedged verses unhedged

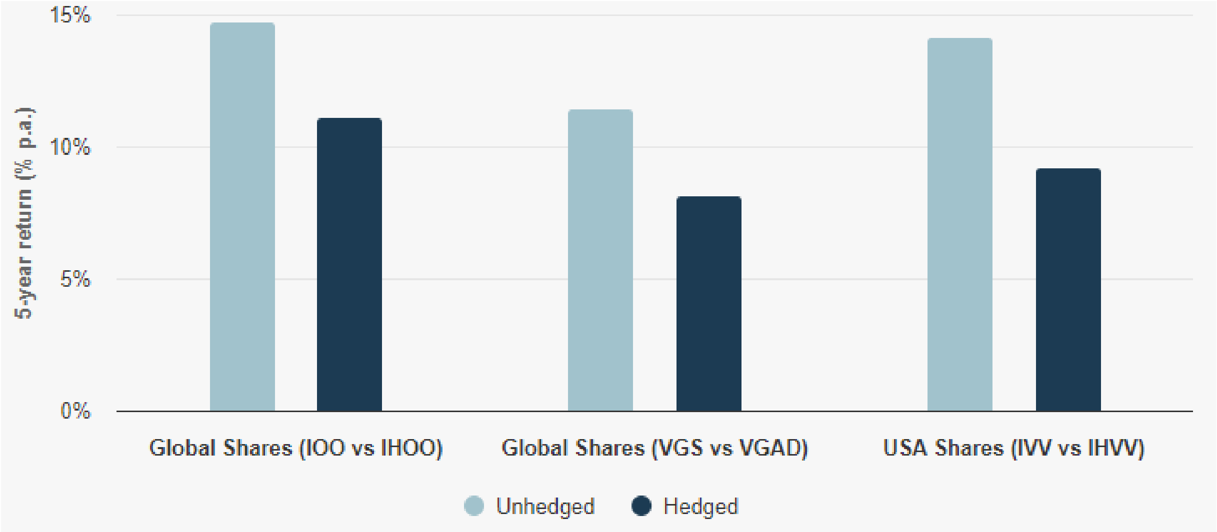
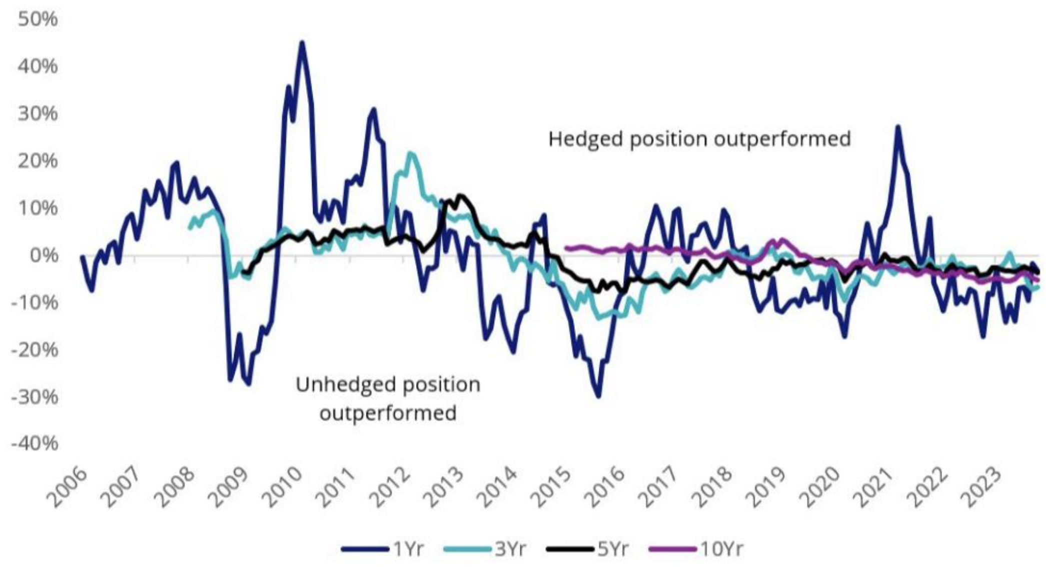


Figure 1 – Rolling S&P 500 AUD hedged less unhedged annualised returns



Source: Bloomberg. Past performance is not indicative of future results.

Covariance Hedging Determination

Covariance US	US Industrials	US Healthcare	US Tech Breakthrough	US Energy	Gold	Infra - Index	LNG	Green Bond - USD	US T (7-10yrs)	AUD/USD
AUD/USD	-0.036019425	-0.068965036	-0.022208099	-0.32889761	-0.057981336	-0.079889515	-3.109053332	0.154697829	0.375836125	0.001818173

Covariance UK	Glencore	Anglo American	Relix	Stan	BBRY	Energy - Real Assets	Transport - Real Assets	Fixed Income	AUD/GBP
AUD/GBP	0.027686327	6.262288908	-6.935302428	-0.843248622	2.596223388	0.621174173	1.163441493	0.013104421	0.000429586

Portfolio Volatility Components
Volatility comes from the foreign asset returns, spot exchange rate movements, and correlations between the exchange rate and asset returns (covariance).

Effect of Covariance on Volatility:

- **Positive Covariance –** in this scenario, hedging reduces overall volatility. Since with positive covariance, AUD appreciation often coincides with higher asset returns.
- **Negative Covariance –** in this scenario the impact of hedging on volatility depends on negative covariance size. If negative covariance offsets exchange rate volatility, total portfolio volatility may increase with hedging.

UK Commentary:

1) All negative covariances exceed substantially exceed the variance of the AUD/GBP thus suggesting no hedging is required to reduce portfolio volatility.

2) Individualised UK equities have high covariance signal:

   - based on further analysis these equities have high levels of historical volatility suggesting that equity volatility is the main driver of risk.
   - Therefore, equity option-based hedge is sufficient to manage volatility risks.

3) Real Asset proxies have substantial positive covariances, however due to the illiquid, stable and long-term nature of these investments hedging is not required as currency movements should even out based on mean reversion theory in the long run.

4) Fixed Income assets have positive covariances. This risk is related to interest rate risk and as such has been hedged.

US Commentary:

1) All negative covariances exceed substantially exceed the variance of the AUD/USD thus suggesting no hedging is required to reduce portfolio volatility.

2) Real Asset proxies have substantial positive covariances, however due to the illiquid, stable and long-term nature of these investments hedging is not required as currency movements should even out based on mean reversion theory in the long run.

3) Fixed Income assets have positive covariances. This risk is related to interest rate risk and as such has been hedged.

Historical Periods of Hawkish Monetary Policy

United Kingdom

1970s Inflation Control (1972–1980)

- The UK faced high inflation in the 1970s due to the oil crisis and economic challenges. Interest rates were raised throughout the late 1970s to tackle inflation, which reached over 20%
- The Bank of England raised interest rates repeatedly by working with the government. Rates peaked at around 17% in 1980 before inflation was brought under control.

1990s Pre-ERM Crisis and Inflation Control (1988–1992)

- In the late 1980s, the BoE raised rates aggressively to control inflation, which had been rising due to strong economic growth. The UK also joined the European Exchange Rate Mechanism (ERM) in 1990, which required high interest rates to maintain the pound’s value against the Deutsche Mark.
- Interest rates reached as high as 15% in 1992, but the UK was eventually forced to leave the ERM in the "Black Wednesday" crisis, leading to a collapse in the pound.

Mid-2000s Tightening (2003–2007)

- The BoE began raising rates in 2003 due to strong economic growth, a booming housing market, and rising inflation. Interest rates were gradually increased from around 3.5% in 2003 to 5.75% in 2007.
- This tightening period was cut short by the onset of the Global Financial Crisis in 2007–2008, which prompted the BoE to cut rates drastically in the aftermath.

Post-Brexit and COVID Tightening (2021–Present)

- After an extended period of ultra-low interest rates, the BoE began raising rates in December 2021 to combat rising inflation, exacerbated by supply chain disruptions and energy price increases following Brexit and the COVID-19 pandemic.
- The BoE has steadily increased rates from near-zero to over 5% by mid-2023, marking its most aggressive tightening since the 1980s. The inflation surge has prompted ongoing rate hikes.

United States

Volcker Era (1979–1987)

- Federal Reserve Chairman Paul Volcker significantly raised interest rates to combat double-digit inflation. The federal funds rate peaked at around 20% in 1981.
- It caused two recessions (1980 and 1981-1982) but successfully reduced inflation from over 13% in 1980 to around 3% by 1983.

Mid-1990s Tightening (1994–1995)

- In 1994, under Chairman Alan Greenspan, the Fed aggressively hiked interest rates to prevent inflation as the U.S. economy strengthened. The Fed raised rates by 3 percentage points over 12 months.
- This preemptive tightening helped keep inflation low without causing a recession..

Post-Financial Crisis Tightening (2015–2019)

- After an extended period of ultra-low interest rates and quantitative easing, the Fed began tightening under Chair Janet Yellen in December 2015.
- The Fed raised rates from 0% to 2.5% by 2019, marking a slow but steady return to normalization, but paused and reversed course due to slowing economic growth and trade tensions.

Post-COVID Tightening (2022–Present)

- In response to high inflation the Fed initiated rapid interest rate hikes under Jerome Powell starting in March 2022. The federal funds rate jumped from near-zero to over 5% in 2023
- The sharp rate increases aimed to bring inflation down from levels exceeding 8%, with effects still playing out in economic growth and inflation trends.