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INSIGHT

# The case for 'mid-risk' assets in a 'lower for longer' interest rate world

Economic uncertainty and ongoing monetary policy accommodation imply that risk free interest rates of return will remain low, cycling around a structurally lower average for an extended period. In this 'lower for longer' interest rate world, investors have started to reconsider the risk reward trade-off that has historically been relied upon to bolster returns. It is our contention that 'mid-risk' assets (unlisted infrastructure equity and debt, unlisted property) will become relatively more attractive to institutional investors in this environment as they provide much needed diversification, along with solid expected returns that are less correlated and less volatile than traditional listed assets.

November 2019



## PART 1 Setting the scene - why interest rates will be lower for longer

### Monetary policy in easing mode again

Through much of this year it has become clear that central banks would have to wind back their expectations of 'normalising' policy interest rates and adopting more conventional policy stances and instead commit to more monetary policy accommodation. This is where we find ourselves in late-2019, with most advanced economy central banks either adding further stimulus, or assessing the timing of doing so, because their economies face increasing downside risks.

The underlying reasons for this are relatively straight forward. Global growth is being challenged by heightened geopolitical risks and global trade tensions, whilst structural headwinds to potential growth rates are also dragging on growth. This has left these economies unable to generate sustainable inflationary momentum.

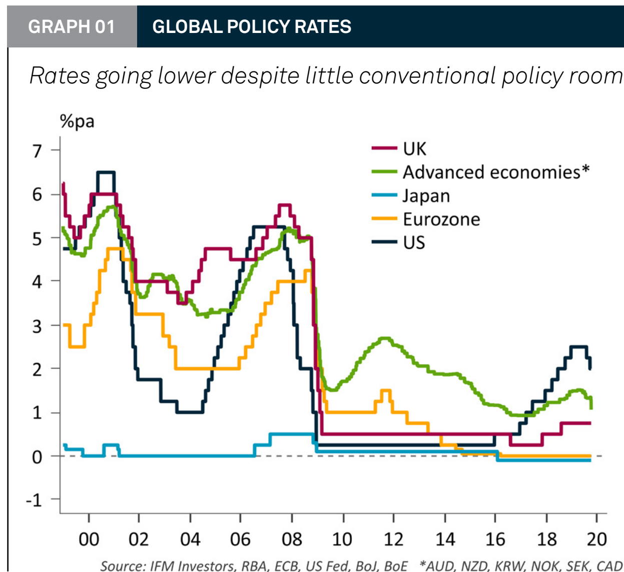
However, this re-commitment to monetary policy comes without any material normalisation of policy rates over preceding years and has left little room for a conventional policy response for many central banks. Consequently those central banks that have some policy space above zero will move rates toward zero and potentially lower, those that have negative rates may take them more negative and both may have to consider further quantitative easing or other unconventional policies. To some extent, central bankers have been coerced to take this path by fiscal policymakers that are

unwilling or unable to take the lead. As such global central banks have sought to 'double down' on their commitment to generate economic growth and inflation.[1]

haven assets) that rates may rise and fall in a cyclical fashion, but interest rates staying "lower for longer" is likely the "new normal" in a secular sense. We detail the rationale for this argument below.

GRAPH 01 GLOBAL POLICY RATES

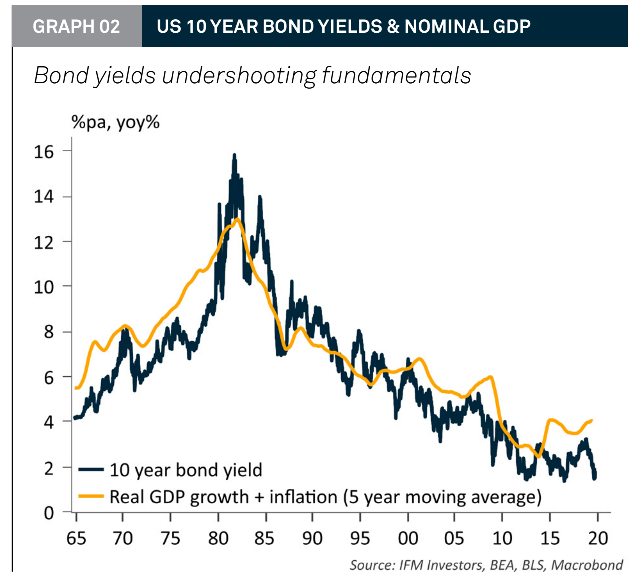
*Rates going lower despite little conventional policy room*




Source: IFM Investors, RBA, ECB, US Fed, BoJ, BoE *AUD, NZD, KRW, NOK, SEK, CAD

GRAPH 02 US 10 YEAR BOND YIELDS & NOMINAL GDP

*Bond yields undershooting fundamentals*




Source: IFM Investors, BEA, BLS, Macrobond

Whether this is an appropriate course remains to be seen, we suspect it may not be as the cyclical tool of monetary policy seems increasingly unable to generate sustainable real economic growth.

## Cyclical tools won't solve structural problems

Many advanced economies have similar economic issues - modest wages growth, lack of inflation momentum, weak productivity, subdued investment, high debt and deteriorating demographics. Consequently, economic growth has been at or below potential. The solution to this problem to date has been monetary policy – with policy interest rates hitting new lows and unconventional monetary policies becoming conventional.

The realisation is only now dawning on central bankers that structural economic problems cannot be effectively remedied by monetary policy alone. Fiscal stimulus and more importantly, structural reform, need to step in and help. However governments globally remain incapable and/or unwilling to act in a meaningful way, consequently the status quo will likely prevail.

The prominent exception to this is the US that injected massive fiscal stimulus into its economy, facilitating the Fed's tightening cycle in 2016-18. That stimulus is now fading and reversing, which has in part driven the Fed's recent shift back towards policy easing.

The above factors underpin our assertion (based on an economic rationale rather than stronger demand for safe

## Lower neutral policy rates

The "neutral" rate of interest is the rate at which policy is considered to have moved from accommodative to contractionary. It is this rate that will define how high future interest rates can go, flowing through to global bond yields and risk free interest rates.

Central banks seem to agree that the neutral rate is indeed lower than it has been historically. Most importantly for global markets and bond yields, the US Federal Reserve (Fed) subscribes to this view. Over recent years the Fed's expectation of what the neutral rate will be has trended lower. In September 2012 the Federal Open Market Committee (FOMC) forecast the neutral longer term interest rate at 4.25% compared to its forecast of 2.75% in September 2017 (indeed recent developments suggest it may be lower). Studies for the Eurozone imply that the bloc's real neutral rate of interest is around zero.

This issue is also pertinent in small open economies like Australia. The Reserve Bank of Australia (RBA) noted earlier this year that its estimate of the neutral rate is around 3.5% compared to above 5% in the pre-financial crisis, pre-resources bust period. The Bank of Canada has been discussing the neutral rate for some time and reiterated in its July 2017 Monetary Policy Report that "The neutral nominal policy rate in Canada is estimated to be between 2.5 and 3.5 per cent."

We also believe that neutral policy interest rates will be lower than average for an extended period and

[1] Prominent among these is, of course, the Fed with Chairman Powell asserting he "will act as appropriate" to get US inflation to target. But he was not alone: Governor Kuroda at the Bank of Japan said that he "...will not hesitate" to take additional easing measures if Japanese inflation loses momentum. President Draghi and the Governing Council would be "determined to act" should the ECB continue to "fall short" of its inflation objective. And in Australia, Governor Phil Lowe stated that he and the RBA Board are "strongly committed to making sure we get there", in reference to the midpoint of the Bank's 2-3% inflation target.

consequently so will long-term treasury rates (risk free rates). This argument is based on our view of three fundamental drivers:

1. Real GDP growth and potential growth rates
2. Elevated public and private debt levels
3. Inflation rates

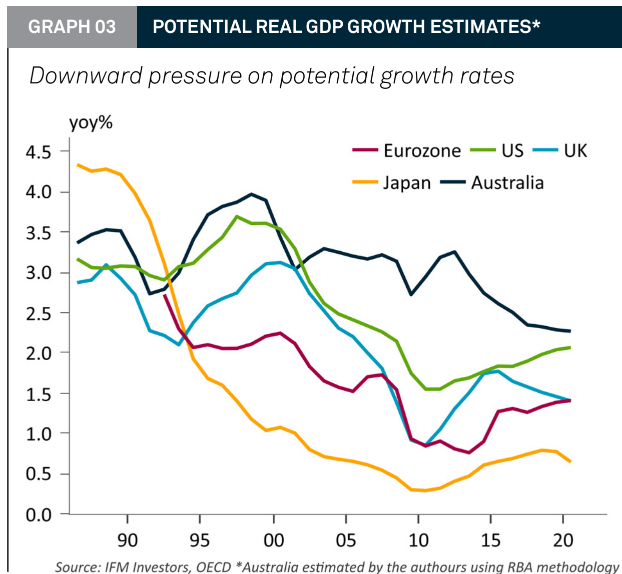
Each of these drivers is discussed in detail below.

## Lower potential growth

Central banks note that lower potential growth rates of real GDP are a key driver of a lower neutral interest rate outlook. The real GDP growth outlook is particularly impacted by lower productivity growth, reduced labour supply (via deteriorating demographics) and reduced growth in capital inputs. Indeed, neutral rates of interest and potential economic growth have likely declined in lock-step. This is a global phenomenon and advanced economy potential growth rates, as estimated by central banks, have been in decline for the past two decades – all due to similar factors.

GRAPH 03 POTENTIAL REAL GDP GROWTH ESTIMATES*

*Downward pressure on potential growth rates*



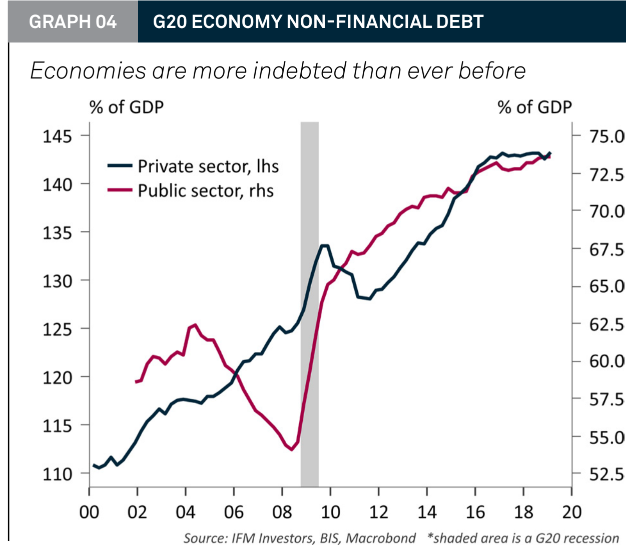

Source: IFM Investors, OECD *Australia estimated by the authours using RBA methodology

## High levels of public and private debt

Aggressive monetary policy easing by central banks has created a situation in which accommodation is now more difficult to remove. Given the high level of private debt across the developed world, rising interest rates are much more powerful than in the past. Monetary policy has become a very asymmetric tool - further policy easing will likely have limited impact on corporate and household behaviour but raising rates would likely have a material impact on heavily indebted households, particularly newer borrowers.

GRAPH 04 G20 ECONOMY NON-FINANCIAL DEBT

*Economies are more indebted than ever before*



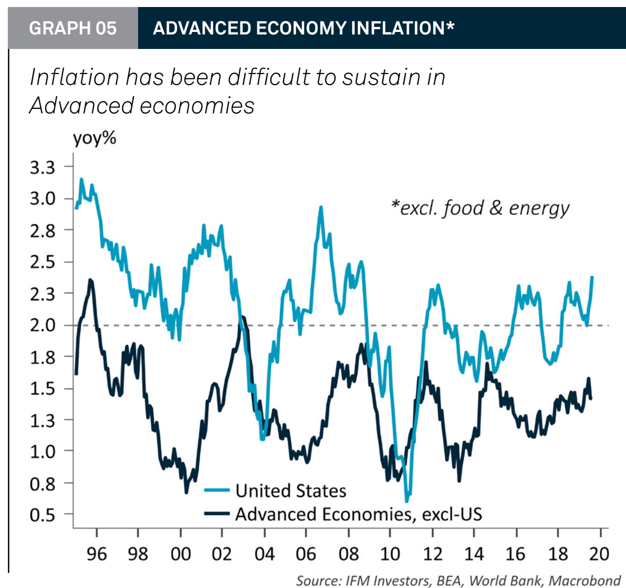

Source: IFM Investors, BIS, Macrobond *shaded area is a G20 recession

## Weaker inflation

Inflation has been particularly weak in recent years, and the 'reflation' that was hoped for in the global economic upswing in 2016-17 failed to gather any self-sustaining momentum. Currently central banks are doing all they can to encourage inflation back to target ranges – with varying degrees of success.

GRAPH 05 ADVANCED ECONOMY INFLATION*

*Inflation has been difficult to sustain in Advanced economies*




Source: IFM Investors, BEA, World Bank, Macrobond

It is becoming increasingly clear that structural headwinds are working against inflation, particularly in advanced economies. These include the rise of technology and automation, deteriorating demographics, increased competition/lack of pricing power and high indebtedness. These factors are likely to continue to keep inflation rates relatively subdued.

## Rates to remain lower for longer

To sum up, economic uncertainty and ongoing monetary policy accommodation imply that risk free interest rates of return will be lower for longer – cycling around a

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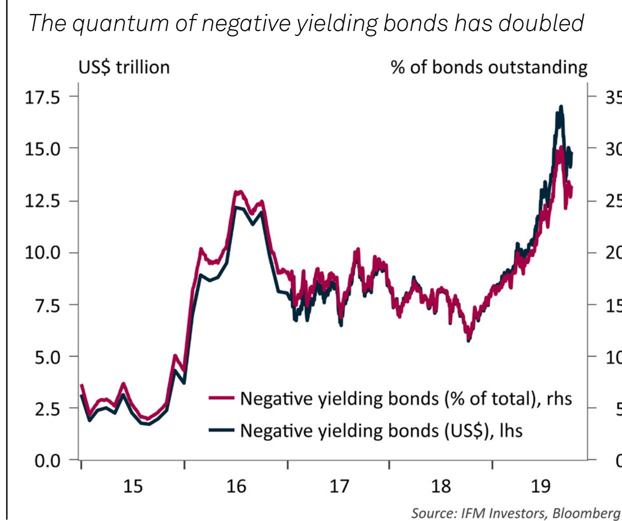
structurally lower average for an extended period.

In markets, US 10-year bond yields are again below 2% (despite nominal GDP growth – a traditional anchor – of around 4%), Australian 10-year yields are around 1%, Japan's yields on bonds with maturities less than 20-years are all negative, and the entire German yield curve is submerged.

At the time of writing, around US$15 trillion of bonds – around 25% of the total – had negative yields. This is a measure of investor risk perception around the global economic outlook and a bet that monetary policy makers will do whatever it takes to support the global economy. Nonetheless, after such aggressive moves in bond markets, investors face historically low returns where they are not being compensated for the risks they are taking.

**GRAPH 06** **NEGATIVE YIELDING BONDS OUTSTANDING**

*The quantum of negative yielding bonds has doubled*

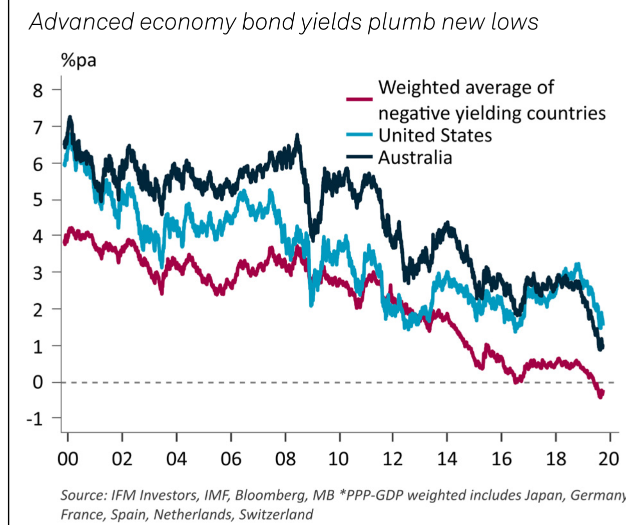



*Source: IFM Investors, Bloomberg*

This cyclical response of interest rates to potential economic weakness has entrenched what is a structural thematic. The 'secular stagnation' afflicting global economies, with particularly reference to economic activity and inflation, will continue to be reflected in the level of risk free rates of return – arguably for an even longer period than first thought. Bond yields being 'lower for longer' is the 'new normal'. This is particularly true in an environment where monetary policy is so heavily relied upon and potential fiscal policy stimulus has not been drawn upon in most advanced economies (and has faded in the US).

**GRAPH 07** **GLOBAL BOND YIELDS**

*Advanced economy bond yields plumb new lows*




*Source: IFM Investors, IMF, Bloomberg, MB *PPP-GDP weighted includes Japan, Germany, France, Spain, Netherlands, Switzerland*

As we will see in Parts 2 and 3 of this article, this has significant implications for asset allocation and perceptions of the risk/reward trade-off across asset classes.

## PART 2 Asset allocation in a 'lower for longer' world – introducing 'mid-risk' assets

There has been a clear move by global investors to de-risk portfolios in response to a weaker global outlook, the return of monetary policy easing and the potential for a 'lower for longer' interest rate world.

This is certainly observable in higher frequency US mutual fund data that covers traditional liquid asset classes. Investors lost faith in global growth in late 2018 as the economic data in advanced economies became increasingly patchy, but the US economy, buoyed by fiscal policy, was still outperforming.

Hence, investors wound back their expansion into global equity markets in favour of a rotation back to US domestic equities. By the end of 2018, global central banks turned dovish and the risks to global growth had increased, prompting a further rotation away from both US and global equities towards a traditional safe haven assets like bonds and cash.

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**Bond yields being 'lower for longer' is the 'new normal', particularly in an environment where monetary policy is so heavily relied upon.**

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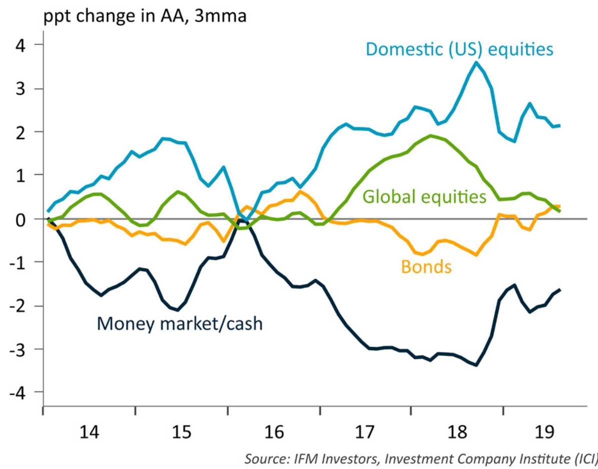
GRAPH 08 ASSET ALLOCATION OF US MUTUAL FUNDS

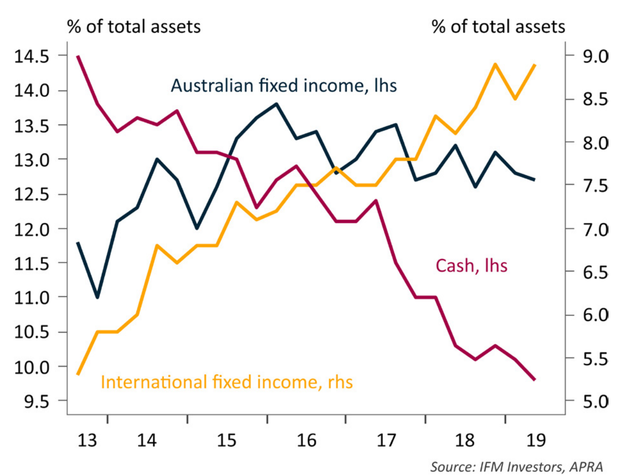
*US investors have pulled back on risk*




Source: IFM Investors, Investment Company Institute (ICI)

GRAPH 09 ASSET ALLOCATION OF SUPERANNUATION FUNDS

*Australian investors putting capital to work*




Source: IFM Investors, APRA

Notwithstanding these recent trends, US investors' 'tilt' to domestic and global equities remains intact despite global growth concerns and trade tensions (see table below). US investors are also overweight bonds, from an historical perspective, in an effort to reduce risk and benefit from the recent rally underpinned by the shift in monetary policy direction. It is likely that within this asset class there has also been some additional risk taken to pursue higher yields, from government bonds to those up the credit curve. This shift into both bonds and equities comes at the expense of cash assets which are currently quite low.

| Asset class | Current allocation (%) | Average since 2000 (%) |
|---|---|---|
| **Domestic (US) equities** | 40.0 | 39.0 |
| **Global equities** | 13.8 | 11.3 |
| **Bonds** | 22.4 | 18.9 |
| **Cash/money market** | 16.1 | 23.6 |

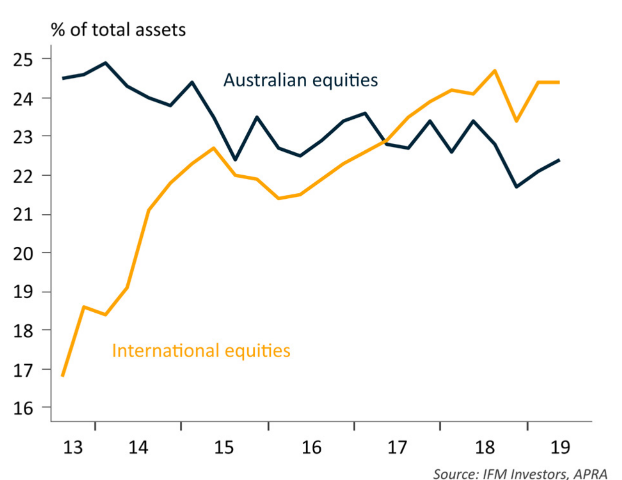
Source: IFM Investors, Investment Company Institute, Data as at Sep 2019.

Australian superannuation funds have demonstrated similar asset allocation shifts, reducing cash holdings in favour of higher return global fixed income investments that had outperformed the same asset class in Australia for some time due to the different monetary policy stances that prevailed up until early 2019. More recently, the Reserve Bank of Australia's policy capitulation in the face of global and domestic pressures has prompted more investor interest in domestic fixed income, but this has not yet been reflected in these relatively lagged quarterly data.

To take advantage of global growth prior to 2018, Australian superannuation investors also proactively moved into global equities. This was encouraged by an underperforming domestic market, hence portfolio exposures to Australian equities have been in gradual trend decline.

GRAPH 10 ASSET ALLOCATION OF SUPERANNUATION FUNDS

*Australian investors taking stock of growth narrative*




Source: IFM Investors, APRA

Australian investors' allocation to global asset classes has increased from 22.5% in September 2013 to 34.4% in March 2019, primarily driven by two trends:

- **Australia's superannuation system** - At just over 146.7% of GDP, Australia's pool of superannuation capital is one of the largest in the world.[2] It is 'outgrowing' domestic markets and, for diversification reasons as much as anything else, the sector must increasingly deploy capital into global markets.
- **Improved valuations of global asset classes** - Over the above timeframe, global asset values broadly outperformed domestic markets but the more powerful impact on valuations has been the Australian dollar.

[2] Using the most recent quarterly data compiled from APRA, ATO, ABS and the Future Fund

» The exchange rate declined from US$1.05 in April 2013 to US$0.67 currently – a 36% tailwind. This occurred despite investors having solid hedge ratios across asset classes (which are shorter term than the investment itself).

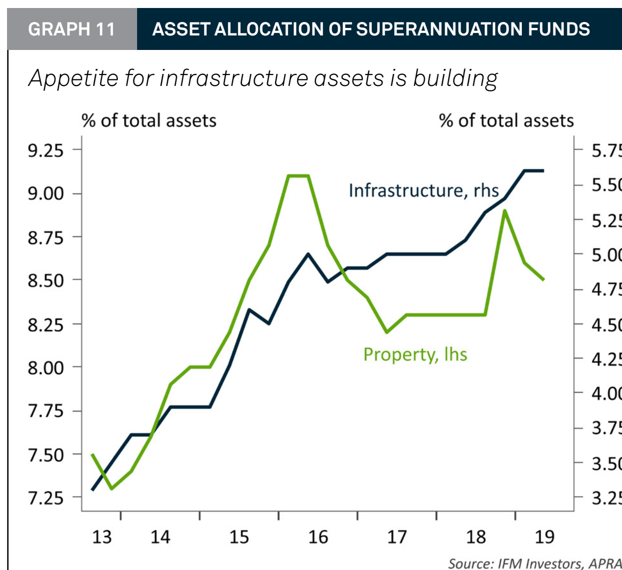
With the Australian dollar just below its historical average and the outlook for global asset returns now more uncertain, these two tailwinds are unlikely to be as strong in future. However, there seems little doubt that the growing volume of superannuation money domestically will continue to force Australian investors to commit more to offshore assets.

Another key differentiator of Australian investors' asset allocation behaviour is the relatively high exposure to unlisted asset classes, most notably infrastructure (both domestic and global) and property. The proportions of funds under management (FUM) allocated to these asset classes have increased from 3.3% to 5.6% (infrastructure) and 7.5% to 8.6% (property) since 2013. On a global basis, this is relatively high for pension fund investors, particularly for unlisted infrastructure.

Property and infrastructure are known (in Australia) as 'mid-risk' asset classes. These are recognised as providing diversification benefits as they tend to exhibit lower correlation and volatility than other asset classes and this has supported the risk-adjusted returns of Australian superannuation funds in recent years. The attractiveness of infrastructure assets in particular also reflects relatively unique risk-return characteristics and also match long term investors with assets that reflect their future liabilities.

GRAPH 11 ASSET ALLOCATION OF SUPERANNUATION FUNDS

*Appetite for infrastructure assets is building*




*Source: IFM Investors, APRA*

In Part 3 of this article we argue that the expected future macro-economic environment and subtle shifts in perceptions of investment risk are likely to reinforce this strong demand for mid-risk asset exposure, both in Australia and globally.

## PART 3 Why 'mid-risk' assets are increasingly attractive in a lower for longer world

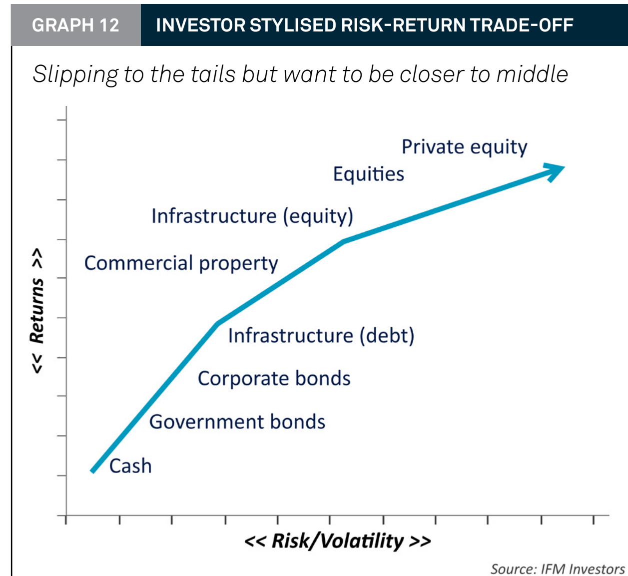
In a prevailing 'lower for longer' interest rate world, investors have started to reconsider the risk reward trade-off that has historically been relied upon to bolster returns. In this environment it is our view that 'mid-risk' assets (unlisted infrastructure equity and debt, unlisted property) are likely to become relatively more attractive to institutional investors. In particular as they provide much needed diversification away from listed asset classes by having a combination of solid expected returns characterised by lower volatility and correlations.

### Risk-return – slipping to the tails

Before looking at mid-risk assets specifically, it is helpful to examine a stylised illustration of the traditional risk-return trade-off to understand what asset allocation shifts have occurred in more liquid asset classes.

GRAPH 12 INVESTOR STYLISED RISK-RETURN TRADE-OFF

*Slipping to the tails but want to be closer to middle*




*Source: IFM Investors*

**Cash and fixed income** returns have been attractive recently, particularly in bonds, as central banks have turned dovish, but rotating further into this asset class is likely to challenge overall portfolio returns since yields are so low. Furthermore, risk (as measured by volatility), may be relatively low, but there are now asymmetric risks given the decline in bond yields is so pronounced. Intuitively there seems to be more upside than downside risk to bond yields that are negative. The deep entrenchment of negative term premiums underscores that investors are not being compensated for duration risk.

**Equity** returns were underpinned by a strong global growth narrative, but more recently this driver has become challenged. Nonetheless fresh highs have recently been made in many advanced economies, in part »

due to central banks promising more stimulus and a direct valuation impact from lower risk-free rates. But this comes with increasing risks – both economic and geopolitical - that are observable in actual and implied volatility measures. Consequently, risk adjusted returns in these asset classes have suffered.

These dynamics suggest fixed income and equities are moving to the extreme, or tail ends, of the risk-return curve (see Graph 12):

- Fixed income has moved to the left, as volatility has reduced in this asset class. Returns have been solid as yields have fallen but inevitably these will slip down the curve as yields stabilise, as the marginal dollar flowing into the asset class attracts lower returns.
- Equities have had higher returns until recently but this has come with higher risk (reflected in higher volatility), hence equities have moved to the right on the curve. We have also witnessed a deceleration in upward momentum in most markets as global growth concerns bite. Therefore it is reasonable to suggest that this asset class has, and may also drift lower on the stylised curve.

This begs several questions: What is the acceptable level of risk in the current economic environment? How much will investors tolerate the potential downward pressure on their returns by managing this risk? This applies to the highly competitive landscape of Australian superannuation funds, who compete for members based on net returns, as well as defined benefit pension funds in the northern hemisphere (that are often underfunded), providing returns below what has been promised to members. So, how much de-risking is too much?

This desire to de-risk is a key reason why we view 'mid-risk' asset classes as more attractive in the current environment. Increased allocation to mid-risk asset classes helps investors achieve a more acceptable level of portfolio risk while still offering solid returns. Mid-risk assets also offer diversification benefits away from financial markets, lower correlation, lower volatility and return characteristics that are a blend of both bonds and equity.

## Investors converge to mid-risk

These risk-return shifts across asset classes are now resulting in a convergence along the stylised risk/return curve:

- Fixed income investors are taking **more** risk to achieve higher returns. This includes shifting up the credit curve seeking higher returns in corporate bonds and corporate lending. The marked increase in interest and activity in infrastructure debt is also part of this thematic.
- Equity investors are taking **less** risk for lower returns as evidenced by the US cyclicals to defensives ratio exhibiting limited upside since 2018, the outperformance of 'quality' large cap companies and strong performance in volatility minimising indexes. The latter an example of the increased prevalence of factor-based/smart-beta investment that satisfies specific characteristics desirable to individual investors.

**The desire to de-risk is a key reason why we view 'mid-risk' asset classes as more attractive in the current environment.**

Investors are also considering different risk-return trade-offs, including alternative asset classes, as they strive to maximise returns. There is a tactical element to this shift to address concerns around the global economic cycle. Yet we'd also argue that a strategic asset allocation shift is also occurring to adapt to a low returns environment. In doing so, alternative asset classes are experiencing strong demand as investors gain more understanding and comfort with them. This shift in behaviour has been driven by attractive return characteristics that are increasingly observable.

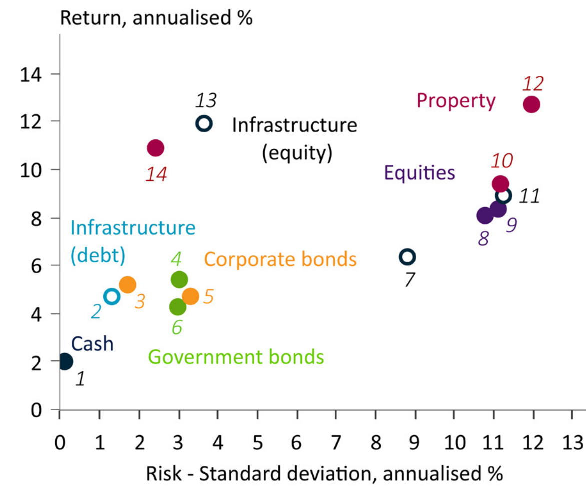
These trends are evident in Graph 13 that shows the actual 5-year rolling annualised risk-return comparison across asset classes[3] for Australian investors. Key points to note about this chart include:

- **Unlisted infrastructure** (equity) assets offer attractive returns for relatively lower risk than listed infrastructure indexes, with the latter being more highly correlated with equity markets and more impacted by short-term moves in risk-free rates.
- **Unlisted property** returns are solid and also show lower average volatility than listed counterparts.
- **Fixed income** returns appear reasonable for a significantly lower level of risk but, given the rally in bond markets, the marginal investment going forward will clearly attract materially lower returns.
- **Infrastructure debt** compares well with corporate fixed income returns but has experienced a lower level of volatility than other sub-sectors of the fixed income asset class.
- Both Australian and global **equities** have generated similar levels of return and volatility driven by the relatively high correlation of global listed markets.

[3] For global asset classes, the returns are in local currency to abstract from the impact of exchange rate fluctuations on the returns.

**GRAPH 13 ACTUAL RISK-RETURN TRADE-OFF**

*Five year returns, Australian investor perspective*




Source: IFM Investors, various sources

**Asset description and source (Australian assets unless otherwise noted)**

**1** Cash - Bloomberg Barclays AusBond Bank Bill Index
**2** Global Infrastructure Debt - EDHEC Global Private Infrastructure Debt
**3** Corporate Credit - Bloomberg Barclays AusBond Credit 0+ Yr
**4** Government Bonds - Bloomberg Barclays AusBond 0+ Yr Govt
**5** Global Corporate Credit - Bloomberg Barclays Global Aggregate
**6** Global Government Bonds - Bloomberg Barclays Global Treasury
**7** Global Listed Infrastructure - MSCI World Ex-Australia
**8** Equities - ASX300
**9** Global Equites - MSCI World Ex-Australia
**10** Global Listed Property - MSCI World Real Estate
**11** Listed Infrastructure - MSCI Australian Infrastructure
**12** Listed Property - GPR250 Australian REITs/ASX300 A-REIT
**13** Global Infrastructure Equity - EDHEC Global Unlisted Infrastructure
**14** Unlisted Property – ANREV Australia Core Property Fund

To see a breakdown of historical comparative returns, by year and by asset class, please refer to Appendix 1 where we build upon the popular 'Asset Quilt' concept to include mid-risk asset classes.

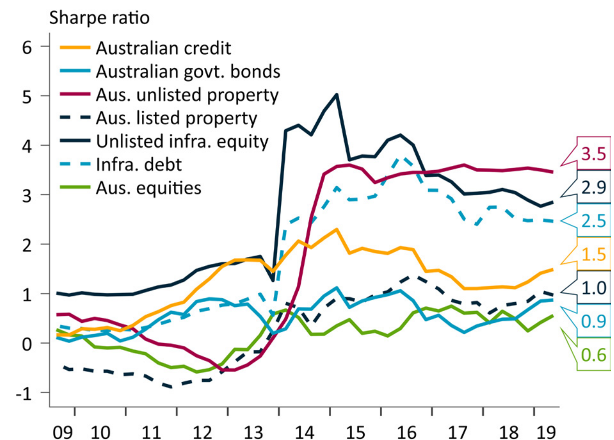
> **Infrastructure equity has a higher Sharpe ratio than other comparable asset classes and markedly higher than growth assets, such as equities.**

## Look Sharpe...

The attractiveness of unlisted infrastructure equity and debt is also evident in Sharpe ratios which measure risk-adjusted returns over time. These have fallen modestly over the past 12-months (on a rolling 5-year basis) as volatility has increased but still compare very favourably to listed asset classes.

**GRAPH 14 SHARPE RATIOS**

*Five year rolling risk adjusted returns*




Source: IFM Investors, various sources as listed above in Graph 13

Interestingly, infrastructure equity has a consistently higher Sharpe ratio than other comparable asset classes over recent years. And are markedly higher than growth assets, such as listed equites. Infrastructure debt also displays significantly better risk adjusted returns than government bonds and corporate credit. This is further evidence of the risk-return diversification benefits of including these mid-risk asset classes more prominently in portfolios.

## Volatility of historical returns is telling

Another way to analyse these relationships is to plot a stylised empirical probability density function (PDF) of quarterly returns for each asset class from mid-2004 to mid-2019.[4] The 'peak' of each PDF roughly shows the most likely quarterly return (mode) over the time frame, whilst the 'spread' of each PDF shows how variable returns were over the same period. In the chart below, the PDFs are ordered from least variable (cash) to most variable (listed property).

Clearly, there is a marked difference between the asset classes at the low variability end of the graph, where returns are tightly centred around their peaks, and asset classes at the high variability end, where there is much more dispersion in returns. There is also a broad tendency for the peak to shift to the right (ie higher average returns) as one moves towards more volatile/ risky assets.

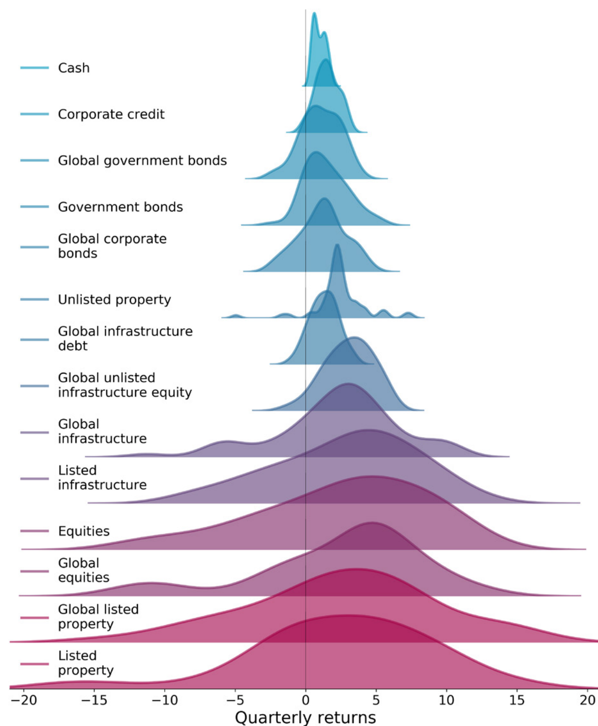
Not surprisingly, global unlisted infrastructure equity and unlisted property – ie mid-risk assets - are the main exceptions as they have achieved returns comparable

[4] Note that in order to reduce the impact of outliers a 5% 'trim' was done. This trims the extreme 2.5% of observations from each of the tails of the distribution for ease of analysis. Also note that for purposes of comparability the PDFs share the same x-axis but the y-axis for each PDF has been scaled such that visual heights are similar (for example, the peak density of cash is an order of magnitude higher than that of listed property, such that if they were displayed on the same scale the listed property PDF would appear almost flat).

with more risky assets but with significantly less observed volatility. This reinforces the argument that a portfolio containing a greater allocation to these assets may achieve superior returns with appreciably less volatility.

**GRAPH 15 DISTRIBUTION FUNCTION OF ASSET CLASS RETURNS**

*Listed equity assets are more susceptible to volatility*




Sources and definition as in Graph 13

## But risk isn't just volatility

There is definitely useful information in the above statistical measures, but we acknowledge that they remain over-simplifications – in the real world, risk is much more than just volatility. This is particularly true when comparing listed and unlisted asset classes and liquid and illiquid ones. There are also clearly differences in how valuations are arrived at that also make direct comparison challenging. So, while we still assert that it is possible to make the case for including more infrastructure assets within portfolios, the appropriateness of this recommendation depends on the circumstances of individual investors and their appetite, understanding, and ability to manage a 'different' set of risks.

This also applies to how an investor chooses to access infrastructure assets - either directly or indirectly. A direct investor, particularly one that has Board level and management input, is arguably better placed to understand and potentially manage the risks involved in infrastructure investment compared to one investing in an index or an individual listed company. There is also greater input and insight into the re-investment and development of existing assets (that may provide potential upside risks to returns) in a portfolio that are a hallmark of a long-term investors.

So while the risks in unlisted infrastructure may differ from traditional assets – and this makes direct comparison difficult – this is arguably a positive outcome from a portfolio diversification perspective. It is this different risk profile that enables this asset class to exhibit lower correlation with other investments, a characteristic that is rare, particularly among listed asset classes.

Further, many of the other risks to unlisted infrastructure, outside broader fluctuations in markets, exist equally for listed asset classes, including regulatory and political risks. Indeed at present, there are significant global economic risks looming, with many commentators expecting some form of recession in coming years. Therefore, taking on additional investment risk if we are on the precipice of a more material downturn in the global economy should be approached with caution but not completely ruled out. In our paper **Infrastructure and the Global Financial Crisis: Ten Years On** we demonstrate the defensive performance of an unlisted infrastructure portfolio in the event of a downturn. It compared relatively well to similar asset classes and, although not immune to downside economic shocks, the unlisted portfolio had good defensive properties. Whilst also being able to leverage off growth in the recovery phase of the cycle.

## Low correlation also a diversification benefit

Correlation of returns is an equally important concept for portfolio construction as returns and volatility. In this space we seek to demonstrate the positive impact of mid-risk assets in a portfolio due to their relative lack of correlation with other asset classes, particularly those in the listed space.

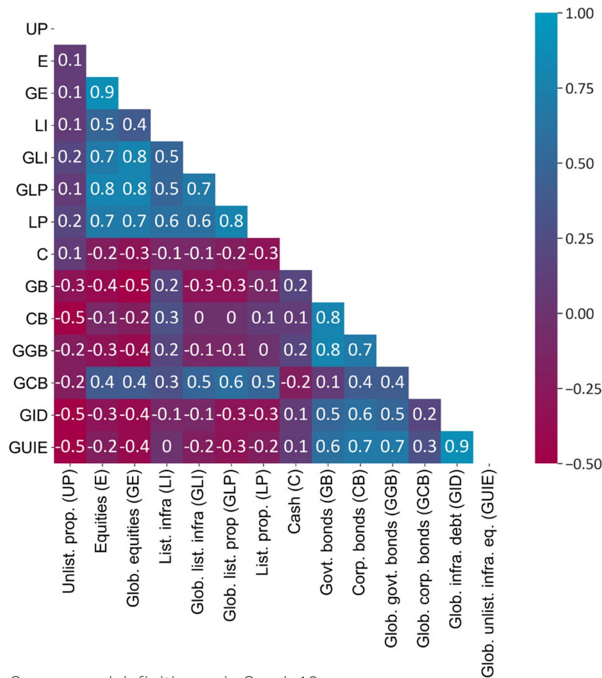
The chart overleaf shows the correlation of quarterly asset class returns from Q2 2004 to Q2 2019. From here it can be seen that unlisted infrastructure equity and infrastructure debt exhibit relatively low correlations across most asset classes. The low correlation to higher risk equity markets suggests that the diversification benefits of adding listed infrastructure equity and infrastructure debt to portfolios is likely significant – this is particularly true given the high weight of listed equities as an asset class in most superannuation fund portfolios. Beyond simply a lower expected portfolio variance, expected portfolio return should also be materially improved by the inclusion of these assets - particularly unlisted infrastructure equity.

> **Mid-risk assets have achieved returns comparable with more risky assets but with significantly less volatility.**

»

**GRAPH 16 ASSET CLASS CORRELATION MATRIX**

*Unlisted Infrastructure asset classes show low correlation*




Sources and definition as in Graph 13

## Being wrong...lower but not for longer

While we have outlined a plausible scenario around the global economic and returns outlook, there is always the potential to be wrong. What if risk free rates actually rise again materially and on a structural basis? Such a move would clearly have negative implications for valuations across asset classes.

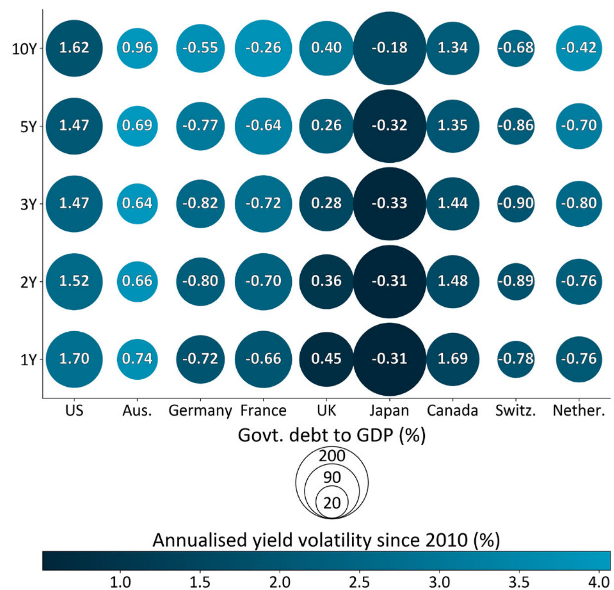
That being said, we have argued before in our August 2018 paper **Infrastructure investment in a rising interest rate environment** that infrastructure as an asset class – in an IFM specific portfolio – actually garners some benefit from a rising interest rate environment. This runs counterintuitive to the popular perception that infrastructure returns are inversely correlated with interest rates. Our analysis revealed that the better economic growth and inflation outcomes associated with higher interest rates provide a support to returns that offsets the impact of higher rates. This suggests that the valuation risk that an increase in rates may pose across all asset classes may be relatively limited for mid-risk type assets, at least in the case of the IFM's infrastructure portfolio.

## Not risk free return but return free risk

Government borrowing rates across the developed world are at (or at least very near) historic lows. The below chart – a stylised representation of government borrowing rates for a selection of developed economies for bonds with maturities of 1-, 2-, 3-, 5-, and 10-years – highlights the issue: borrowing rates in Germany, Japan, France, Switzerland, and the Netherlands are negative for all these maturities. Looking at Switzerland in particular, the country with the lowest borrowing rates, one has to pay the government around 1% per year for the privilege of lending it money. These dynamics are clearly not without risk and even a small increase in bond yields has significant potential to undermine returns. The moniker of government bonds being safe haven assets persists but this safety now comes at a cost and with a new set of risks.

**GRAPH 17 GOVERNMENT BOND YIELDS AND DEBT**

*It's not just negative rates it's negative yield curves*

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APPENDIX 01

## Asset Quilt – year-on-year returns of traditional and mid-risk asset classes

The diagram below details calendar year returns for each asset class since 2006 (2019 returns are year to the second quarter). In any given year, the asset classes are ordered from highest to lowest based on returns. It shows that the returns from mid-risk assets – unlisted infrastructure (equity and debt) and unlisted property – tend to be less volatile than listed assets and usually sit towards the top of the chart as they have historically delivered solid returns in most calendar years.

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 (YTD) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Global listed prop. 36.6% | Unlisted property 25.5% | Government bonds 17.4% | Equities 37.6% | Global listed prop. 17.2% | Listed infra. 17.8% | Listed property 32.9% | Global equities 30.8% | Listed property 27.2% | Listed infra. 18.5% | Listed property 13.7% | Global equities 19.3% | Global unlist. infra. equity 10.9% | Listed infra. 24.2% |
| Listed property 34.7% | Global listed infra. 16.3% | Global unlist. infra. equity 15.1% | Global unlist. infra. equity 30.6% | AUD/USD 14.0% | Government bonds 12.6% | Global listed prop. 30.6% | Global listed infra. 24.2% | Listed infra. 22.3% | Listed property 14.8% | Global unlist. infra. equity 13.3% | Global listed prop. 12.9% | Unlisted property 10.1% | Listed property 20.6% |
| Global listed infra. 26.7% | Equities 16.2% | Corporate credit 10.7% | Global listed prop. 29.2% | Global equities 12.7% | Global unlist. infra. equity 11.4% | Listed infra. 29.1% | Listed infra. 21.8% | Global listed prop. 19.5% | Global unlist. infra. equity 14.0% | Equities 11.8% | Unlisted property 12.6% | Listed property 5.9% | Equities 19.8% |
| Unlisted property 26.1% | AUD/USD 11.4% | Global govt. bonds 9.1% | AUD/USD 28.7% | Global unlist. infra. equity 12.6% | Unlisted property 9.5% | Equities 19.7% | Equities 19.7% | Global unlist. infra. equity 15.0% | Unlisted property 13.4% | Unlisted property 11.3% | Equities 11.9% | Government bonds 4.8% | Global equities 16.9% |
| Listed infra. 24.8% | Cash 6.7% | Cash 7.6% | Global equities 27.7% | Unlisted property 9.3% | Corporate credit 9.2% | Global unlist. infra. equity 17.7% | Global unlist. infra. equity 17.0% | Global listed infra. 14.3% | Global infra. debt 6.4% | Global listed infra. 11.1% | Global unlist. infra. equity 9.5% | Corporate credit 3.9% | Global listed prop. 16.8% |
| Equities 24.5% | Global govt. bonds 5.6% | Global infra. debt 4.6% | Global infra. debt 18.9% | Global corp. credit 7.2% | Global govt. bonds 5.5% | Global equities 16.6% | Unlisted property 8.7% | Government bonds 10.5% | Global listed prop. 3.7% | Global equities 10.2% | AUD/USD 8.0% | Global infra. debt 3.3% | Global listed infra. 12.8% |
| Global equities 16.2% | Listed infra. 5.0% | Global corp. credit -5.1% | Global corp. credit 16.6% | Corporate credit 7.1% | Cash 5.0% | Global corp. credit 10.9% | Global infra. debt 8.3% | Global equities 10.1% | Corporate credit 3.0% | Global corp. credit 6.2% | Global listed infra. 6.1% | Global govt. bonds 2.8% | Global corp. credit 8.6% |
| Global unlist. infra. equity 8.1% | Global equities 4.4% | Unlisted property -5.6% | Listed property 9.4% | Global listed infra. 6.5% | Global corp. credit 4.8% | Corporate credit 9.8% | Global listed prop. 8.1% | Unlisted property 9.2% | Equities 2.8% | Global infra. debt 5.4% | Global corp. credit 5.7% | Cash 1.9% | Global unlist. infra. equity 7.1% |
| AUD/USD 7.5% | Government bonds 3.8% | Listed infra. -17.0% | Global listed infra. 8.6% | Government bonds 5.8% | Global infra. debt 4.7% | Global infra. debt 8.5% | Listed property 6.9% | Global govt. bonds 8.1% | Global equities 2.7% | Global listed prop. 4.1% | Listed infra. 5.4% | Global corp. credit -1.0% | Government bonds 7.0% |
| Cash 6.0% | Global unlist. infra. equity 3.8% | AUD/USD -20.5% | Corporate credit 6.1% | Global infra. debt 5.2% | Global listed infra. 1.3% | Unlisted property 7.9% | Corporate credit 4.3% | Corporate credit 8.1% | Government bonds 2.5% | Global govt. bonds 3.9% | Listed property 5.3% | Global listed infra. -2.2% | Corporate credit 5.6% |
| Corporate credit 3.9% | Global corp. credit 3.2% | Global listed infra. -27.0% | Cash 3.5% | Cash 4.7% | AUD/USD 0.0% | Government bonds 6.7% | Cash 2.9% | Global infra. debt 7.8% | Cash 2.3% | Corporate credit 3.8% | Corporate credit 5.1% | Equities -3.1% | Global govt. bonds 5.5% |
| Global corp. credit 3.6% | Corporate credit 3.2% | Global equities -38.5% | Global govt. bonds 1.0% | Global govt. bonds 3.6% | Listed property -1.3% | Global listed infra. 5.2% | Government bonds 1.3% | Global corp. credit 7.6% | Global govt. bonds 1.4% | Government bonds 2.8% | Global infra. debt 3.6% | Global listed prop. -4.6% | Unlisted property 2.7% |
| Global govt. bonds 3.3% | Global infra. debt -1.0% | Equities -38.9% | Government bonds 0.0% | Equities 1.9% | Global equities -5.2% | Global govt. bonds 4.5% | Global corp. credit 0.1% | Equities 5.3% | Global corp. credit -0.2% | Cash 2.1% | Government bonds 3.4% | Listed infra. -4.7% | Global infra. debt 2.4% |
| Government bonds 2.7% | Listed property -7.9% | Global listed prop. -46.8% | Listed infra. -0.7% | Listed infra. 1.8% | Global listed prop. -6.7% | Cash 4.0% | Global govt. bonds 0.1% | Cash 2.7% | Global listed infra. -1.7% | Listed infra. 1.6% | Global govt. bonds 2.1% | Global equities -7.7% | Cash 1.0% |
| Global infra. debt 2.5% | Global listed prop. -8.9% | Listed property -52.8% | Unlisted property -9.1% | Listed property -0.6% | Equities -11.0% | AUD/USD 1.3% | AUD/USD -13.8% | AUD/USD -8.5% | AUD/USD -11.2% | AUD/USD -0.5% | Cash 1.7% | AUD/USD -10.0% | AUD/USD -0.3% |

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