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MLC ASSET MANAGEMENT

MLC's scenario insights & portfolio positioning

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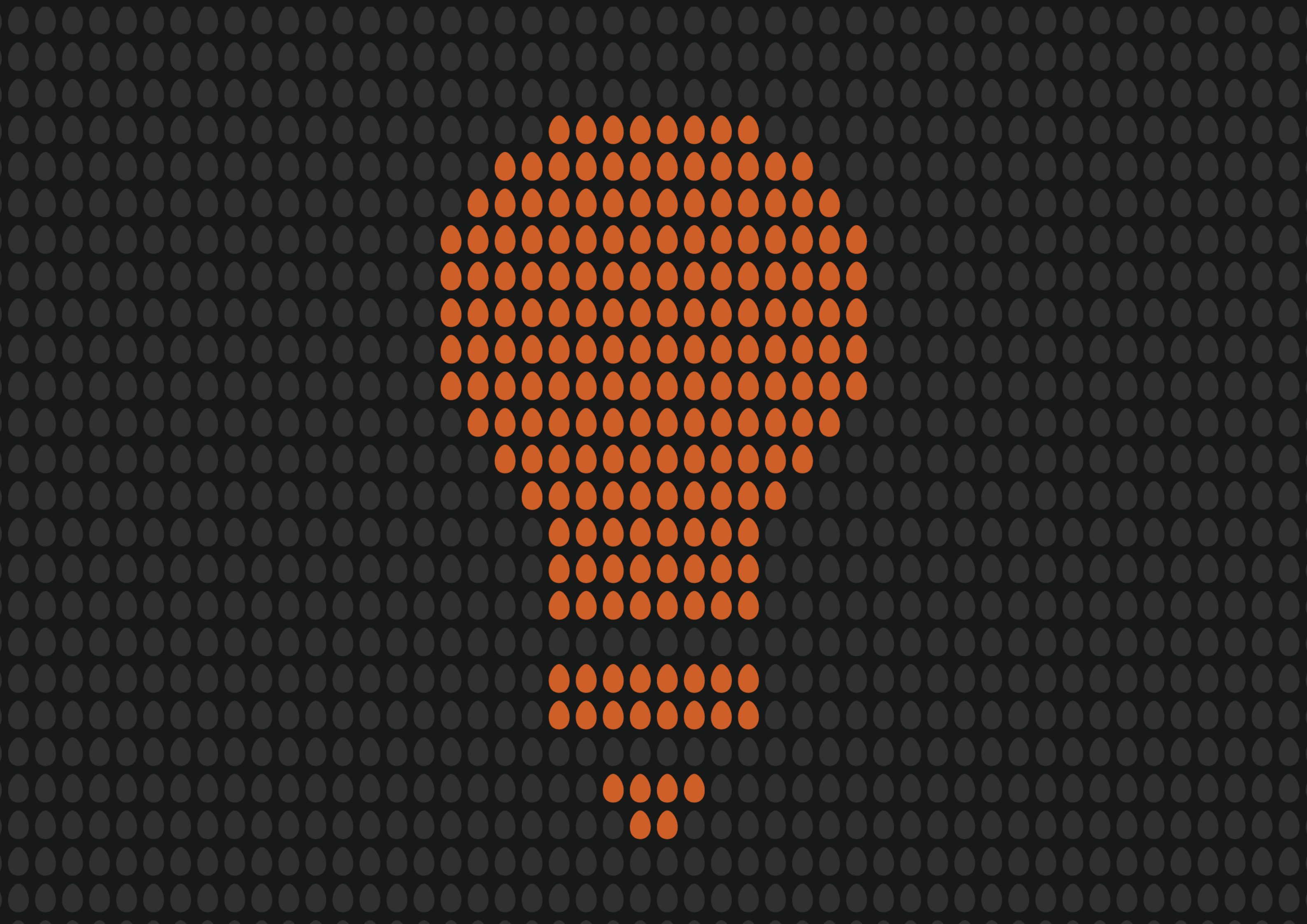
MLC's investment and super portfolios
MLC Inflation Plus, MLC Horizon and MLC Index Plus portfolios

MLC's Managed Account Strategies
MLC Premium and Value model portfolios



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MLC Investment Trust:	MLC Super Fund:	MLC Managed Account Strategies:
MLC Wholesale Horizon 1 Bond Portfolio	MLC Horizon 1 Bond Portfolio	MLC Premium Moderate Model Portfolio
MLC Wholesale Horizon 2 Income Portfolio	MLC Horizon 2 Capital Stable Portfolio	MLC Premium Assertive Model Portfolio
MLC Wholesale Horizon 3 Conservative Growth Portfolio	MLC Horizon 3 Conservative Growth Portfolio	MLC Premium Aggressive Model Portfolio
MLC Wholesale Horizon 4 Balanced Portfolio	MLC Horizon 4 Balanced Portfolio	MLC Value Moderate Model Portfolio
MLC Wholesale Horizon 5 Growth Portfolio	MLC Horizon 5 Growth Portfolio	MLC Value Assertive Model Portfolio
MLC Wholesale Horizon 6 Share Portfolio	MLC Horizon 6 Share Portfolio	MLC Value Aggressive Model Portfolio
MLC Wholesale Horizon 7 Accelerated Growth Portfolio	MLC Horizon 7 Accelerated Growth Portfolio	
MLC Wholesale Inflation Plus Conservative Portfolio	MLC Inflation Plus Conservative Portfolio	
MLC Wholesale Inflation Plus Moderate Portfolio	MLC Inflation Plus Moderate Portfolio	
MLC Wholesale Inflation Plus Assertive Portfolio	MLC Inflation Plus Assertive Portfolio	
MLC Wholesale Index Plus Conservative Growth Portfolio	MLC Index Plus Conservative Growth Portfolio	
MLC Wholesale Index Plus Balanced Portfolio	MLC Index Plus Balanced Portfolio	
MLC Wholesale Index Plus Growth Portfolio	MLC Index Plus Growth Portfolio	

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Quarterly insights

Highlights

- **Forecasting market behaviour is notoriously difficult. You first need to estimate how a certain parameter will change, and then you need to divine how the market will react to that change.**
- **The inherent complexity of markets makes it hard to know with any level of repeatable accuracy how all the different moving parts will behave over a given time frame.**
- **Over the long term, we can predict we will earn a return consistent with the risk premium we are accessing, but the path through which we earn this return is far from predictable, particularly over the shorter term.**
- **At MLC, we prefer to use our proprietary Investment Futures Framework to consider a wide range of potential futures with each one characterised by particular economic and behavioural factors that we believe are the key drivers of markets.**
- **Our Investment Futures Framework allows us to be more open in accepting the chaos of markets.**

Insights

With 2021 now drawn to a close, it is that time of year again when predictions abound for what 2022 may hold for investors. A myriad of forecasts will be available on how the markets will play out over the next 12 months, some accurate and some not so much. Forecasting market behaviour is notoriously difficult as you first need to estimate how a certain parameter will change, and then you need to divine how the market will react to that change.

For example, let us consider how difficult it would have been to forecast US Treasury yields for 2021. If the forecaster knew with perfect foresight that US growth would improve by around 6% over 2021 and that inflation would explode from 1.4% to 7.0%, how many would forecast for US 10 Year Treasury yields to only rise by a little more than 0.5%? You would expect a 5%+ increase in inflation alone would warrant a more aggressive response.

Herein lies the difficulty with forecasting. Even with perfect foresight on how the respective economic parameters play out, anticipating how the market will react to these changes is a tough exercise. The inherent complexity of markets makes it hard to know with any level of repeatable accuracy how all the different moving parts will behave over a given time frame. Over the long term, we can predict we will earn a return consistent with the risk premium we are accessing, but the path through which we earn this return is far from predictable, particularly over the shorter term.

MLC'S active investment approach

- Key to MLC's market-leading investment approach is our unique Investment Futures Framework.
- In an unpredictable world, the Framework helps us comprehensively assess what the future might hold. By taking into account the many scenarios that could unfold – positive and negative – we gain continuing insight into return potential, future risks, and opportunities for diversification.
- The information from the Framework gives us a deep understanding of how risks and return opportunities change over time for both individual assets and total portfolios.
- We can then determine the asset allocations that will help achieve our portfolios' objectives with the required level of risk control, and adjust the portfolio if necessary. We'll generally reduce exposure to assets if we believe risk is too high. We prefer exposures with limited downside risk compared to upside potential.
- More information about MLC's investment approach is available on our **website** and in Appendix 1.

Where will the S&P500 be at the end of 2022?

A favourite game to play this time of year is to answer the question 'where will the S&P500 be at the end of 2022'? This exercise is bound to generate a rich conversation in trying to determine how a range of factors may impact the price of the US share market, but it is predicated on believing the market will behave in a ***predictable*** way. It requires the forecaster to believe they can distil the complexity of all competing forces into a single point forecast (see illustration in Chart 1). They are essentially mapping out one version of the future for the S&P500.

Chart 1: Single point forecasting

Source: MLC Asset Management Services Limited.

Unfortunately, markets tend more toward chaos than predictability. The above point forecast exercise is useful in trying to organise a complex array of information into one observable outcome. But in trying to simplify the inherently complex, the forecast runs the risk of sidelining a significant amount of useful information should it turn out to be wrong. All the valuable thinking that cascaded up in arriving at the point forecast gets thrown out with the proverbial bathwater if markets behave unpredictably.

At MLC, we turn this information pyramid upside down using our proprietary Investment Futures Framework (Chart 2). Rather than trying to divine the single future path of the S&P500, we prefer to consider a wide range of potential futures with each one characterised by particular economic and behavioural factors that we believe are the key drivers of markets. By accepting markets will behave unpredictably, we are able to understand the many potential costs (and benefits) of holding the S&P500 in our portfolios.

Chart 2: Investment Futures Framework forecasting

Multiple potential S&P500 futures

Current return drivers

Source: MLC Asset Management Services Limited.

This approach allows us to be more open in accepting the chaos of markets. If the market path takes an unexpected turn, chances are we have already considered how this alternative route will impact our portfolios. Take the pandemic as a recent example. We have a '**Pandemic Scenario**' in our set of 40 potential scenarios. It is basically characterised as lower growth and higher inflation due predominantly to supply side disruptions. When COVID-19 struck in the first quarter of 2020, we already had an understanding of how this event could impact our portfolios and were able to react accordingly. By being open to the potential of multiple futures, we were in a strong position to understand the present.

This type of approach can be particularly useful in a transitional environment. Consider the current inflationary regime. US inflation is at its highest level since the early 1980's. Will the US fall back into the disinflationary regime that prevailed the last two decades or are they transitioning to a higher inflationary environment? We don't know, so rather than try to divine one future path for US inflation, our preference is to consider a range of scenarios that incorporate both higher and lower inflationary outcomes.

We also need to consider the multiple different ways inflation can impact market pricing. Even if we knew how inflation would unfold, we could still be wrong on markets. It is important that we include in these scenarios how the market will react to the changes in inflation. For example, will the inflation change engender growth and a positive market reaction (**Inflationary Growth Scenario**) or will it create supply-side issues and a poor market reaction (**Stagflation Scenario**)? By understanding the range of potential inflation outcomes and how they impact markets, we get a better understanding of the prospective risks facing our portfolios.

Understanding potential portfolio risks and trade-offs

A common criticism of this approach is that by worrying about all the possible risks that could impact a portfolio, the portfolio manager runs the risk of being perennially risk averse. We believe it is a little more nuanced than that and it comes down to 'cost', and not just in the monetary sense. Sometimes it will be expensive to hedge certain risks and other times it will be cheap. The Investment Futures Framework (scenarios process) provides us with a comprehensive understanding of the risks we are exposed to and it is our job as portfolio managers to assess the trade-offs associated with hedging those risks.

This may be best explained by way of an example. US shares contribute a high level of risk to our portfolios as they make up over 60% of our global shares exposure. There are a number of scenarios where they could perform quite poorly, particularly given their lofty valuation levels. But there is a meaningful 'cost' associated with hedging out US shares risk. This cost comes in the form of foregoing exposure to the primary driver of expected global share market returns. For our portfolios that need to deliver a meaningful return, US shares have been the main source of growth for a number of years and consensus forecasts expect that to continue (Table 1).

Table 1: US expected earnings vs other major countries

Realised earnings across markets						
	US	**EU**	**UK**	**JP**	**AU**	**EM**
1 year						
Dec-21	51.9%	56.7%	83.0%	63.2%	40.6%	47.8%
Dec-20	-16.4%	-24.2%	-39.9%	-30.9%	-23.7%	-16.5%
Dec-19	1.1%	-2.5%	-6.1%	-13.1%	-3.2%	-10.7%
3 years pa						
Dec-21	8.7%	5.0%	1.1%	-0.7%	1.2%	3.5%

Source: FactSet.

As portfolio managers, the trade-off we need to assess here is how we remain exposed to a key global growth driver while limiting our capital losses should the lofty US share market valuations revert to more normal levels. A number of our scenarios involve a degree of reversion toward mean for US valuations. In 2019 we were able to significantly reduce the cost of solving this trade off by simply buying vanilla US equity market put options. Volatility was very cheap and so for a very small monetary cost we were able to maintain exposure to US shares while at the same time minimising capital losses through the protection afforded by the puts. This proved very helpful for our portfolios as the pandemic disrupted markets in early 2020.

Unfortunately, it is a more difficult trade off to solve now. US shares are more expensive than prior to the pandemic and so the risk of capital loss is more acute. Volatility is more expensive and so the simple put solution we've used in the past, is no longer cost effective. We have to take a more innovative approach to solving this time around. Our first step was to try and reduce the risk of capital losses. Outright volatility is expensive, but much more so on the downside. A number of market participants are obviously also nervous that US shares look expensive and are trying to hedge their risk through buying put options. We took advantage of this by selling downside volatility and replacing a portion of our US shares exposure with call options. That way we participate in market upside and have reduced our exposure to the downside – exploiting the favourable volatility skew.

The next step was to broaden our drivers of growth. The US market is still our largest shares exposure, but we complemented it with growth exposures in emerging markets and specific sectors like Materials and Energy. These shares have the capacity to perform well if the higher inflation regime is more persistent – an environment that may be challenging for US shares. The added benefit of these types of cyclical exposures is they are not expensive so the sensitivity to capital losses is reduced.

This two-stepped approach allows us to maintain exposure to the expensive US share market without exposing our investors to meaningful capital losses. Hopefully this example has provided some insight into the workings of the Investment Futures Framework.

Our investment approach

Our Investment Futures Framework is designed to first understand the risks facing our portfolio and to then assess the cost associated with mitigating those risks. We accept the inherent complexity of markets makes it difficult to predict their path with any consistency, and so we consider the portfolio impact of multiple different potential paths. It is our belief this open approach will be helpful for our clients as we continue to navigate our way through the current inflationary episode.

The Investment Futures Framework: Scenarios, changes in return potential, and portfolio positioning

Scenarios

In managing MLC's multi-asset portfolios using our Investment Futures Framework, following are the short-term scenarios that we have assessed as currently providing the highest potential future risks and opportunities.

As the pandemic progresses to normalisation in the developed world, other issues have begun to compete for importance in determining the opportunities and challenges faced by investors. Nonetheless, we believe that COVID-19 remains strong enough a determinant of near-term risk to continue anchoring our short-term scenarios thinking and mapping the outcome of many critical issues into one of the three scenarios.

Now that more is understood about Omicron it has become clear that this strain will most likely be remembered as a pivotal step in the progression of SARS-COV-2 from a COVID-19 pandemic to a tolerable endemic virus. This is particularly likely for regions of the world that have attained high levels of vaccination to the original alpha variant. Omicron survives better in the upper respiratory tract than other variants, meaning it is less likely to invade the lungs before triggering an immune response. This makes Omicron less dangerous but more transmissible. Furthermore, the degree of change in Omicron's spike protein is mild enough such that current vaccines remain partly effective, but different enough that a new set of antibodies become activated. Together, this means that people vaccinated with first generation vaccines and subsequently infected with Omicron will have a broadening of their immunity. This bodes well for resistance to infection in the future.

Alongside the emergence of Omicron, divergence of China from the rest of the world in preventative management of COVID-19 represents a significant change in the currents that underpin the economic impact of the pandemic. Whereas up until the December 2021 quarter, the key line of stratification was cut by vaccination creating an emerging- versus developed-world dichotomy, emergence of Omicron and China's now almost unique zero-tolerance policy means that the divide is now China versus the rest of the world. For whereas low levels of vaccination previously created potentially long-term headwinds for emerging economies, rapid infection by Omicron, while disruptive in the short-term, should quickly supplement lack of vaccine. China meanwhile risks sitting out on its own, unable to open to the rest of the world until either better vaccines emerge, or a widely available therapy becomes available. China's zero tolerance approach to COVID-19 sits squarely with the government's strong aversion to any form of social unrest. Fears that widespread infection would quickly overwhelm the country's healthcare system means that isolation and the cost of social separation is the lesser evil to the risk of healthcare chaos.

Isolation of China from the rest of the world, if sustained, has implications for domestic sectors and for geopolitics. In Australia, travel and education are obvious at-risk sectors with inbound demand unlikely to recover until China re-opens. Prior to the pandemic, travellers from China represented near 20% of all ex-New Zealand short-term arrivals but only 5% of ex-New Zealand domestic outbound travel. The impact on education is even more stark with nearly 40% of pre-pandemic enrolments at risk. From a geopolitical lens isolation of China, while not a game changer, will make it harder for the growing frictions between China and several western nations to change course.

Within the real economy, inflation remains uncertain and arguably remains at the behest of the pandemic, particularly the supply side. Under the most optimistic of our three scenarios, we believe that inflation will remain stubbornly above central bank targets driven by a combination of supply and demand factors. Monetary policy will react, but most likely lag the inflationary tendency, tempering real interest rates and steepening yield curves. By contrast, lingering risks from the pandemic, should variants continue to repress activity in the developed world, will drive an ambiguous inflation environment and the debate regarding supply-side impacts will persist.

With this in mind, we retain our three core pandemic scenarios with minor modification to their specification probabilities relative to last quarter.

Global pandemic: Immunity drives a return to growth (stable probability)

- Omicron peters out quickly.
- Consumer confidence spikes on pent up demand.
- Government stimulus fades.
- Supply side constraints and a demand spike stoke inflation.
- Interest rates rise, but lag inflation.

Global pandemic: Slow return to normality (higher probability)

- Vaccine rollout continues (boosters) and herd immunity increases.
- Omicron wave continues in the short-term (and subsides).
- Earnings growth slows in 2022.
- Consumers remain cautious.
- Supply-side constraints remain and the inflation outlook remains ambiguous.

Global pandemic: Emergence of vaccine resistance (lower probability)

- A severe vaccine-resistant strain of COVID-19 emerges, despite Omicron.
- Fiscal and monetary stimulus near the point of exhaustion.
- Acceleration of populism.
- High risk of global depression.
- Disinflation or deflation are more likely than inflation.

Changes in return potential for asset classes

The return potential across most asset classes remained more or less unchanged from the end of the September quarter (Chart 3).

In terms of absolute levels, the five year return potential of the majority of asset classes remains significantly below normalised long-term returns. Indeed, for some asset classes the long-term return now lies close to the most bullish of our 40 scenarios, particularly for fixed income sectors whose long-term 'normal' returns sit beyond the average of the best 10% of scenarios on a five year basis.

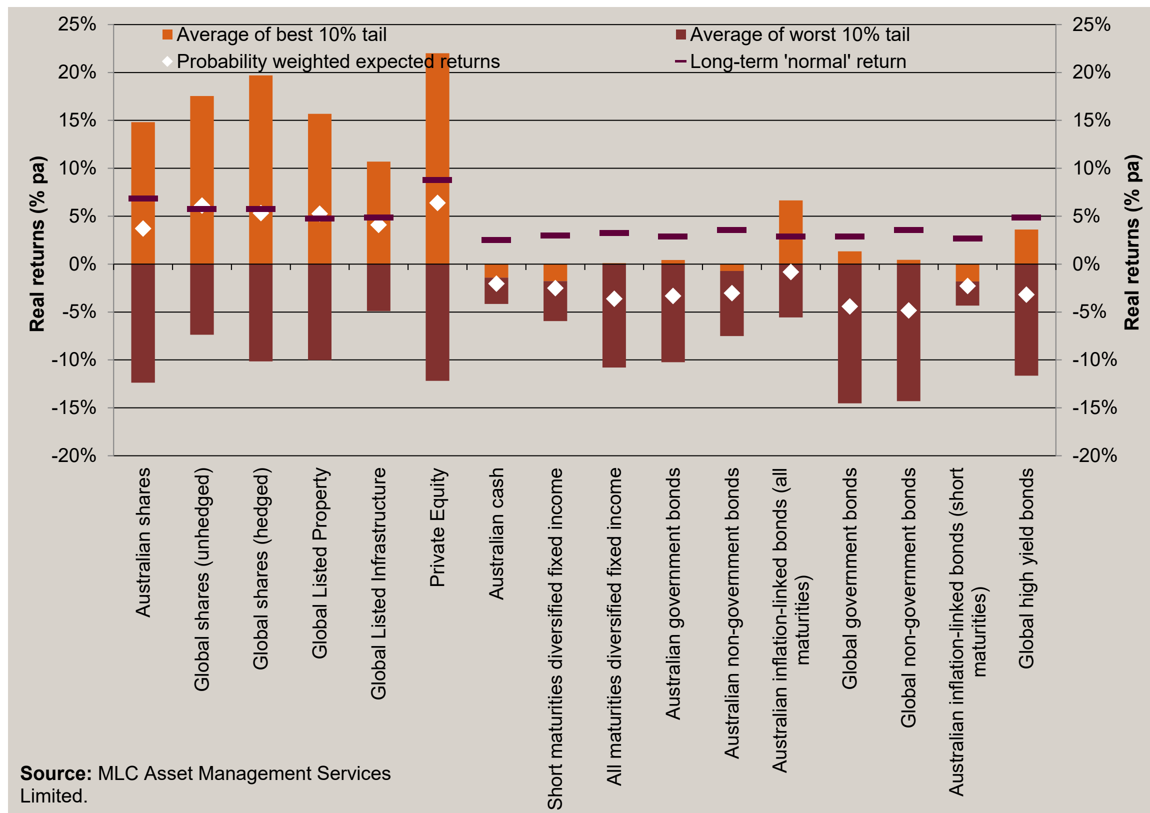
The five year probability weighted expected returns of some asset classes are in-line with their long-term 'normal' returns – particularly global shares. While valuations for these markets continue to be stretched and punitive for forward-looking returns, earnings growth expectations continue to remain strong and help in compensating for the headwind from valuations. However a disappointing earnings result would mean that one pillar for the probability weighted expectation is no longer supported and hence could see a return outcome that is closer to the 10% worst tail. This example highlights how there are a multitude of return potentials that exist and exemplifies the merits of the scenarios framework. While the probability weighted outcomes provide a measure of central tendency, the full spectrum of outcomes provides the richness of information needed to appropriately understand the risks present in the current investment environment.

Portfolio positioning

This quarter market movements proffered many opportunities for us to take profits and enter into additional participate and protect strategies in the Inflation Plus portfolios. We also introduced a direct allocation to insurance-related investments to avail the MLC Horizon portfolios of the stable yield and uncorrelated return stream these investments provide. In the current environment of low yields across traditional fixed income assets, insurance-related investments are expected to provide the portfolios a healthy yield that's driven by factors other than economic growth, inflation and credit, providing a valuable source of income diversification.

Details on portfolio positioning is in the sections: MLC Inflation Plus, Horizon, Index Plus, Premium, and Value portfolios.

Chart 3: 40 scenario set (generic scenarios) potential real returns (December 2021) - 5 years, 0% tax with franking credits, pre-fees, pre-alpha



Source: MLC Asset Management Services Limited.

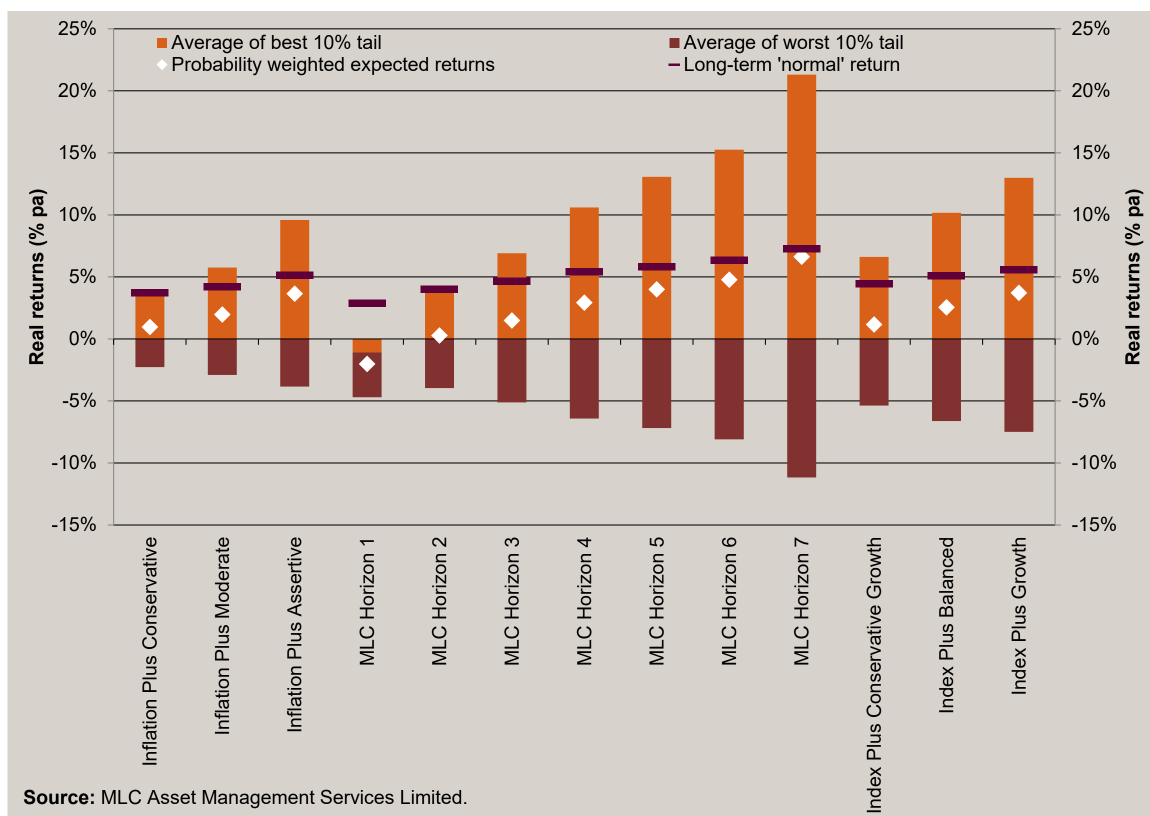
The potential real returns for each asset class are shown above. The probability-weighted real returns are shown as diamonds. For comparison we've included long-term 'normal' return expectations which are set by considering a stable fair value world – these are shown by the horizontal lines. Also, as an indicator of how uncertain these returns are, we've taken the bottom (and top) 10% of the scenario real returns and calculated the probability-weighted average in those 'tail' outcomes. These are shown in the bars. Asset classes with wider ranges could have more extreme return outcomes than those with narrow ranges.

Return potential

Charts 4 and 5 show return potential for the MLC Horizon, Inflation Plus and Index Plus portfolios, and the Managed Account Strategies respectively, based on our generic (40) scenario set, looking forward from the end of December 2021.

The stronger risk focus of the Inflation Plus portfolios is evident (Chart 4). Consistent with their objectives, the Inflation Plus portfolios have responded to shrinking return potential and weakening risk diversifiers by continuing to pursue a 'Participate and Protect' strategy – adding to appropriately priced sources of return potential in a risk-controlled way. This reduces the return potential in strong scenarios but provides tighter risk control in the event of an adverse environment.

Chart 4: 40 scenario set (generic scenarios) potential real returns (December 2021) - 5 years, 0% tax with franking credits, pre-fees, pre-alpha



Source: MLC Asset Management Services Limited.

The probability-weighted real returns are shown above (diamonds). For comparison we've included long-term 'normal' return expectations which are set by considering a stable fair value world - these are shown by the horizontal lines. Also, as an indicator of how uncertain these returns are, we've taken the bottom (and top) 10% of the scenario real returns and calculated the probability-weighted average in those 'tail' outcomes. These are shown in the bars. Portfolios with wider ranges could have more extreme return outcomes than those with narrow ranges.

Consistent with their Horizon and Index Plus multi-asset counterparts, the medium-term return potential of all the MLC Managed Account Strategies remains significantly below the returns similar asset allocations have produced in the past (Chart 5).

While both the Premium and Value Model Portfolios are expected to deliver similar returns, the additional levers and active management dimensions afforded by the higher cost of the Premium Model Portfolios result in slightly more positively skewed potential outcomes, with incrementally higher returns in the most positive scenarios and less negative returns in the worst.

Chart 5: MLC Managed Account Strategies - 40 scenario set (generic scenarios) potential real returns (December 2021) - 5 years, 0% tax with franking credits, pre-fees, pre-alpha

The probability-weighted real returns are shown above (diamonds). For comparison we've included long-term 'normal' return expectations which are set by considering a stable fair value world - these are shown by the horizontal lines. Also, as an indicator of how uncertain these returns are, we've taken the bottom (and top) 10% of the scenario real returns and calculated the probability-weighted average in those 'tail' outcomes. These are shown in the bars. Portfolios with wider ranges could have more extreme return outcomes than those with narrow ranges.

MLC Inflation Plus portfolios

The key portfolio activities during the December 2021 quarter, including up until the time of writing, were:

- Rolling our protected emerging market exposure for another three months using the same total return swaps already in place. We still believe a combination of the China onshore CSI-300 and MSCI Emerging Market-ex China indices provide us with the most appropriate exposure to emerging market growth. The domestic focus of Chinese policy and the outperformance we receive on the CSI-300 swap means we continue to prefer it to MSCI China. The potential losses on the swap structure are mitigated by a protective option collar.
- Introducing put protection over our US shares exposure in the form of crash protection and a contingent put option. The crash protection is in the form of a deep out-of-the-money put option to reduce the premium cost. The contingent put is a vanilla US equity put option that has a payoff contingent on the level of the Australian dollar (AUD)/US dollar (USD) currency level. This is appealing for the Inflation Plus portfolios as we currently hold elevated levels of foreign currency whose role is to reduce losses if share markets perform poorly. The contingent option is a cheap way for us to reduce the portfolio's reliance on the correlation between AUD and global shares remaining positive.

The MLC Inflation Plus portfolios have flexible asset allocations with few constraints which enable us to target tight control of risk over each portfolio's time horizon.

- Taking profits on our Japanese yen (JPY) call and rolling the strike up and out. This position is designed to protect against a weakening of the JPY. The portfolios' exposure to JPY forms part of a protective core but is vulnerable to a rise in real rates. Other parts of the portfolio have a similar sensitivity to changes in real rates (eg gold, inflation linked bonds, infrastructure etc) making this a pain point for the portfolios under an adverse interest rate scenario. Optionality over JPY is the cheapest means of offsetting this risk.

Here is a summary of the changes to positioning of the MLC Inflation Plus portfolios over the recent quarter.

Asset class	MLC Wholesale Inflation Plus portfolios change in target asset allocation over the 3 months ended 31 December 2021		
	Conservative	Moderate	Assertive
Chinese government bonds (through derivative strategies)	Steady	Steady	Steady
China A-shares with downside limit of -20% (through derivative strategies)	Steady	Steady	Steady
Emerging market shares (through derivative strategies)	Steady	Steady	Steady
USD/JPY call option	**Decreased**	**Decreased**	**Decreased**
Defensive Australian shares (including protected income mining and energy shares)	**Increased**	**Increased**	Steady
Global shares (through derivative strategies)	Steady	Steady	Steady
Global listed infrastructure	Steady	Steady	Steady
Global shares (unhedged)	**Increased**	**Increased**	Steady
Foreign currency exposure	Diversified basket maintained	Diversified basket maintained	Diversified basket maintained
Gold exposure (through derivative strategies via call options)	Steady	Steady	Steady
Low correlation strategy	Steady	Steady	Steady
Real return strategy	Steady	Steady	Steady
Australian inflation-linked bonds	Steady	Steady	Steady
Insurance-related investments	Steady	Steady	Steady
Global high yield bonds and loans	Steady	Steady	Steady
Global non-government bonds (short maturity)	Steady	Steady	Steady
Global non-government bonds (all maturity)	Steady	Steady	Steady
Australian non-government bonds (short maturity)	Steady	Steady	No allocation
Cash	**Decreased**	**Decreased**	**Increased**
Borrowings	Not permitted	Not permitted	No borrowings

MLC Horizon portfolios

The key portfolio activities during the December 2021 quarter were:

- We've introduced a direct allocation to insurance-related investments to avail the portfolios of the stable yield and uncorrelated return stream these investments provide. In the current environment of low yields across traditional fixed income assets, insurance-related investments are expected to provide the portfolios a healthy yield that's driven by factors other than economic growth, inflation and credit, providing a valuable source of income diversification. The allocation to insurance-related investments has been funded by reducing exposure to inflation-linked bonds, short and all-maturities Australian and global bonds. The portfolios have a small existing exposure to insurance-related investments which they inherit from investing in the MLC Inflation Plus portfolios. More details are available at **mlc.com.au**
- The overweight allocation to emerging market shares was rolled in December. This allocation is expressed through a swap structure that is a combination of the onshore China CSI-300 and Emerging Market-ex China indices, similar to the Inflation Plus portfolios. This continues to be our preferred means of gaining exposure to emerging market growth.
- The new allocation to global listed infrastructure we introduced in the September 2021 quarter is fully invested and tracking to expectations.
- The performance benchmark for the Australian shares component of the Horizon portfolios was changed to the S&P/ASX 300 Total Return Index from the S&P/ASX 200. This change brings the benchmark into alignment with that used in APRA's Your Future, Your Super performance test. Over the long term (7 years+) the performance differences between these two indices are negligible.

For the active management of the MLC Horizon portfolios, risk is primarily benchmark-related. Strategic (benchmark) asset allocations have been designed to efficiently generate above-inflation outcomes on the basis of long-term investment assumptions and taking into account that over time a broad range of scenarios could play out.

- MLC Horizon portfolios also inherit exposures through investment in Inflation Plus, providing important real return exposure and sources of low correlation return streams. Activity in Inflation Plus this quarter continues to be focused on 'Participating and Protecting' by rolling our protected emerging market exposure for another three months. We still believe a combination of the China onshore CSI-300 and MSCI Emerging Market-ex China indices provide us with the most appropriate exposure to emerging market growth. We also introduced put protection over our US shares exposure in the form of crash protection and a contingent put option. This is appealing for the Inflation Plus portfolios as we currently hold elevated levels of foreign currency whose role is to reduce losses if share markets perform poorly. We also took profits on our Japanese yen (JPY) call.

We will continue to look to diversify the MLC Horizon portfolios' drivers of growth as we move into 2022, taking advantage of any attractive pricing opportunities that may present as a result of market dislocations.

Here is a summary of the positioning of the MLC Horizon 4 Balanced Portfolio.

Asset class	MLC Wholesale Horizon 4 Balanced Portfolio target asset allocation at 31 December 2021		
	Under	Strategic asset allocation	Over
Australian shares		•	
Global shares (unhedged)			•
Global shares (hedged)	•		
Global property securities		•	
Global listed infrastructure			•
Cash			•
Australian bonds (short maturities)			•
Australian bonds (all maturities)	•		
Australian inflation-linked bonds	•		
Global bonds (short maturities)			•
Global bonds (all maturities)	•		
Global non-investment grade bonds (high yield bonds and loans)		•	
Real return strategies (including Inflation Plus)	•		
Infrastructure			•
Insurance-related investments			•
Low correlation strategy		•	

MLC Index Plus portfolios

Asset allocation positioning of the MLC Index Plus portfolios was little changed in the December quarter.

MLC Index Plus portfolios inherit exposures through investment in the real return strategy, providing important real return exposure and sources of low correlation return streams. The real return strategy's activity this quarter was focused on accessing reasonably priced return sources whilst at the same time controlling for adverse outcomes:

- The exposure to emerging markets was rolled with the onshore China CSI-300 and Emerging Market ex-China swap exposures extended for another 3 months. This strategy has embedded option protection to limit losses, consistent with our 'Participate and Protect' mantra.

Risk is primarily benchmark-related for the Index Plus portfolios. Strategic (benchmark) asset allocations have been designed to efficiently generate above-inflation outcomes on the basis of long-term investment assumptions and taking into account that over time a broad range of scenarios could play out.

- Cheap downside protection was added through a deep out-of-the-money S&P500 share index put and a vanilla S&P500 put contingent on the AUD/USD exchange rate remaining above a certain barrier. Outright volatility remains expensive so we continue to seek low cost ways of maintaining exposure to expensive US shares while reducing the risk of meaningful capital losses.

Here is a summary of the positioning of the MLC Index Plus Balanced Portfolio.

Asset class	MLC Wholesale Index Plus Balanced Portfolio target asset allocation at 31 December 2021		
	Under	Strategic asset allocation	Over
Australian shares		•	
Global shares (unhedged)			•
Global shares (hedged)	•		
Global property securities		•	
Cash	•		
Australian bonds (short maturities)			•
Australian bonds (all maturities)	•		
Australian inflation-linked bonds	•		
Global bonds (short maturities)			•
Global bonds (all maturities)	•		
Real return strategies		•	

MLC Managed Account Strategies

The MLC Managed Account Strategies were launched on 1 July 2020. No major changes have been made to the portfolio asset allocations since then. We've positioned the portfolio for diverse and resilient returns across asset classes in the following key ways:

- **Maintaining growth asset exposure** – We retain our positioning towards a reflationary environment and are keen to benefit from the real cash flows of assets with revenues linked to inflation, most notably Australian and global shares.
- **Foreign currency diversification** – Within global shares we continue to see foreign currency exposure as an important diversifier (holding both hedged and unhedged global shares).
- **Active fixed income** – Fixed income funds are actively managed, which we believe is essential in effectively navigating a rising interest rate environment. Our fixed income duration continues to be relatively short to help insulate the portfolio's exposure to rising interest rates, and we selectively pursue investments in credit through Bentham's funds.
- **Inflation Plus changes** – MLC Wholesale Inflation Plus portfolios' provide important real return exposure and sources of low correlation return streams. As outlined above, Inflation Plus' activity this quarter was focused on:
  - Rolling our protected emerging market exposure (China onshore CSI-300 and MSCI Emerging Market-ex China indices) for another three months using the existing total return swaps structure.
  - Introducing put protection over our US shares exposure in the form of deep out-of-the-money put 'crash protection' and a contingent (AUD/USD currency level) US shares put option.
  - Taking profits on our JPY yen call and rolling the strike up and out; designed to protect against a weakening of the JPY.

The MLC Managed Account Strategies are focused on providing investors with above-inflation returns through professionally managed portfolios that are extensively diversified across asset classes, specialist investment managers, and stocks.

There was minimal portfolio rebalancing activity over the December quarter, limited to some reshaping of the direct ASX sub-portfolio within the Premium series of MLC's Managed Account Strategies. The amplification of existing exposure in Brambles (BXB) and Macquarie Group (MQG) was funded via a reduction in exposure in Alumina (AWC) and South 32 (S32). Details of recent stock changes are available in the portfolio activity reports at **mlcam.com.au**

There were no changes in target allocations during the quarter. The latest portfolio updates are available at **mlcam.com.au**

Appendix 1 – MLC's market-leading investment process

Step 1

Scenario analysis and portfolio construction

'The Investment Futures Framework'

- We can never be certain what the future will hold. To adequately understand risk we must take into account the things that *could* happen.
- We do this by building a comprehensive understanding of the possible future investment environments or scenarios that could occur. This includes not just those things most likely to occur, but also unlikely but very distinctive environments (such as financial crises and other 'tail risk' environments).
- The Investment Futures Framework builds a detailed understanding of how returns vary in each scenario. This also provides detailed information about the nature and extent of investment risks, the means to diversify those risks and how these change through time.
- Understanding how returns and risks can change over time means we can determine the best combination of assets, strategies and managers to generate returns while controlling risks in all scenarios - the asset allocation.

Step 2

Implementation

We implement the asset allocation as efficiently as possible to minimise costs.

Step 3

Review

We continuously apply our Investment Futures Framework to determine if portfolio adjustments are appropriate.

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