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MLC's scenario insights & portfolio positioning

MLC Horizon, MLC Inflation Plus and MLC Index Plus portfolios

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Update for the quarter ending 31 March 2019.

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Quarterly insights

Over the past 10 years investors have enjoyed strong returns that have reinforced a belief that the world's problems are largely solved, but recent market volatilities hint at underlying vulnerabilities.

Ultimately long-term economic fundamentals drive long-term market outcomes. But it is investor behaviour that's key for short-term market fluctuations. It can be confusing when investors sometimes react sharply but at other times don't react at all to new information. The reason for this lies in complexity of the investment world – there is more information than we can readily hold in our heads. As a result investors need to rely on short cuts. A common approach involves weighing up whether the news is mostly positive or negative. Investment managers also frequently use short cuts to make investment problems more manageable. While this makes portfolio analysis seem easier, it limits understanding because genuine insight lies within the messiness of the real world. MLC's investment process enables us to extract more insight into the future by taking into account real world complexity.

Looking back over the past few years, the news flow was mostly positive for a long period of time (with very limited interruptions). This encouraged investors to extrapolate continuing good news, and increasingly gloss over the risks. Inevitably it's a shock when things don't turn out as expected. This is what happened in the final quarter of 2018, when fears of US interest rate rises and global trade combined to shift investor expectations. This resulted in the worst year since 2011 for share markets. However, optimism quickly returned. January saw sentiment quickly reverse again as the US Federal Reserve (Fed) signalled easier policy, which together with hopes for a China-US trade deal, restored the key pillars for share markets which have been low interest rates and earnings growth.

But is this renewed optimism based on sound foundations?

Understanding the past

Before looking forward to examine that question, it is first important to understand where we are starting from and how we got here. Market historian James Grant has made the astute observation that, while in science knowledge is cumulative (it builds on previous insights), in finance knowledge is cyclical - meaning that prior lessons are often forgotten. This is due to behavioural biases which ground thinking in recent events, making it difficult for investors to maintain a clear perspective on risk and opportunity. The longer the period of high returns (low returns), the stronger is investor confidence that this will continue. However, history teaches us that the reverse is the case – prolonged periods of strong (adverse) returns tend to be indicators of weak (strong) future return potential.

It is therefore important to remember that the origins of today's investment environment go back a long way. In fact back to the late 1980s, since when there have been a series of booms which have inevitably led to busts. Each bust brought ever more innovative and accommodative monetary policy creating a 'debt super-cycle' in which excesses (debt) didn't get fully cleaned out, and debt progressively ratcheted higher relative to income (chart 1). This meant that at each bust a progressively more severe downturn was in prospect.

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 in Appendix 2.

When the tech bubble burst, conditions were in place for a deep recession, but the response of central banks meant that didn't happen and the seeds were sown for the housing bubble and the related leverage boom. In 2008 it looked like this process had finally run out of road, but central banks pulled quantitative easing (QE) out of the hat and debt continued to rise (particularly as a result of the China infrastructure stimulus which was so important for Australia's smooth path through the GFC). At that point policy makers were worried not about a deep recession, but a depression. They know this scenario is very difficult to escape from and were prepared to move to a new level of monetary stimulation – historically low interest rates and QE. This ultra-easy monetary policy was required because debt was too high, and unwinding it is deflationary. An inflationary offset was required, and that ultra-accommodative monetary policy has been a key driver of inflation in asset prices.

While the debt overhang has not been resolved, it has changed form. Whereas financial sector leverage has dropped, US corporate leverage has risen to an all-time high when measured relative to GDP. Low interest rates and rapid earnings growth mask the build-up of debt when measured relative to company income, but the high debt stock engenders a vulnerability that will manifest should either interest rates rise or earnings fall.

As long as earnings remain robust and interest rates low, the risks are contained. According to analysis by Bridgewater, one of our investment managers, much of the riskiest corporate debt is not held by banks but pension and other investment funds. This means that systemic risks in the banking system are now lower. On the other hand, a by-product of QE is that there is now considerably more debt on government balance sheets which acts as a constraint on policy flexibility. While in Australia that is less of an issue, residential debt here remains very elevated, creating an important vulnerability that is linked to risks in the residential property market.

In addition to the debt overhang there are two other secular deflationary forces that have been playing out: **technological change** and **globalisation** (chart 2). These forces interact (technology is an enabler of globalisation) to reduce the demand for labour and increase competition for workers, which puts downward pressure on wages. While technological advances lower costs and increase profits, it also tends to disempower workers. The three deflationary forces act together to reduce labour incomes and reduce asset cash flows. However, on the positive, this environment has been almost ideal for share investors.

Chart 1: Global debt overhang originates back to the late 1980s

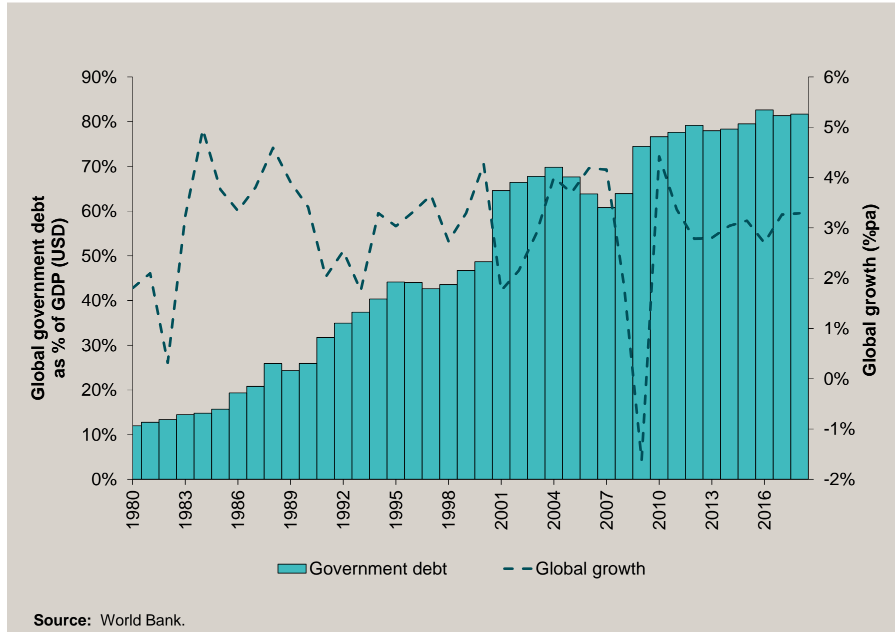


Chart 2: Continued increasing globalisation is a deflationary force

An ideal environment for share investors

Investors in risk assets have benefited in a number of ways. Firstly, low rates have meant those relying on interest income have missed out, pushing some savers to take on more risk in order to generate an adequate return. With central banks pushing government bond yields to artificially low levels, conservative investors were pushed up the risk spectrum. That weight of money progressively increased asset prices offering the prospect of higher returns. This creates an obvious vulnerability when monetary policy reverses (chart 3).

Chart 3: US supportive monetary policy has been reversing

Source: FactSet.

Secondly, the wealth effect arising from higher asset prices supported synchronised global growth, and lower debt servicing costs also helped in maintaining spending (particularly by governments) – as shown in charts 4 and 5.

Chart 4: Robust US economic growth

Sources: Federal Reserve Bank of St Louis and the World Bank.

* Potential growth is the level of growth that an economy can sustain. It reflects the productive capacity of the economy which depends on labour force and productivity growth.

Chart 5: Fiscal boost to US profits via lower taxes

Another pivotal driver of higher earnings has been the progressively bigger share of income that has accrued in profits at the expense of labour (charts 6 and 7). However, this process cannot go on indefinitely and there are now forces pushing back the other way. Wage earners feel increasingly left behind in a world where technology and global competition have undermined job security. History teaches us that when wage earners miss out, political ructions result that are rarely positive. The populist backlash that led to the election of US President Donald Trump and the Brexit debacle have links to perceptions of rising inequality and social discontent. There are newly militant labour forces in the US, UK and Europe. This issue is getting political attention. There is rising animosity towards globalisation, immigration and large companies. We are starting to see the reversal of past trends which have also resulted in lower company taxation and reduced regulation.

In addition to the populist pressure, continued windfalls from globalisation are also threatened by economic realities. China, the world's greatest source of disinflation, is in the midst of economic rebalancing that aims to drive consumption relative to investment. This process will almost certainly change the supply-demand dynamic of global consumer goods over the coming decade. At the same time, the demographic dividend in China has diminished as wages grow faster than gains in productivity.

Chart 6: Rising profits at the expense of US wage earners

Sources: Federal Reserve Bank of St Louis and the World Bank.

Chart 7: US corporate profits have been rising

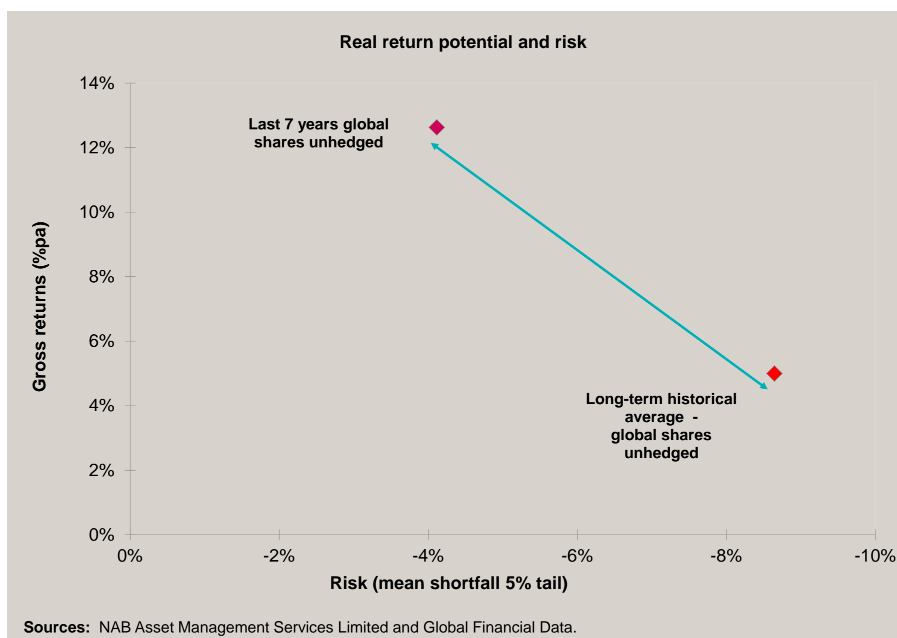
Sources: Federal Reserve Bank of St Louis and the World Bank.

The future is unlikely to look like the past

This combination of supportive factors - low rates and QE, synchronised global growth, low inflation, rising margins (due to repressed wages, low interest rates, deregulation, lower taxes and financial engineering) - created the opportunity for stellar share market returns which have been well in excess of long-term averages (chart 8). While this is obviously good for investors that have arguably been over-rewarded, these excessively strong returns mean that future return potential is reduced and risk of loss is increased. This was the case in both 1999 and 2007. Today is not the same as either of those points in time (and they were different from each other), but looking back from each point in time, returns were unusually high for a long period of time. Given current market pricing (and their uneasy foundation on current monetary policy settings), unless rates stay low and future earnings growth robust (which is becoming more difficult) it seems increasingly difficult for these returns to persist. An additional challenge today is that while there were places to 'hide' your money in 1999 (by investing in 'old economy' stocks)

and in 2007 (by investing in long-maturity nominal bonds), today a rising tide of liquidity has lifted all boats.

Chart 8: Real return and risk – past 7 years vs long-term average



Sources: NAB Asset Management Services Limited and Global Financial Data.

Tight labour markets, social discontent and related protectionist forces, plus rising Chinese wages, increased regulatory focus (particularly on large firms), all create headwinds for company profits. This means that it's becoming more difficult for the strong returns of the past to persist.

While we can understand recent volatility within the context of investors' behavioural biases, arguably the most important change that has been taking place is that monetary policy is now tighter. The Fed has raised rates nine times since 2015 and QE has been wound back. In the US the Fed has not only ceased asset purchases but is reducing the size of its balance sheet (maturing bonds are not replaced). Additionally, the European Central Bank (ECB) has been running down QE; and the Bank of Japan (BOJ) has now reduced asset purchases. This tighter stance is also more challenging given that, not only is US Treasury bond issuance also continuing to rise, but the last few years have seen a significant increase in US investment grade bonds outstanding, which will require refinancing or repayment.

Given these policy changes, we have not been surprised to see a rise in market volatility. The obvious vulnerability is that as rates rise investors are at some point induced to come back down the risk spectrum as the tide that has lifted all boats starts to recede. Additionally, as we have mentioned in previous briefings, repressed interest rates have driven investors to seek alternative or modified return sources. These include risk parity, minimum volatility smart beta, volatility targeting and tracking strategies, trend following and generally the selling of volatility to meet yield targets. These strategies supress current market volatility, while making it more reactive to sell-offs - we should not be surprised to see further volatility.

What does the future hold?

Future investment outcomes of course rely on how the future turns out versus what's priced into markets. Given the strong tendency for investors to extrapolate past trends, current market assumptions about US profit growth still appear optimistic. When the environment has been mostly positive, risks tend not to be factored in before they are obvious. Looking forward, we can see that a number of those tailwinds that have supported strong returns from growth assets may be waning and potentially turning into headwinds.

The future is always uncertain. When we look back, what happened seems obvious, but in reality the past is just one of many possible futures that could have played out. Looking forward, there is a range of futures that could occur – there are credible positive futures in which policy decisions underpin continuing growth and well behaved markets. But there are risks that policy is ineffective or misdirected (tariffs present the most obvious risk), and of lower economic and most particularly disappointing profit growth. Deflationary forces could again dominate but higher inflation is also not as unlikely as commonly presumed.

Recently economic growth indicators have disappointed, this could play out in a number of ways. First, it could prove to be temporary. For example, disruptive protests in France may moderate, and auto sector production delays in Germany probably won't persist. Additionally, there have already been policy responses which will tend to support higher confidence. Looking forward, growth could turn out to be higher than expected as temporary factors wash out and policy is more supportive, the extent to which this feeds through into higher earnings will depend on what happens to wages. US growth has slowed from last year's 2.8%, many forecasters are suggesting around 2% for this year but this is still ahead of the potential growth rate which means an already tight labour market

will continue to tighten. Tight labour markets together with increasing protectionism, and weakening forces of globalisation, tend to boost wages and reduce profit margins. However, wages have been slow to rise even in the US and Japan where labour markets are tightest, which makes it possible that we are not yet at the end of the period of strong profit growth.

It's also possible that growth will continue to slow, for instance rising Brexit uncertainty is weighing on confidence in Europe. If that's the case we should expect further policy responses, but in a significant downturn, policy degrees of freedom are limited. The US is best placed to respond, but there is concern that firepower may only be adequate for a modest downturn, not a recession. This raises the possibility that in a deep enough recessionary environment, another step in ultra-monetary accommodation is necessary to engineer a recovery in which policy makers target higher spending. Such a policy would see inflation in asset prices rotate to consumer price inflation. There is clear potential for much higher inflation in this scenario – paradoxically a recession which increases the risk of a deflationary slump makes rising inflation more likely. This may sound like an extreme scenario, but the GFC and QE reminds us that the future can be very different from the past and from what's commonly expected.

When investing, there is not much that we know for sure. Today we do know this is a challenging starting point. Assets generally are expensive, return potential is low and diversification opportunities are limited – bonds have limited diversification power, and are sensitive to some of the same risks as shares (both are vulnerable to a rise in cost of capital). Policy decisions remain key and neither these nor the behaviour of politicians can be second guessed.

The question you may now be asking is with so many possibilities, how should portfolios be positioned?

Hope versus risk-based investing

To be clear, the choice is to position the portfolio on the basis of either:

- hope that you can forecast the one future that will unfold, typically this relies heavily on extrapolation of the past leading to unexpected risk exposures when the environment changes, or
- an understanding of the things that could happen, good and bad – that is on the basis of an informed decision about how much risk and what sort of risks to take and what the consequences of that are for return outcomes.

In other words, the choice is between **hope-based** or **risk-based** investing. Hoping that things will not go wrong is not a sound strategy – at some point during a decent length of retirement a major market decline is likely. Risk-based investing prepares for the possibility that things do not turn out as we would prefer. This is the only sound basis for portfolio positioning and is the approach that we take at MLC. This understanding has led us to develop a unique approach to investing.

What is different about what we do, and on what basis do we make investment decisions?

We do not rely on any particular academic theory or on commonly used simplifying assumptions. For example, reliance on summary statistics such as standard deviations and correlations rely on past data not future possibilities. They also do not capture how behaviour changes across the investment environment – for example, bonds are a less reliable diversifier of share market risk in a stagflation versus a deflationary slump. We need the detail of when certain risk diversifiers will work and when they won't – summary statistics lose that vital information.

Instead our investment process starts from first principles. We start with the fundamental observation that we invest in an environment of uncertainty. We can never be sure what the future holds. There is always a range of possible futures which could play out. Which will occur is not predetermined, and so is not reliably forecastable. Our industry pays insufficient attention to this reality. An important reason for this lies in cognitive or behavioural biases. We are all prone to these and they mislead us as to how the world works (and where the boundary lies between investment insight and illusion).

Overconfidence is a key issue – this affects many things (surveys suggest that over 90% of US drivers think they have above average driving ability). Investors tend to believe they have more insight into the future than they really do. Investors also have a tendency to be grounded in what we are currently experiencing which makes it difficult to imagine a world that's significantly different from today. This matters, for example, it created the illusion that we were in a low risk world (the so-called 'great moderation') before the GFC when in fact it was clear at the time that risk was high. And today the focus on 'lower for longer' rates is resulting in the neglect of other important possibilities. Notably, there is little concern about rising inflation even though it presents significant risk to the preservation of real capital.

The Investment Futures Framework: Scenarios and changes in return potential

Our investment approach focusses on understanding the different futures that could play out – what could go well and how challenges might arise. This requires that we remain sceptical of any one possibility – and in particular, we never assume that the environment will remain much like the past. We seek to understand the set of distinctive potential futures or scenarios. These scenarios do not forecast the future but describe the drivers of change. This provides a rich source of forward-looking information about return potential, the nature of future risks, and the most effective sources of diversification.

Our high-level map of investment uncertainty consists of a comprehensive set of distinctive potential futures. For each scenario we use a series of integrated models to generate return expectations for all portfolio exposures, and whole portfolios. As prevailing valuations change through time, return potential, the extent and nature of future risks and opportunity for diversification, all change which feeds into portfolio positioning. This systematic and comprehensive analysis generates genuine insight into what drives future market outcomes. We are not forecasting the future, but instead describing the drivers of change. The power of this process lies in thinking through what could happen, ahead of time.

In terms of the mechanics of this framework, each scenario has the same starting point. But each has a distinctive path and end point. Over time starting conditions change - exchange rates, interest rates, bond yields, company earnings, share prices – and this changes the scenario projections of the future. As potential returns, the extent of risks, and opportunity for diversification change, we reassess and refine portfolio positioning. For example, chart 9 shows the real return potential from global shares looking forward three years from different points in time. Each point represents a probability-weighted average across each of the scenario possibilities. It is indicative of potential but returns could be much higher or much lower depending on how the future plays out. We can observe that looking forward from 2012 return potential was significantly higher than today. We can also see how return potential improved during the December quarter last year, which enabled the MLC Inflation Plus portfolios to increase share exposures. However, this response was limited by return potential which was still well below normal levels. In the first quarter of 2019 strong returns mean it has reversed again, leading us to review these positions.

We can track the path of risk and return potential for all components in a portfolio, and for the whole portfolio. The riskiness and return potential of all assets changes through time. When share prices rise faster than earnings they are factoring in future good news – which lowers future return potential. Return potential declines – and there is higher risk because the future may not turn out as positively as presumed.

Looking forward from today, valuations are again as extended as at the end of third quarter 2018. However, it remains possible that robust returns may resume. However, risks are higher and we are again reviewing portfolio positions and whether the additional small allocations to shares made in January remain appropriate.

The Investment Futures Framework scenario sets explained

Our approach assesses and analyses a comprehensive set of possible future scenarios – this is referred to as the Investment Futures Framework. This thorough assessment of the different ways in which the future might unfold provides us with detailed insight into return potential and, most importantly, the sources and the extent of risk and the means of efficiently controlling risk. We track how future risk and return potential changes through time. The process provides a deep and detailed understanding of future risks, return potential and the opportunity for diversification. Risk is not a statistic; it arises from a range of real economic, political and business events. Using our Framework's comprehensive assessment of the potential sources of future risk we are equipped to position portfolios to extract return potential while maintaining the required risk control.

The Investment Futures Framework comprises both our **generic** broad set of 40 scenarios which pivot around the main drivers of returns – the macroeconomic drivers and investor behaviour (swings in the level of optimism or pessimism, and rational changes in risk perception) – and a **tailored** scenario set which includes as many primary distinctive scenarios as is necessary looking forward from the current starting point.

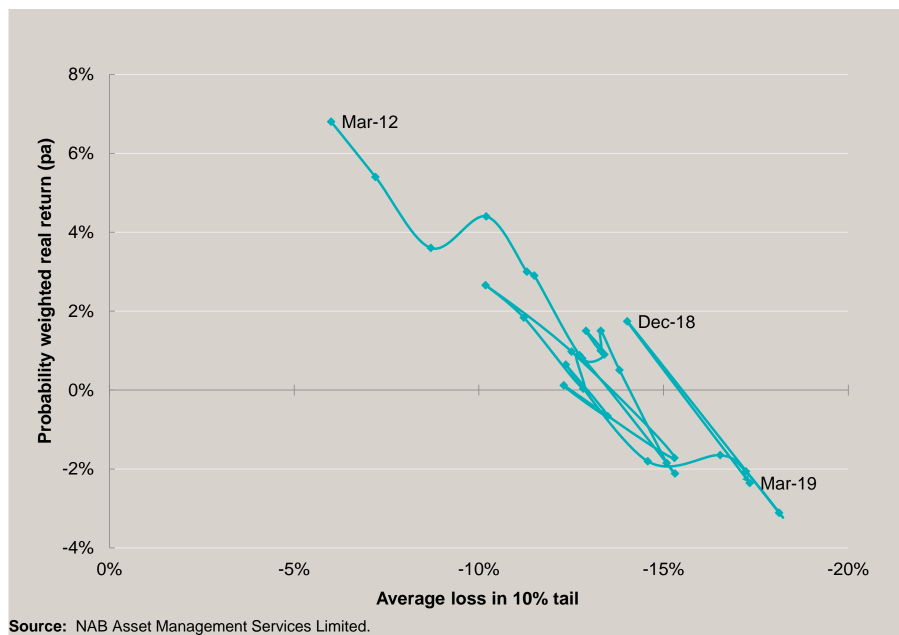
The generic set of scenarios is designed to have relevance from any starting point and provide a consistent barometer of risk and return through time. The smaller tailored set of scenarios pivot around the key characteristics and uncertainties in the current environment. The tailored set might be seen as consisting of the most obvious potential futures, though we are aware that what seems most obvious today may not be after the event – the future is only ever obvious once it has become the past.

These two scenario sets in combination are used to assess portfolio positioning. Both sets of scenarios are updated as asset prices change – as asset prices change, future return potential and possible future risks change. We take this evolution into account in positioning our portfolios.

Our aim is to understand the key things that could happen, what can drive change, and then identify the most appropriate risk and return trade-off, given the objectives and constraints for each portfolio, to find at least an acceptable outcome regardless of what happens.

Our promise, particularly to our Inflation Plus portfolio investors, is to maintain the risk control discipline - this means that in a worst-case scenario we must avoid significant negative returns over each portfolio's time horizon. However, our awareness of the possibility of ongoing volatility means we need to be nimble and rapidly re-assess positioning - though we still suspect further strong rises have a declining probability, we recognise that animal spirits can mean that challenging news is ignored.

Chart 9: Real return potential from global shares (unhedged) looking forward three years



Source: NAB Asset Management Services Limited.

Our tailored scenario set is consistent with last quarters' and we have been developing some shorter-term scenarios to examine more closely the dynamics of a changing and more volatile environment. We continue to be vigilant, with respect to the past, of confidence and growth and the unanticipated possibility of a coincident inflation pick-up across major economies. Another important issue is the strength of the forces supporting a continuing depreciation in the Australian dollar (AUD). Refer to Appendix 1 for the current tailored scenarios set.

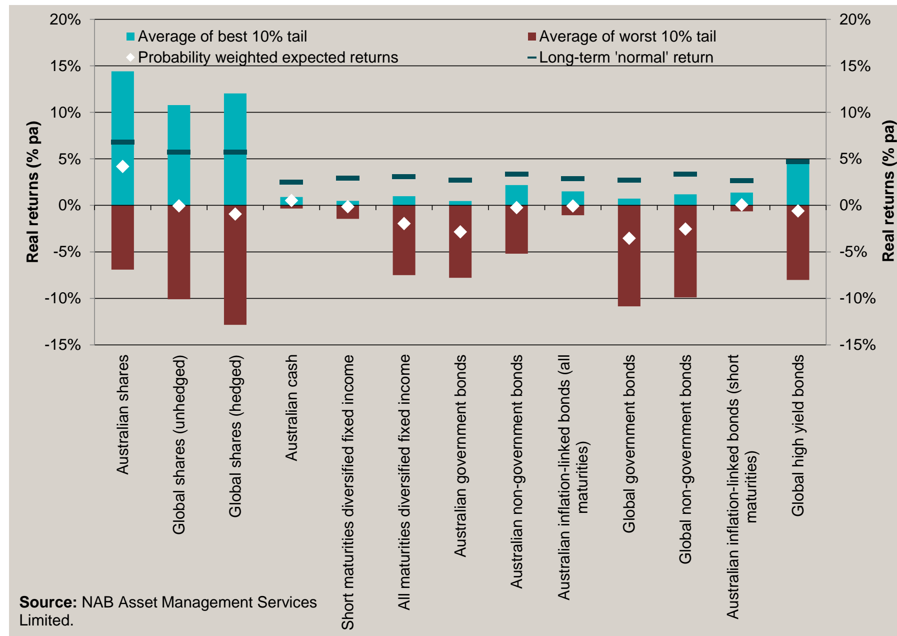
Due to the prevailing distortions and policy uncertainty, the tailored scenarios contain more complexity and cover a wider range of outcomes for assets than would be the case from a less distorted starting point.

As explained above, the fundamental underlying challenge remains widespread high debt loads. This means that outcomes will not just pivot along inflation and growth paths, but will be heavily influenced by decisions to either save or borrow in both the private and public sectors and by the direction of policy that might or might not foster an improvement in efficiency and a pickup in potential growth, and the ways in which this could manifest. Credible outcomes range from favourable improvements in nominal prices and improvements in capital productivity (ie **Inflationary debt resolution** scenario) through to the **Stagflation** and **Extended risk aversion** environments that we expect would eventuate should today's unorthodox policies fail and fiscal stimulus disappoints or fails to materialise. The political pressures that arise from what are now multiple displays of voter discontent with the status quo reinforces the need to change the policy agenda. This is a risk point to watch closely, particularly as it has coincided with changing perceptions about monetary policy efficacy.

The potential real returns for each asset class are shown in chart 10.

The Investment Futures Framework: Scenarios and changes in return potential

Chart 10: 40 scenario set (generic scenarios) potential real returns (March 2019) – 5 years, 0% tax with franking credits, pre-fees, pre-alpha



Source: NAB Asset Management Services Limited.

The probability-weighted real returns shown in chart 10 (diamonds) have deteriorated over the last quarter. For comparison, we've provided 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.

Performance expectations

Chart 11 shows return potential for the MLC Horizon, Inflation Plus and Index Plus portfolios based on our generic (40) scenario set looking forward from the end of March 2019.

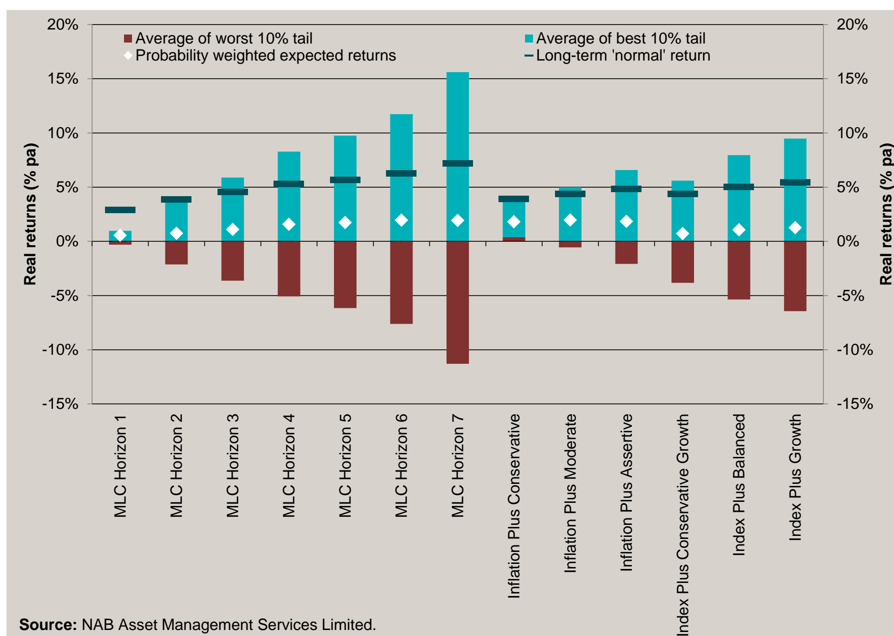
As with previous quarters, the chart shows that on average, looking across the whole scenario set, the potential reward for taking risk has declined. In the event that a scenario with relatively higher returns occurs, the returns of those portfolios with larger share allocations will be sharply higher. However, looking across the range of future possibilities and using our assessment of their probabilities, it is clear that the reward for risk-taking could disappoint investor expectations.

Comparing the MLC Inflation Plus to the MLC Horizon and Index Plus portfolios, the stronger risk focus of the Inflation Plus portfolios is evident. Consistent with their objectives, these portfolios have responded to shrinking return potential and weakening risk diversifiers by reducing exposures to riskier assets. This reduces the return potential in strong scenarios but provides tight risk control in the event that an adverse environment occurs.

In positioning the MLC multi-asset portfolios we take into account outcomes in all our scenarios. For the MLC Inflation Plus portfolios, our focus is on strictly limiting both the probability and most importantly the extent of negative real returns over each portfolio's time horizon in the event that an adverse scenario occurs, while extracting as much return potential as possible subject to this risk constraint.

Also, in relation to the MLC Inflation Plus portfolios, the chart suggests that with a single static asset allocation, a particularly positive scenario is required to meet the return hurdle. Of course, in practice the portfolios' asset allocations are not static. We evolve the MLC Inflation Plus portfolios' allocations dynamically through time to control risk as required and exploit opportunities as they arise. However, we will not chase returns to meet the return hurdle if that requires too great a risk exposure. If a higher level of volatility persists, this may result in new opportunities to enhance returns in an appropriately risk controlled manner.

Chart 11: 40 scenario set (generic scenarios) potential real returns (March 2019) – 5 years, 0% tax with franking credits, pre-fees, pre-alpha



Source: NAB Asset Management Services Limited.

The probability-weighted real returns are shown in chart 11 (diamonds). For comparison, we've provided 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 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. In particular:

- we limit vulnerability to negative returns to preserve capital in above-inflation terms over the defined time frame – if there is higher prospective risk this triggers tighter risk control
- in other scenarios, we aim to deliver attractive inflation plus returns over the defined time frame, and
- we will not chase higher returns if the risks of doing so are inconsistent with capital preservation over each portfolio's investment time frame.

Returns over the past year have been modest, particularly relative to those generated in prior years. The past 12 months have been challenging for our defensive positioning.

Here is a summary of the positioning of the MLC Inflation Plus portfolios.

Asset class	Change in target allocation to asset classes in the MLC Inflation Plus portfolios (in MLC MasterKey's super and pension products) over the March quarter			Comment
	Conservative	**Moderate**	**Assertive**	
China A-shares with downside limit of -20% (through derivative strategies)	Steady (zero) allocation	Steady (+0.5%) allocation	Steady (1.0%) allocation	We maintain our exposure to the on-shore China-A share market using the combination of a Total Return Swap (TRS) and a 20% out-of-the-money put. As the put is completely funded by the fee received from the TRS, the payoff profile for this exposure is performance of the China-A share market (AUD unhedged) with a downside limit of -20%. Due to the high growth potential and volatility of Chinese shares, this type of exposure has a favourable prospective payoff profile. This strategy has performed strongly during the past quarter.
Emerging market shares	Steady (zero) allocation	Steady allocation	Steady allocation	Small emerging markets shares exposure.
Defensive Australian shares	**Higher allocation**	**Higher allocation**	**Higher allocation**	Our defensive shares investment process directly takes account of the risks identified in our scenarios analysis. By investing in defensive Australian shares we're able to have a higher exposure to Australian shares than we otherwise would.
Global shares (through derivative strategies)	Zero allocation	**Higher allocation**	**Higher allocation**	Tailored exposure to specific markets via futures on the basis of fundamental value and risk offsets via currency exposure plus a call options exposure provides a risk controlled exposure to share market upside with a limited and pre-defined downside.
Defensive global shares (unhedged)	Steady allocation	Steady allocation	Steady allocation	Primary global share exposure is defensive. The portfolios have a strong bias to absolute, not index-relative, shares.
Foreign currency exposure	Call options protection maintained	Call options protection maintained	Call options protection maintained	AUD/USD upside protection maintained at a lower level.
Gold exposure (through derivative strategies)	Zero allocation	Zero allocation	Steady allocation	Gold helps protect the portfolio against a range of shocks and inflationary scenarios. However the gold price can be volatile and the concept of fair value is nebulous. Exposure to gold is through our derivative strategies using futures.
Low correlation strategy	Steady allocation	Steady allocation	Steady allocation	High quality, transparent hedge fund strategies are a relatively important source of return potential in a world where it has become more difficult to generate returns with reasonable risk. However, these strategies are exposed to a variety of risks, and allocations are sized accordingly.
Real return strategy	Steady allocation	Steady allocation	Steady allocation	Allocation to our multi-asset real return manager, Ruffer, maintained.
Derivative strategies	Steady allocation	Steady allocation	Steady allocation	Focus has increased on risk controlled equity exposures using derivative strategies opportunistically, taking advantage of favourable market pricing where this is consistent with our scenario insights.

Asset class	Change in target allocation to asset classes in the MLC Inflation Plus portfolios (in MLC MasterKey's super and pension products) over the March quarter			Comment
	Conservative	**Moderate**	**Assertive**	
Global private assets	Steady allocation	Steady allocation	Steady allocation	Within the private equity portfolio some rebalancing is underway which reduces the venture capital exposure. This locks in what have been very strong returns in this part of the market and reduces the overall risk profile of the strategy.
Global property securities	Zero direct exposure	Zero direct exposure	Zero direct exposure	In the portfolio we are limiting exposure to interest rate sensitive assets. We prefer the broader opportunity and absolute return orientation of defensive global shares and multi-asset strategies. There is potential reversion in the prices of higher yielding assets such as Real Estate Investment Trusts (REITs) in scenarios in which monetary policy normalises.
Global government bonds	Zero direct exposure	Zero direct exposure	Zero direct exposure	Deeply unattractive, with limited diversification benefit.
Australian inflation-linked bonds	Steady allocation	Steady allocation	Steady allocation	Maintaining emphasis on short duration inflation-linked bonds.
Insurance-related investments	Zero allocation	Steady allocation	Steady allocation	Insurance-related investments are uncorrelated to other asset classes though it's a risky exposure that we believe is appropriate in portfolios with a sufficient investment time horizon.
Bank loans	**Lower allocation**	**Lower allocation**	**Lower allocation**	Floating rate loans offer some exposure to diversifying income-based risk premia without as much capital risk as fixed coupon bonds. While this exposure has been attractive in the current environment, tight spreads increase price risk and a tendency for low liquidity in adverse environments limits the degree to which portfolios should have exposure.
Australian non-government bonds (short duration)	Steady allocation	Steady allocation	**Lower allocation**	These short-duration bonds offer some return enhancement while limiting additional risk.
Cash	**Higher allocation**	**Higher allocation**	**Higher allocation**	We continue to keep significant powder dry (in cash) waiting for better opportunities. The benefit of cash allocations comes from the optionality it provides in a risk-off environment.
Borrowings	Borrowing not permitted	Borrowing not permitted	No borrowings	Reward for risk is too limited.

MLC Horizon portfolios

For the active management of the MLC Horizon portfolios, risk is primarily benchmark-related. Benchmarks 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. For setting our benchmark asset allocations we use our comprehensive 'generic' set of scenarios which comprises a broad set of distinctive potential futures which are not grounded in current conditions. Target allocations deviate from the benchmark when (as is typically the case) the prospective medium-term investment environment differs from these long-term assumptions.

Our scenarios analysis (taking into account current starting conditions) is used to identify target allocations which are more risk-return efficient than the benchmark which, because these portfolios must remain true to label, have constraints on the extent to which they can deviate from the benchmark. In particular, these traditional multi-asset portfolios have constraints to the mix of fixed income and shares which they can hold. This provides a level of certainty to investors about where their money will be invested, however it also means that portfolio risk is primarily a function of market risk.

As the riskiness of assets changes through time, we vary the asset allocation to position the portfolios to achieve a higher reward for risk than the benchmark. The risk aware nature of our investment process tends to mean that value is added via the adoption of defensive positioning when risk is high, which reduces loss exposure.

For MLC Horizon portfolios we are maintaining a relatively defensive orientation, in part this comes from exposures to Inflation Plus but also through significant deviations from benchmark debt allocations. We continually test our thinking, and we retain high conviction in the appropriateness of this positioning. While the flexibility is more limited and exposure lower, we are utilising similar derivative strategies, as for Inflation Plus portfolios, to enhance the defensiveness of share exposures and manage currency risk.

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

	MLC Horizon 4 Balanced Portfolio (in MLC MasterKey's super and pension products) target asset allocation at end of the March quarter			**Comment**
	Under	**Benchmark**	**Over**	
Growth-focussed assets	•			
Australian shares	•			Moved to a slightly underweight exposure this quarter due to risks building in the Australian market, following strong returns.
Global shares (unhedged)			•	We continue to be overweight foreign currencies (underweight the AUD), with an overweight allocation to unhedged global shares at the expense of hedged global shares. While foreign currency remains an important source of risk control, its power as a risk diversifier has reduced as the AUD declined significantly from peak levels.
Global shares (hedged)	•			
Global property securities		•		Retained benchmark allocation – the benchmark allocations are underweight versus peers.
Income-focussed assets	•			
Cash			•	To reduce interest rate risk in MLC Horizon 2 to 5 portfolios we've maintained the overweight to cash and underweight exposure to Australian and global bonds. We've taken this position in response to low bond yields, gradually rising risks of higher inflation and potential headwinds from a slow tightening in monetary conditions.
Australian bonds - All Maturities	•			Underweight to longer duration Australian bonds maintained for MLC Horizon 2 to 5 portfolios, to reduce interest rate risk.
Australian inflation-linked bonds		•		This allocation to inflation-linked bonds in MLC Horizon 2 to 5 portfolios includes exposure to both short and all maturities duration inflation-linked bonds. The portfolios are underweight all maturities exposure, and overweight the short duration exposure which reduces interest rate risk.
Global bonds - All Maturities	•			Underweight to longer duration global bonds maintained for MLC Horizon 2 to 5 portfolios, to reduce interest rate risk.
Global non-investment grade bonds (high yield bonds and loans)		•		Retained benchmark allocation.
Alternatives			•	

	MLC Horizon 4 Balanced Portfolio (in MLC MasterKey's super and pension products) target asset allocation at end of the March quarter			Comment
	Under	**Benchmark**	**Over**	
Global private assets		•		Retained target benchmark allocation.
Real return strategies (including Inflation Plus)			•	MLC Horizon 4 and 5 portfolios remain overweight real return strategies, other portfolios are at benchmark. We believe the allocation to real return strategies provides the portfolios with a greater potential ability to preserve investors' capital in volatile markets and provides our investors with potentially better investment returns for the level of risk we take.
Low correlation strategy		•		This fund of hedge funds strategy aims to generate a return above cash and deliver returns that are mostly independent of share market performance.

MLC Index Plus portfolios

Risk is primarily benchmark-related for the Index Plus portfolios. Benchmarks 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. For setting our benchmark asset allocations we use our comprehensive 'generic' set of scenarios which comprises a broad set of distinctive potential futures which are not grounded in current conditions. Target allocations deviate from the benchmark when (as is typically the case) the prospective medium-term investment environment differs from these long-term assumptions.

Our scenarios analysis (taking into account current conditions) is used to identify target allocations which are more risk-return efficient than the benchmark which, because these portfolios must remain true to label, have limitations in the extent to which they can deviate from the benchmark. In particular, these traditional multi-asset portfolios have constraints to the mix of fixed income and shares which they can hold. This provides a level of certainty to investors about where their money will be invested, however it also means that portfolio risk is primarily a function of market risk.

As the riskiness of assets changes through time, we vary the asset allocation to position the portfolios to achieve a higher reward for risk than the benchmark. The risk aware nature of our investment process tends to mean that value is added via the adoption of defensive positioning when risk is high, which reduces loss exposure.

For MLC Index Plus portfolios we are maintaining a relatively defensive orientation, this is through adjustments made to the fixed income strategy and allocation to the real return strategy. We continually test our thinking, and we retain high conviction in the appropriateness of this positioning.

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

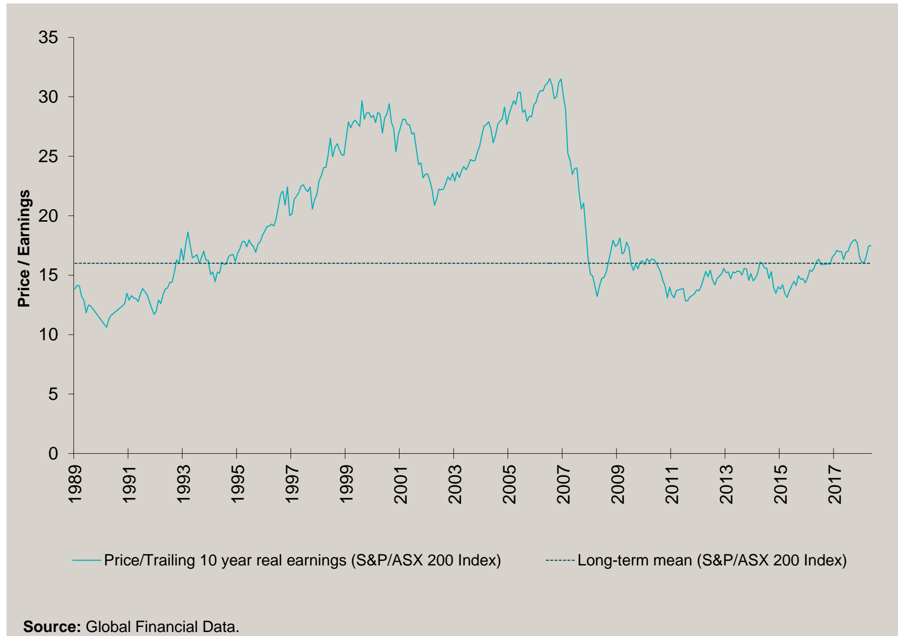
	MLC Index Plus Balanced Portfolio target asset allocation at end of the March quarter			Comment
	Under	**Benchmark**	**Over**	
Growth-focussed assets	•			
Australian shares	•			Moved to a slightly underweight exposure this quarter due to risks building in the Australian market, following strong returns.
Global shares (unhedged)			•	We continue to be overweight foreign currencies (underweight the AUD), with an overweight allocation to unhedged global shares at the expense of hedged global shares. While foreign currency remains an important source of risk control, its power as a risk diversifier has reduced as the AUD has declined significantly from peak levels.
Global shares (hedged)	•			
Global property securities		•		Retained benchmark allocation – the benchmark allocations are underweight versus peers.
Income-focussed assets			•	
Cash			•	To reduce interest rate risk in all Index Plus portfolios we've maintained an overweight to cash and underweight exposure to Australian and global bonds. We've taken this position in response to low bond yields, gradually rising risks of higher inflation and potential headwinds from a slow tightening in monetary conditions.
Australian bonds – Short maturities			•	Overweight maintained.
Australian bonds - All maturities	•			Underweight to longer duration Australian bonds maintained for all Index Plus portfolios, to reduce interest rate risk.
Australian inflation-linked bonds		•		This allocation to inflation-linked bonds includes exposure to both short and all maturities duration inflation-linked bonds. The portfolios are underweight all maturities exposure, and overweight the short duration exposure which reduces interest rate risk.
Global bonds - Short maturities			•	Overweight maintained.
Global bonds - All maturities	•			Underweight to longer duration global bonds maintained for all Index Plus portfolios, to reduce interest rate risk.
Alternatives		•		
Real return strategies			•	We've moved to a slightly overweight exposure this quarter to increase our defensive positioning. We believe the allocation to real return strategies (through the Simple Real Return strategy) provides the

	MLC Index Plus Balanced Portfolio target asset allocation at end of the March quarter			Comment
	Under	**Benchmark**	**Over**	
				portfolios with a greater potential ability to preserve investors' capital in volatile markets and provides our investors with potentially better investment returns for the level of risk we take.

Asset class indicators

Commentary on the main asset classes follows.

Chart 12: Australian shares

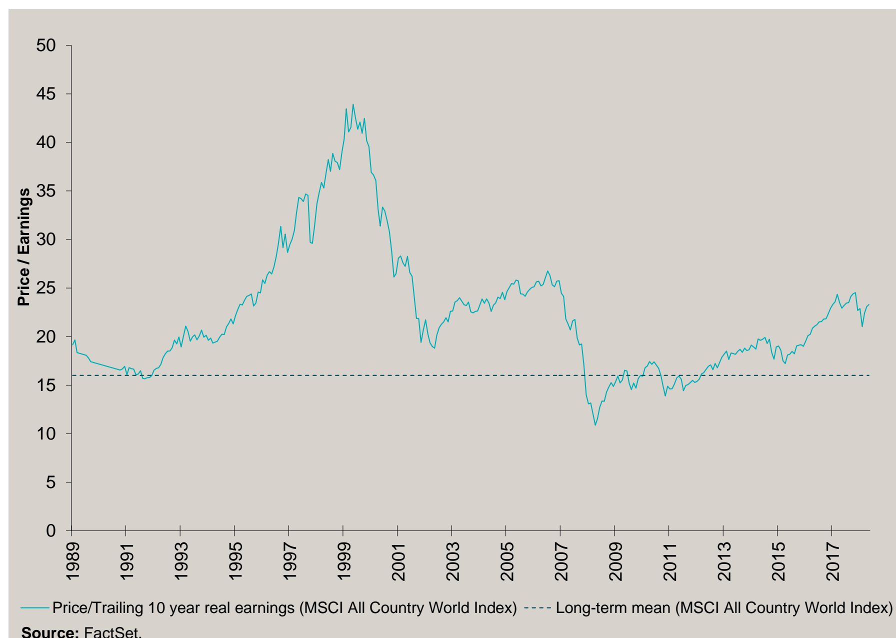


Source: Global Financial Data.

Australian economic data has been subdued with concerns over the softer local housing market. House prices continue to fall in both the Sydney and Melbourne markets after an extended boom. Australian consumers are also cautious as seen in sedate retail spending and weaker car sales. However the strong labour market performance with solid job gains and the unemployment rate moving below 5% has partly mitigated concerns over Australia's growth profile. Accordingly, the Reserve Bank of Australia (RBA) has kept the cash interest rate steady at 1.5%.

Australian shares posted an exceptionally strong return of 10.9% for the past three months. Higher iron ore and metal prices have driven an extraordinary 19% gain for the Resources sector. Both the Real Estate Investment Trust (14.8%) and Utilities (11.6%) sectors posted strong gains given lower government bond yields.

Chart 13: Global shares



Source: FactSet.

Global shares (unhedged) made an exceptionally strong return of 11.3% over the past three months to 31 March 2019. This strong performance is a welcome recovery from the painful negative returns for the final quarter of 2018. The stronger AUD over the past quarter allowed AUD hedged global shares to deliver an even stronger return of 12.3%.

This sharp recovery in global shares reflected a combination of positive factors in terms of lower interest rates, diminishing global trade tensions and some stabilising signs on global growth prospects.

The US Fed signalled in January that it will be patient on future interest rate increases given moderate global conditions and muted inflation pressures. This provided the impetus for sharply lower bond yields across the globe as markets priced in a more supportive stance on interest rates over coming years.

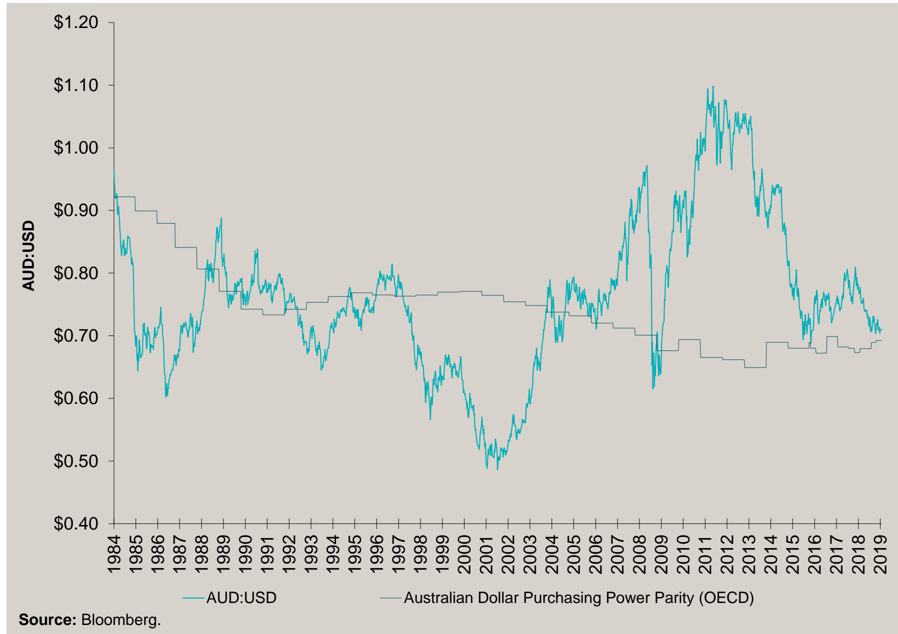
Trade tension between China and the US also faded with signs that a negotiated settlement was possible. President Trump decided to delay the 1 March deadline for imposing a 25% tariff on Chinese imports while China signalled a willingness to increase imports of US products. China's central bank has also encouragingly provided more monetary stimulus to mitigate the current growth slowdown.

Even European shares managed to recover with fading global trade tensions. However political concerns with Britain's pending exit from Europe (Brexit) and subdued European economic data has restrained European share gains.

Asian shares have rebounded strongly this year after a disappointing 2018. The MSCI China share index has surged 16.6% given the more promising signs that the US/China trade issue could be resolved. Further stimulus measures by the Chinese central bank have also assisted this rebound. Emerging markets (unhedged) surged back by 9% with the hope of stable US interest rates and diminishing global trade tensions.

Asset class indicators

Chart 14: Australian dollar



Source: Bloomberg.

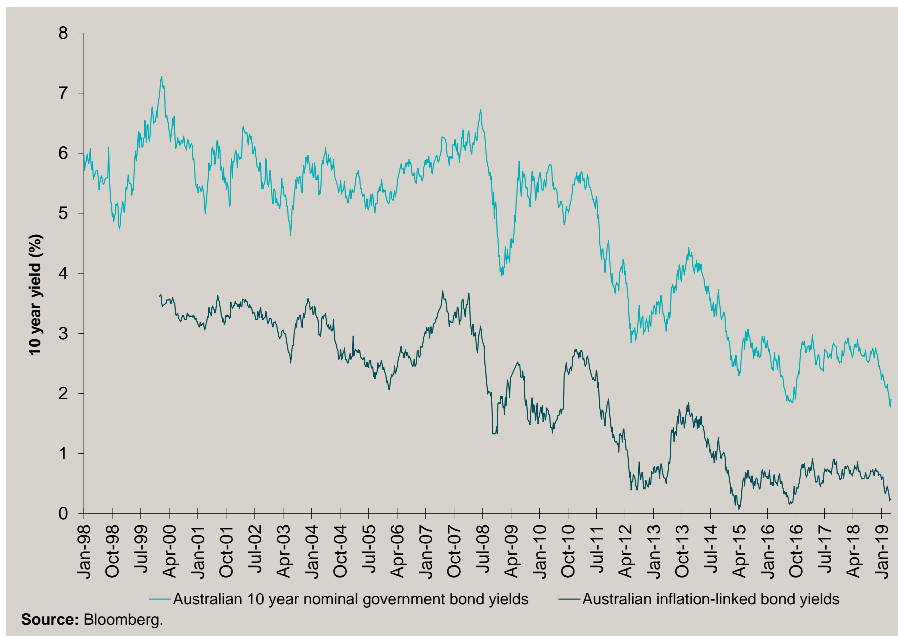
The AUD strengthened modestly in the March quarter with the benefit of higher commodity prices. Iron ore prices surged in response to the tragic Brazilian dam disaster constraining supply, while metal prices rebounded given more promising signs of Chinese policy stimulus to support growth. The AUD even managed to remain resilient to softer Australian economic activity data in terms of falling housing approvals and car sales. The RBA's move to an 'evenly balanced' view on future interest rates also had minimal impact on the AUD.

Chart 15: Global government bonds

Source: Bloomberg.

Global bonds (hedged) delivered a strong return of 2.8% for the quarter. Soothing comments from the Fed on future US interest rates and some weaker data in Europe generated a sharp downward shift in bond yields.

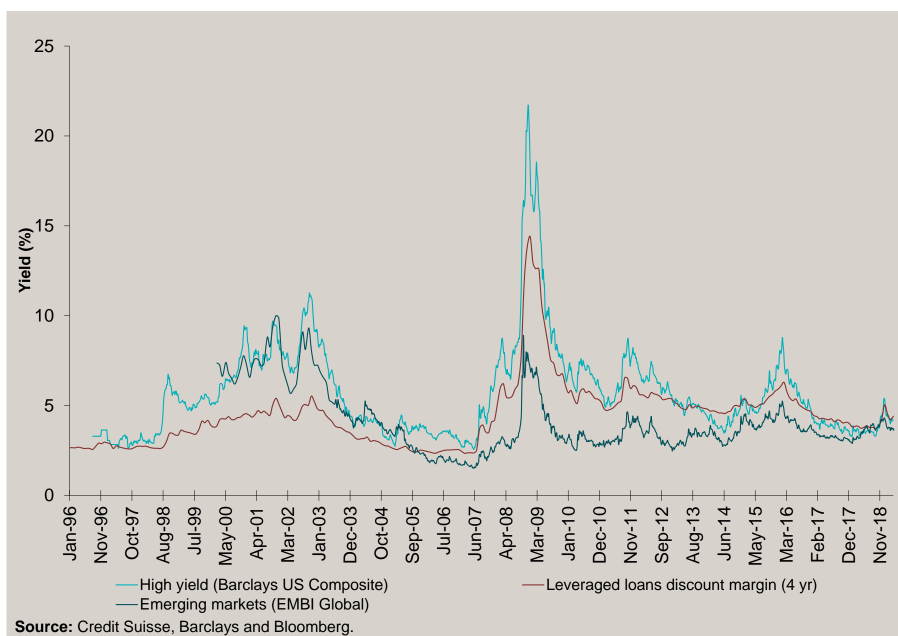
Chart 16: Australian government bonds



Source: Bloomberg.

Australian bonds managed a strong return of 3.4% for the quarter. Sedate Australian economic data and mild inflation have been supportive of lower bond yields.

Chart 17: Non-investment grade bonds



Source: Credit Suisse, Barclays and Bloomberg.

Global high yield bonds (hedged) delivered a strong 3.8% return for the quarter. Credit markets have recovered solidly this year in line with strong performance from global share markets.

Appendix 1 – Tailored scenario set

Scenario	Probability ranking (previous rank)	Description
Inflationary debt resolution	1 (1)	Central banks err on the side of supporting growth while economic reforms do not occur fast enough to entirely offset inflationary pressure, resulting in an orderly rise in inflation. Upward pressure on skilled wages supports demand but squeezes profits. Widespread USD, GBP, JPY and EUR liquidity support asset prices, but this is offset by earnings reversion in the US. Bond markets are reasonably well behaved, but yields do rise. Inflation is high enough to help inflate away the debt burden and global productivity levels decline. Emerging markets experience more severe inflation than the developed world, slightly normalising the growth differential across the emerging markets and developed markets.
Three speed global economy (China soft landing)	2 (2)	The world continues to split into three distinct economic growth zones. Emerging markets led global growth with some rebalancing and moderation in China; the US and UK grow at or above trend; while Europe continues to stagnate. Japan struggles to escape stagnation for now. Strong USD and AUD vs JPY and EUR.
Synchronised moderate growth	3 (3)	Japan's and Europe's growth approach trend levels, while the US, UK and China moderate, resulting in a synchronised modest global growth scenario.
Slow global growth deleveraging	4 (4)	A prolonged and slow consumer deleveraging. Slowing consumption growth and falling nominal prices extend the deleveraging cycle. There is global growth convergence as persistent slow growth and further disinflation in the developed world spills over into the now highly indebted emerging world.
Reform (path to growth normalisation)	5 (5)	A growth upside scenario contingent upon coordinated reforms that address inefficiencies that are idiosyncratic to particular economies (eg labour in many European economies and Japan, infrastructure in the US, sector contribution to growth in China and structural issues in the eurozone). This scenario is increasingly more likely in light of recent policy initiatives. The US and UK grow at or above trend, reforms and stimulus in Japan boost growth to above trend, reforms continue in the eurozone which start to increase growth potential and easing of austerity reduces growth constraints.
Inflation shock	6 (6)	Similar to **Stagflation**, though assumed growth is higher. Sharp rise in inflationary expectations.
Australian stress	7 (7)	This vulnerability increases as China's growth slows - a more pronounced slowdown is a potential trigger for this scenario. A consequence of moderating demand for Australia's mineral exports is deteriorating terms of trade which erodes national income. In this scenario, positive real growth could disguise an income recession. Since interest payments must be made in nominal rather than real terms, this stress becomes more acute at higher levels of foreign debt. Where this occurs, coincident with an unravelling of the over-extended residential property market, a worst case scenario loss of confidence in Australia causes funding stress to banks which requires central bank intervention.
Extended risk aversion	8 (8)	A generic scenario to capture prolonged aversion to risk. The probability of a **Eurozone slow disintegration** scenario was previously included in this generalised risk aversion scenario. Potential triggers include policy disappointment, in particular a protectionist Trump presidency with rising tension with China.
Rise in USD risk premium	9 (9)	Low starting yields are a valuation risk for bonds. Yields could rise to more normal levels even in the context of low growth/inflation expectations. High government debt burdens (UK/core Europe/Japan/USA) provide the potential for a bond-vigilante style re-rating of sovereign yields that undermines key safe haven currencies including the USD. This is not a likely near-term scenario, but given the low yields and high level of indebtedness as a starting point, there is a risk that the environment could progress to one where apparently safe paper becomes compromised. This in turn increases the cost of funding and reduces corporate activity. At the same time, government spending is curtailed by enforced austerity in an effort to limit yield increases, remain liquid and stay solvent. This may be a precursor to a prolonged stagnation scenario. AUD strong but does not re-visit highs vs USD.
Stagflation	10 (10)	With no clear roadmap for the withdrawal of policy stimulus, the inflation risks from quantitative easing may be much bigger than are currently appreciated. In this scenario, policy stimulus is not withdrawn fast enough, perhaps coupled with increased policymaker tolerance for an inflationary work-out (due to a much stronger aversion against deflation than inflation) which gets out of hand. Run-away inflation in this scenario is likely to be negative for real growth, which could in turn lead to **Stagflation**. The scenario is likely to involve monetary policy reversals reminiscent of the 70s. The US economy is getting closer to the point at which an inflationary policy mistake could occur.
Early re-leveraging	11 (11)	Low yields and a period of policy stability prompt a resumption of credit growth in developed economies. Economic growth picks up more quickly than expected and unemployment recedes. Debt imbalances begin worsening again as the developed world quickly re-levers and Asia focuses on investment. This scenario could precede an **Inflation shock**, a second crisis or, if policy makers are nimble enough, a transition to a mild **Inflationary debt resolution**.

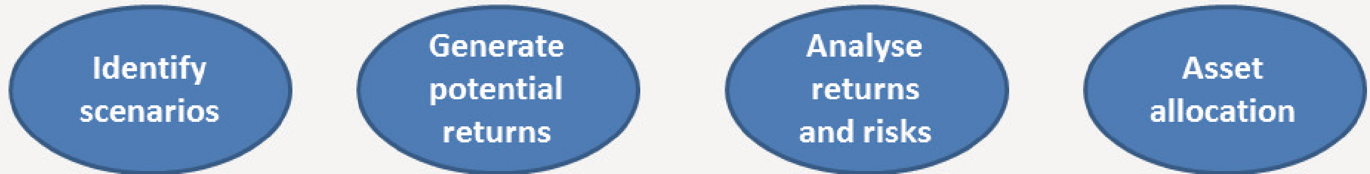
Scenario	Probability ranking (previous rank)	Description
Negative nominal interest rates	12 (12)	Central banks of Japan and Europe move further into negative deposit rates with the Fed and the Bank of England inching towards negative policy rates. This scenario includes the impact of expanded USD, GBP, JPY and EUR liquidity which principally finds its way into asset prices, rather than spurring consumption. The character of this scenario has changed as further extensions of monetary policy have less impact on asset market pricing. Important drivers to change include rising confidence on robust US growth, and moderation in Chinese resources demand with consequent flow-on effects for the Australian economy and interest rates. Consequently it is not anticipated that the AUD would re-visit recent peaks in this scenario, though could remain elevated versus measures of fair value particularly versus the EUR and JPY. China's economy continues to rebalance and growth moderates. China accepts more foreign direct investment. Sourcing these funds externally - rather than from within China - could act as a 'backdoor bailout' of China's poorly performing projects from the 2008/9 stimulus.
Eurozone slow disintegration (possibly leading to reform)	13 (13)	Rising risk of anti-eurozone politicians gaining power, most notably in France with consequent loss of confidence in the stability of the eurozone periphery. A worst case version of this scenario is most likely expressed in the form of withdrawal of cash from banks in countries where an exit is feared, potentially prompting capital controls and raising questions about the union. The path a **Eurozone slow disintegration** might take is highly uncertain. A positive version of this scenario occurs if existential fears lead to a meaningful policy change including on the contentious issues of closing the output gap which requires a significant shift from Germany, and external immigration. In a best case situation there is meaningful reform which potentially influences Brexit - this possibility is captured in the **Reform** scenario.
Monetary failure	14 (14)	A distinctive and hence important scenario that accounts for the possibility of unorthodox monetary policy to fail. Ineffective or stop-go policy, in the absence of meaningful fiscal stimulation, could result in this scenario that could lead to global stagnation, recessionary or even hyperinflationary conditions. In this scenario investors and consumers lose faith in the ability of monetary policy to resolve critical imbalances within the global economy. Developed market economic expansion is negligible and emerging markets slow down significantly, running the risk of a crash. Shares perform poorly. Commodities fall. Nominal yields rally further and remain low.

Appendix 2 – 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.

We welcome your feedback on this document.
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