MLC's scenario insights & portfolio positioning

MLC Horizon, MLC Inflation Plus and MLC Index Plus portfolios

December 2017

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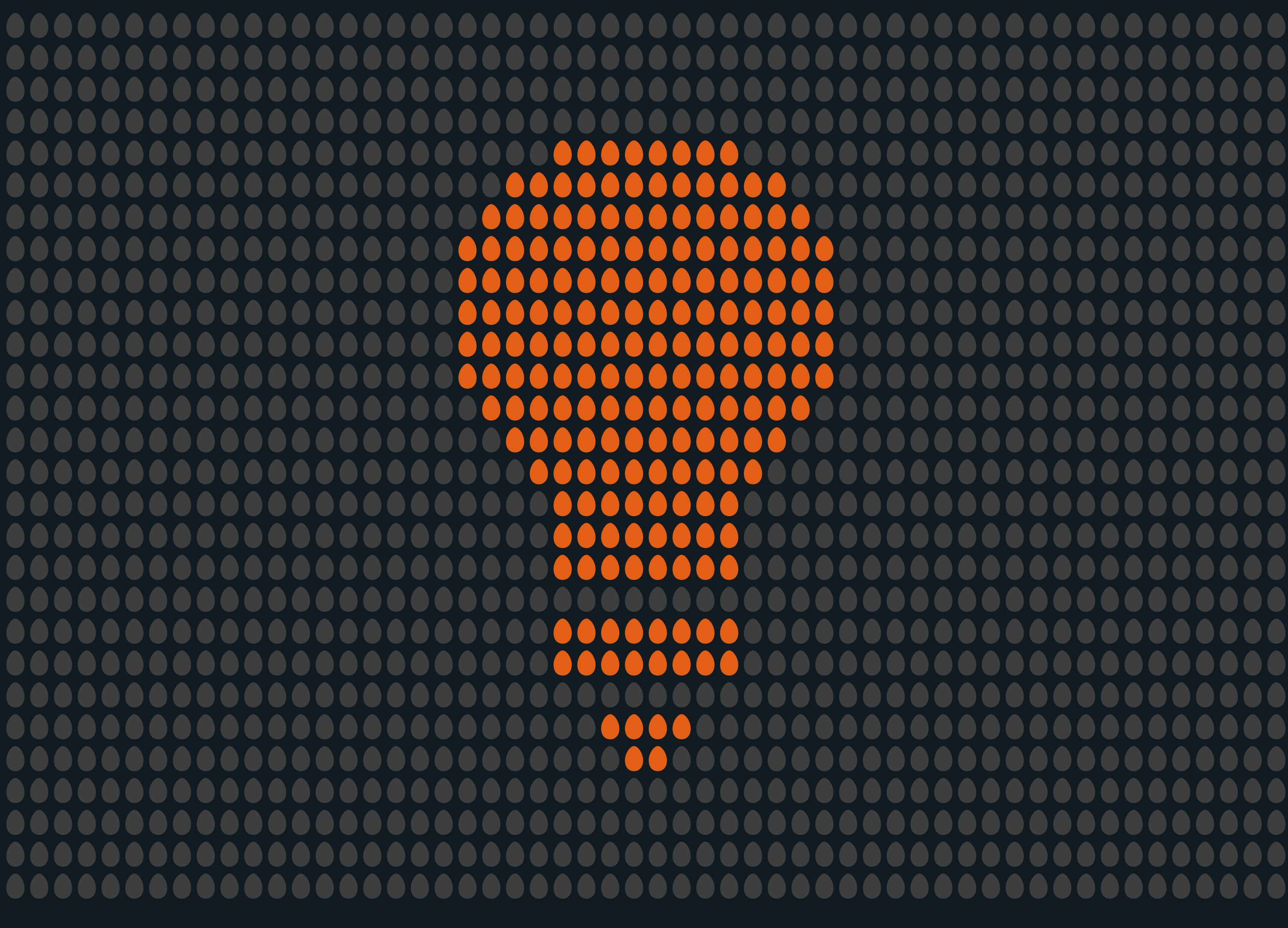

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Investing is hard work. Not for the physical labour, but for the amount of energy that must necessarily be spent assessing the diverse array of interconnectedness that permeates the real and financial economies.

> The relationships that drive macroeconomic and financial market outcomes are among the most complex systems that modern society grapples with.

Many economic linkages are 'chicken -and-egg' relationships, making it difficult to even know which way the system flows eg did low rates drive leverage, or did leverage drive low rates? Yet despite their complexity, the temptation faced by investors is to make convenient assumptions and simplify the investment puzzle into rigid cause and effect relationships. But hand-in-hand with simplification comes a hamstringing of the ability to understand risk. For as we become more precise and more narrow in our schema of the current economic system we necessarily begin to ignore more and more information, lessening our ability to understand risk, ie, the consequence of being wrong.

From reading endless commentary on markets, we believe that investors by and large try to reconcile the path of markets and the economy by focussing on the overarching characteristics that define periods of time that are implicitly taken as prototypical, which for the most part are limited to some run of the recent past. In this type of analytical framework, persistent departures from normality will be interpreted as a paradigm shift and establishment of a new normal.

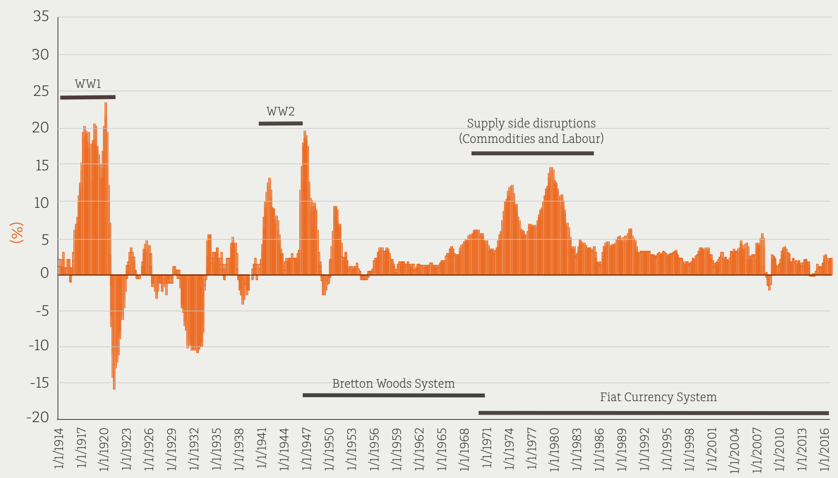
Nonetheless, regardless of how one believes the economy works and whether simplification is beneficial or harmful, it is hard to argue against the notion that the behaviour of inflation is one of, if not the most, critical considerations for investors trying to achieve a real return. For not only does inflation have a direct impact on the purchasing power of savings, it also has significant impact on core components of the financial and real economy through real cash rates and real income growth respectively.

But just as inflation is critical to investors, it is also highly elusive. Short-run inflation can be volatile and destructive (as it was prior to the introduction of the Bretton Woods System in the mid 1940s, where currencies were pegged to the price of gold), persistently high, or persistently low. Nonetheless, the existence of different inflationary regimes *per se* is not the root of worry. The real problem for investors is that while inflationary regimes can persist for extraordinarily long periods of time, they persist without too much signalling that the end of an era is nigh. From a historical perspective, inflationary regimes have ended through profound policy change (eg the early Bretton Woods era), sudden supply shocks (eg the mid 1970s), or a combination of changes across an array of underlying factors (see Chart 1).

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.

Chart 1: Historical US inflation from 1913 to present



Source: Federal Reserve Bank of St. Louis.

The complexities of inflation outcomes mean that we can never be complacent. For just as there now exists the notion that *'Inflation is Dead'*, there have existed periods where inflation was probably perceived as *'forever volatile'* (WWI to Bretton Woods) and *'probably never going back to 2%'* (1968 – 1985). Yet both of these double decade bouts of characteristic inflation eventually ended, solving yesterday's problem but bringing a different set of challenges to the fore. Fixed income investors of the early 1970s will never forget the destructive impact of rapidly rising inflation on the value of US Treasury Notes, whereas the bond buyers from the early 1990s onward could be forgiven for wondering why you'd bother owning anything else? Of course neither of these extremes should drive a longer-term view of fixed income as an asset class, but it does highlight the necessity of both fluid thought and the ability to hold a flexible asset allocation.

As frustrating as inflation is to investors, inflation is a fascinating topic to ponder and discuss. While the ultimate determinants of inflation will always be the nexus between supply and demand, the underlying forces that act on both are broad and complex. The breadth and complexity of factors that influence both supply and demand behaviour make it impossible to generalise the relationship between inflation and key economic indicators.

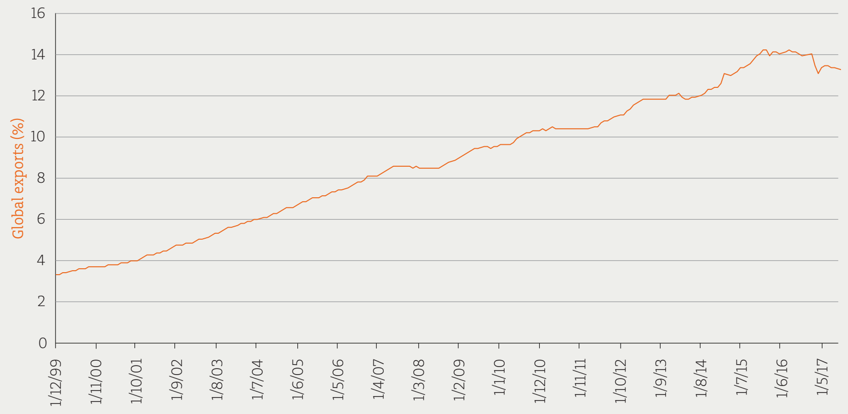
This in turn means that, depending on the prevailing economic conditions, the same change in a key variable that theoretically impacts inflation or inflation expectations might or might not cause the aggregate price of goods and services in the real economy to change. Quantitative easing (QE) might be a case in point. All else equal, an increase in the supply of money into an economy should raise inflation expectations. Yet, the unprecedented supply of liquidity from key central banks into the global economy over the past decade has done little to prime the Consumer Price Index (CPI) or lift inflationary expectations. In our opinion, at least part of the explanation for this lies in the fact that scarcity has been notably absent from developed economies for a very long time due to a stable and adequate supply across key sectors (food, energy, labour and manufactured goods). Perceptions of scarcity have therefore probably had less impact on inflation expectations that would have otherwise been the case.

But, at least as far as the real economy is concerned, QE is not money printing. True, QE creates money, but it is created within the financial economy. This new money directly impacts asset prices but must either be spent or indirectly stimulate demand in the real economy to have an effect on the price of goods and services. So while it is clear that balance sheets must grow under QE, it is not as certain that the price of goods and services will rise. Granted, the impact of QE on asset prices lowers the cost of capital which all else equal should stimulate demand; nonetheless, the impact on CPI will still ultimately rely on movement in either the prevailing supply-demand balance or perception that scarcity will arise.

In our opinion, at least part of the explanation for lack of inflationary fears, despite expanding balance sheets and easy monetary conditions, lies in the fact that scarcity of goods and resources has been absent from economies for a very long time. Aside from some peculiar sectors (eg housing in the UK, Australia and Canada) supply of natural resources, food, consumer goods (and labour to a certain extent), has been ample to meet demand, meaning that perceptions of scarcity have not pressured inflation expectations.

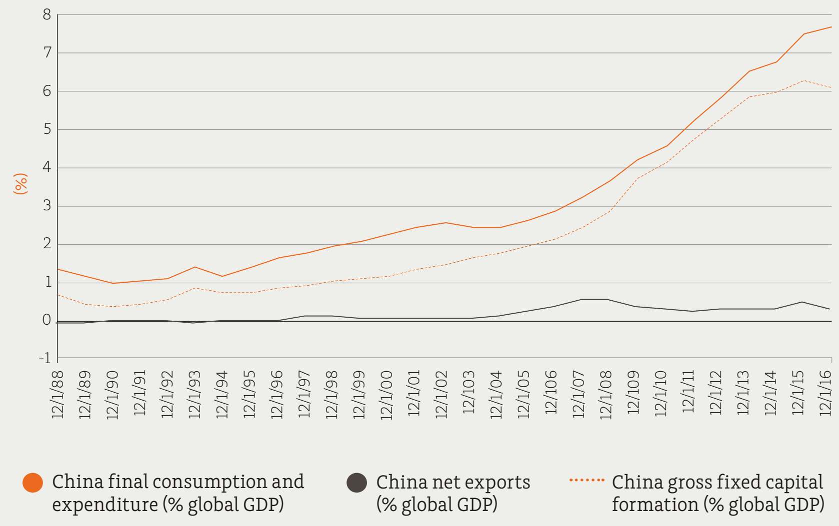
Demand factors have also played a role in supressing inflationary pressure on discretionary or near-discretionary items due to the tendency of consumers across developed economies to deleverage in recent years. Less spending by consumers, in turn, has weakened the impetus of businesses to invest domestically, further undermining demand. In a related way, leverage levels might also have played a role in suppressing wages as the heavily indebted fret about the need to maintain employment in order to service their liabilities. Increased job insecurity, at least at the margin, reduces the bargaining power of labour.

chart 2: China - Share of global exports



Source: Bloomberg.

chart 3: China - Percentage of global GDP



Source: Bloomberg.

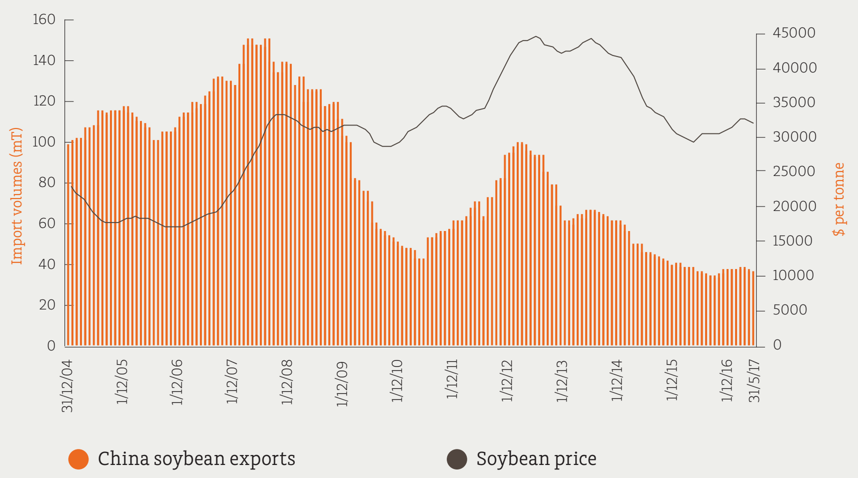
Returning to the notion that lack of scarcity has dampened the scope for an increase in monetary potential to drive inflation expectations, we should consider why developed economies have enjoyed an ample supply of goods over the past two decades. Lack of scarcity has diverse origins. Technology has driven productivity-based supply gains in both agriculture and energy. Higher crop yields aided by seed and equipment technology have underpinned an expansion in food supply, while fracking technology has had a profound impact on the supply dynamics of energy. But perhaps more interesting, is the expansion of consumer and some industrial goods, where the surge in supply is almost exclusively attributable to a rapid run-up in domestic Chinese investment over the past two decades. The impact of China on global trade in merchandise is not just one of scale, but a combination of scale and speed. China's share of global export trade grew from sub 6% to 16% in a little under a decade causing a significant shock to global merchandise supply.

But what makes the China story particularly interesting is that it appears to have been interpreted by the consensus as a one way street. The belief has been that China can perpetually export deflationary pressure to the rest of the world via a timeless harvesting of productivity gains that have flowed from a demographic dividend. This of course is a false assumption. Two factors separate China's economic rise from similar periods for peer economies:

1) The rate of evolution, and

2) The relative size of China's domestic economy to the rest of the world.

Chart 4: China - Soybean exports vs global soybean price



Source: Bloomberg.

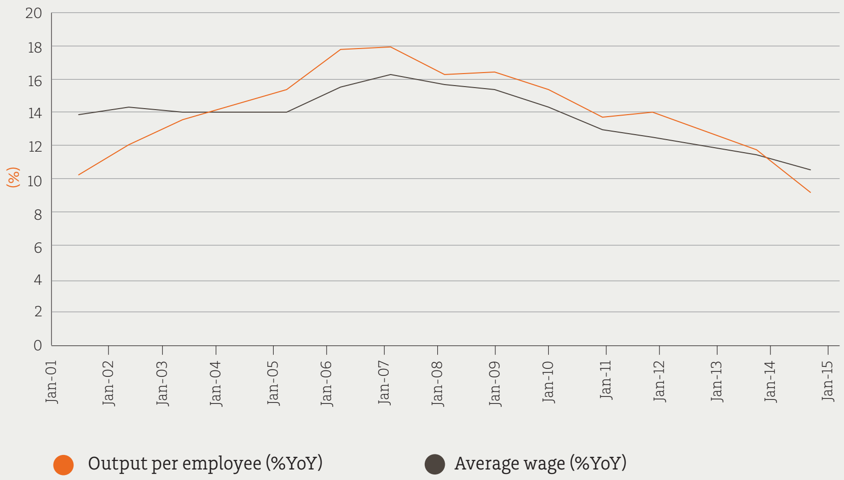
Both of the factors have provoked a greater impact from 'globalisation' on trading partners than was the case with either Japan or Korea. This in turn has established a belief that the power of globalisation is on a one way trajectory of lowering cost and deflating the nominal global economy. Part of this is of course true; greater connectedness will facilitate transmission of economic conditions more quickly and in doing so liberalise industry. But sustained greater interconnectedness does not mean deflation in consumer goods will continue. Is this the right way to view the outlook for globalisation? Perhaps, but we think not.

We believe that the rapidity and scale of China's investment in production capacity should be viewed as a shock, rather than a sustainable change to global economic conditions. Domestic capacity to produce in China has risen significantly faster than domestic demand, meaning that a surplus of goods has become available to global consumers over a very short period of time. Chart 2 (on the previous page) shows that China now accounts for 13% of all global exports with a trade surplus of 0.31% of global GDP (Chart 3). While prior policy in China encouraged capacity over consumption, a continuing shift that began five years ago and has recently picked up momentum has swung policy away from investment and towards consumption. For some sectors this means a lower rate of investment and slower capacity expansion, while for others (eg steel) it means outright cuts. At the same time, China's massive and quickly enriching workers are being encouraged to spend more and save less. That the rate of supply growth is decreasing while the rate of consumption growth expands should necessarily raise concerns about inflation. For just as the scale of China's domestic investment had a profound deflationary impact on global consumer goods prices, the reverse could happen as China's domestic consumers demand more of a limited pool of global resources. To highlight this point, it is worth noting that domestic consumption in China is growing at a nominal rate of just over 10% pa in renminbi (RMB) and now represents just over 7.5% of global GDP (measured in USD).

While there is no precedent to assess how growth in Chinese consumption might impact global inflation, we have seen past bouts of price disruption within individual commodity markets when China has moved from a net export to net import position (eg thermal coal +150% and soybean approximately +40% over 3 years (Chart 4)). And although no direct parallel can be drawn between commodities, particularly across industrial and commercial goods, it is difficult to argue that more diverse global goods (and services) are not at risk of demand pressure, as policy in China continues to migrate away from investment and towards consumption.

But it is not just the potential evolutionary path of supply-demand dynamics within China that poses a risk to global inflation. Domestic productivity gains have also recently began to slow, undermining the support for continued export of disinflationary pressure. Between 2002 and 2015, output per employee consistently grew at a faster rate than average wages (Chart 5). Mobilisation of workers from rural to urban production centres as well as better supply chains and more efficient means of production allowed output to consistently outpace rapidly rising labour compensation. More and more workers with greater and greater output and rising productivity were and still are part of the central forces driving the current wave of globalisation and disinflation. But just as the policy impetus to continue investment driven growth is waning, labour productivity is also beginning to decline. For the first time since 2002, wage growth outpaced output growth in 2015, potentially limiting at least one of the deflationary pressures that has lent on global prices over the past decade.

CHART 5: CHINA - LABOUR PRODUCTIVITY



Source: Bloomberg.

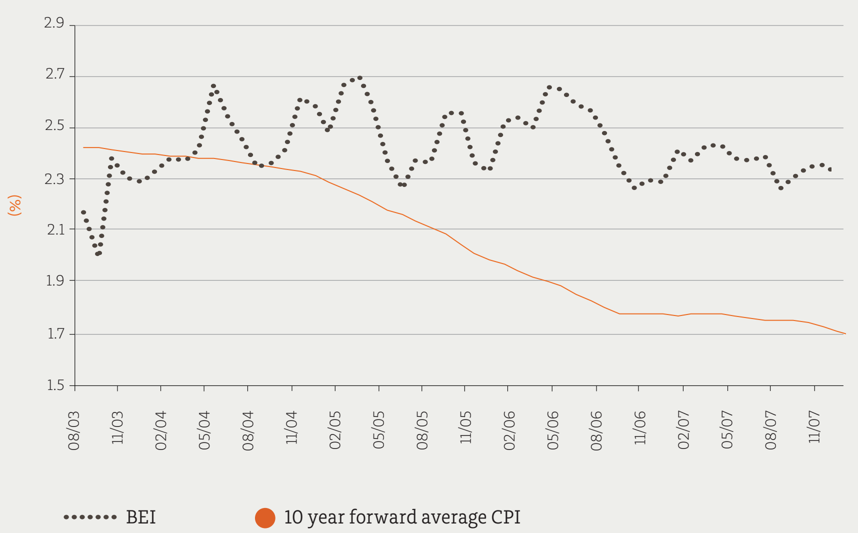
Reinforcing this upward pressure on export prices is a strengthening RMB. The RMB strengthened by roughly 6% in 2017 against its trade-weighted index. The stronger currency either raises the cost of goods to foreign buyers or reduces selling prices and therefore margins of the manufacturer or exporter. Either way, the impact is deflationary at some point. Nonetheless, it is unwise to view Chinese foreign exchange policy as highly uncertain. What was a 6% gain could easily reverse, especially if policy makers become confident that tightened capital controls have curbed illicit outflows. Using foreign exchange reserve data as a guide, this appears to be the case. After falling consistently since June 2014, Chinese foreign exchange reserves began to grow again throughout 2017.

Although this note flags the underlying potential for changes in China's domestic conditions to impact the global disinflationary trend, it would be a mistake to interpret what we've said as implying that other forces aren't at play. Indeed, it's not even clear to us that Chinese factors stand out as being more likely to drive upside inflation risks than other diverse sources of supply-demand distortion across a range of global consumer goods and services - indeed, the most significant threat to inflation might come from continuation of a well-established monetary policy trend that has continued to favour leverage over savings. Nonetheless, what is clear to us is that investors generally perceive China's contribution to globalisation as a perpetual source of disinflationary pressure, something that we disagree with. While this may be the case, especially for the immediate term, our more broad-based and forward looking analysis suggests that ignoring the potential for the disinflationary pressures emanating from China to reverse at some point in the future is a mistake.

As far as the US is concerned, the recently approved US tax changes could spark much needed investment in the domestic economy, with a flow-on impact to consumption and sentiment. That this is occurring in the context of a tightening labour market and an economy that seems to be growing near trend elevates the prospect that domestic US factors are perhaps a more immediate threat to US wage and CPI inflation than globalisation. Meanwhile, Japan's ultra-accommodative policy and omnipresent risk of debt monetisation stands out as the key inflationary risk. The UK on the other hand faces a different set of risks altogether, as a reliance on foreign goods and potentially weaker currency in the face of as yet unresolved Brexit risks strike us as the most likely source of inflationary pressure. This potentially leaves Europe as the lowest inflation risk amongst the four major developed economic regions. Fiscal constraint by virtue of the eurozone budgetary restrictions and an ever-watchful German influence at the European Central Bank lessen both fiscal profligacy and extended overzealous monetary policy.

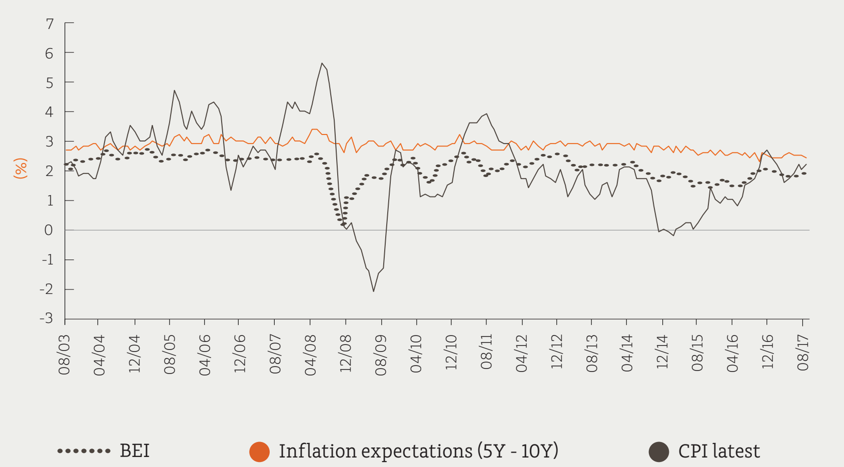
Whatever the case, and no matter how strong the argument for upward CPI pressure might be, we cannot presume that inflation will necessarily rise, especially over the medium term. High leverage could continue to taper demand and support a savings and low credit growth environment with low consumption and low investment, wages might remain stagnant as a second order consequence of globalisation, and further enlarged balance sheets fed by a savings imbalance and central bank activity could keep yields and therefore investment earnings low. Markets seem to think this is true, particularly in the US, Japan and Europe. European and US yield curves have flattened in the face of rising policy rates, with very little reaction in longer maturity bond yields. Breakeven inflation rates (the difference between yields on nominal bonds and real yields on inflation linked bonds, reflecting inflation rate expectations) also remain stubbornly low, even across extremely long-dated bonds in all markets. On this measure, bond markets currently anticipate (price) that both the step down in growth and inflation observed since the credit crisis are here to stay, with real yields sitting at sub 1% and breakeven inflation out to 30 years priced at under 2%.
But history tells us that although the bond market is better at macroeconomics than equity markets, it is still a hopeless forecaster over any horizon other than the extremely short-term, even when central banks are not actively distorting prices.

Chart 6: US 10 year average CPI vs 10 year prior breakeven inflation



Source: Bloomberg.

Chart 7: US inflation expectations (10 year breakeven rates)



Source: Bloomberg.

Charts 6 and 7 highlight how wrong the bond market can be. Chart 6 shows 10 year breakeven inflation rates (dashed line) against the average 10 year realised inflation rate from that particular point in time.

To draw an example, consider buyers of breakeven inflation between 2006 and 2007. At that time, the bond market foresaw that the average rate of CPI would run at approximately 2.5%, not too dissimilar to the prior 10 year average. Yet, realised average inflation over the ensuing 10 years was closer to 1.5% than it was to 2.5%. This type of miss by bond investors is not surprising when you take a close look at the very tight relationship between 10 year breakeven inflation and current CPI, making it hard not to conclude that breakeven inflation rates, even longer maturity measures, say much more about yesterday and today than they do about tomorrow and the day after.

So if bond investors lowered their inflation expectations over the past 10 years, might they do so again over the next 10? Perhaps. Ten year (and 30 year) breakeven inflation in the US is now priced at a little under 2%, which is below the lower range of the US Federal Reserve's (Fed's) preferred inflation window. And while this might be correct, it is almost certainly the case that low realised CPI is the main driver of lower breakeven inflation. If this is true, and if we believe that the risks to inflation are at least finely balanced between upside and downside risk, then surely exposure to breakeven inflation is something that real return investors should consider as a relatively attractive source of inflation hedging.

Investment strategy and research

The section provides a summary of some of the strategy changes we've made this quarter, those under consideration, and research we've undertaken.

Investment strategy		
Strategy	**Rationale**	**Detail**
AUD/USD upside protection	This is a risk management strategy. Foreign currency (FX) is often a diversifier of equity risk. FX exposure enables a higher allocation to equities in our Inflation Plus portfolios than would otherwise be possible. Our FX exposure enhanced returns while the AUD was declining. At higher levels of FX exposure there is higher risk of AUD appreciation – this strategy reduced exposure to that risk at zero cost.	The strategy involves the purchase of 9 month AUD call options, and selling knockout AUD put options for net zero premium against our underlying foreign currency exposures. Careful structuring resulted in the AUD put options being 'knocked out' after two weeks, resulting in 'free' topside AUD protection. The strategy has been implemented over the last 3 years; the strategy has worked very well. The put options have either knocked out or expired worthless, and increases in the AUD have allowed the portfolio to either add more cover for no cost, or restructure existing cover more favourably. Overall the strategy has provided significant cover at no cost to the portfolios and generated a very small amount of positive return from the restructures.
Japan TOPIX allocation	A strategy that reduces downside risk by exploiting the tendency for the Japanese yen and the Japanese share market to move in opposite directions. This strategy has been removed from the Inflation Plus Conservative Portfolio by taking profits, but remains in place in Moderate and Assertive portfolios.	Long TOPIX futures, cash-backed and unhedged.
Japanese yen and gold exposure	We continue to assess risk hedges as a means of maintaining exposure to equities in the face of elevated risk. This quarter we have assessed a combination of gold and long JPY (short AUD) as a counter to equity risk. But, due to a combination to recent AUD weakness and gold strength we have held off implementation.	Long JPY short AUD and long gold short AUD.
Breakeven exposure	Based on the Investment Futures Framework, we believe that the current spread between inflation linked and nominal bonds' yields is attractive. The Capital Markets Research team is working with our fixed income and derivatives specialists to investigate and assess various ways to gain exposure to real-nominal bond spreads.	Work in progress.
Catastrophe risk (insurance-related investments)	Catastrophe risk remains an attractive diversifier, albeit with a lower expected return than past years. Nonetheless, our alternatives team worked hard over the past quarter with reinsurance partners to reduce the risk profile of our insurance-related investments exposure.	Included a second insurance-related investments manager, Mt. Logan Re, and increased diversification of re-insurance contracts.

The Investment Futures Framework: scenarios and changes in return potential

In managing MLC's multi-asset portfolios we assess potential future risks and opportunities. We invest by understanding what could happen as opposed to picking the single future that will unfold. The future is not predetermined; it depends on what policy makers do, how companies behave and how these things compare to investors' expectations.

As outlined, looking forward from today we see the potential for the strong returns that we have seen over recent years to persist, but this environment is not based on strong foundations and fragility is increasing. While policy makers might manage to engineer a benign path forward, we must still take seriously the possibility of a significant market decline. Our aim is to understand the key things that could happen and then identify the most appropriate trade-off of risk and return, 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 a prolonged strong speculative rally means we need to be nimble and rapidly re-assess positioning, particularly on market pull-backs. We also need to re-double efforts to seek new risk controlled market exposures.

Our tailored scenario set currently consists of 14 scenarios (refer to Appendix 1 and Diagram 1). Due to the prevailing distortions and policy uncertainty, these scenarios contain more complexity and cover a wider range of outcomes for assets than would be the case from a less distorted starting point. The current inflation circumstances (discussed in our opening comments above) assume an appropriately high level of importance in design of the tailored scenario set. And while consideration of inflation is *always* important, its role is perhaps more critical now given the breadth of underlying factors that might spark a reversal of the multi-decade run of disinflation and tendency toward looser monetary policy. Diagram 1 highlights the central role of inflation in design of the tailored scenario set by mapping an inflation-based path from where we believe the global economy is today to each scenario. Scenarios in the upper half of the diagram require inflation to increase, whereas scenarios in the lower panel require further disinflation and in some cases outright deflation.

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.

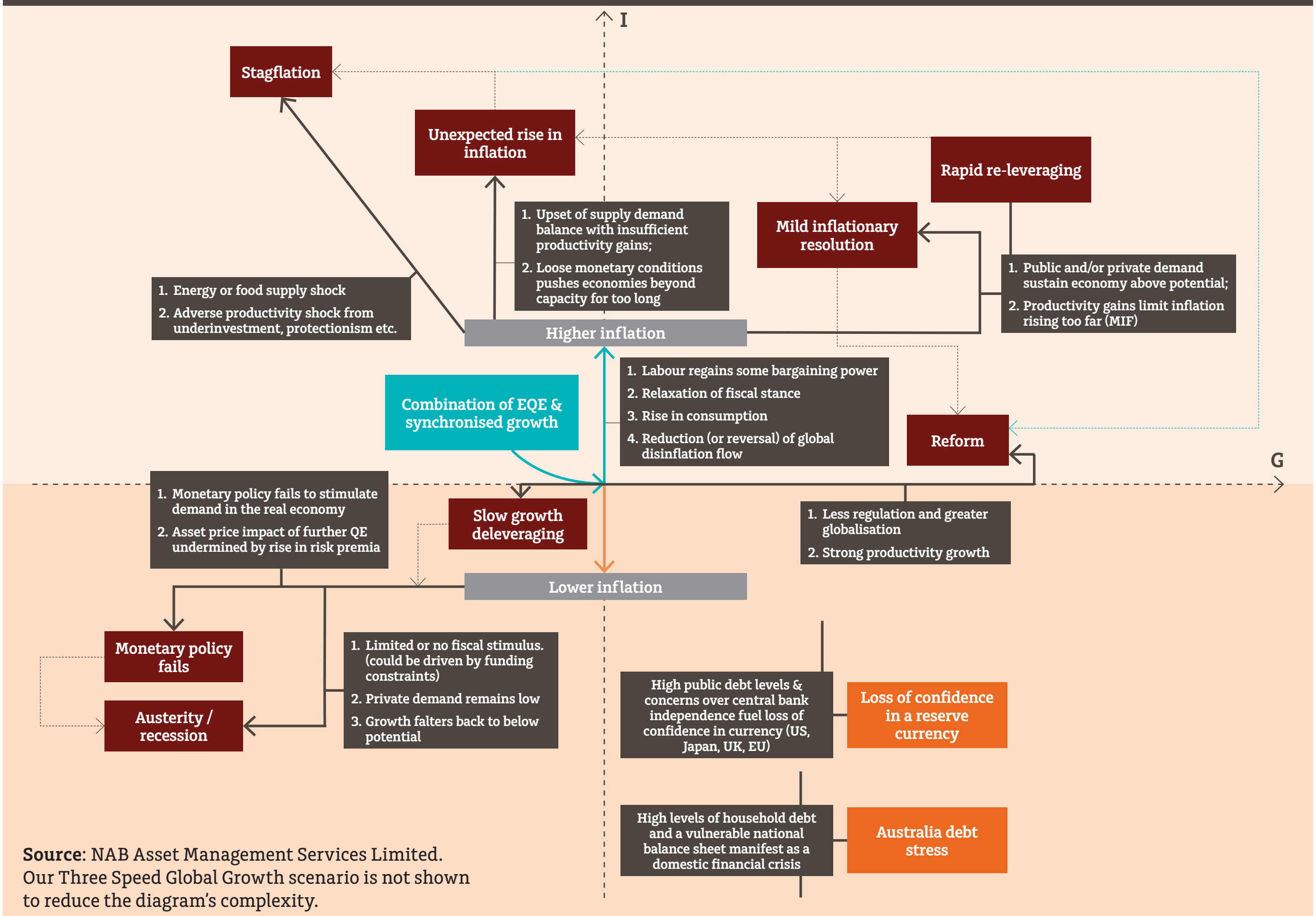
The Investment Futures Framework comprises both our **generic** broad set of 40 scenarios which pivot around the main drivers of returns – the macroeconomic drivers and investor behaviour (swings in the level of optimism or pessimism, and rational changes in risk perception) – and a **tailored** scenario 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.

MLC's scenario insights & portfolio positioning

Diagram 1: The central role of inflation in our tailored scenario set

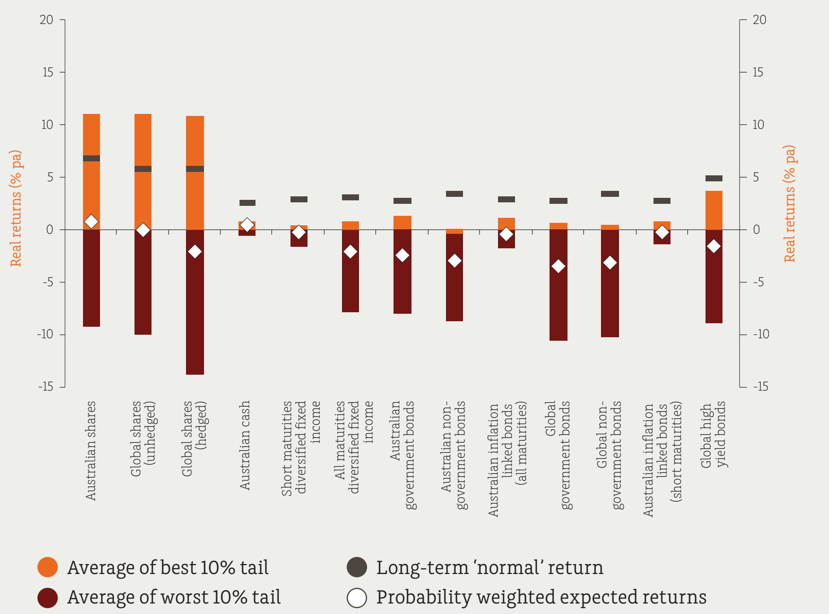


Source: NAB Asset Management Services Limited.
Our Three Speed Global Growth scenario is not shown to reduce the diagram's complexity.

Regardless of inflation, it remains the case that pressure persists on the real economy from widespread high debt loads. This means that outcomes will not just pivot along inflation 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. 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 8 on page 12.

Chart 8: 40 scenario set (generic scenarios) potential real returns (December 2017) – 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 the graph (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. Asset classes with wider ranges could have more extreme return outcomes than those with narrow ranges.

Performance expectations

Chart 9, on page 13, 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 December 2017.

The chart continues to show that on average, looking across the whole scenario set, the potential reward for taking risk is still limited. 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.

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.

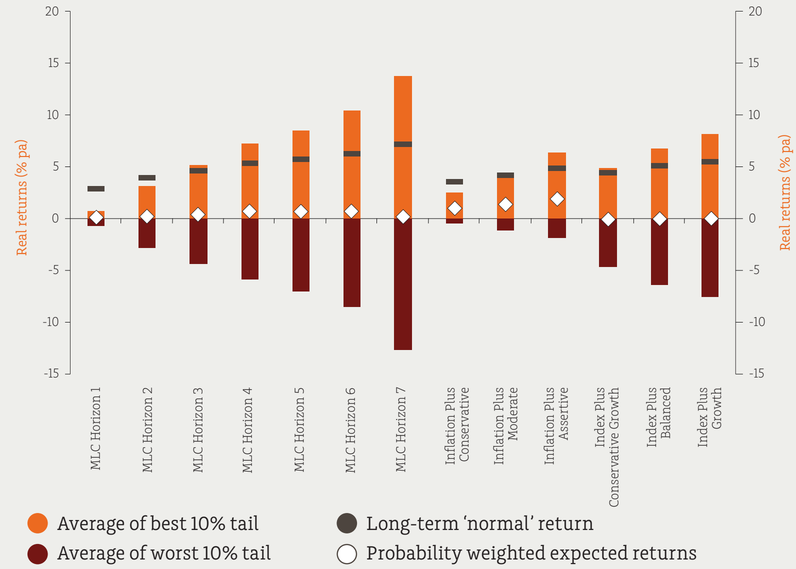
In positioning the MLC multi-asset portfolios we take into account outcomes in all our scenarios. For the MLC Inflation Plus portfolios, our focus is on strictly limiting both the probability and most importantly the extent of negative real returns over each portfolio's time horizon in the event that 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.

MLC Horizon, MLC Inflation Plus and MLC Index Plus portfolios

MLC's scenario insights & portfolio positioning

Chart 9: 40 scenario set (generic scenarios) potential real returns (December 2017) – 5 Years, 0% tax with franking credits, pre-fees, pre-alpha



Source: NAB Asset Management Services Limited.

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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 very 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 changes to the positioning over the quarter for the MLC Inflation Plus portfolios.

Asset class	Change in allocation to asset classes in the MLC Inflation Plus portfolios (in MLC MasterKey's super and pension products) over the December quarter			Comment
	Conservative	**Moderate**	**Assertive**	
Defensive Australian shares	Steady allocation	Steady allocation	Steady allocation	Our defensive shares investment process directly takes account of the risks identified in our scenarios analysis. By investing in defensive Australian share we're able to have a higher exposure to Australian shares than we otherwise would.
Global shares	Close to zero allocation	Close to zero allocation	Zero allocation	Limited exposure due to strong preference for a defensive share allocation in a relatively high risk environment.
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** (explained on page 9) maintained.
Gold exposure	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 derivatives strategy 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. This quarter we've slightly reduced exposure in the Moderate portfolio to increase portfolio liquidity.
Real return strategy	Steady allocation	Steady allocation	Steady allocation	Allocation to our multi-asset real return manager, Ruffer, maintained.
Derivatives 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 scenarios insights. We made a change to the **Japan TOPIX allocation**, explained on page 9.

MLC Inflation Plus portfolios continued

Asset class	Change in allocation to asset classes in the MLC Inflation Plus portfolios (in MLC MasterKey's super and pension products) over the December 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 portfolio.
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, which helped protect returns as yields rose during the quarter.
Insurance-related investments	Zero allocation	**Decreased 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. Research we've undertaken on our exposure is outlined on page 9. Additionally, we've decreased exposure in the Moderate portfolio by 0.5% this quarter. We may increase this exposure if more favourable pricing of insurance-related investments eventuates. Given the extent of industry-wide reinsurance losses in the September quarter, with three hurricanes making landfall in the US and two major earthquakes in Mexico, it is likely that reinsurance premium rates will increase at year end when reinsurance contracts are renewed for 2018, placing the strategy in a good position to benefit from an improved pricing environment.
Bank loans	Steady allocation	Steady allocation	Steady 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	Steady allocation	Offer some return enhancement while limiting additional risk.
Cash	Steady allocation	Increased allocation	Steady allocation	We continue to keep significant powder dry (in cash) waiting for better opportunities and have been increasing liquidity in the Assertive portfolio in particular. 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. 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 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 Horizon portfolios we are maintaining a relatively defensive orientation. However, while we continually test our thinking, 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 equity exposures and manage exchange rate risk.

	MLC Horizon 4 Balanced Portfolio (in MLC MasterKey's super and pension products) weights at end of the December quarter			Comment
	Under	Benchmark	Over	
Growth assets		•		
Australian shares		•		Retained benchmark allocation.
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.
Defensive assets	•			
Cash			•	To further reduce interest rate risk in MLC Horizon 2 to 5 portfolios we've increased the overweight to cash and decreased exposure to Australian and global bonds. We've made these changes 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 increased for MLC Horizon 2 to 5 portfolios, to further reduce interest rate risk.

MLC Horizon portfolios continued

	MLC Horizon 4 Balanced Portfolio (in MLC MasterKey's super and pension products) weights at end of the December quarter			Comment
	Under	Benchmark	Over	
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. To further reduce interest rate risk in MLC Horizon 2 and 3 portfolios we reduced their allocation to all maturities inflation-linked bonds this quarter.
Global bonds – All maturities	•			Underweight to longer duration global bonds increased for MLC Horizon 2 to 5 portfolios, to further reduce interest rate risk.
Global non-investment grade bonds (high yield bonds and loans)		•		Retain benchmark allocation.
Alternatives			•	
Global private assets		•		Retain 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. 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 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.

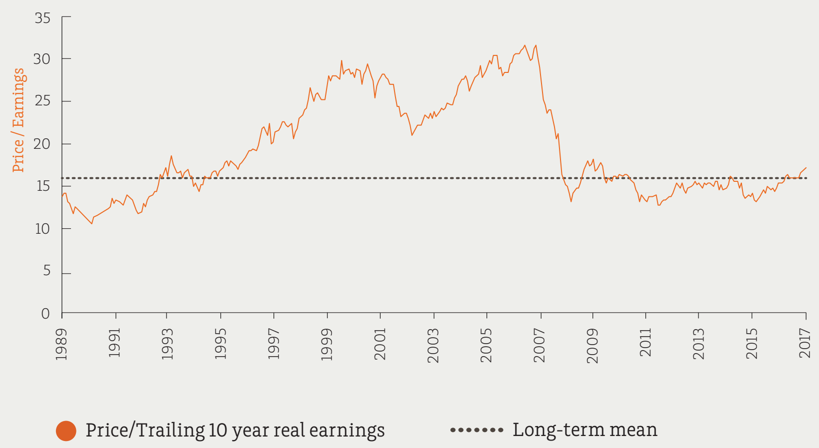
For MLC Index Plus portfolios we are maintaining a relatively defensive orientation. Over the past year the defensive positioning and particularly the foreign currency overweight have detracted from returns. However, while we continually test our thinking, we retain high conviction in the appropriateness of this positioning.

	MLC Index Plus Balanced Portfolio weights at end of the December quarter			Comment
	Under	Benchmark	Over	
Growth assets	•			
Australian shares		•		Retained benchmark allocation.
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		•		Retain benchmark allocation – the benchmark allocations are underweight versus peers.
Defensive assets			•	
Cash			•	To further reduce interest rate risk in all Index Plus portfolios we've increased the overweight to cash and decreased exposure to Australian and global bonds. We've made these changes 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 increased for all Index Plus portfolios, to further 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 for all Index Plus portfolios, to further reduce interest rate risk.
Alternatives		•		
Real return strategies		•		We believe the allocation to real return strategies (through the Simple Real Return strategy) 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.

Asset class indicators

Commentary on the main asset classes follows.

Chart 10: Australian shares
Market indicator *S&P/ASX 200 Index*



Source: Global Financial Data.

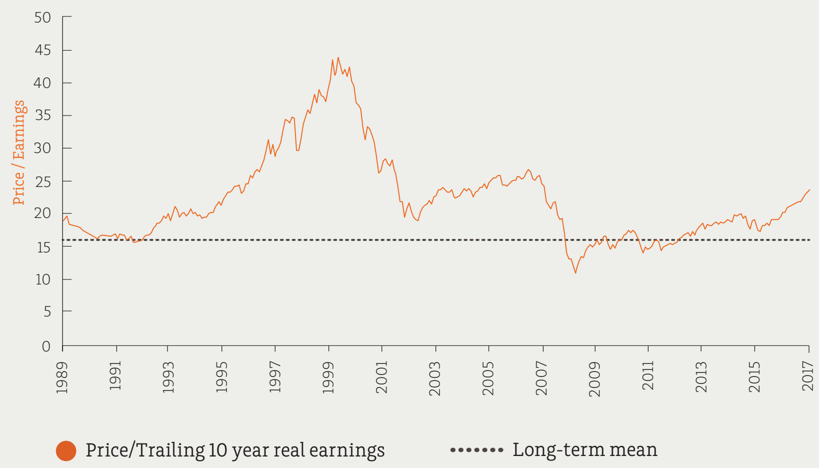
Comment

Australia has recorded mixed economic data. Stronger jobs growth has seen Australia's unemployment rate move down to 5.4%. The National Australia Bank business surveys are also showing positive results. However, retail spending is subdued, indicating that the consumer is constrained by high household debt and slow income growth. The Reserve Bank of Australia has kept the official cash rate steady at 1.5%.

Australian shares posted a strong return of 7.6% for the quarter. Investors favoured the Energy (18.0%) and Information Technology (15.7%) sectors. The Resources (15.6%) sector also performed strongly given improving global economic activity and rising commodity prices.

Asset class indicators continued

Chart 11: Global shares
Market indicator *MSCI All Country World Index*



Source: Factset.

Comment

Global shares made robust returns over the past three months to December 2017 and delivered 5.7% in hedged terms. A weaker Australian dollar (AUD) boosted the unhedged global shares return to 6.2%.

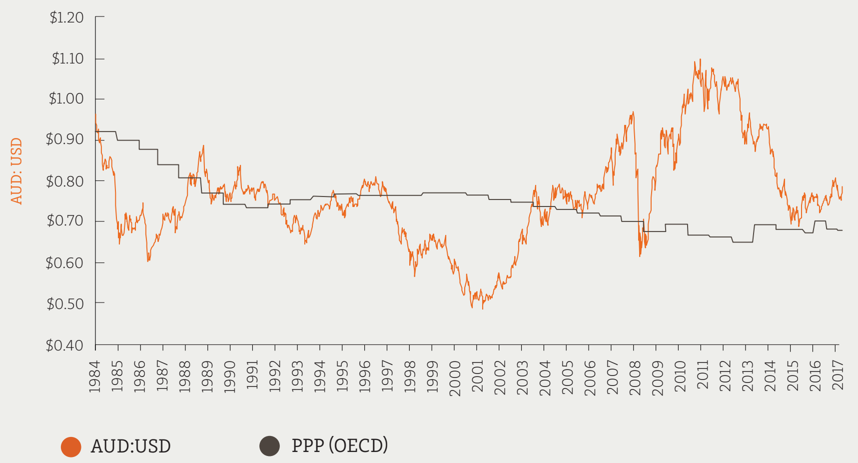
US shares achieved record highs with the benefit of strong corporate profit reports, solid economic data and President Trump's promises of corporate tax cuts. US economic data has also been very positive in terms of jobs growth, lower unemployment and encouraging business surveys. The Fed raised interest rates in December but maintained guidance that future interest rate rises should be "gradual".

European shares made more modest gains over the quarter. While Europe's economy has been doing well in terms of activity and jobs growth, markets were concerned about a stronger euro currency and Germany's failure to establish a coalition Government under Chancellor Angela Merkel.

Emerging markets (unhedged) made robust returns of 7.8% for the quarter. Chinese shares led the way (8.0%, MSCI China unhedged) given encouraging signs that China's economic activity has maintained a solid growth pace.

Asset class indicators continued

CHART 12: AUSTRALIAN DOLLAR
MARKET INDICATOR *Australian Dollar Purchasing Power Parity (PPP)*

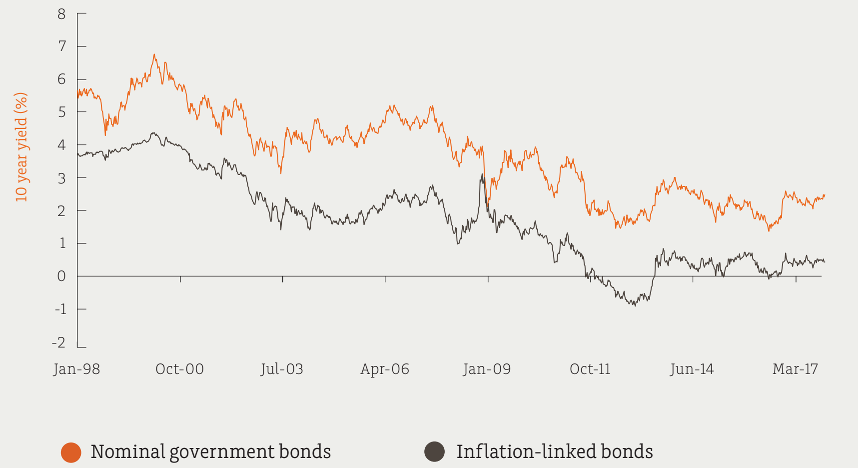


Source: Bloomberg.

Comment

The AUD drifted lower against all the major currencies in the December quarter. Australia's mixed economic data, with strong jobs growth countered by weak retail spending, partly accounts for the AUD's soft performance. The Fed raising US interest rates in December also modestly impacted the AUD.

CHART 13: GLOBAL GOVERNMENT BONDS
MARKET INDICATOR *10 year bond yields - United States*



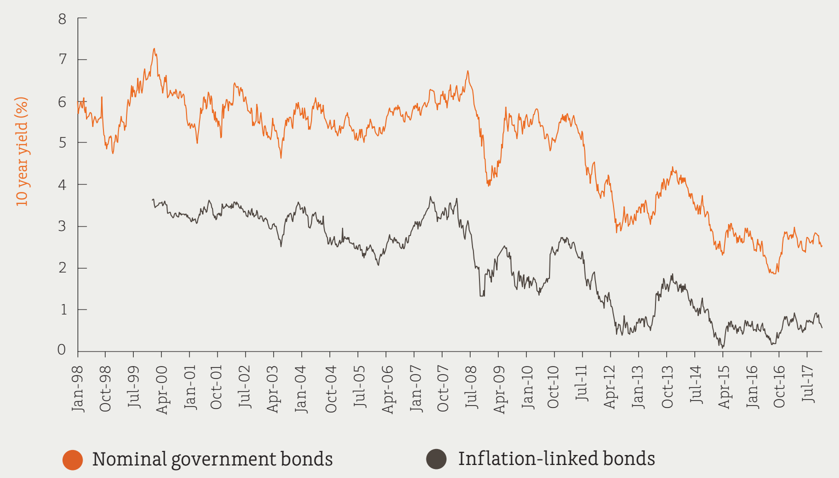
Source: Bloomberg.

Comment

Global bonds (hedged) delivered a return of 0.9% for the quarter. European and Japanese government yields drifted lower during the quarter while credit spreads narrowed.

Asset class indicators continued

CHART 14: AUSTRALIAN GOVERNMENT BONDS
MARKET INDICATOR *10 year bond yields - Australia*

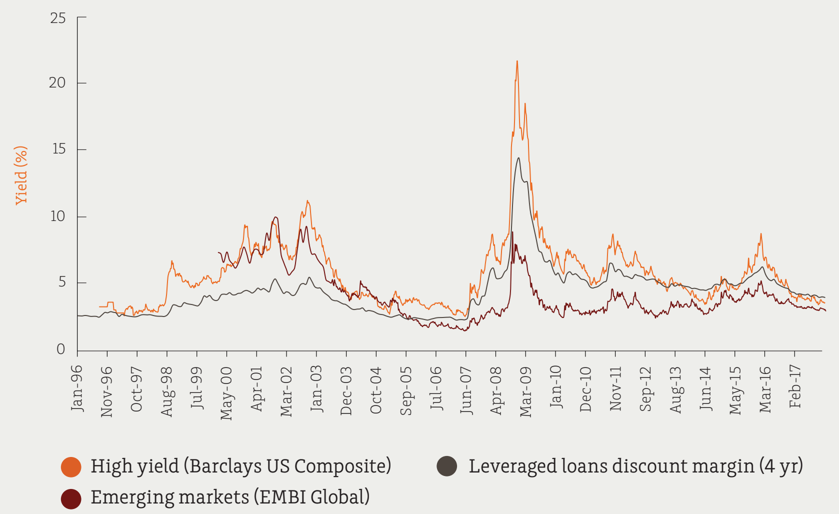


Source: Bloomberg.

Comment

Australian government bond yields moved slightly lower over the quarter given the mild inflation results and mixed economic activity data. Australian bonds delivered a solid 1.4% quarterly return.

CHART 15: NON-INVESTMENT GRADE BONDS
MARKET INDICATOR *Fixed income spreads*



Source: Credit Suisse, Barclays and Bloomberg.

Comment

Global high yield bonds (hedged) made a 1.2% return for the quarter given optimism for higher corporate profits with President Trump's tax plan

Appendix 1
– Tailored scenario set

Scenario	Probability ranking (previous rank)	Description
Reform (path to growth normalisation)	1 (3)	A growth upside scenario contingent upon coordinated reforms that address inefficiencies that are idiosyncratic to particular economies (eg labour in the 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
Inflationary debt resolution	2 (2)	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)	3 (1)	The world continues to split into three distinct economic growth zones. Emerging markets lead 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	4 (4)	Japan's and Europe's growth approach trend levels, while the US, UK and China moderate, resulting in a synchronised modest global growth scenario.
Negative nominal interest rates	5 (5)	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.
Slow global growth deleveraging	6 (6)	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 spill over into the now highly indebted emerging world.

Appendix 1
– Tailored scenario set continued

Scenario	Probability ranking (previous rank)	Description
Early re-leveraging	7 (7)	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 resolution.
Inflation shock	8 (8)	Similar to **Stagflation**, though assumed growth is higher. Sharp rise in inflationary expectations.
Australian stress	9 (9)	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.
Rise in USD risk premium	10 (10)	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.
Eurozone slow disintegration (possibly leading to reform)	11 (11)	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.

Appendix 1
– Tailored scenario set continued

Scenario	Probability ranking (previous rank)	Description
Stagflation	12 (12)	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.
Extended risk aversion	13 (13)	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.
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

1. Identify scenarios
2. Generate potential returns
3. Analyse returns and risks
4. Asset allocation

- 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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