

MACQUARIE ASSET MANAGEMENT

The RBA dilemma

Macquarie Fixed Income Strategic Forum 2023 | Issue 02



Sophie Photios | Graham McDevitt | Patrick Er

Executive summary

Australia's economy is experiencing demand deceleration as supply recovers, with the outlook determined by the collision of two forces: tighter monetary and fiscal policy and the explosion of population growth. The surge in Australia's population has created a conflict of competing pressures on the direction of inflation. It's a "human supply shock" that impacts the supply of labour and therefore wages. It also impacts the housing markets, particularly the demand for rental properties. This presents the Reserve Bank of Australia (RBA) with a unique dilemma.

What will drive RBA decision making – the path of wage growth or "sticky" inflation? The "RBA dilemma", and the decision path that they take, is expected to add to market volatility. With gross domestic product (GDP) growth expected to slow into stagnation and with inflation on a downward trend, our view is that the risk of a per capita recession is rising.

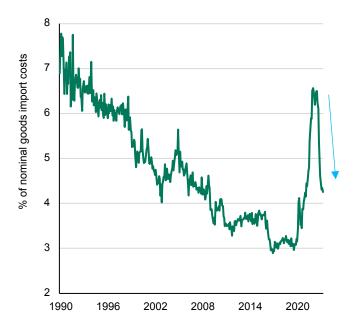
Introduction

The Australian economy is still witnessing high inflation, sluggish growth, and a central bank determined to use higher rates to get inflation back to target. In Issue 01 of the Macquarie Fixed Income (MFI) Strategic Forum 2023 series, we applied a supply-and-demand lens to Australia and then overlayed the exogenous forces of policy. This analysis determined that inflation was on a gradual path lower and that the economy was set to experience its first recession since 1991-1992. We noted that Australia was experiencing a third and unique supply shock (after COVID-19 and the Russia-Ukraine war) coming from the Australian government's decision to expand immigration. This labour supply shock will impact both rents (higher) and wages (lower) and therefore is set to place the RBA between a rock and a hard place on monetary policy. With the second half of 2023 in view, we used Issue 02 of the Strategic Forum 2023 series to reassess our analysis and outlook for the Australian economy.

Supply and demand: Where are we now?

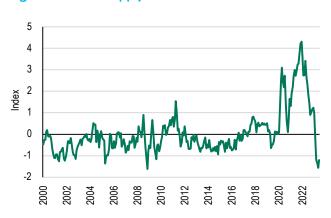
Australia is experiencing a supply recovery as demand is decelerating, much like the rest of the global economy. Australia was dominated by a compromised supply environment in 2020-2022, but now the supply recovery has broadened and deepened and remains on a slow and sustainable trend. The Federal Reserve Bank of New York's Global Supply Chain Pressure Index has returned to its pre-COVID-19 levels as global supply chain conditions have largely normalised (Figure 1). This is reflective in Australia as Australian freight costs are coming down (Figure 2), and Australian import volumes have risen (Figure 3).

Figure 2: Australian freight costs



Source: Australian Bureau of Statistics, May 2023.

Figure 1: Global Supply Chain Pressure Index



Source: Federal Reserve Bank of New York, June 2023.

Figure 3: Australia import volumes



Source: Australian Bureau of Statistics, May 2023.

Demand has weakened as anticipated, with movements becoming more pronounced, but not enough to give rise to outright "demand destruction." Household spending growth has moved to the downside since the year began, as households are under a lot more financial pressure (Figures 4 and 5).

Figure 4: Household consumption

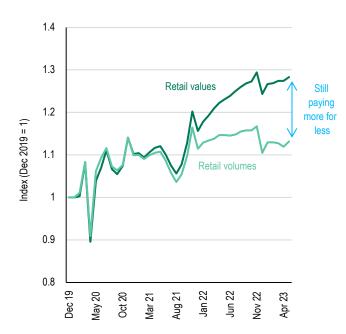
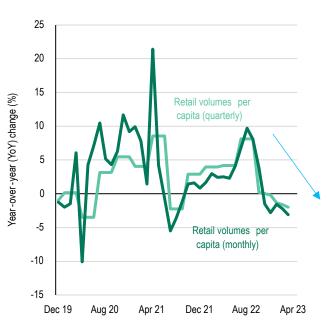


Figure 5: Deceleration more clearly seen on per capita basis

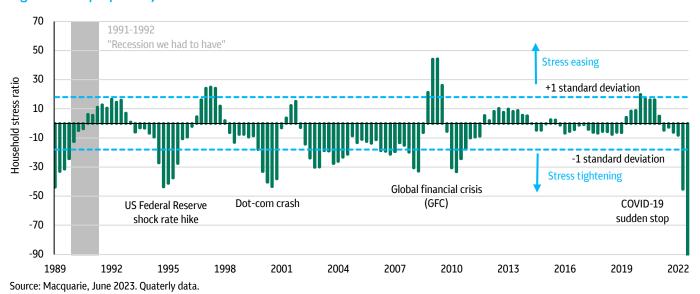


Source: Australian Bureau of Statistics, May 2023.

Source: Australian Bureau of Statistics, May 2023.

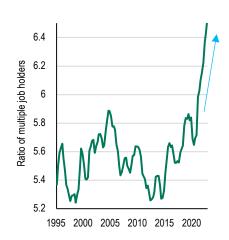
Household incomes have risen substantially on a nominal basis but, because of high inflation, incomes have dived in real terms. MFI's proprietary model of household stress, accounting for both the interest burden and inflation, is at all-time highs (Figure 6), and this has gotten significantly worse since Issue 01 of the Strategic Forum 2023 series.

Figure 6: MFI proprietary model of household stress



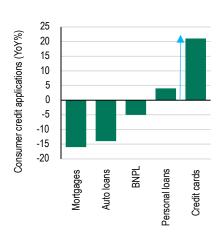
We can see this reflected in the ratio of multiple job holders, which has risen sharply (Figure 7), and more people are resorting to the use of credit cards (Figures 8 and 9) as nominal incomes are not offsetting the squeeze on real spending.

Figure 7: Multiple job holders



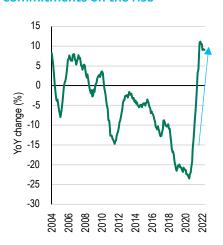
Source: Australian Bureau of Statistics, March 2023

Figure 8: Consumer credit demand shows divergence



Source: Australian Bureau of Statistics, March 2023

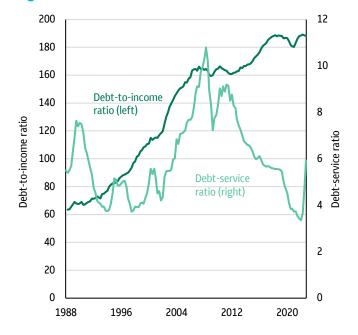
Figure 9: New personal credit commitments on the rise



Source: Australian Bureau of Statistics, March 2023.

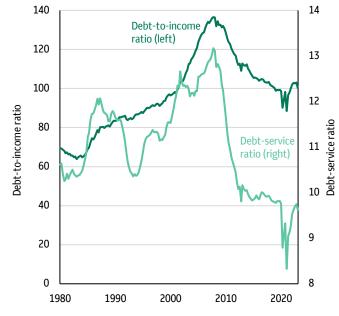
Household balance sheets are in a fragile position as Australia's household debt-to-income ratio has continued to rise post-GFC (Figure 10), while in the US this has reversed and come down (Figure 11). There has been a recent pickup in the debt-service ratio in both countries as interest rates have increased but, given the higher level of debt to income in Australia and the preference for variable rather than fixed-rate loans, Australian households are more sensitive to changes in monetary policy.

Figure 10: Australia household debt-to-income ratio



Sources: Australian Bureau of Statistics, Reserve Bank of Australia, March 2023.

Figure 11: US household debt-to-income ratio



Source: US Federal Reserve, March 2023.

Importantly, while households in aggregate are not doing well and household stress is on the rise, this is not being felt evenly and is masking an even worse story for many Australians. There are significant divergences among the experiences of renters, mortgage holders, and those who own their home outright in Australia. Renters are suffering from soaring rents and many mortgage holders are being affected by soaring mortgage repayments. Meanwhile, those who own their home outright can benefit from higher interest rates on deposits and indexation on pensions.

The use and reliance on monetary policy over fiscal policy to contain inflation creates "winners" (savers and lenders) and "losers" (borrowers, particularly households and businesses in interest-rate-sensitive sectors). As a result, the deposit accumulation seen since the COVID-19 pandemic is significantly held by Australians over 65 years old (who have a lower propensity to spend), while those raising families (who have a higher propensity to spend) have seen a sharp drop (Figures 12 and 13).

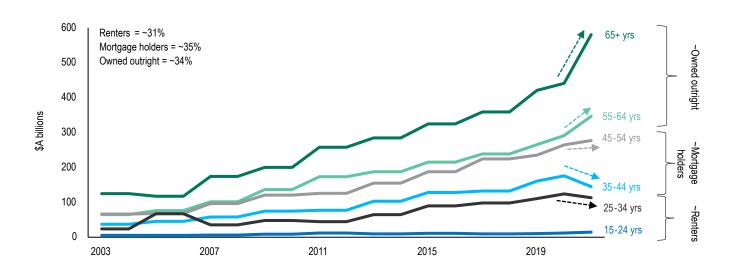


Figure 12: Divergence in deposit accumulation

Source: Australian Bureau of Statistics, 2022.

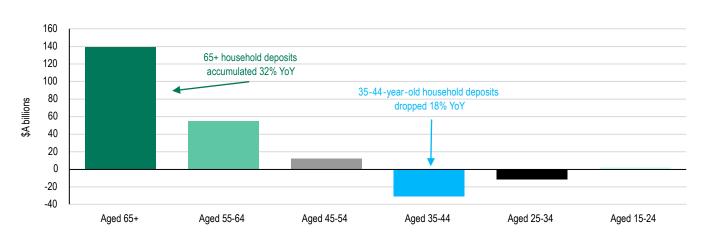
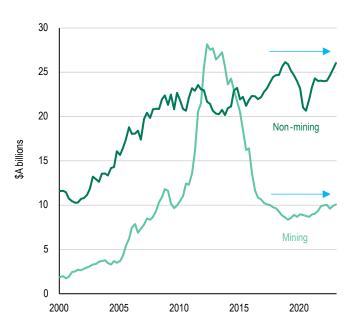


Figure 13: "Savers" accumulated most extra deposits, while "spenders" saw a drop

Source: Australian Bureau of Statistics, 2022.

Businesses, on the other hand, are holding up for now. However, business spending levels remain fairly muted, implying a lack of incentive to significantly expand operations (Figures 14 and 15). Business balance sheets are more resilient than households', and the systemic risk of excessive debt burden is low.

Figure 14: Business capital expenditures not much higher than pre-COVID-19

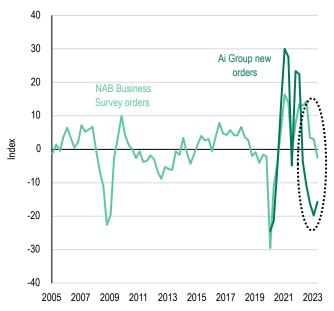


Source: Australian Bureau of Statistics, March 2023.

In summary, our analysis shows that demand is decelerating as supply is recovering. Demand has not turned into outright destruction, but the risks are skewed to the downside as household stress is at all-time highs, and businesses are heading into more challenging conditions. This worsening economic fragility could, in our view, very well create the prevailing conditions in which exogenous headwinds could tip demand deceleration into outright destruction.

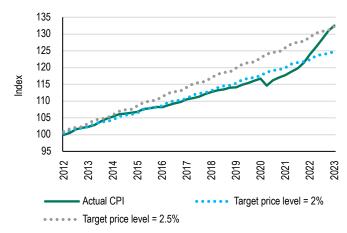
As a consequence of the supply-and-demand environment in recent years, Australia – like many countries – is experiencing inflation "scarring." This means that Australian price levels (Figure 16) have risen sharply, and the population is left having to pay more, much more, for everything. This is not to be confused with inflation, or price growth, which is now on a downward trend (Figure 17).

Figure 15: New orders



Sources: National Australia Bank (NAB), Australian Industry Group (Ai Group), June 2023.

Figure 16: Australia price level gap



Source: Australian Bureau of Statistics, March 2023.

9 Current average print = 1.6% quarter over quarter (QoQ) 8 7 6 5 4 3 RBA target 2-3% range 2 1 Jan 21 Oct 21 Jul 22 Apr 23 Jan 24 — - 0.6% QoQ - 0.8% QoQ --- 1.2% QoQ - 1.0% QoQ --- 1.4% QoQ - 1.6% QoQ -- 1.8% QoQ ____ 2.0% QoQ

Figure 17: Australia headline Consumer Price Index paths

Source: Australian Bureau of Statistics, March 2023.

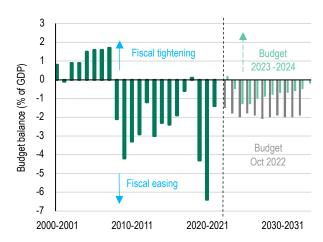
Factors impacting trajectory of supply-and-demand environment

Australia's current economic trajectory, of slowing demand and easing of inflation, will be shaped by fiscal and monetary policy like its developed economic counterparts. However, uniquely for Australia, population growth is likely to be a key macro differentiator and drive economic outcomes, in our view.

Fiscal policy

Australia offered significant fiscal stimulus during the COVID-19 pandemic but is now tightening as fiscal conservatism is re-established. We believe this will have negative implications for growth and tilt the risk toward recession. During the pandemic, the Australian government took a pause from its beliefs around debt and deficits, and fiscal policy was widely deployed to stave off a worst-case scenario of a deep and prolonged recession. The Australian government extended significant aid to the economy via direct payments to households and support to businesses and through furlough payments to workers directly impacted by the pandemic. This contributed to the recession proving to be short and sharp in 2020. In this way, fiscal policy revealed its more direct impact on the economy in comparison to monetary policy, in which no amount of quantitative easing (QE) could have staved off such depression-like risk in reaction to lockdowns.

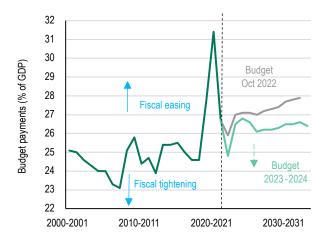
Figure 18: Underlying budget balance



Source: Australian Department of Treasury, May 2023.

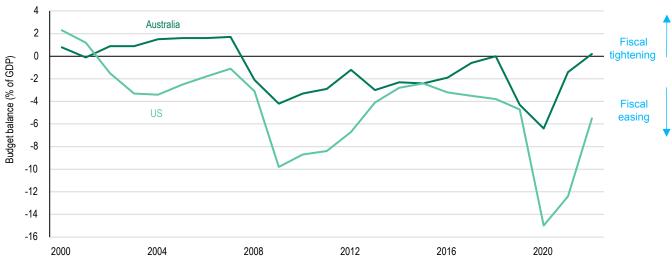
The Australian government's budget for 2023-2024 is projected to return to surplus this year, with both the underlying budget balance and government payments projected to significantly tighten (Figures 18 and 19), removing this positive impulse. Australia's state governments are also tightening fiscal policy, showing a similar budget picture, further dampening the outlook. Australia's budget position is more conservative than that of the US, and just as Australia's stimulus wasn't as significant as the US's on a GDP basis, Australia is also now tightening more (Figure 20). So, in contrast to the expansive action in 2020-2021, fiscal tightening is expected to have negative implications for growth going forward and tilt the risk toward recession.

Figure 19: Government payments



Source: Australian Department of Treasury, May 2023.

Figure 20: Australia vs. US budget balance



Sources: Australian Department of Treasury, US Department of Treasury, May 2023.

Monetary policy

Australia's monetary tightening has seen the RBA aggressively hike interest rates in what looks to become the fastest and most significant tightening in its history (see Figure 21). The full impact of this is yet to play out because of the long and variable lags associated with monetary policy.

5 Change in cash rate (%) 3 2 0 0 12 16 20 24 28 32 36 2009 2022 1994 1999 2002 2006

Months since initial cash rate increase

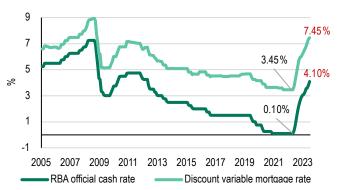
Figure 21: RBA tightening cycles (1990-present)

Source: Reserve Bank of Australia, July 2023.

That said, the RBA has taken the average variable mortgage repayments to more than double its April 2020 pre-tightening level and has indicated that its job may not be done yet (Figure 22). As stated earlier, Australia has extremely high levels of household debt and a structural preference for short-term fixed-rate mortgages, which means the transmission of interest rate changes is felt rapidly by borrowers. This indicates that the share of household income used to service principal and debt repayments will likely increase, and households – already under pressure from the cost-of-living crisis – will likely experience a squeeze on spending.

Rate hikes alone do not necessarily bring about a recession, as history shows that rate hikes create "winners" and "losers." However, if credit conditions are tightened significantly at the same time, then everyone is a "loser," and a recession has unfolded on each occasion. Tighter credit conditions have started to emerge in Australia as business and household credit conditions have tightened on a relative basis, but they have not yet tightened sufficiently or been prolonged enough to adversely impact economic activity. New credit commitments are slowing – housing, business, and personal commitments are all on a declining trend (Figure 23) – but have not yet slipped into demand destruction and hence recession.

Figure 22: Australia mortgage lending rate (discount variable)



Source: Reserve Bank of Australia, July 2023.

Figure 23: Credit growth - New commitments



Source: Australian Bureau of Statistics, May 2023.

Population growth

Uniquely, Australia is experiencing a supply shock coming from the Australian government's decision to expand immigration, which we believe is likely to prove the key macro differentiator and a driver of economic outcomes. Australia's population is being significantly boosted as the Australian government undergoes a significant ramp up in immigration post-COVID-19 with borders opened to immigration but in a way that far exceeds the pre-pandemic historical average (Figure 24). Australia's population is forecasted in the Australian federal budget for 2023-2024 to soar by 2.2 million net overseas arrivals in the next five years.

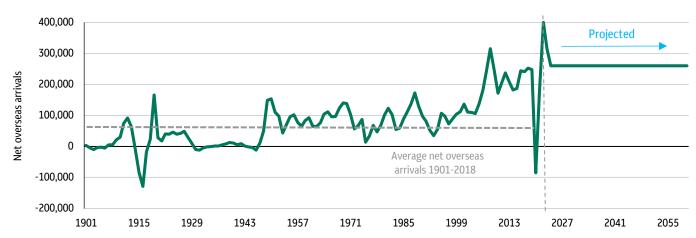


Figure 24: Australian net overseas migration

Sources: Australian Bureau of Statistics, Australia Federal Budget 2023-2024 (May 2023).

Australia is a small country on a population basis, and when undergoing rapid influxes of people over the years (e.g. gold rushes, early federation, post-World War II, Prime Minister Howard era 2004-2007), it has proved a key macro differentiator and driver of economic outcomes. This key structural theme is illustrated in Figure 25, where Australia's population growth has soared above that of other Group of Seven (G7) countries. Immigration has underpinned stronger GDP growth in Australia (as more inputs – i.e. people – mean more output of economic activity), but it has not been as flattering on a per capita basis. Migrants tend to have a lower propensity to spend and higher propensity to save than Australian-born households.

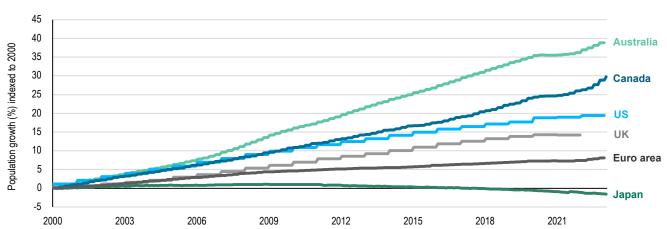


Figure 25: Australia's population growth far exceeds the rest of world

Sources: Australian Bureau of Statistics, US Census Bureau, UK Office of National Statistics, Japanese Statistics Bureau, Statistics Canada, Organisation for Economic Co-operation and Development (OECD), June 2023.

Australia's real GDP growth, and in particular real GDP per capita growth, has trended sharply lower as immigration has surged, and the economy has only expanded 1% year over year on a per capita basis (Figure 26). Underemployment, traditionally always lower than unemployment, flipped and moved higher as the utilisation of labour has decreased at an aggregate level (Figure 27).

Figure 26: GDP growth trending lower since 2000s

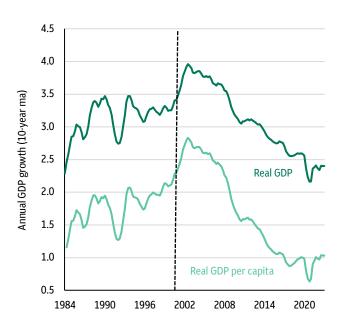
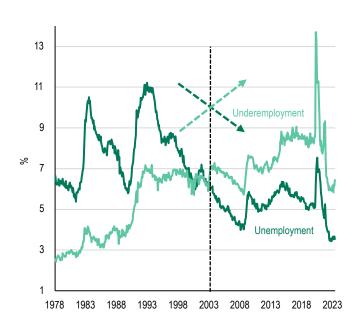


Figure 27: Unemployment turned higher with surge in population growth

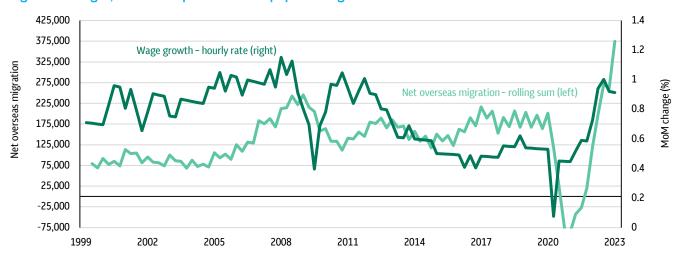


Source: Australian Bureau of Statistics, March 2023.

Source: Australian Bureau of Statistics, May 2023.

The current immigration surge is expected to impact (1) the labour market and (2) the housing market. This will expand the labour force significantly and could lower the employment-to-population ratio. This raises both unemployment and underemployment, supressing wage growth (Figure 28).

Figure 28: Wages, downward pressure from population growth



Sources: Australian Bureau of Statistics, Australian Department of Home Affairs, April 2023.

This also impacts the housing market as this rapid influx of people, mostly living in the three major cities, puts pressure on house prices and rents. New arrivals tend to have a preference to rent rather than buy housing, and this is showing up in surging rents, which is expected to keep inflation sticky (Figure 29).

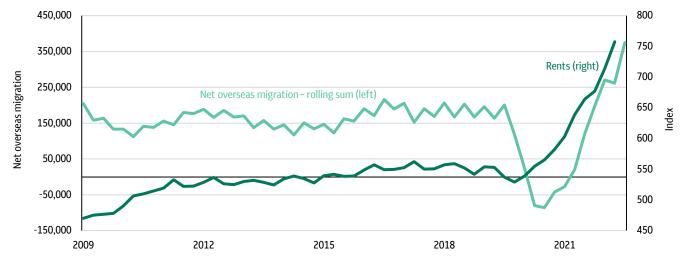


Figure 29: Rents, upward pressure from population growth

Sources: Australian Bureau of Statistics, CoreLogic, April 2023.

This places the RBA between a rock and a hard place on policy as the labour supply shock will impact rents (higher) and wages (lower). Will the path of wage growth drive RBA decision making or will "sticky" inflation drive it?

We believe the "RBA dilemma" and the decision path the RBA takes is likely to add to market volatility as the risk for policy missteps is high.

Conclusion

In Issue 02 of the MFI Strategic Forum 2023 series, we reassessed the outlook for growth and inflation using the supply-and-demand lens and then delved into the exogenous forces that could impact the outlook in the second half of 2023 and beyond. Our analysis shows that Australia is experiencing demand deceleration as supply recovers, with tighter policy seeing our economy weaken. There are some subtle differences compared with the US, such that Australia is experiencing a population shock that is so significant it skews the outlook in comparison. In the US, inflation is already trending lower, while by contrast Australia is experiencing a much slower fall. We expect the US to experience slower growth that may evolve into recession, but by contrast we expect Australia to have slower, sluggish growth with still-elevated inflation and a per capita recession all but locked in.

We think population is the key factor to understand, as it influences (1) labour supply and eventually wages and (2) demand for housing, particularly the rental market. The RBA dilemma – *Does it focus on wage growth (which will be slow) or inflation (which will be "sticky" in its decline)?* – could give rise to a decision path that leads to volatility, thus increasing the risk for policy missteps. We see inflation coming down to between 3% and 4.5% by year end, well above the RBA's target, and for growth to slow to stagnation, barely more than 0% to 1%, with risks for a per capita recession more than 50%.

IMPORTANT INFORMATION

The opinions expressed are those of the author(s) as of the date indicated and may change based on market and other conditions. The accuracy of the content and its relevance to your client's particular circumstances is not guaranteed.

This market commentary has been prepared for general informational purposes by the team, who are part of Macquarie Asset Management (MAM), the asset management business of Macquarie Group (Macquarie), and is not a product of the Macquarie Research Department. This market commentary reflects the views of the team and statements in it may differ from the views of others in MAM or of other Macquarie divisions or groups, including Macquarie Research. This market commentary has not been prepared to comply with requirements designed to promote the independence of investment research and is accordingly not subject to any prohibition on dealing ahead of the dissemination of investment research

Nothing in this market commentary shall be construed as a solicitation to buy or sell any security or other product, or to engage in or refrain from engaging in any transaction. Macquarie conducts a global full-service, integrated investment banking, asset management, and brokerage business. Macquarie may do, and seek to do, business with any of the companies covered in this market commentary. Macquarie has investment banking and other business relationships with a significant number of companies, which may include companies that are discussed in this commentary, and may have positions in financial instruments or other financial interests in the subject matter of this market commentary. As a result, investors should be aware that Macquarie may have a conflict of interest that could affect the objectivity of this market commentary. In preparing this market commentary, we did not take into account the investment objectives, financial situation or needs of any particular client. You should not make an investment decision on the basis of this market commentary. Before making an investment decision you need to consider, with or without the assistance of an adviser, whether the investment is appropriate in light of your particular investment needs, objectives, and financial circumstances

Macquarie salespeople, traders and other professionals may provide oral or written market

commentary, analysis, trading strategies or research products to Macquarie's clients that reflect opinions which are different from or contrary to the opinions expressed in this market commentary. Macquarie's asset management business (including MAM), principal trading desks and investing businesses may make investment decisions that are inconsistent with the views expressed in this commentary. There are risks involved in investing. The price of securities and other financial products can and does fluctuate, and an individual security or financial product may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international or local financial, market, economic, tax or regulatory conditions, which may adversely affect the value of the investment. This market commentary is based on information obtained from sources believed to be reliable, but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in this market commentary. Opinions, information, and data in this market commentary are as of the date indicated on the cover and subject to change without notice. No member of the Macquarie Group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this market commentary and/or further communication in relation to this market commentary. Some of the data in this market commentary may be sourced from information and materials published by government or industry bodies or agencies, however this market commentary is neither endorsed or certified by any such bodies or agencies. This market commentary does not constitute legal, tax accounting or investment advice. Recipients should independently evaluate any specific investment in consultation with their legal, tax, accounting, and investment advisors.
Past performance is not indicative of future

This market commentary may include forward-looking statements, forecasts, estimates, projections, opinions, and investment theses, which may be identified by the use of terminology such as "anticipate," "believe," "estimate," "expect," "intend," "may," "can," "plan," "will," "would," "should," "seek," "project," "continue," "target," and similar expressions. No representation is made or will be made that any

forward-looking statements will be achieved or will prove to be correct or that any assumptions on which such statements may be based are reasonable. A number of factors could cause actual future results and operations to vary materially and adversely from the forward-looking statements. Qualitative statements regarding political, regulatory, market and economic environments and opportunities are based on the author's opinion, belief, and judgment.

Other than Macquarie Bank Limited ABN 46 008 583 542 ("Macquarie Bank"), any Macquarie Group entity noted in this document is not an authorised deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia). The obligations of these other Macquarie Group entities do not represent deposits or other liabilities of Macquarie Bank. Macquarie Bank does not guarantee or otherwise provide assurance in respect of the obligations of these other Macquarie Group entities. In addition, if this document relates to an investment, (a) the investor is subject to investment risk including possible delays in repayment and loss of income and principal invested and (b) none of Macquarie Bank or any other Macquarie Group entity guarantees any particular rate of return on or the performance of the investment, nor do they guarantee repayment of capital in respect of the investment.

Past performance does not guarantee future results.

Diversification may not protect against market risk.

Fixed income securities and bond funds can lose value, and investors can lose principal, as interest rates rise. They also may be affected by economic conditions that hinder an issuer's ability to make interest and principal payments on its debt. This includes prepayment risk, the risk that the principal of a bond that is held by a portfolio will be prepaid prior to maturity, at the time when interest rates are lower than what the bond was paying. A portfolio may then have to reinvest that money at a lower interest rate.

Market risk is the risk that all or a majority of the securities in a certain market – like the stock market or bond market – will decline in value because of factors such as adverse political or economic conditions, future expectations, investor confidence, or heavy institutional selling. Natural or environmental disasters, such as earthquakes, fires, floods, hurricanes, tsunamis, and other severe weather-related phenomena generally, and widespread disease, including pandemics and epidemics, have been and can be highly disruptive to economies and markets, adversely impacting individual companies, sectors, industries, markets, currencies, interest and inflation rates, credit ratings, investor sentiment, and other factors affecting the value of the Strategy's investments. Given the increasing interdependence among global economies and markets, conditions in one country, market, or region are increasingly likely to adversely affect markets, issuers, and/or foreign exchange rates in other countries. These disruptions could prevent the Strategy from executing advantageous investment decisions in a timely manner and could negatively impact the Strategy's ability to achieve its investment objective. Any such event(s) could have a significant adverse impact on the value and risk profile of the Strategy.

International investments entail risks including fluctuation in currency values, differences in accounting principles, or economic or political instability. Investing in emerging markets can be riskier than investing in established foreign markets due to increased volatility, lower trading volume, and higher risk of market closures. In many emerging markets, there is substantially less publicly available information and the available information may be incomplete or misleading. Legal claims are generally more difficult to pursue.

Currency risk is the risk that fluctuations in exchange rates between the US dollar and foreign currencies and between various foreign currencies may cause the value of the fund's investments to decline. The market for some (or all) currencies may from time to time have low trading volume and become illiquid, which may prevent the fund from effecting positions or from promptly

liquidating unfavorable positions in such markets, thus subjecting the fund to substantial losses.

Credit risk is the risk of loss of principal or loss of a financial reward stemming from a borrower's failure to repay a loan or otherwise meet a contractual obligation. Credit risk arises whenever a borrower expects to use future cash flows to pay a current debt. Investors are compensated for assuming credit risk by way of interest payments from the borrower or issuer of a debt obligation. Credit risk is closely tied to the potential return of an investment, the most notable being that the yields on bonds correlate strongly to their perceived credit risk.

Demand deceleration is when growth slows relative to the prior period, and demand destruction is when growth contracts relative to the prior period (i.e. a period of negative growth).

The Group of Seven (G7) is an intergovernmental political forum consisting of Canada, France, Germany, Italy, Japan, the UK, and the US; additionally, the European Union is a "non-enumerated member." It is organized around shared values of pluralism, liberal democracy, and representative government.

The global financial crisis (GFC) refers to the period of extreme stress in global financial markets and banking systems between mid-2007 and early 2009.

Gross domestic product (GDP) is a measure of all goods and services produced by a nation in a year. It is a measure of economic activity.

Inflation is the rate at which the general level of prices for goods and services is rising, and, subsequently, purchasing power is falling. Central banks attempt to stop severe inflation, along with severe deflation, in an attempt to keep the excessive growth of prices to a minimum.

Monetary policy is a set of actions available to a nation's central bank to achieve sustainable economic growth by adjusting the money supply.

A rate hike cycle is the time period between the month of the first hike until the month before the first cut.

Recession is a period of temporary economic decline during which trade and industrial activity are reduced, generally identified by a fall in gross domestic product (GDP) in two successive quarters.

Stagflation is persistent high inflation combined with high unemployment and stagnant demand in a country's economy.

Quantitative easing (QE) is a form of monetary policy in which a central bank, like the US Federal Reserve, purchases securities from the open market to reduce interest rates and increase the money supply.

Underemployment is a measure of the total number of people in an economy who are unwillingly working in low-skill and low-paying jobs or only part-time because they cannot get full-time jobs that use their skills.

The Australia Consumer Price Index (CPI) measures household inflation and includes statistics about price change for categories of household expenditure.

The **Global Supply Chain Pressure Index**, created by the Federal Reserve Bank of New York, tracks the state of global supply chains using data from the transportation and manufacturing sectors.

Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

Economic trend information is sourced from Bloomberg unless otherwise noted.

All third-party marks cited are the property of their respective owners.

© 2023 Macquarie Group Limited

macq.co/MAM-Public-Investments

Contact us

Americas

Market Street
Philadelphia
215 255 1200
mim americas@macquarie.com

EMEA

Ropemaker Place London 44 20 303 72049 mim.emea@macquarie.com

Australia

Martin Place Sydney 1 800 814 523 min@macquarie.com

Asia

Harbour View Street Hong Kong 852 3922 1256 macquarie.funds.hk@macquarie.con