PORTFOLIO MANAGEMENT CONFERENCE 2022

Portfolio Management Under Uncertainty

28th July 2022
#PMC2022

Upcoming IMAP events

Independent Thought Conference
6th September – Sydney

Australian Equities - Schroders
Panelists from Bellmont Securities & Infinity Asset Management

International Equities - Fiera Capital / Ironbark
Panelists from Centrepoint Alliance, Morgan Stanley & AMP

Fixed Interest - PIMCO
Panelists from Oreana Portfolio Advisory, Lonsec & Insight Investment Consulting

Property and Infrastructure - AMP Capital
Panelists from Context Capital, Morningstar & First Sentier Investors

Alternatives and Private Markets - Metrics / Pinnacle
Panelists from JANA Investment Advisers & Perpetual Private

2022 IMAP MANAGED ACCOUNT AWARDS FINALISTS

PRESENTATION CEREMONY - 5:30PM 24 AUGUST 2022

ESG PORTFOLIO
Kearney Group
Lonsec
Morgan Stanley Wealth Management
Russell Investments
DNR Capital

LICENSEE MANAGED ACCOUNT
Alvia Asset Partners
DWA
Halcyon
Morgan Stanley Wealth Management
Oreana Financial Services Portfolio Advisory Service

MULTI ASSET CLASS
Drummond Capital Partners
MLC Asset Management
Morgan Stanley Wealth Management
Oreana Financial Services Portfolio Advisory Service
Perpetual Private
State Street Global Advisors

AUSTRALIAN EQUITIES
DNR
Elston Asset Management
Infinity Asset Management
Macquarie Asset Management
Perpetual Private

AUSTRALIAN EQUITIES SMALL CAP
Macquarie Asset Management
SG Hiscock & Co
Infinity Asset Management

INTERNATIONAL EQUITIES
Franklin Templeton Australia Limited
Private Portfolio Managers
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Conference MC

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SCAN FOR CONFERENCE MATERIAL

Economic Outlook

David Bassanese
BetaShares

Economic Outlook

July 2022

David Bassanese
BetaShares Chief Economist

Important information

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Agenda

- ► **Post-COVID economic recovery**
- ► **Inflation and interest rate outlook**
- ► **Housing market update**

Australia's COVID success

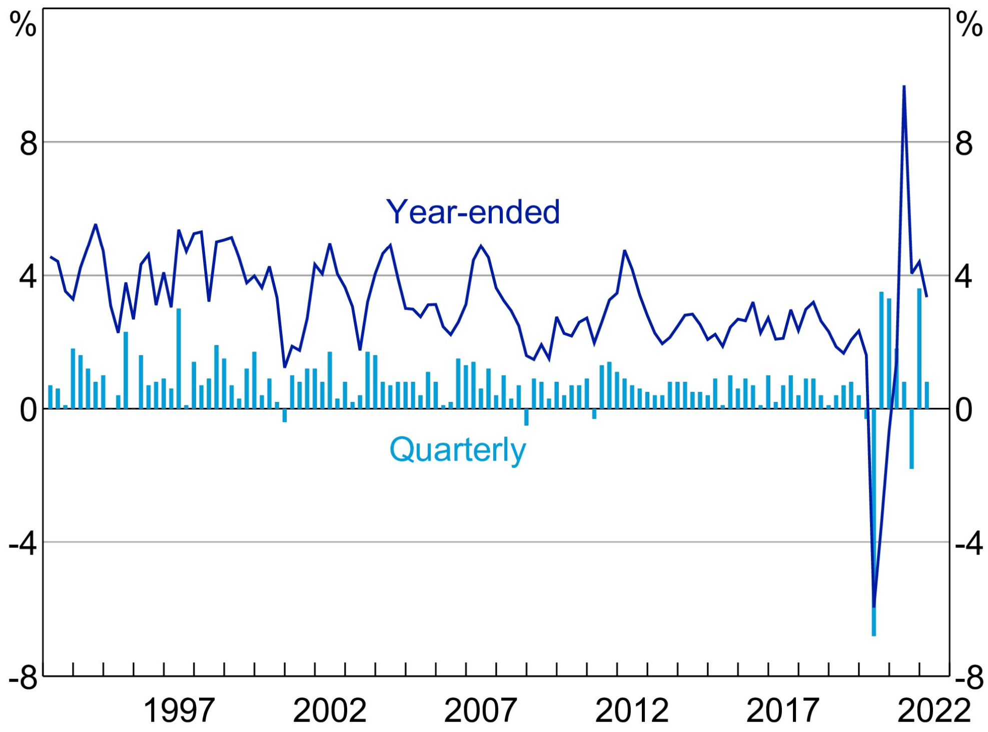
New deaths attributed to COVID-19 in U.S. and Australia

Seven-day rolling average of new deaths (per 100k)

Source: Financial Times analysis of data from John Hopkins CSSE, World Health Organisation, UK government coronavirus dashboard, Government of Peru, Public Health France, Israeli Health Ministry, Slovenian Ministry of Health, Finnish Institute for Health and Welfare and the Swedish Public Health Agency. Data updated 8 July 2022.

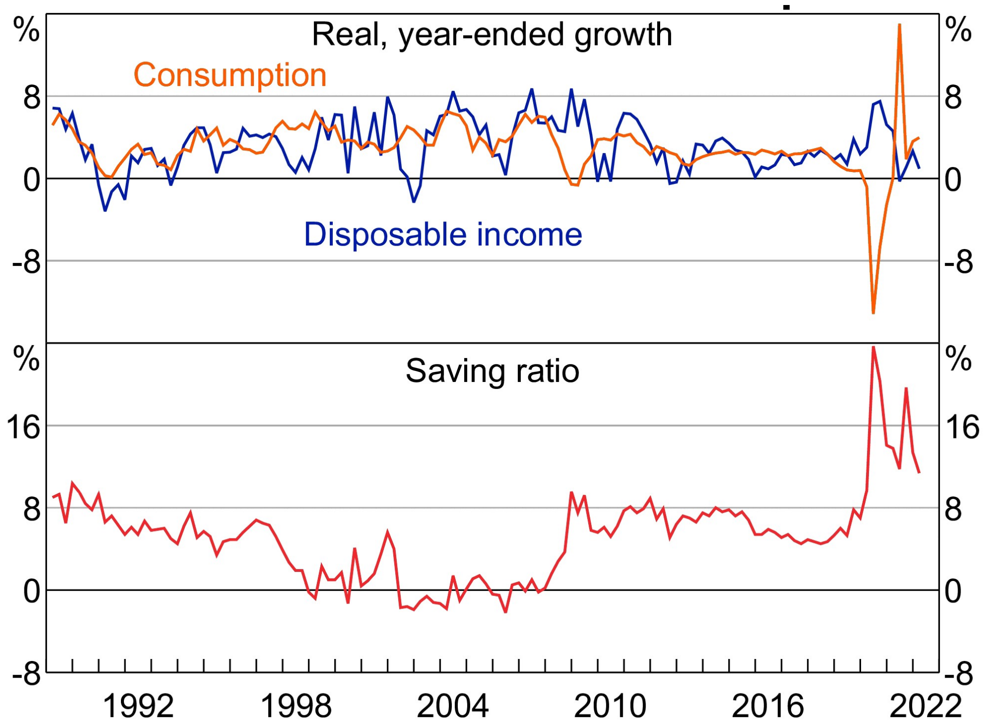
Consumer driven recovery

GDP growth



Source: RBA, ABS, BetaShares

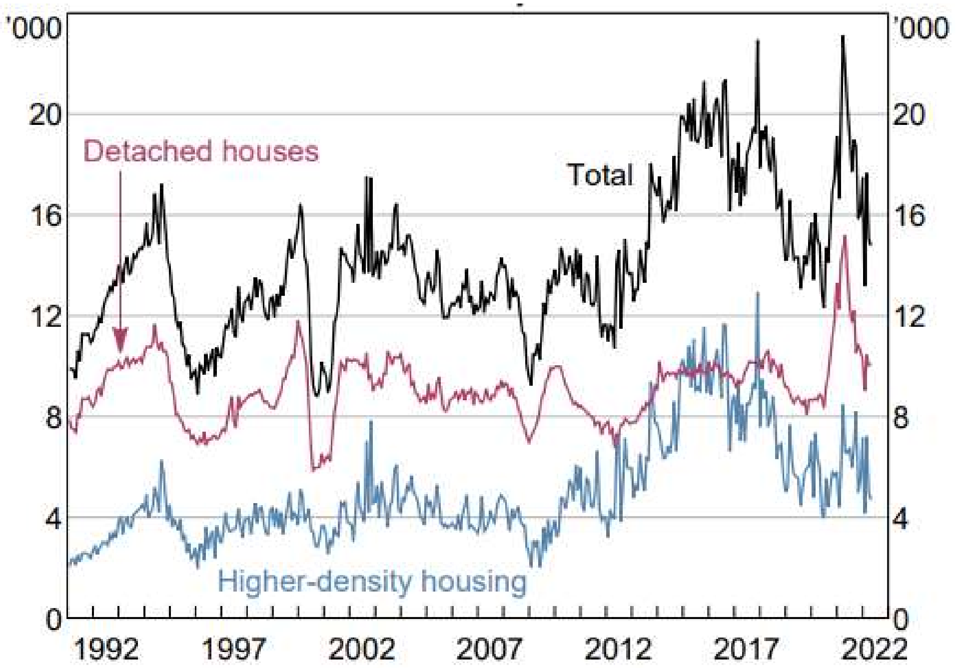
Household income and consumption*



*Household sector includes unincorporated enterprises; disposable income is after tax and interest payments; saving ratio is net of depreciation.

Housing boom also – but starting to fade

Private residential building approvals
Monthly



Source: RBA,ABS, BetaShares

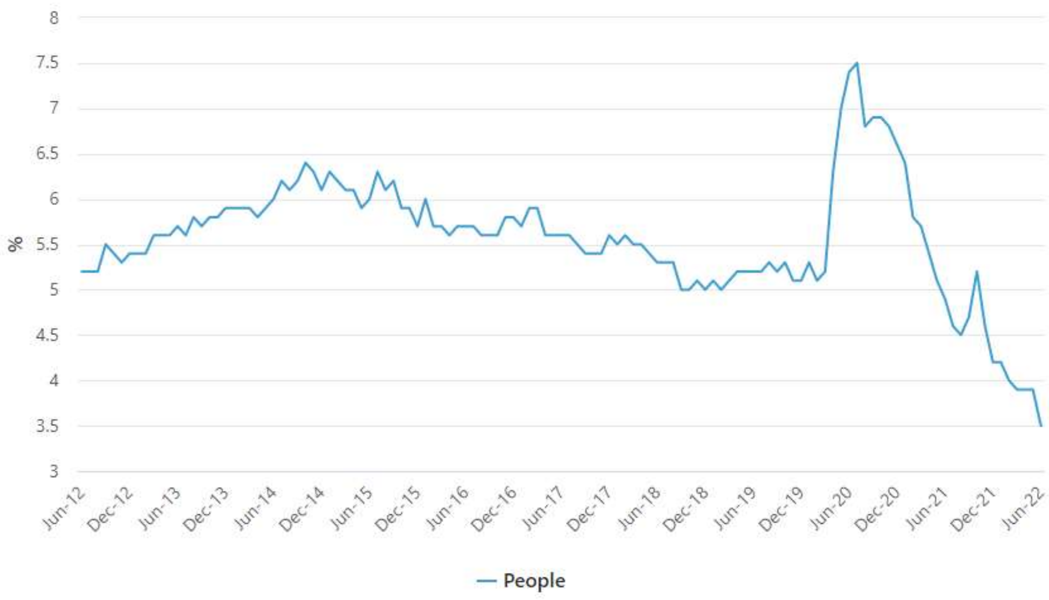
Private dwelling investment*
Chain volume, quarterly

* Reference year is 2019/20.

BetaShares

Tight labour market and rising inflation

Unemployment rate, seasonally adjusted

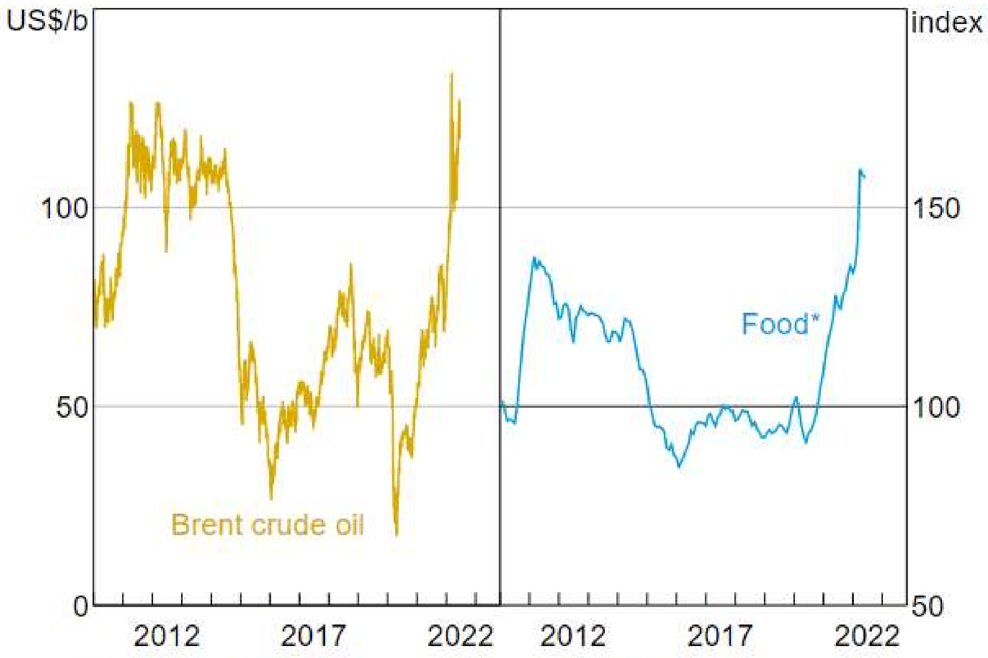


CPI, Trimmed mean and Weighted median, Annual movement (%)

Source: ABS, BetaShares

Broad based inflation pressures

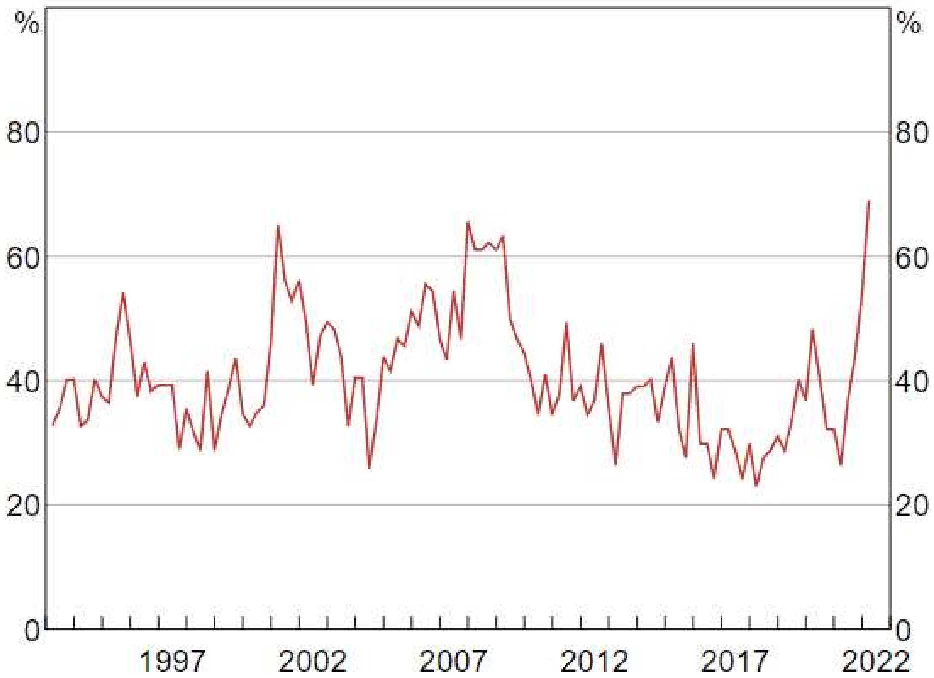
Commodity prices



* FAO Food Price Index; average of 2014–2016 = 100.

Source: RBA, ABS, UN FAO, Bloomberg, Refinitiv Datastream, BetaShares

Share of CPI items rising more than 3%*

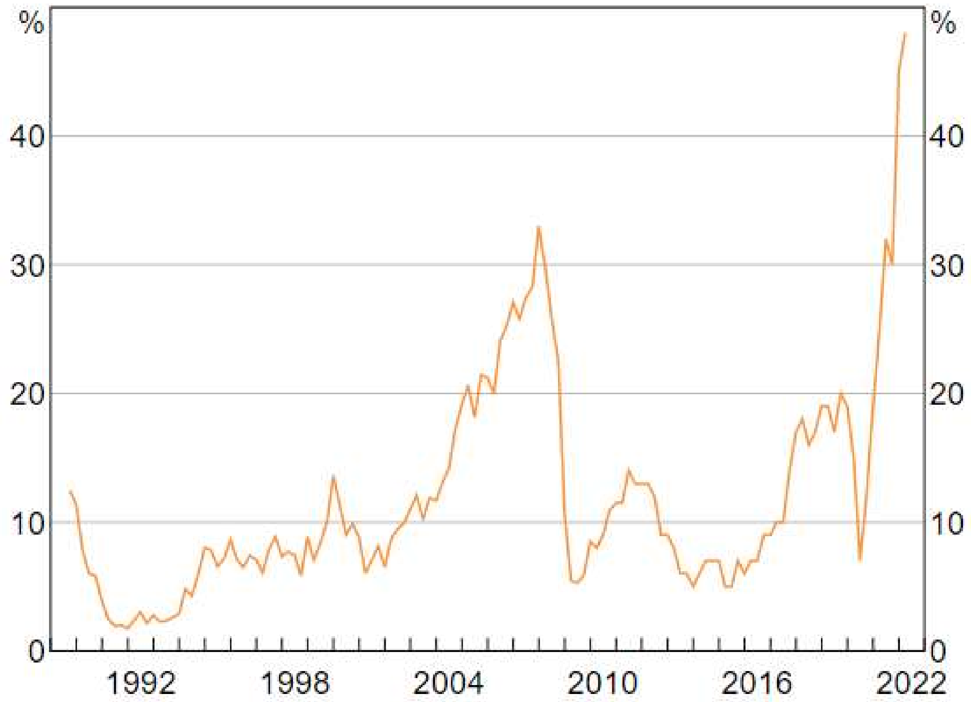


*Proportion of CPI items by number with annualised quarterly growth more than 3%; based on seasonally adjusted data; adjusted for the tax changes of 1999-2000.

Tight labour market but official wages so far still benign

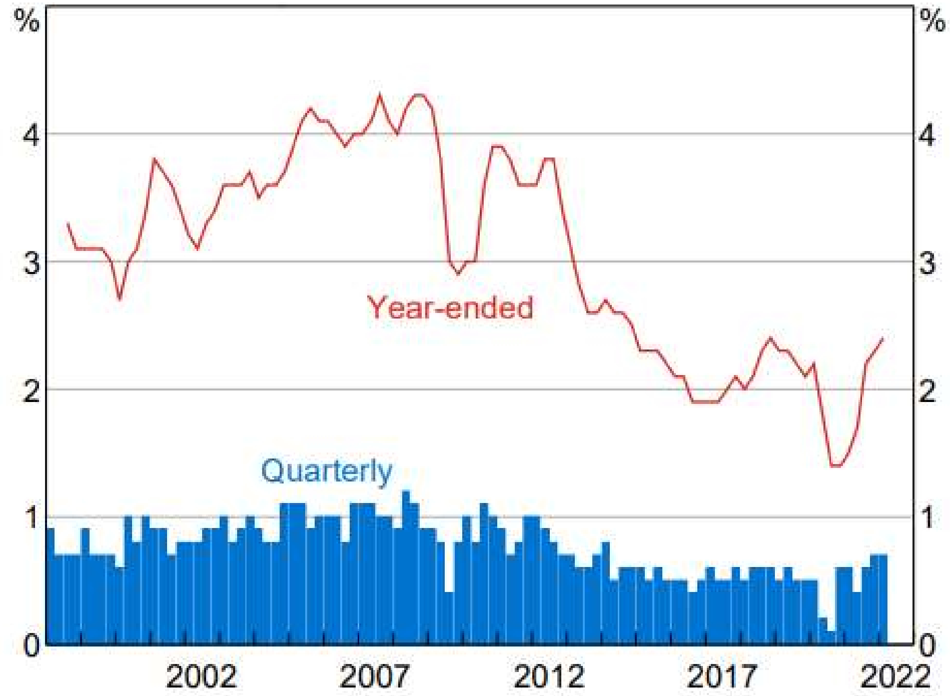
Difficulty in finding suitable labour

Share of firms reporting labour as a significant constraint



Source: NAB, ABS, Refinitiv Datastream, BetaShares

Wage price index growth*



*Total pay excluding bonuses.

Agenda

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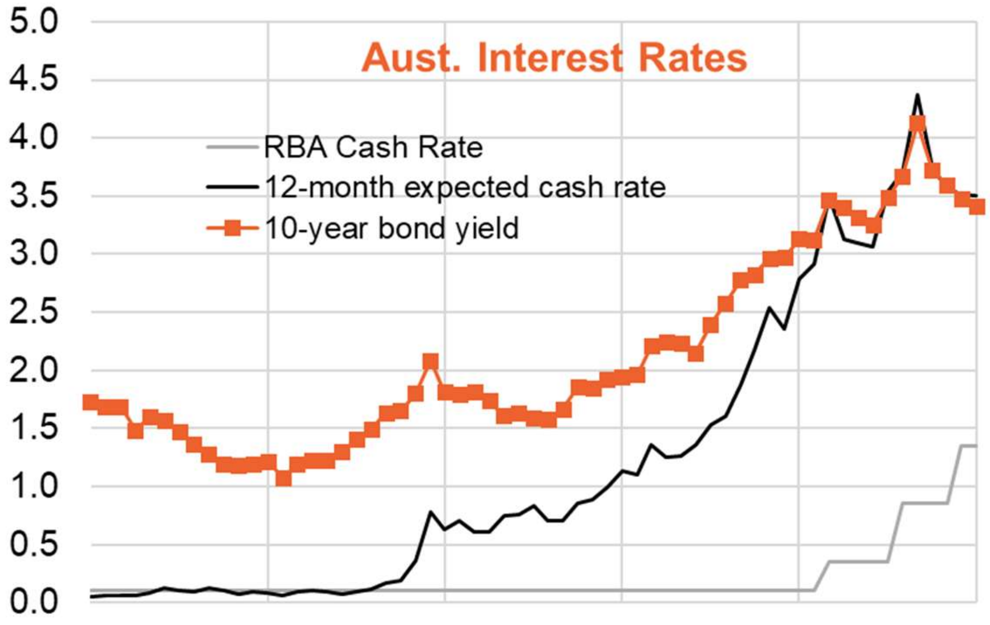
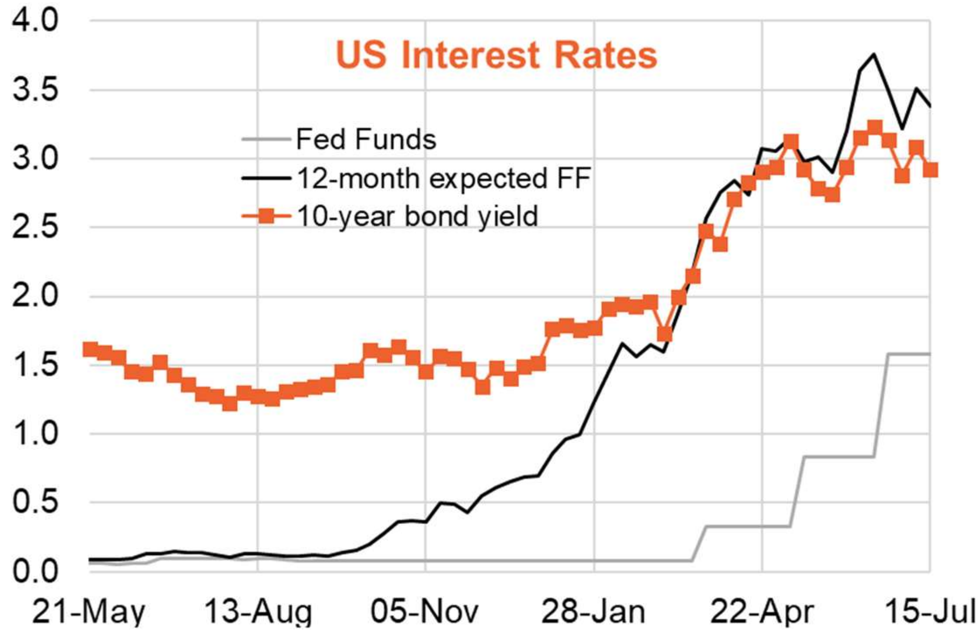
- ▶ **Inflation and interest rate outlook**
- ▶ Housing market update

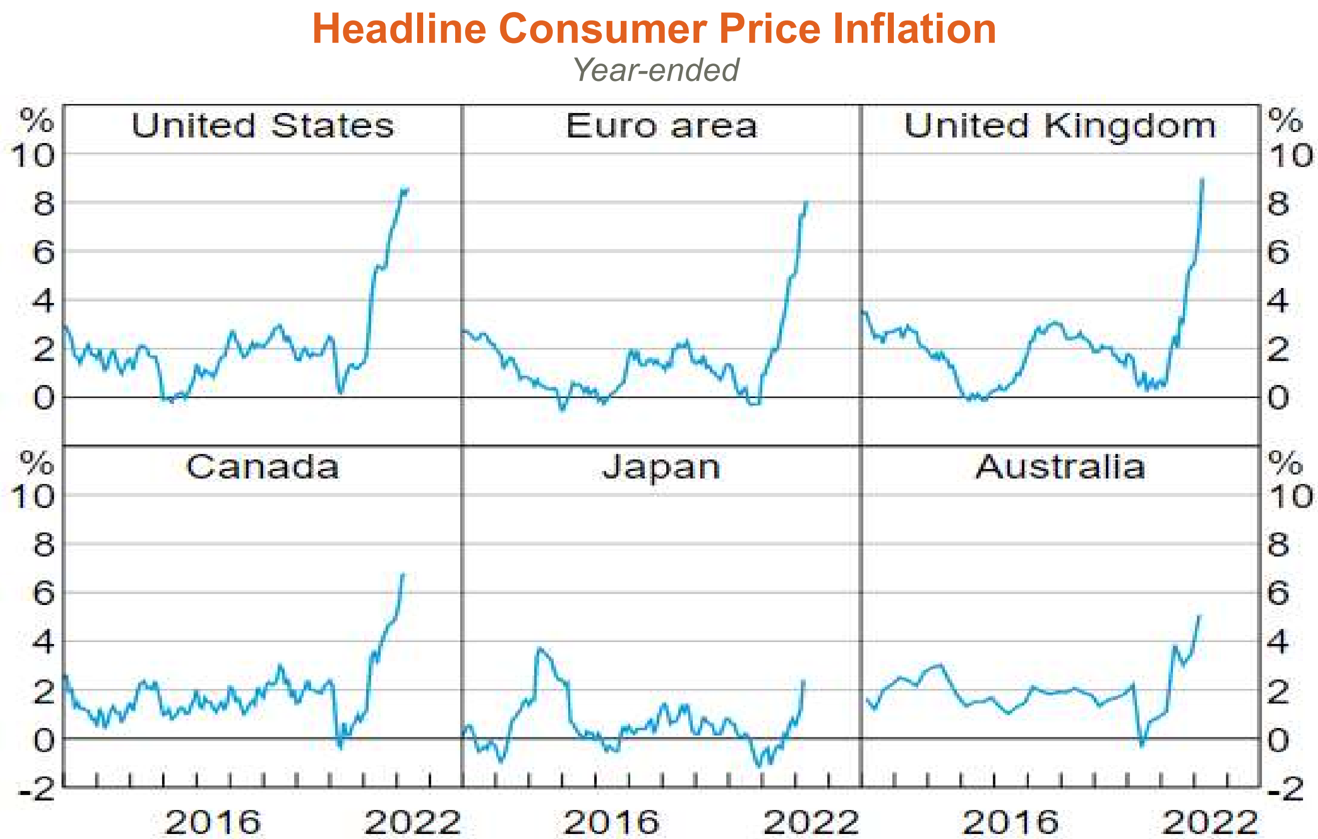
Belated but strong monetary response this year





Source: Refinitiv, BetaShares

Inflation: a global phenomenon



Source: ABS, RBA, Refinitiv Datastream, BetaShares

The US is not experiencing stagflation – rather an old fashioned demand boom

U.S. unemployment rate

U.S. core PCE deflator

Source: Financial Times

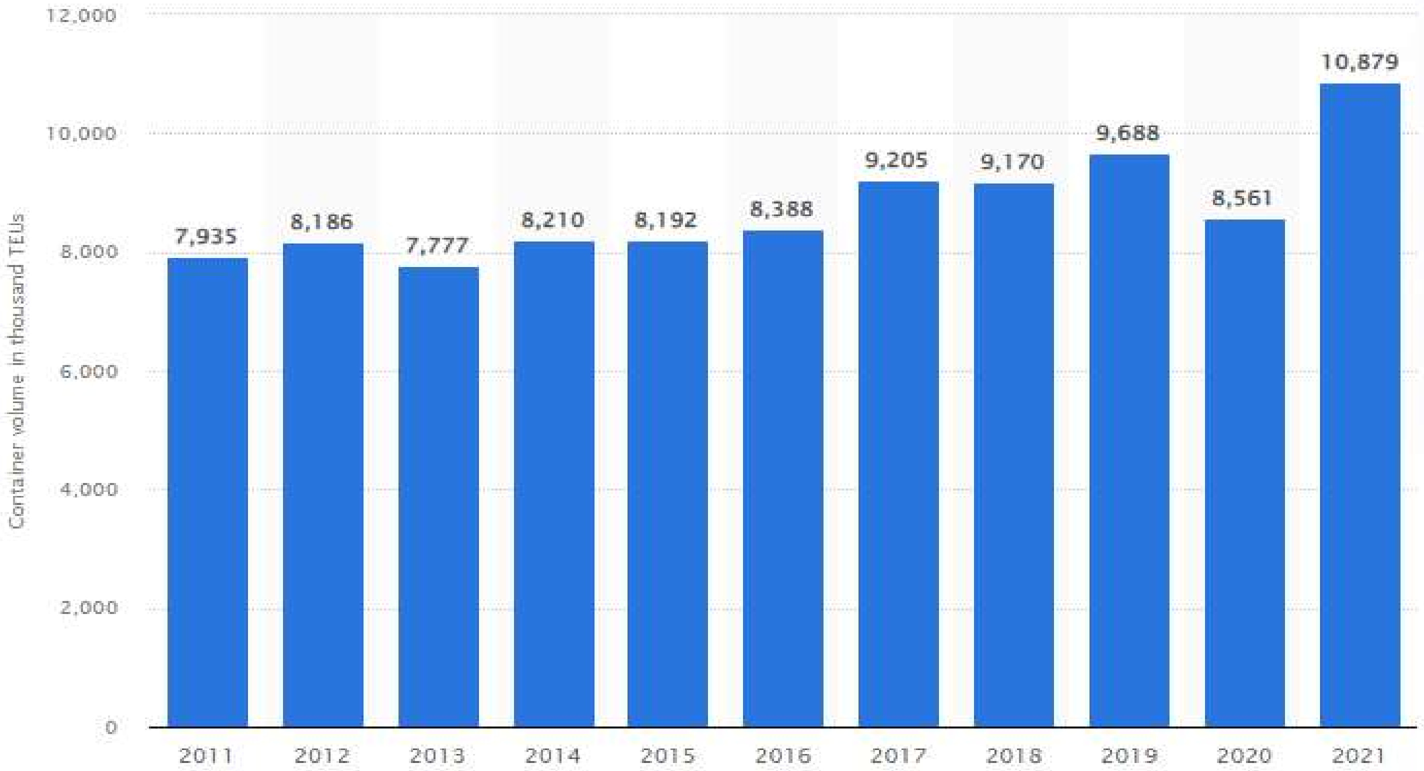
Real spending on US consumer durable goods

Real Personal Consumption Expenditures: Durable Goods

Source: U.S. Bureau of Economic Analysis. Shaded areas indicate U.S. recessions.

LA Ports were able to handle more cargo in ‘21 than ‘16

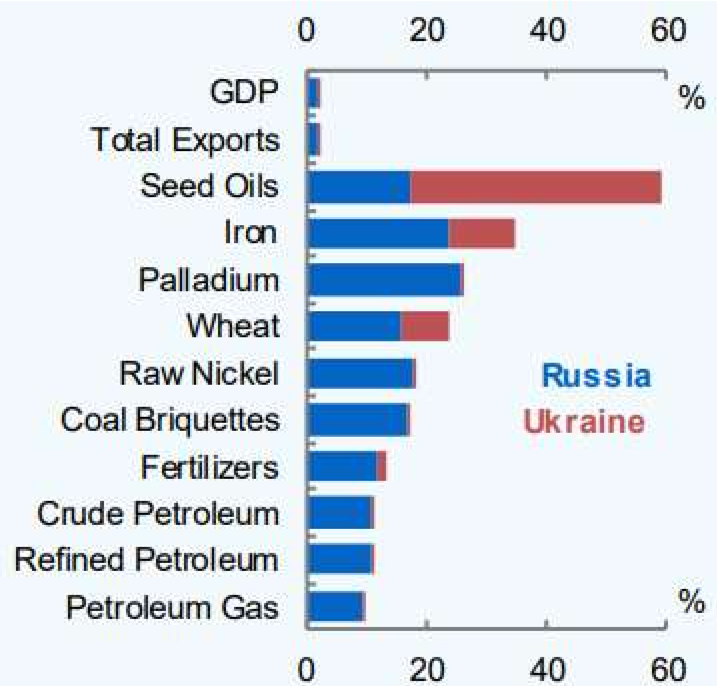
Container traffic handled at the Port of Los Angeles



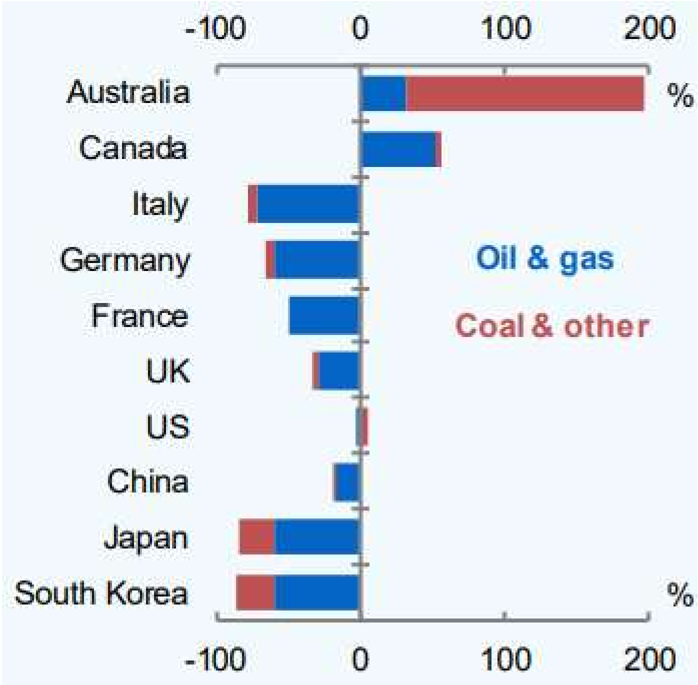
Source: Statista, BetaShares

Russia's Ukraine invasion: adding to cost pressures

Contribution to global GDP and exports of selected commodities



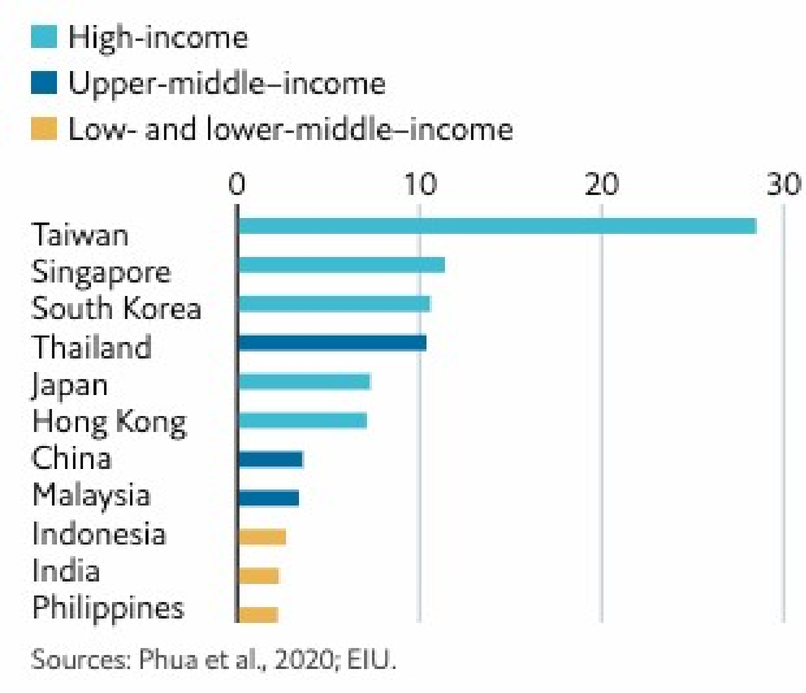
Net energy exports as a proportion of domestic energy use



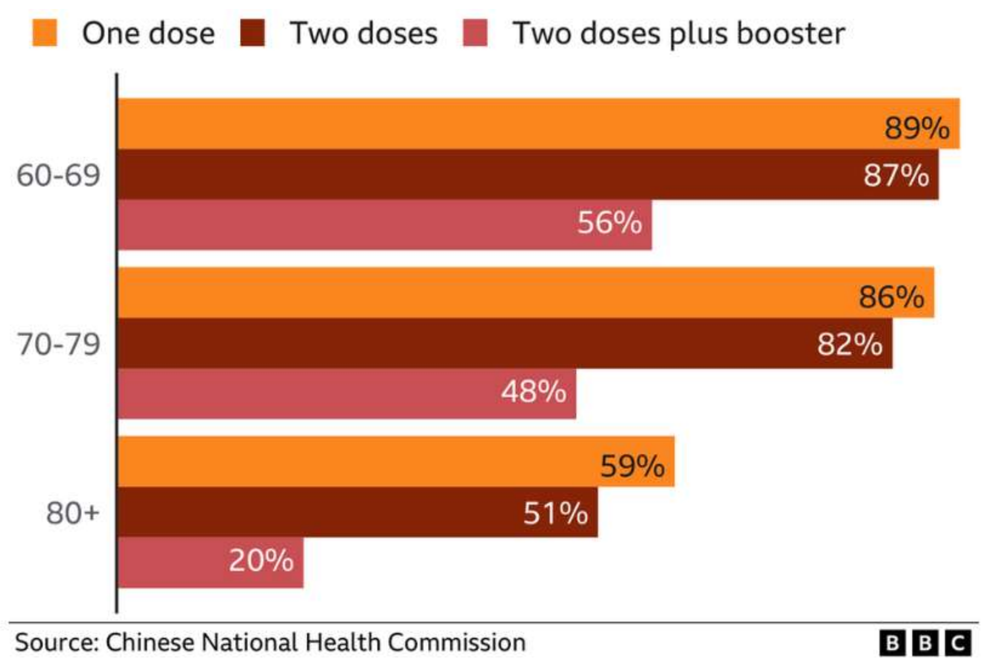
Source: UN Comtrade, Treasury, International Energy Agency - Australian Government Budget Paper #2, March 2022.

China – still less prepared to live with COVID

China has relatively low critical care capacity
(Intensive care beds, per 100,000 population)



Lower vaccination levels in China's over-80's
Percentage of population vaccinated by age group and dose



Source: The Economist, BBC, BetaShares

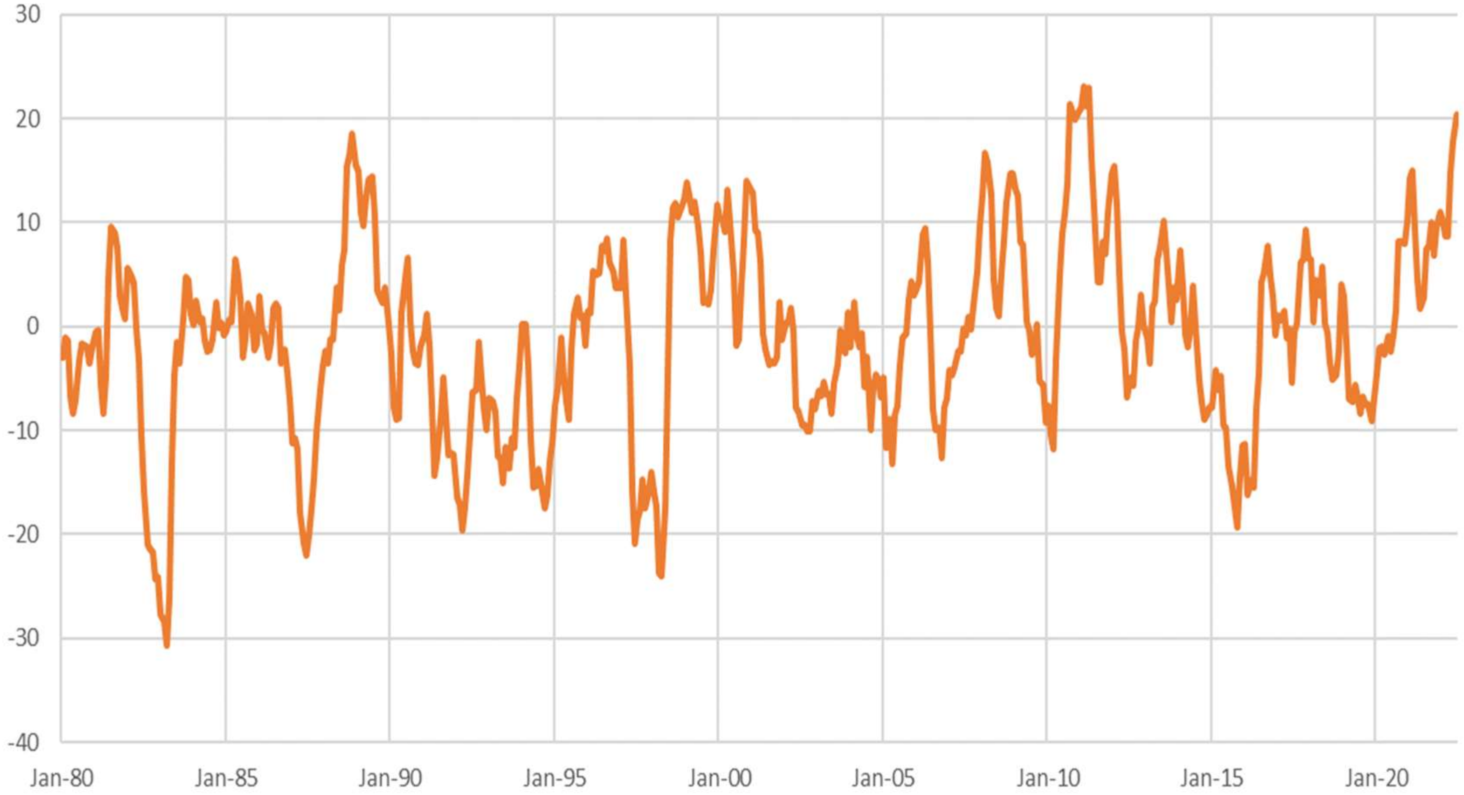
Oil market will remain tight unless demand slows

Demand/Supply balance

*Assumes OPEC + unwinds cuts. Iran remains under sanctions.
Source: International Energy Agency, July 2022 Oil Market Report.

La Niña conditions may continue to affect food prices

Southern Oscillation Index



Source: Refintiv

Agenda

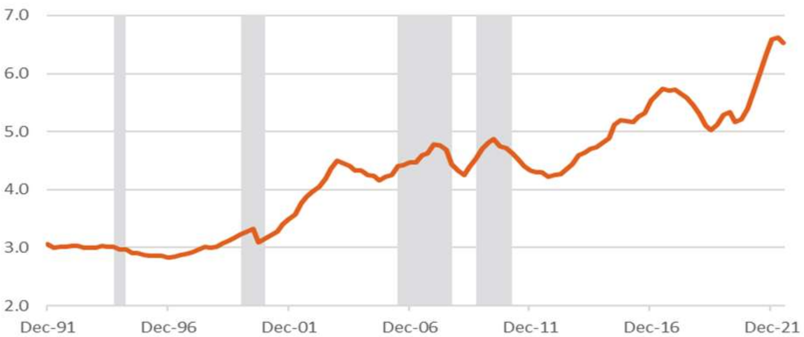
- ▶ Post-COVID Economic Recovery
- ▶ Inflation and interest rate outlook
- ▶ **Housing market update**

House prices have peaked!

Australian house price valuations

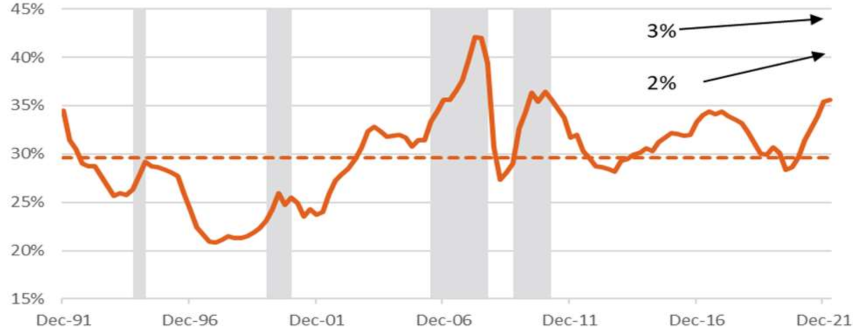
Nominal Median House Price, $1000s

House Price to Income Ratio



Interest Rates

Mortgage Repayment Ratio



Source: BetaShares, ABS, Core Logic.

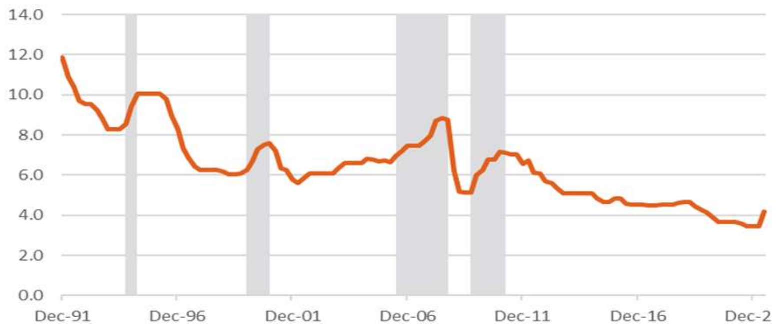
Sydney very unaffordable

Sydney house price valuations

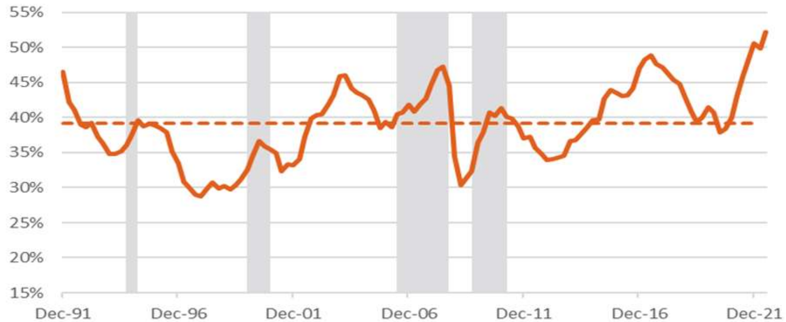
Nominal Median House Price, $1000s

House Price Ratios

Viable Mortgage Rate



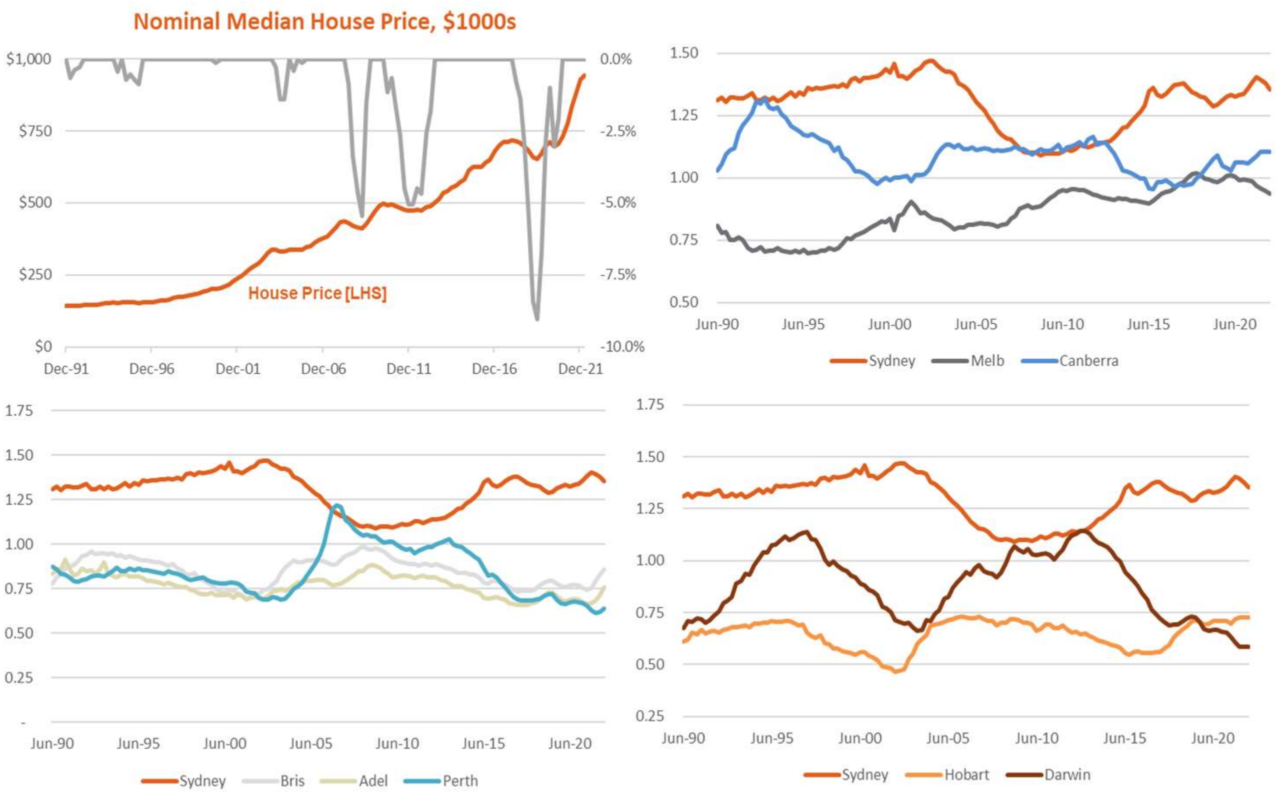
Mortgage Repayment Ratio



Source: BetaShares, ABS, Core Logic.

Sydney & Melbourne likely to correct the most

House price relativities by capital city

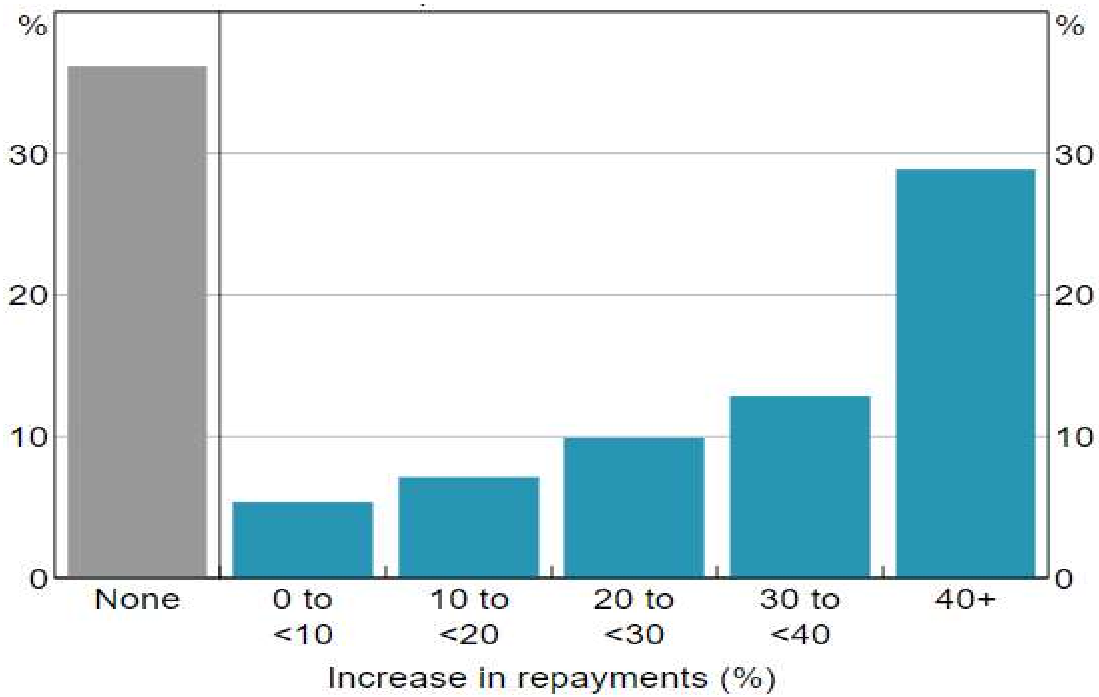


Source: Core Logic, ABS, BetaShares

Impact of rising rates should be manageable for most

Repayment increases for variable-rate loans

*Changes in repayments in response to a 300 basis point increase in interest rates**



*Changes between new required repayments and average monthly payments over the past year; share of variable-rate loans (excluding split loans) as at May 2022.
Source: RBA, Securitisation System

Things to consider

Investment Risk	The value of an investor's portfolio can go down as well as up. Risks include: ▸ Market risk with equities ▸ Currency risk with international investments ▸ Interest rate and credit risk with bonds and cash.
No guarantees	Future outcomes are uncertain – desired return outcome may not be achieved.
General Information only	Today's discussion does not take into account any person's individual circumstances and is not personal financial advice.
Professional advice	Investors should seek professional financial advice before investing.
Research	See relevant PDS for more information about risks and other features of each fund.

Questions?

How Central Bank Policy and Geopolitical Stresses will affect Investment Markets

Jonathon Costello
Franklin Templeton

FRANKLIN TEMPLETON

How Central Bank Policy and Geo Political Stresses will Affect Investment Markets

Jonathon Costello, CFA

Western Asset Management

IMAP Conference Perth

July 2022

WESTERN ASSET

Geopolitics Fanned Inflation Transition

Inflation Transition

Tailwinds

Fiscal thrust

Monetary accommodation

Covid reopening demand

- Higher commodity prices
- Additional supply side disruption

Ukraine – Russia conflict

Headwinds

Debt

Demographics

Technological displacement

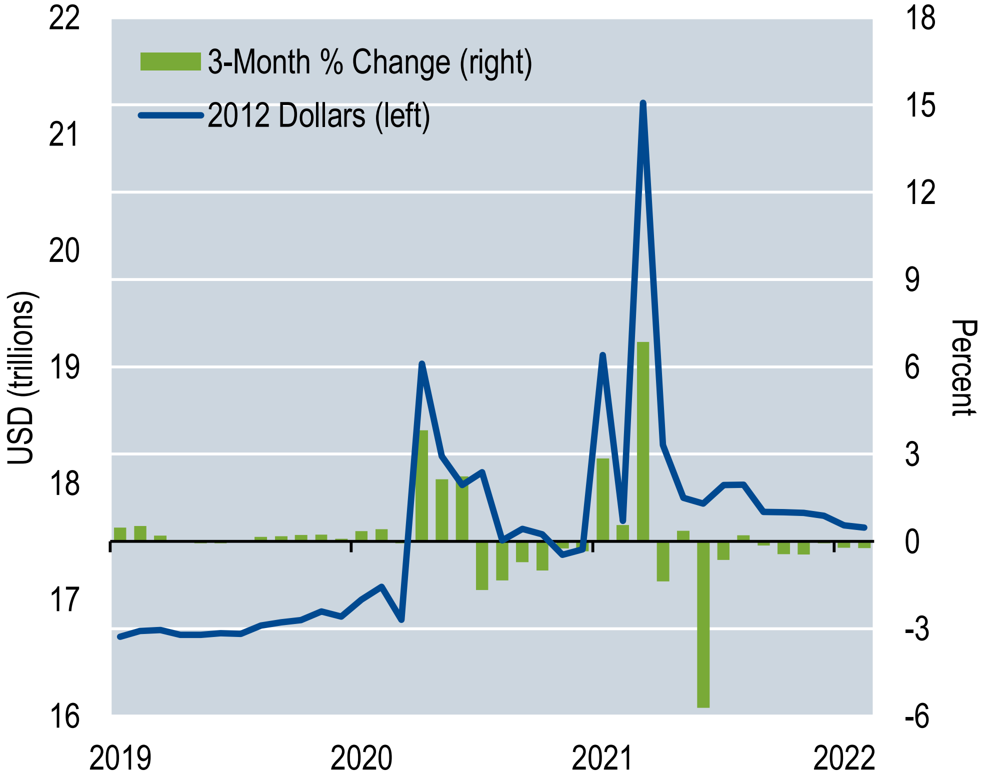
- Additional monetary tightening
- Increased pressure on real incomes and further downside risks to global growth

Cost of Living Headwinds

Declining Real Income a Headwind for Demand

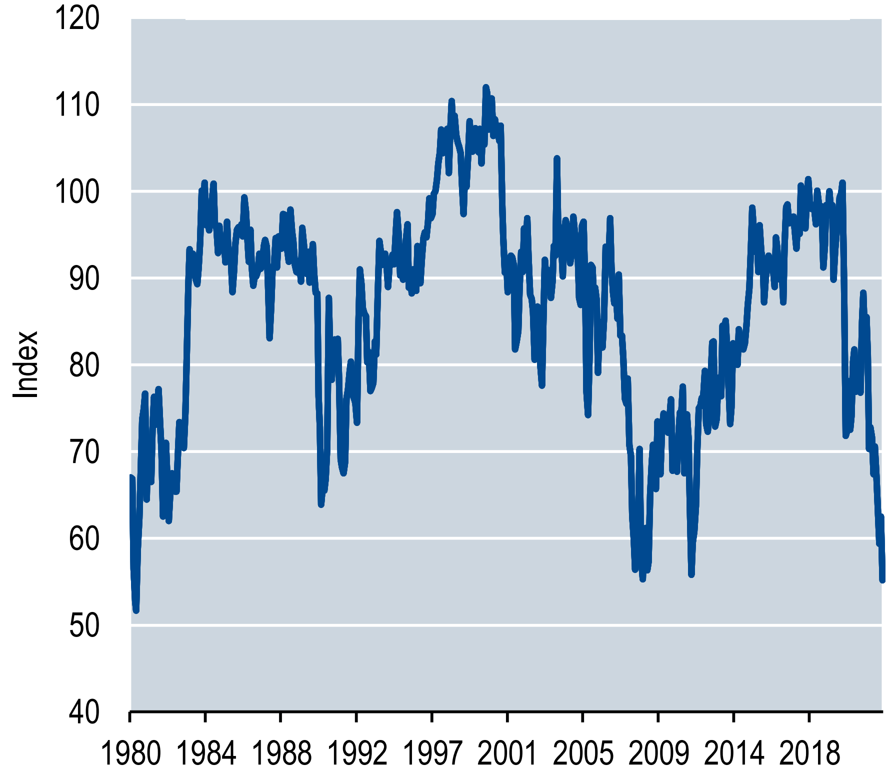
Real incomes are declining to start 2022, due to fading fiscal stimulus and higher inflation

US Real Personal Income



Source: Bureau of Economic Analysis. As of 31 Mar 22

University of Michigan: Consumer Sentiment

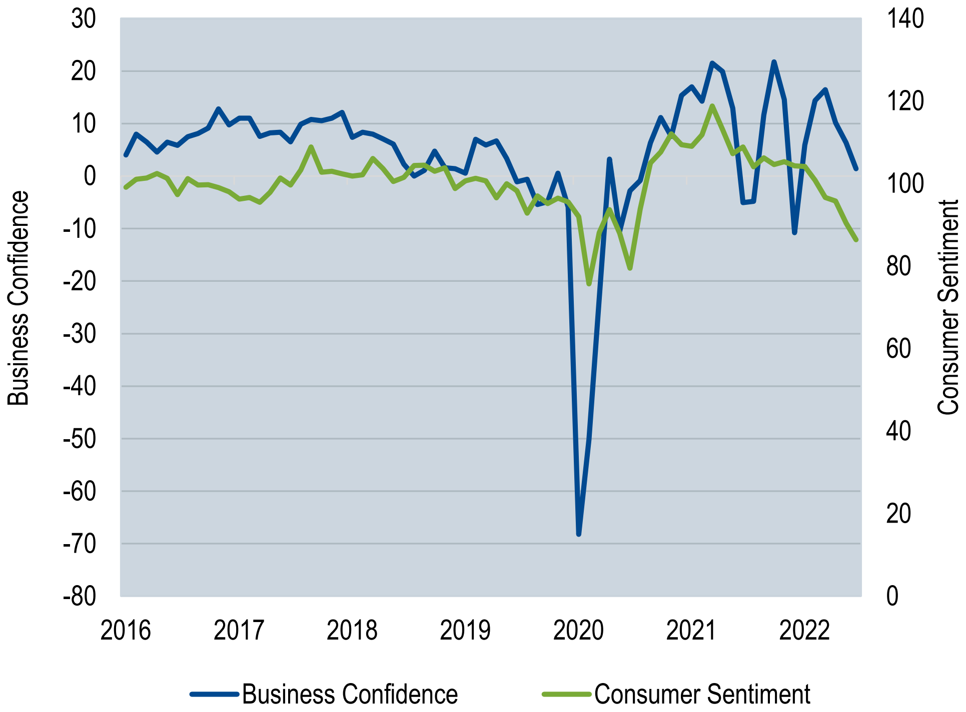


Source: University of Michigan, Haver. As of 31 May 22

Confidence and Sentiment Indicators Deteriorating

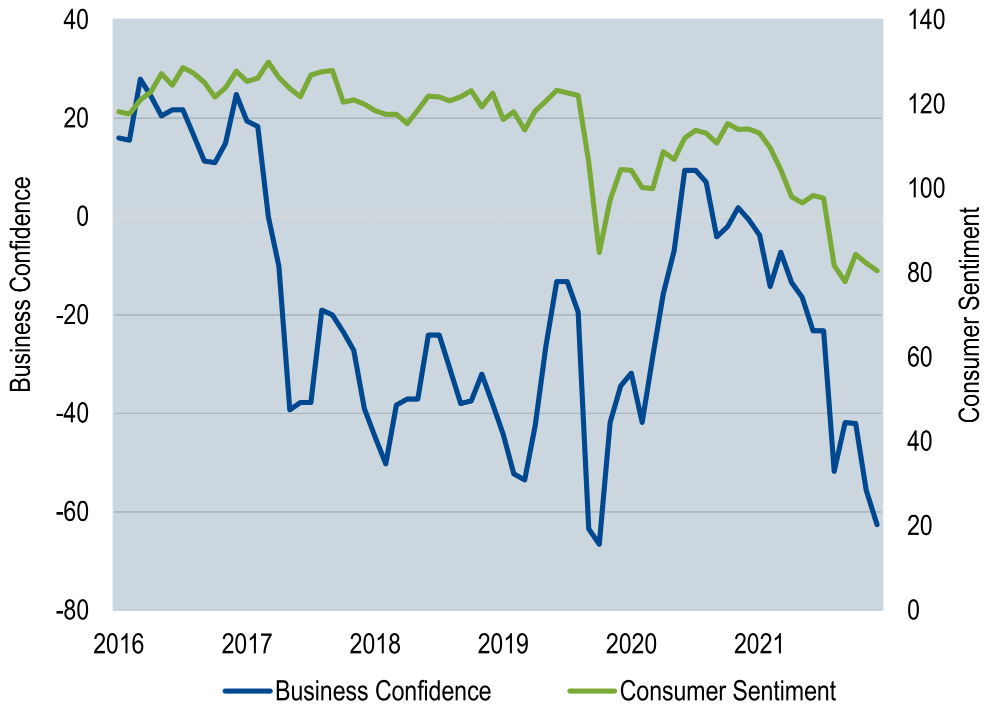
Declining real incomes and growth concerns are impacting businesses and consumers alike

Australia Business Confidence & Consumer Sentiment



Source: Westpac, NAB, Bloomberg
As at June 30 2022

New Zealand Business Confidence and Consumer Sentiment



Source: ANZ Roy Morgan, Bloomberg
As at June 30 2022

Inflation and Central Bank Policy Outlook

Inflation Outlook

WESTERN ASSET

Inflation remains challenging but should ease substantially during 2022

- Monetary policy tightening
- Fiscal policy tightening
- Supply bottlenecks easing
- Commodity price pressures easing

Key Inflation Drivers

Supply & Demand for Goods

- Real Disposable Income
- Consumer Balance Sheets
- Inventories

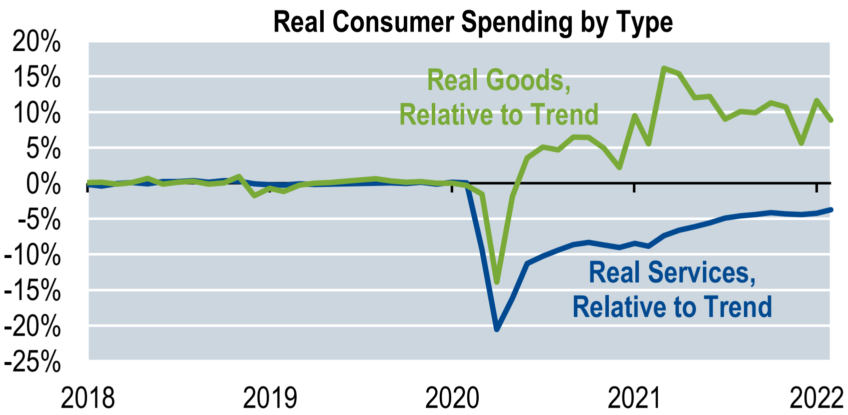
Supply & Demand for Services

- Income and Balance Sheets
- Labour supply
- Wage inflation

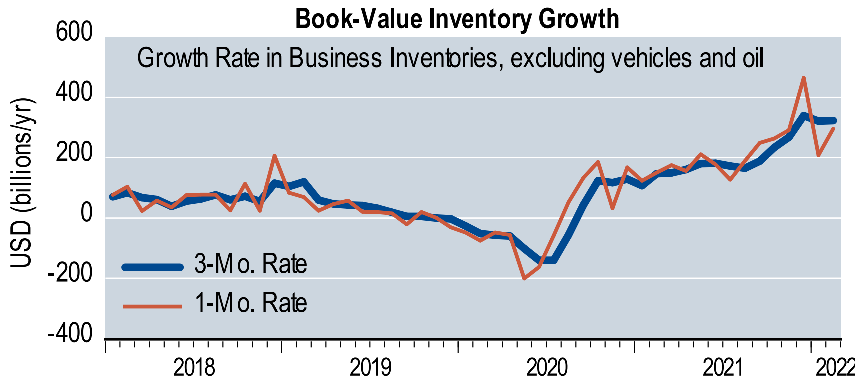
Supply & Demand for Housing

- Mortgage rates
- Housing affordability and impact on rents
- Building approvals

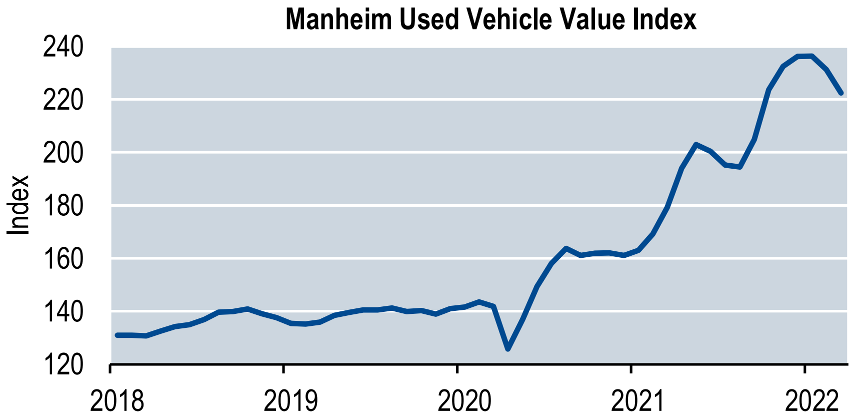
Rebalancing Supply and Demand for Goods



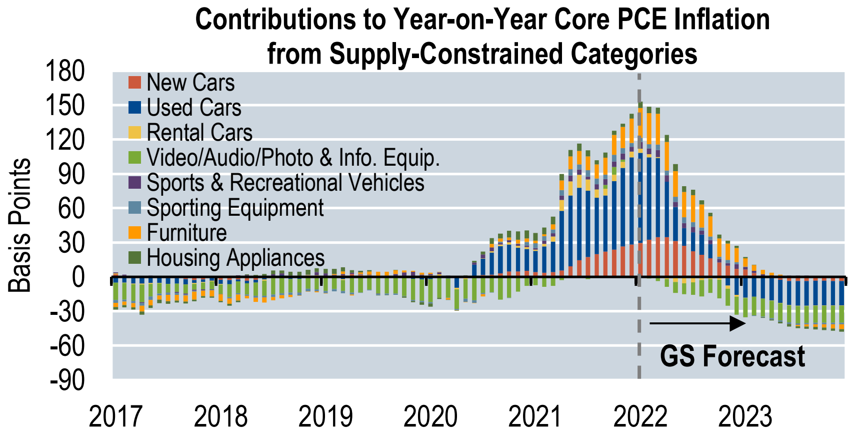
Source: Bureau of Economic Analysis. As of 31 Mar 22



Source: Census Bureau. As of 28 Feb 22

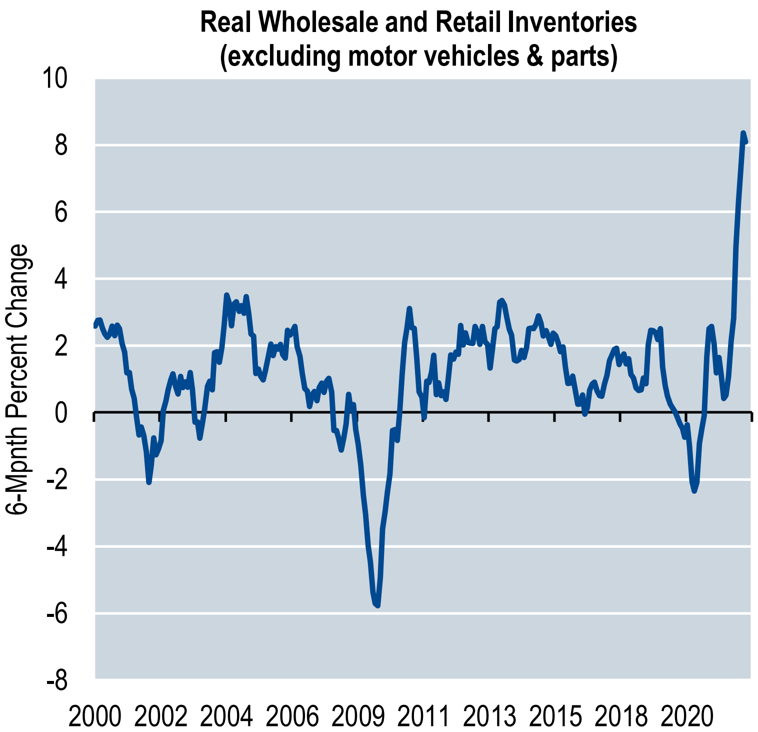


Source: Manheim, Haver. As of 31 Mar 22

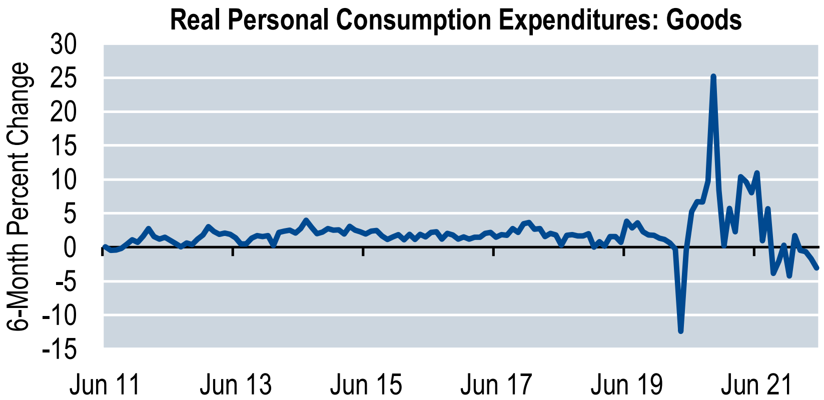


Source: Goldman Sachs. As of 31 Jan 22

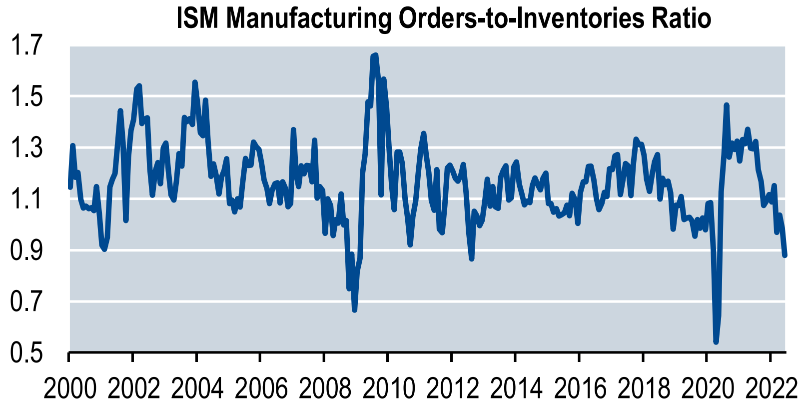
Rising Inventories: Softening Sales and Improving Supply Chains



Source: Haver Analytics, Bloomberg. As of 16 Jun 22



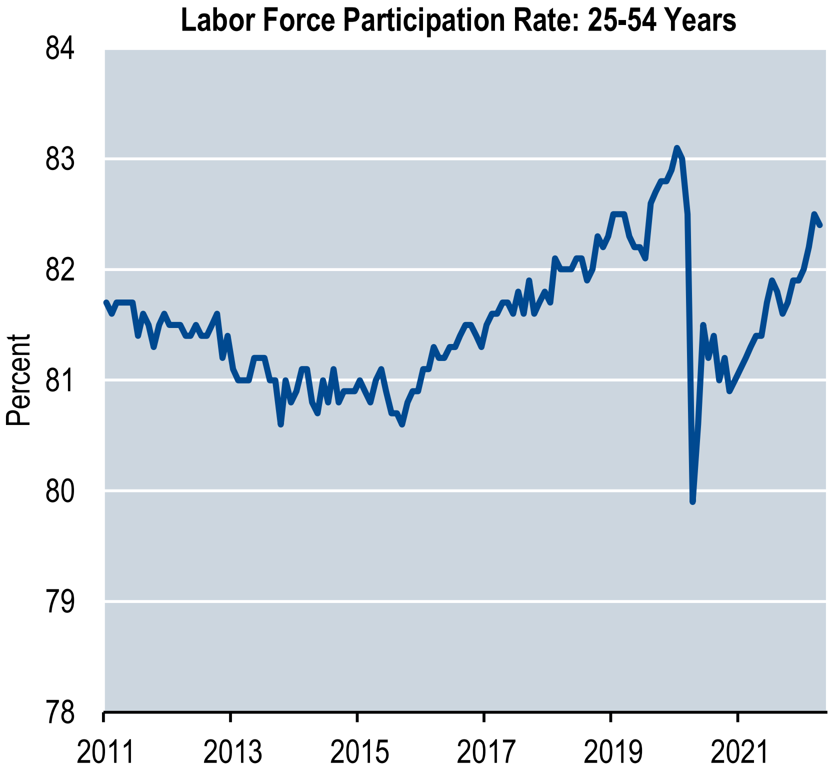
Source: Bureau of Economic Analysis, Haver Analytics. As of 31 May 22



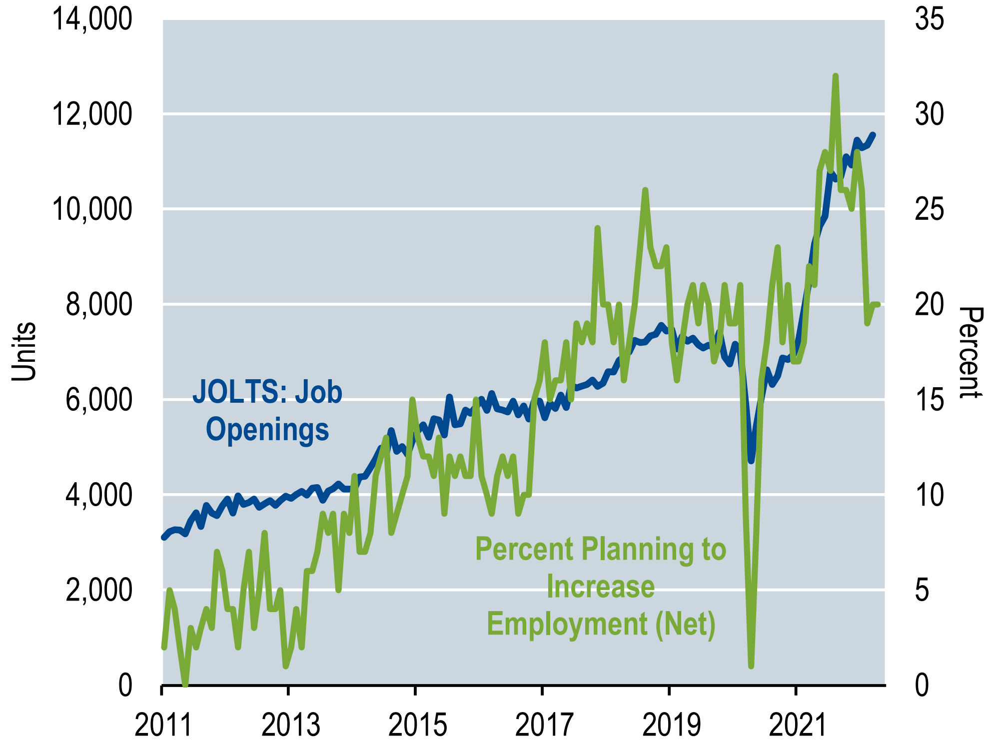
Source: Bloomberg. As of 30 Jun 22

Rebalancing Supply and Demand for Labor

Labor supply improvement can continue in 2022. Job openings have peaked, albeit at high levels. Are hiring plans turning?



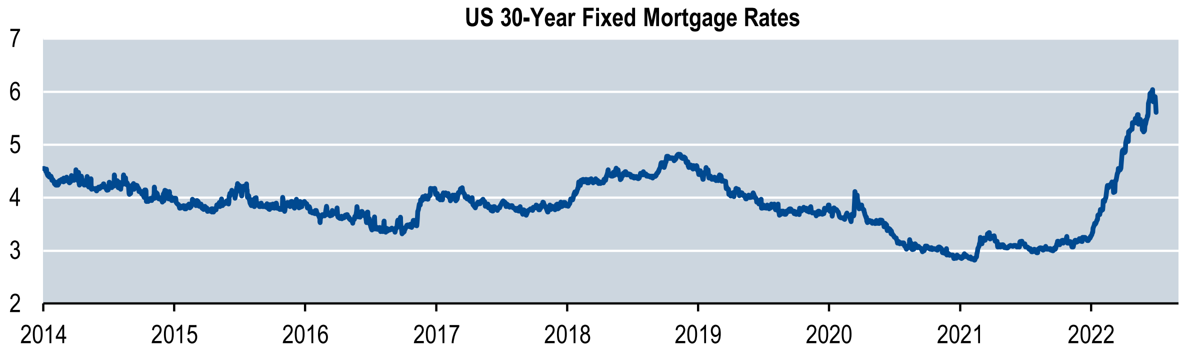
Source: Bureau of Labor Statistics. As of 30 Apr 22
Note: Seasonally adjusted



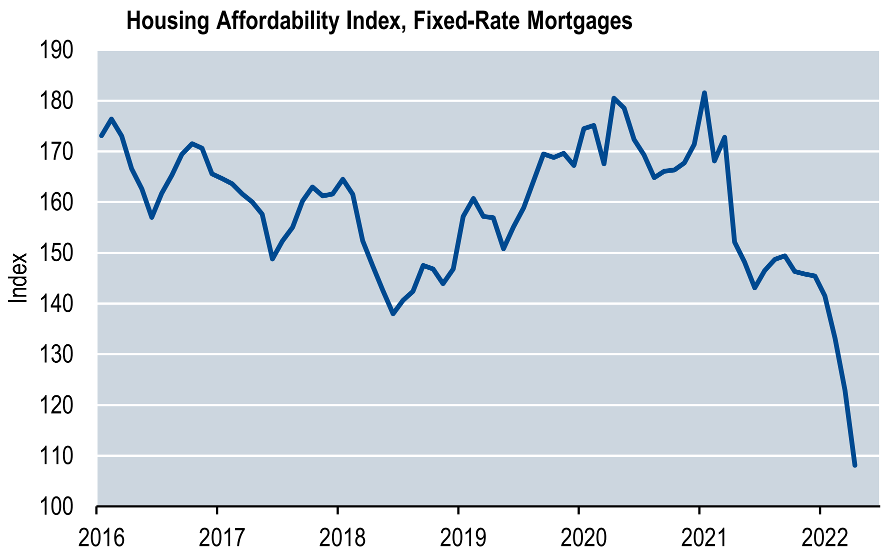
Source: NFIB, Bureau of Labor Statistics, Haver. As of 30 Apr 22
Note: Seasonally adjusted

Housing Market Turning

US Affordability also declining which will impact demand, sales & housing starts



Source: Federal Reserve Bank of Chicago, Bloomberg. As of 29 Jun 22



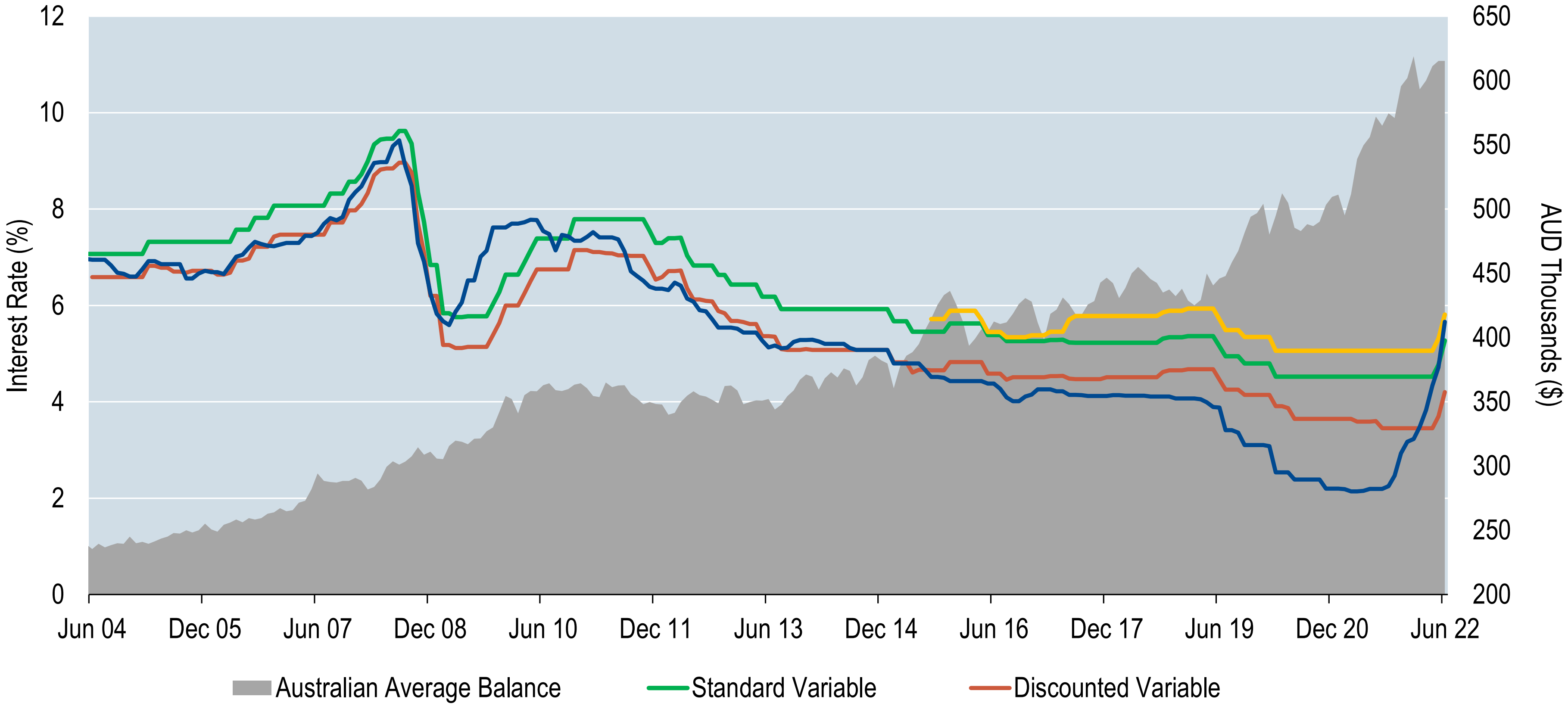
Source: National Association of Realtors, Haver Analytics. As of 30 Jun 22

Source: Census Bureau, Haver Analytics. As of 31 May 22

Household Sector

Roll off of fixed-rate loans could constrain the RBA's monetary tightening path

Average Owner Occupier Home Loan Balance (RHS) vs Mortgage Rates (LHS)

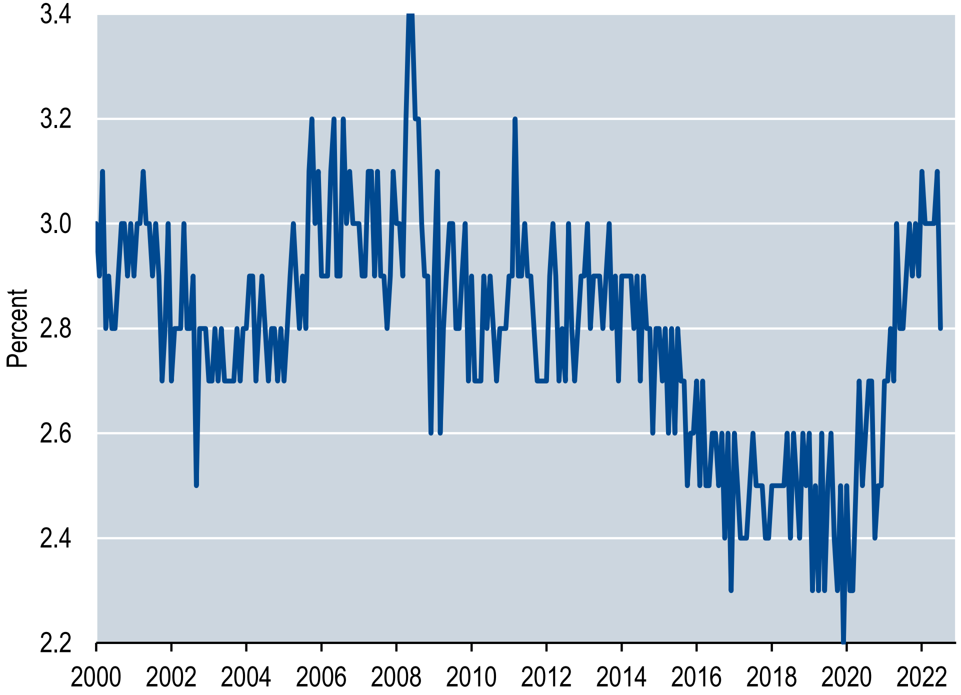


Source: RBA, ABS. As of 30 June 22

Inflation Expectations – Rising or Falling?

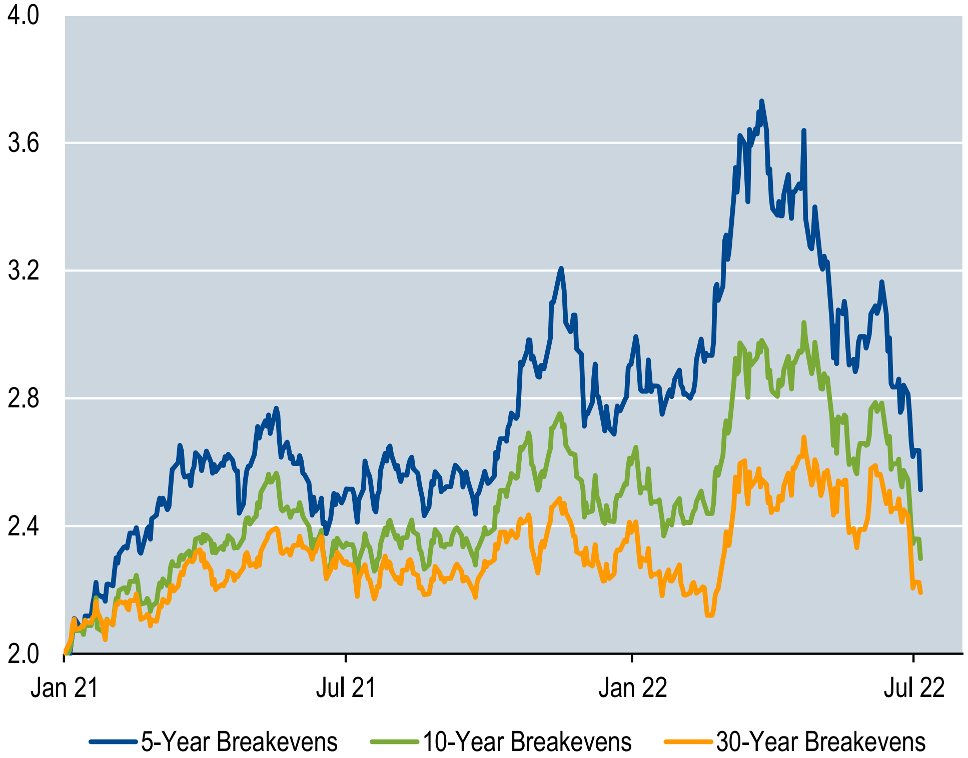
Inflation pressures appear to be moderating

University of Michigan: Expected Inflation Rate, Next 5 Years



Source: University of Michigan, Haver Analytics. As of 16 Jul 22

Breakeven Inflation Rates



Source: Bloomberg. As of 05 Jul 22

Inflation Expectations – Rising or Falling?

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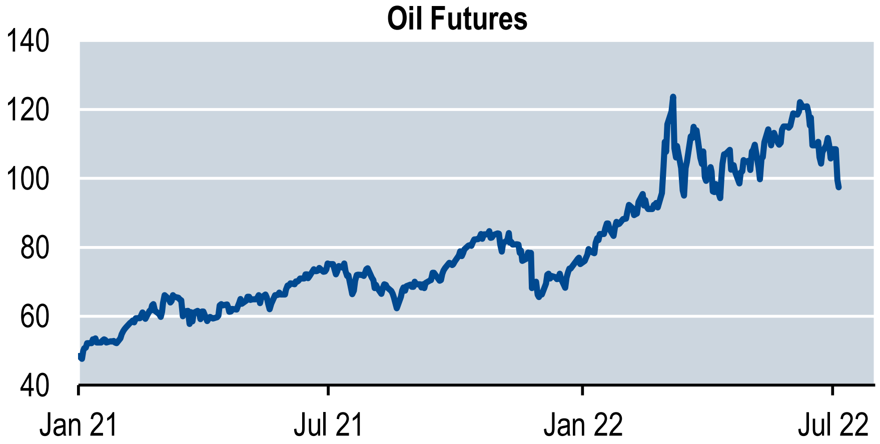
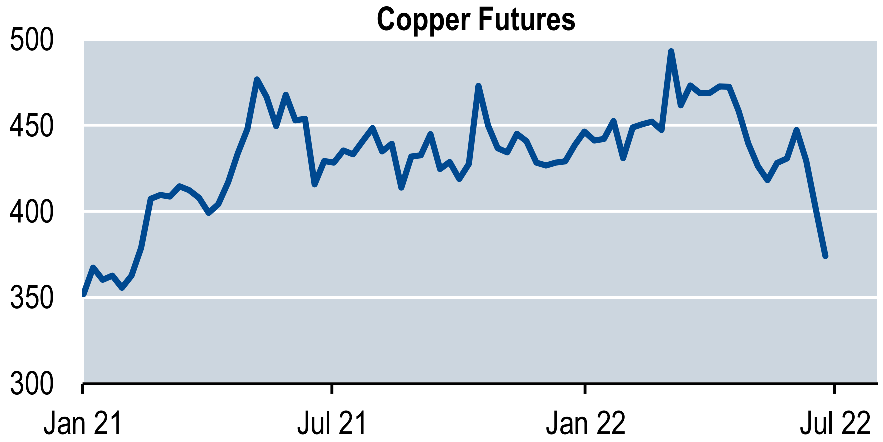
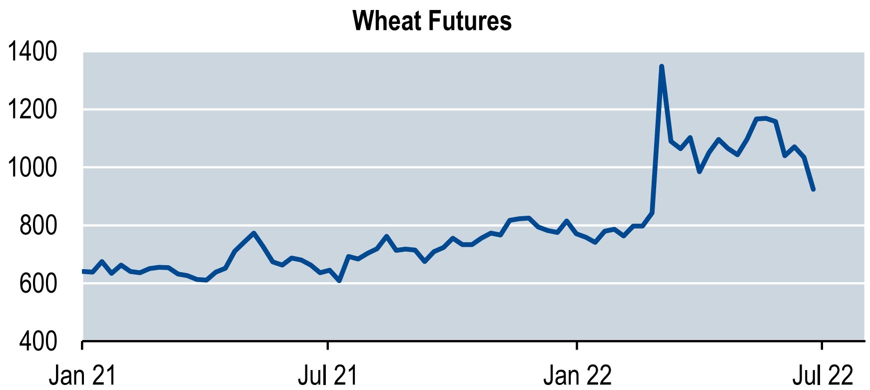


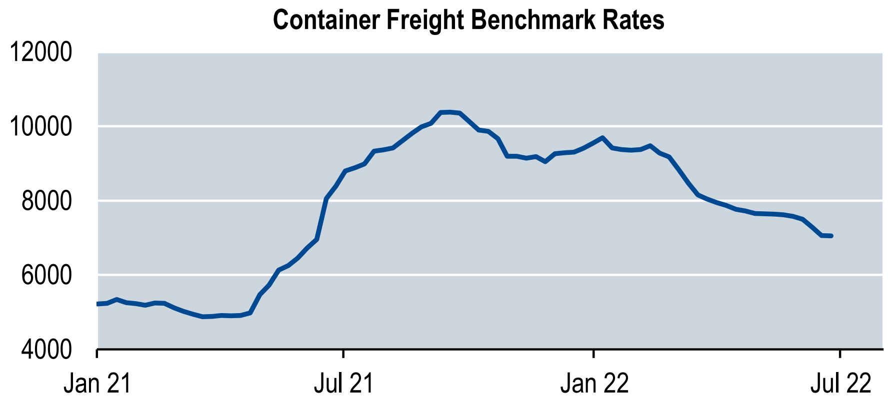
Source: Bloomberg. As of 29 Jun 22



Source: Bloomberg. As of 29 Jun 22



Source: Bloomberg. As of 29 Jun 22



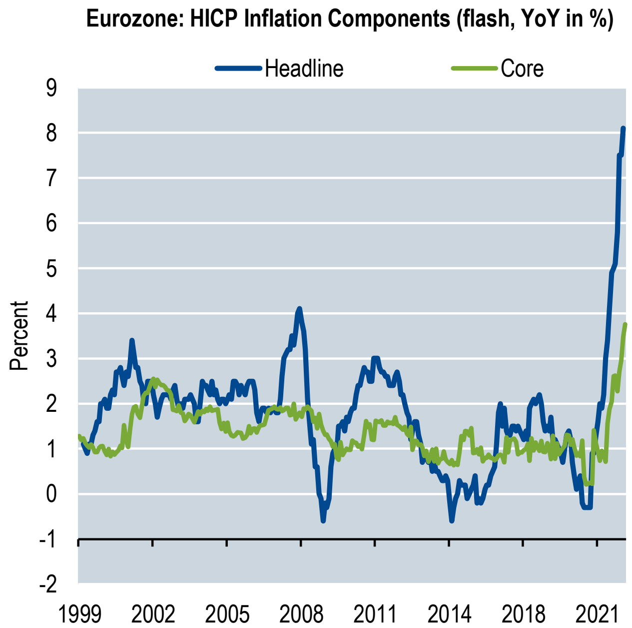
Source: Bloomberg. As of 29 Jun 22

ECB: Stepping on the Brakes Hard, but for How Long?

Europe's economic rebound may be hindered by higher inflation as well as energy insecurity

- ECB has stopped buying assets (for now) and committed to a 50bp hike in July to end negative rates.
- However, beyond September, the economic and inflation outlook is highly uncertain.
- If growth takes a hit due to potential energy shortages, the inflation outlook might normalize, causing (at least) a pause in the ECB's hiking cycle.
- The ECB has proposed a new tool to deal with market fragmentation – Transmission Protection Instrument

In the baseline, the ECB hikes gradually as inflation outlook remains above target…



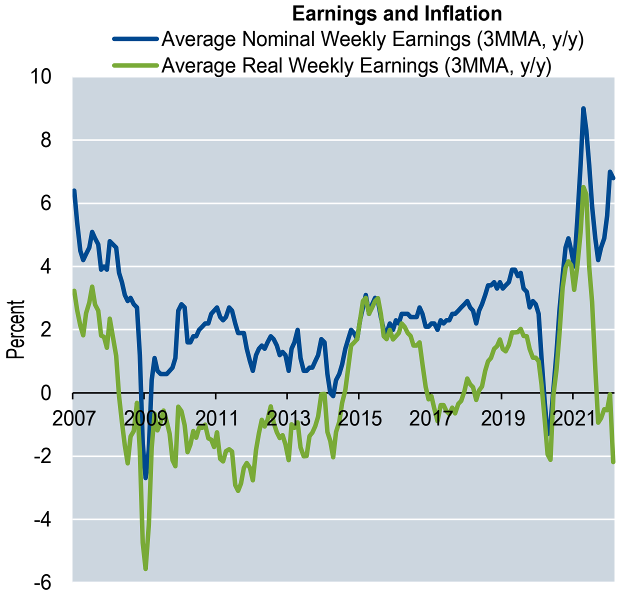
Source: Statistical Office of the European Communities, Haver. As of 31 May

…but growth impulses may be slowing. Consumer confidence and New Orders dropped sharply.

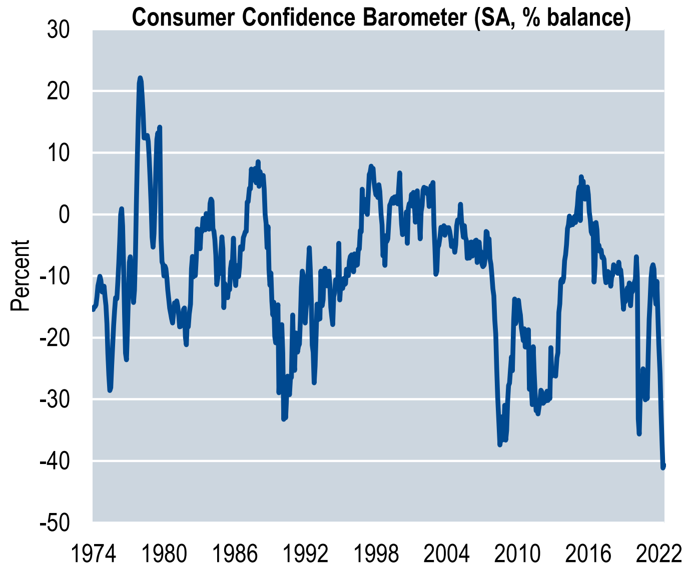
Source: Haver Analytics. As of 30 Jun 22

United Kingdom: Rebound Under Threat

- UK macro narrative similar to the eurozone: falling real disposable incomes/higher cost of living (energy and food inflation, National Insurance contribution hikes)
- Consumer sentiment close to all-time lows, comparable to Covid pandemic and GFC
- Less downside risk as UK economy does not rely on Russian energy imports (but also less inclination for fiscal support)
- Bank of England ended asset purchases last year, hiked the policy rate at consecutive meetings and began (passive) quantitative tightening
- At recent meetings, the central bank softened its stance on the need for further hikes, indicating that current market pricing would lead to an undershoot of the inflation target



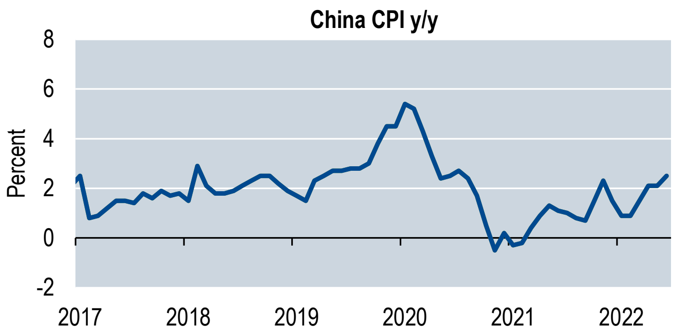
Source: Office for National Statistics/ Haver Analytics. As of 30 Apr 22
The above reflects current opinions of Western Asset and are subject to change with market conditions.



Source: GfK NOP/ European Commission/ Haver Analytics
As of 29 Jun 22

China Outlook: Stabilizing Growth Remains the Priority for Policymakers

Source: Bloomberg. As of 30 Jun 22



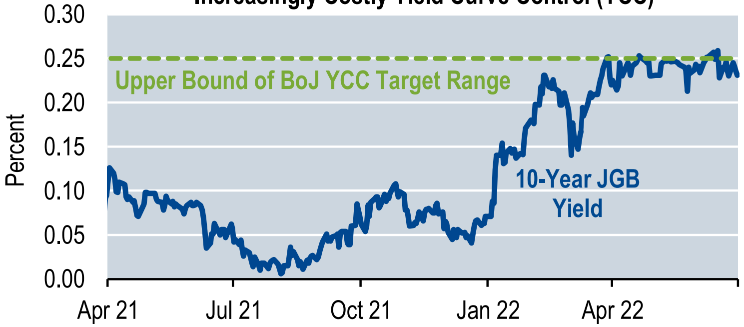
Source: Bloomberg, As of 30 Jun 22

The government has multiple policy levers to potentially utilize, including:

- **Reopening from Covid lockdowns**
  - Shanghai reopened in June after months-long lockdown
  - Policy pivot toward localized lockdowns and mass testing?
- **Infrastructure investment spending**
  - Frontloaded local government (LGFV) bond issuance (3.65 trn CNY) to issue June, utilize by August
  - State Council pledged financial bonds for bridge financing (300 bn CNY) and directed policy banks to provide loans (800 bn CNY)
- **Monetary easing**
  - RRR cut from 11.5% to 11.25% for major banks
  - RRR cut on FX deposits to 8% from 9%
- **Fiscal easing**
  - State Council expanded tax cuts by 140 bn to 2.5 trn CNY
- **Regulatory easing**
  - Eased restrictions on Ant and Didi
  - Signaled regulatory easing in fin-tech
  - Restarted approvals for video game publishing licenses
- **Local Governments**
  - Infrastructure
  - Foreign investment incentives
  - Increased sales and local consumption

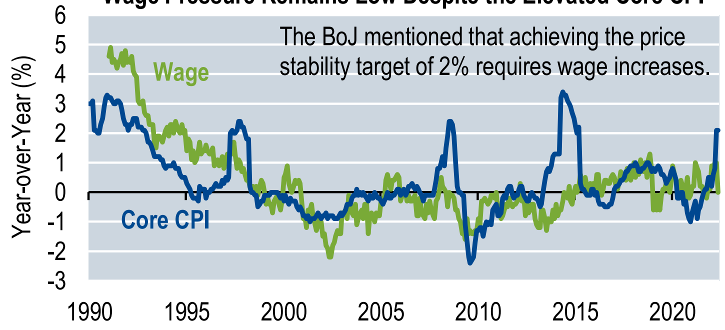
YCC Is Challenged by the Markets Where Interest Rates & Inflation Increase Globally

Increasingly Costly Yield Curve Control (YCC)



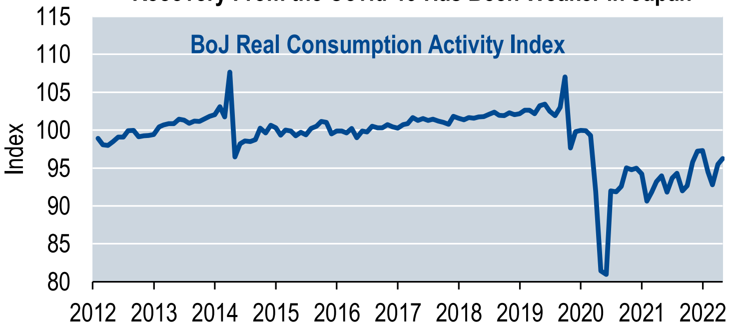
Source: Bloomberg. As of 31 May 22

Wage Pressure Remains Low Despite the Elevated Core CPI



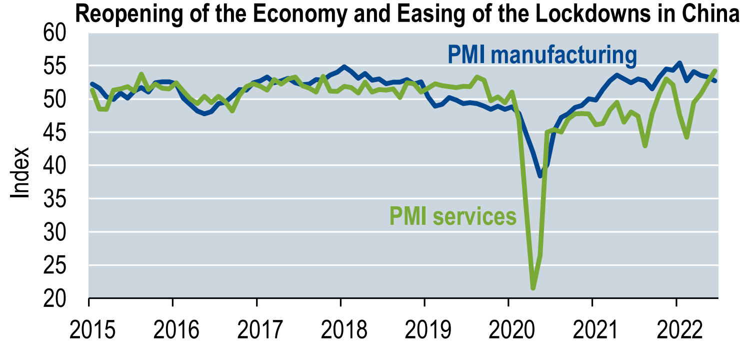
Source: Bloomberg. As of 31 May 22

Recovery From the Covid-19 Has Been Weaker in Japan



Source: Bloomberg, Western Asset. As of 30 Apr 22

Cyclically Japanese Economy Is Expected to Pick Up Due to Reopening of the Economy and Easing of the Lockdowns in China



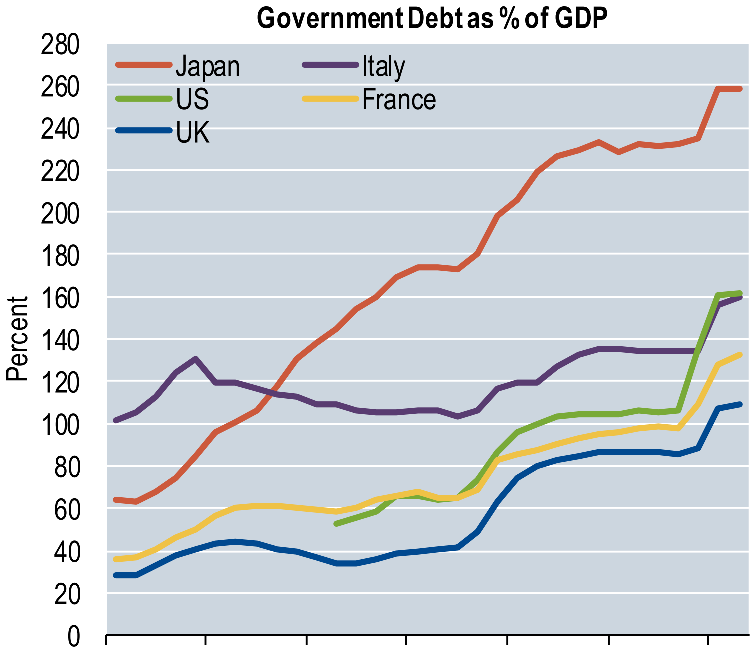
Source: Bloomberg, Western Asset. As of 30 Jun 22

- BoJ's real consumption activity index rose by 0.8% M/M in April following a 2.9% increase in March. Consumption proved resilient after lifting the quasi-state of emergency measures in March.

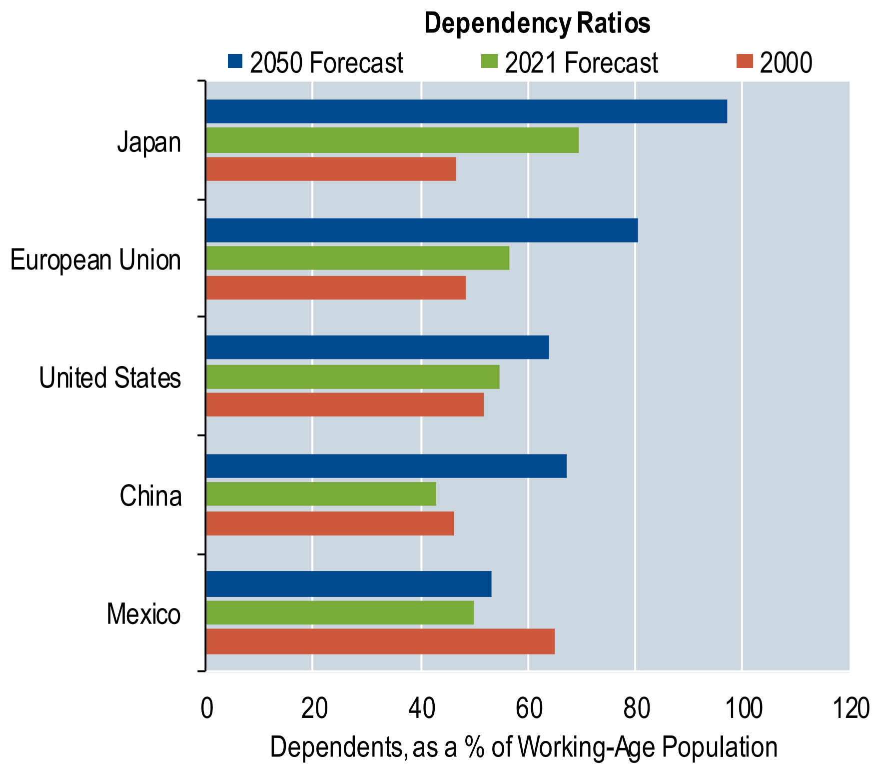
- PMI manufacturing was slightly down to 52.7 in June from 53.3 in May while it remained above the pre-pandemic level. PMI services nicely increased and reached to the highest level for the past nine years due to the reopening of the economy.

The Challenges of Debt Burdens and Global Slack Should Slow Future Growth

Debt load and demographics are long-term growth headwinds



Source: IMF, Organisation for Economic Co-operation and Development (OECD). As of 31 Mar 21

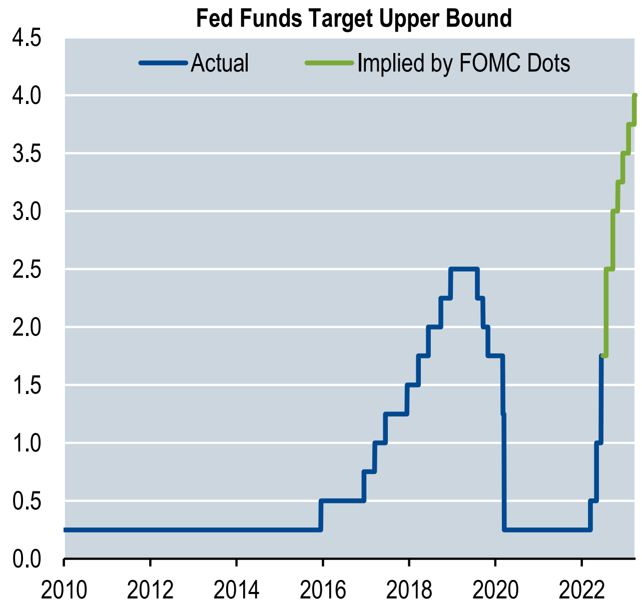


Source: World Bank. As of 15 Sep 21

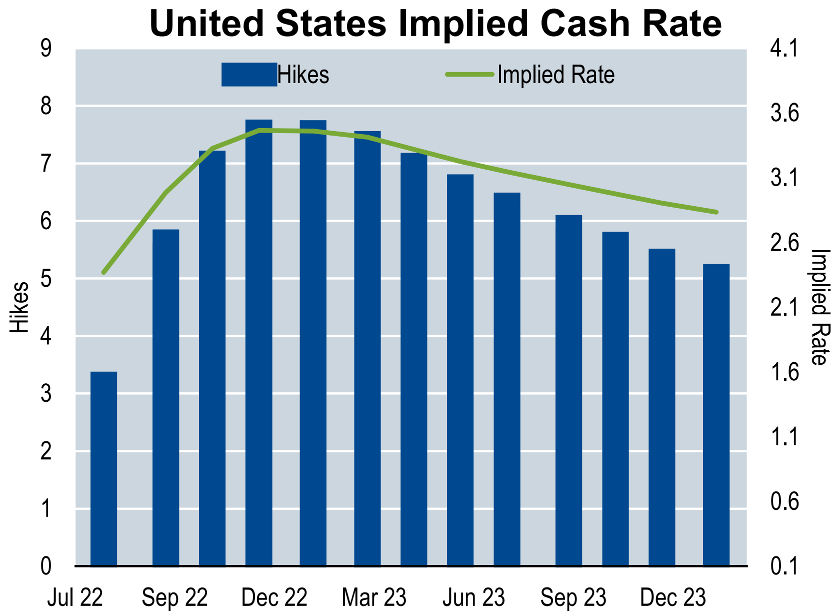
Investment Implications

Aggressive Hikes Priced In

Market pricing for US rate hikes is aggressive. Any less aggressive in reality would result in capital appreciation from interest rate positioning.



Source: Federal Reserve, Bloomberg. As of 16 Jun 22



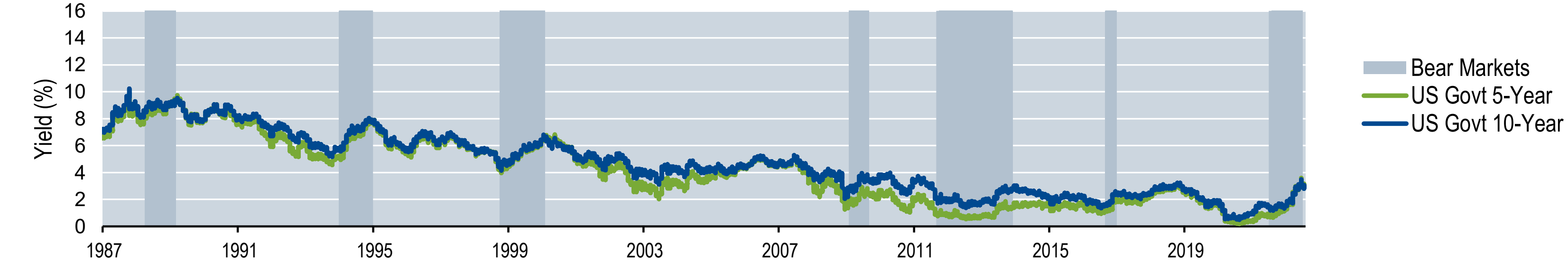
Source: Bloomberg. As at 20 July 2022

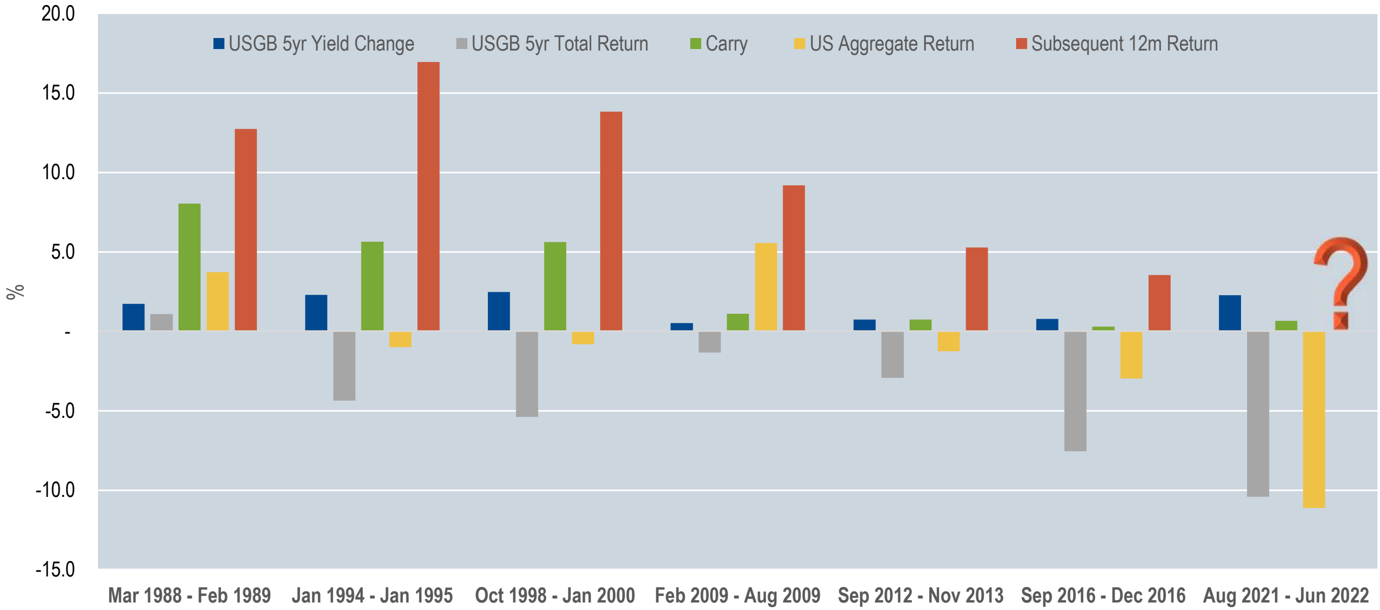
"I dissented at this week's FOMC meeting against a 75 basis point increase in the target range for the federal funds rate because <u>I viewed that move as adding to policy uncertainty</u> … Policy changes affect the economy with a lag, and significant and abrupt changes can be unsettling to households and small businesses as they make necessary adjustments."

– Esther George, June 17, 2022

US Bond Market Drawdowns

Investors have historically experienced strong recoveries post bond bear markets



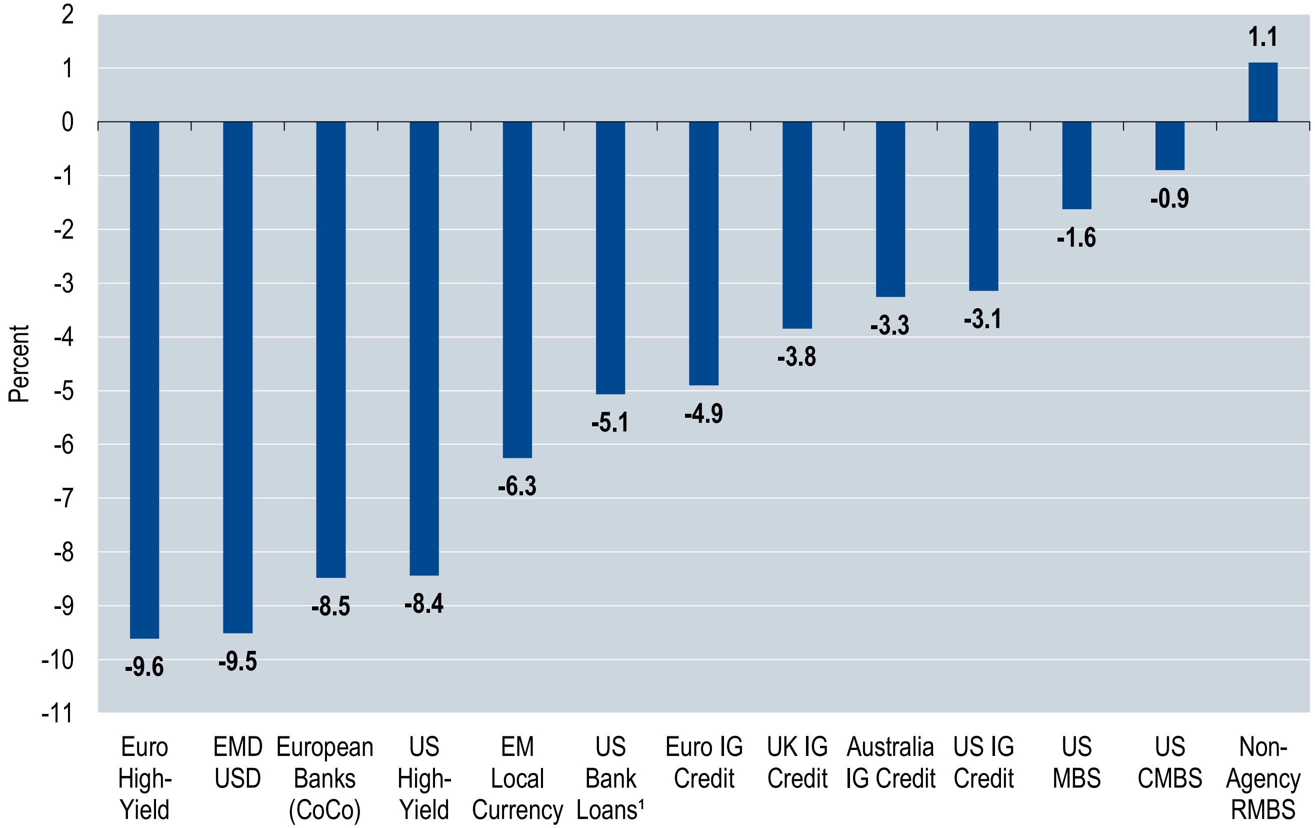


Source: Bloomberg, Western Asset. *USGB 5yr represents US Government 5 Year Bond
Past performance is not a reliable indicator of future results.

Spread Sector Excess Returns

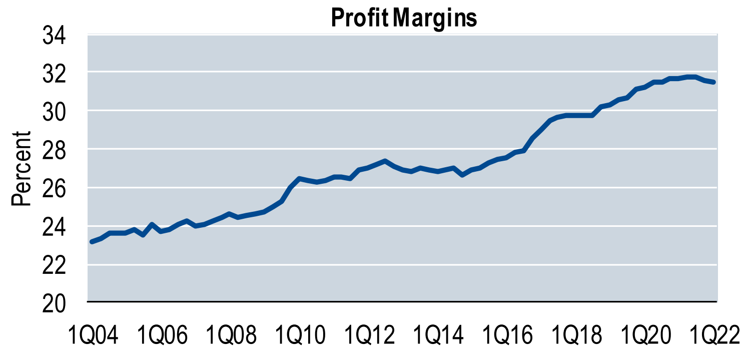
First half of 2022 (1H22) is the worst start for fixed income in decades

Year-To-Date 2022 Excess Returns

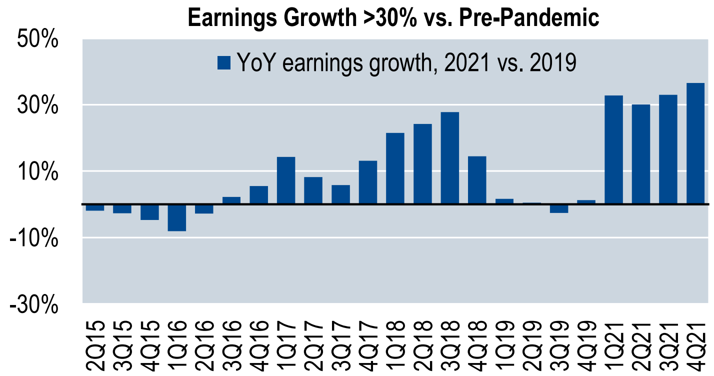


Source: Bloomberg, Citi, J.P. Morgan, S&P Global Market Intelligence, a division of S&P Global Inc, Western Asset. [1]S&P/LSTA Leveraged Loan Total Return Index excess return vs. 3-Month LIBOR. As of 30 Jun 22
Past performance is not a reliable indicator of future results.

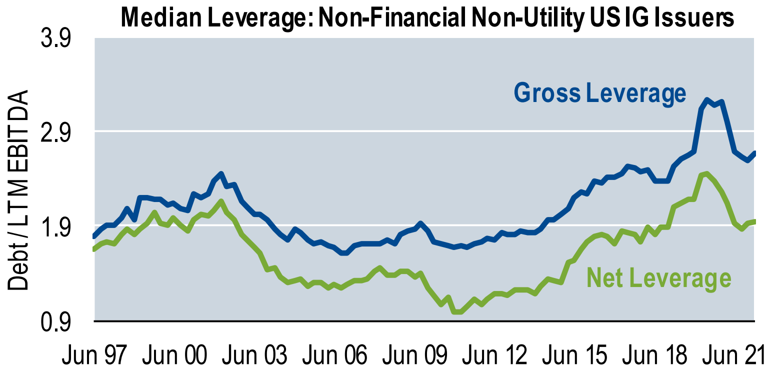
Cash Flow and Debt Metrics Support Investment-Grade Credit



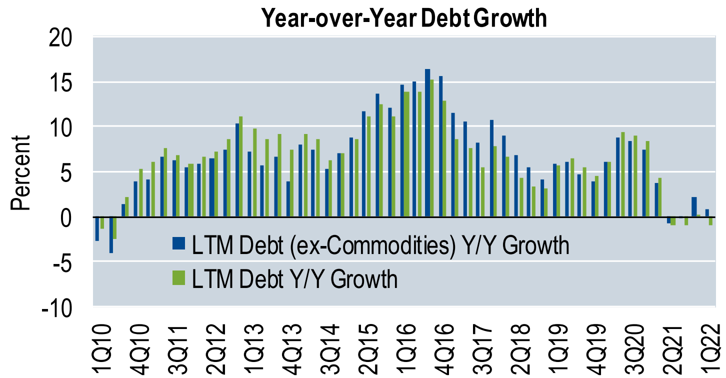
~180 Non-Financial Companies (JULI Based)
Weighting based on amount of debt in the benchmark
Source: J.P. Morgan. As of 31 Mar 22



Source: Factset, BofA Global Research. As of 31 Dec 21*
Note: based on medians for US investment grade non-financial non-utility issuers. Net debt is gross debt minus cash and marketable securities.



Source: BofA Global Research. As of 31 Mar 22*



Source: J.P Morgan. As of 31 Mar 22

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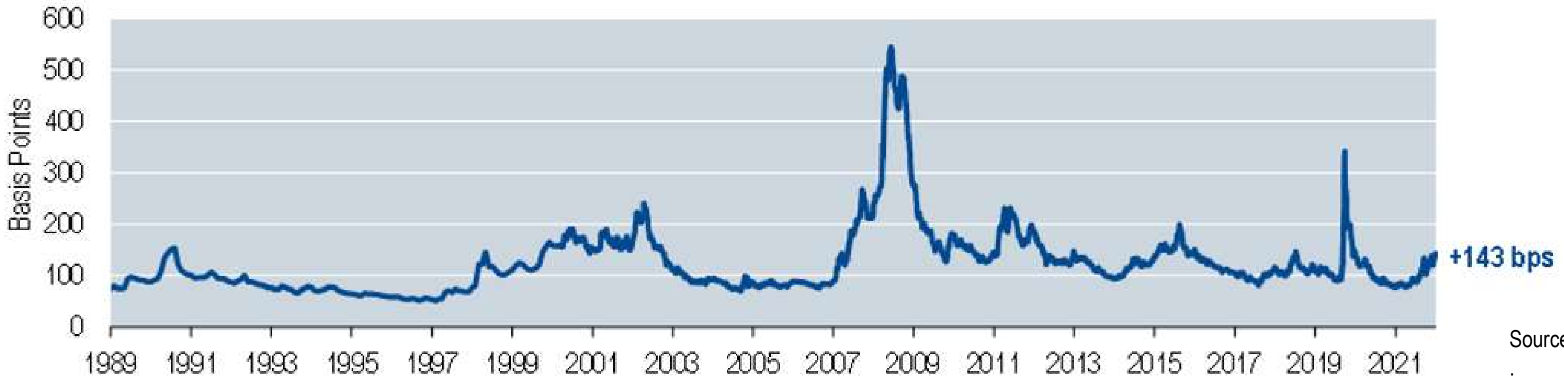
Corporate Credit Spreads

Implied default rate points to adequate compensation for increased uncertainty

Bloomberg U.S. Credit Index: Option-Adjusted Spread



Source: Bloomberg. As at 30 Jun 22

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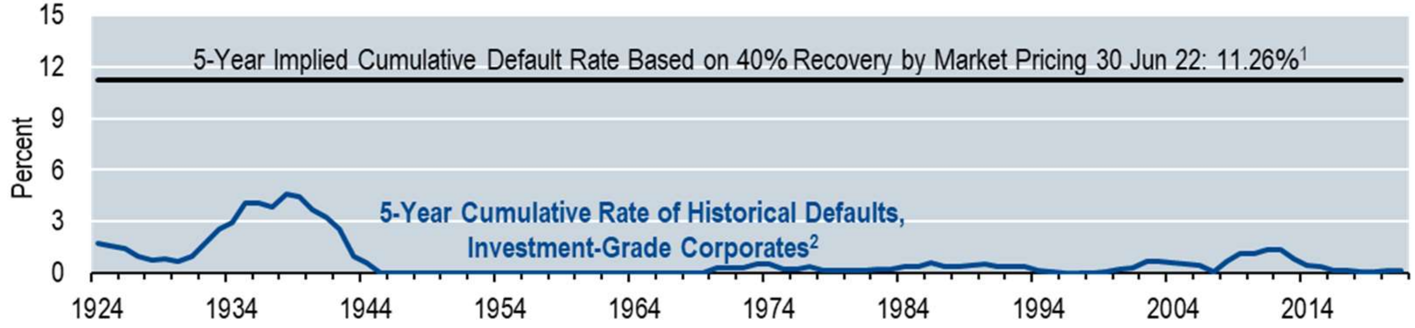
Default Rates, Investment-Grade Corporates



Source: Moody's, Bloomberg Barclays, Bloomberg.

[1]As of 30 Jun 22

[2]As of 31 Dec 21

Second Half of 2022 (2H) Outlook

Western Asset base case:
- Inflation to moderate in 2H 2022 in most countries
- Growth to weaken in 2H 2022, but no recession
- Central banks won't tighten policy by more than currently implied
- What we need to see:
  - Survey and market-based inflation to move lower and actual inflation should follow
  - Hard data to decline but remain in expansion territory
  - Policymakers to signal more measured tightening
- Risks:
  - Inflation remains higher and stickier than we expect
  - Too much tightening from central banks could lead to a contraction in growth

Inflation remains challenging but should ease substantially during 2H 2022 due to tailwinds:
- Monetary policy tightening
- Fiscal policy tightening
- Supply bottlenecks easing
- Commodity price pressures easing

Fixed-Income Outlook
- Russia-Ukraine conflict poses massive geopolitical uncertainty
- Covid continues to bedevil global populations
- US and global growth are decelerating from high levels
- Fed tightening will focus on making inflation a top priority
- Global fiscal stimulus will be sharply reduced

Investment Implications
- Global growth has recently downshifted but should remain resilient, which continues to support the overweight of spread products
- The recovery of "reopening" sectors has been delayed, not derailed
- With the Fed committed to tightening, risk asset volatility should increase
- Longer-term rates, while currently elevated, should subside

The above reflects current opinions of Western Asset and are subject to change with market conditions. As of 06 Jul 22

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Why has innovation in active management failed to deliver?

David Wanis
Longwave Capital

LONGWAVE AUSTRALIAN SMALL COMPANIES FUND

Why has Innovation in Active Management failed to deliver?

David Wanis: CIO and Portfolio Manager
July, 2022

What is Innovation?

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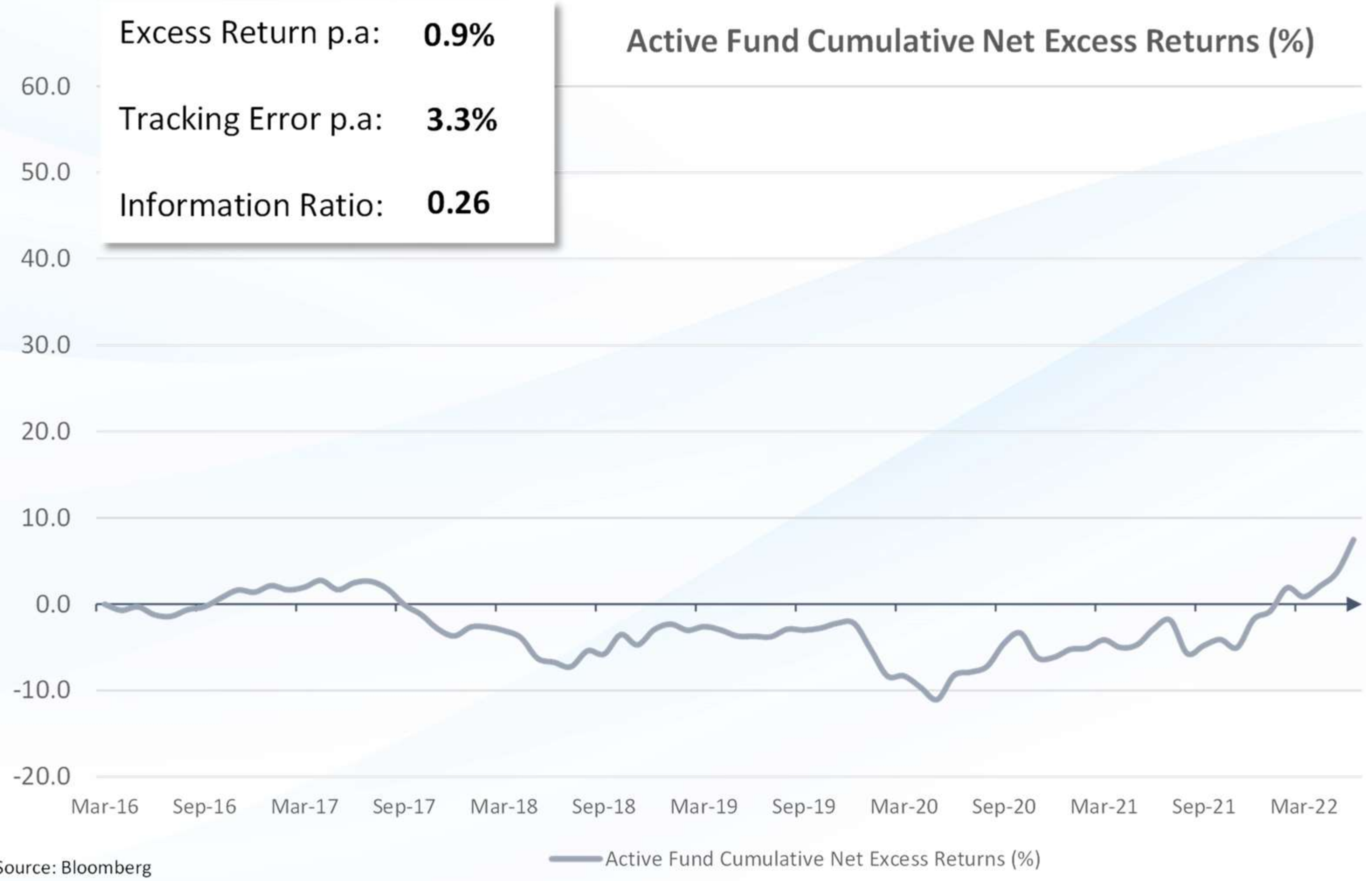
Source: Jeff Bezos, Amazon

“More Consistent Alpha at Lower Fees”

LONGWAVE CAPITAL

More Consistent Alpha…

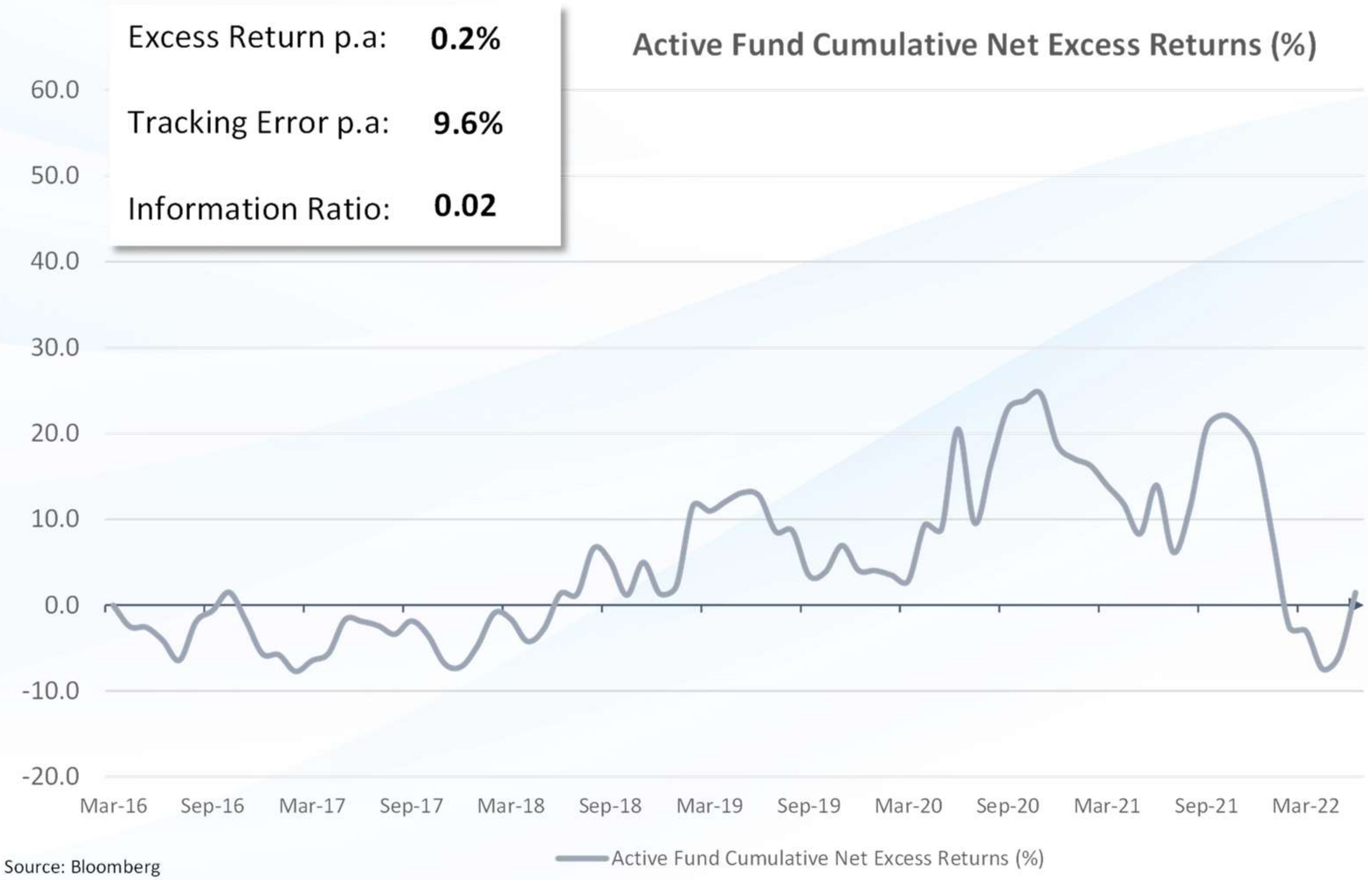
Low Alpha, Low Tracking Error



Source: Bloomberg

LONGWAVE CAPITAL

Low Alpha, High Tracking Error



Source: Bloomberg

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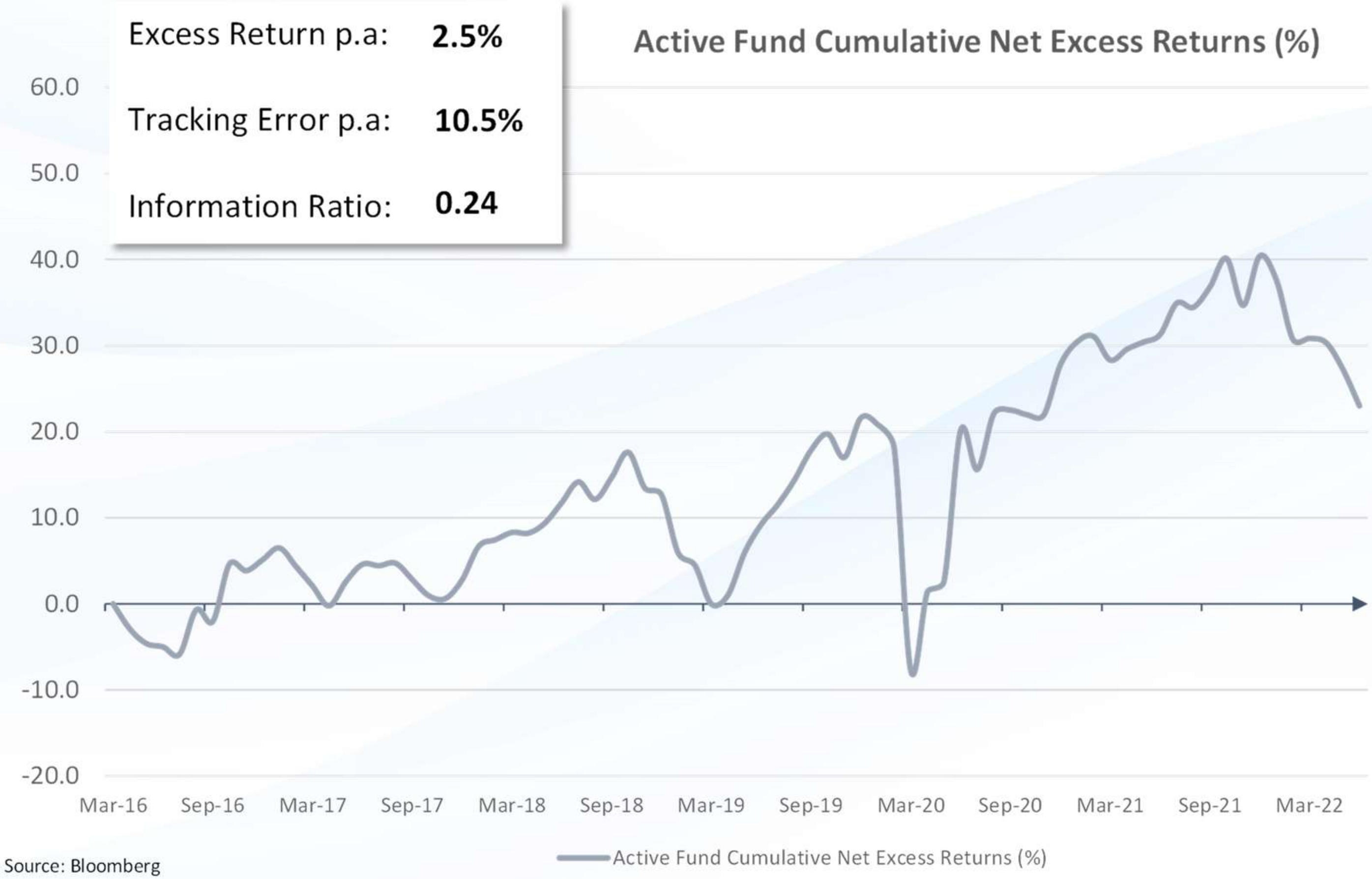
High Alpha, High Tracking Error

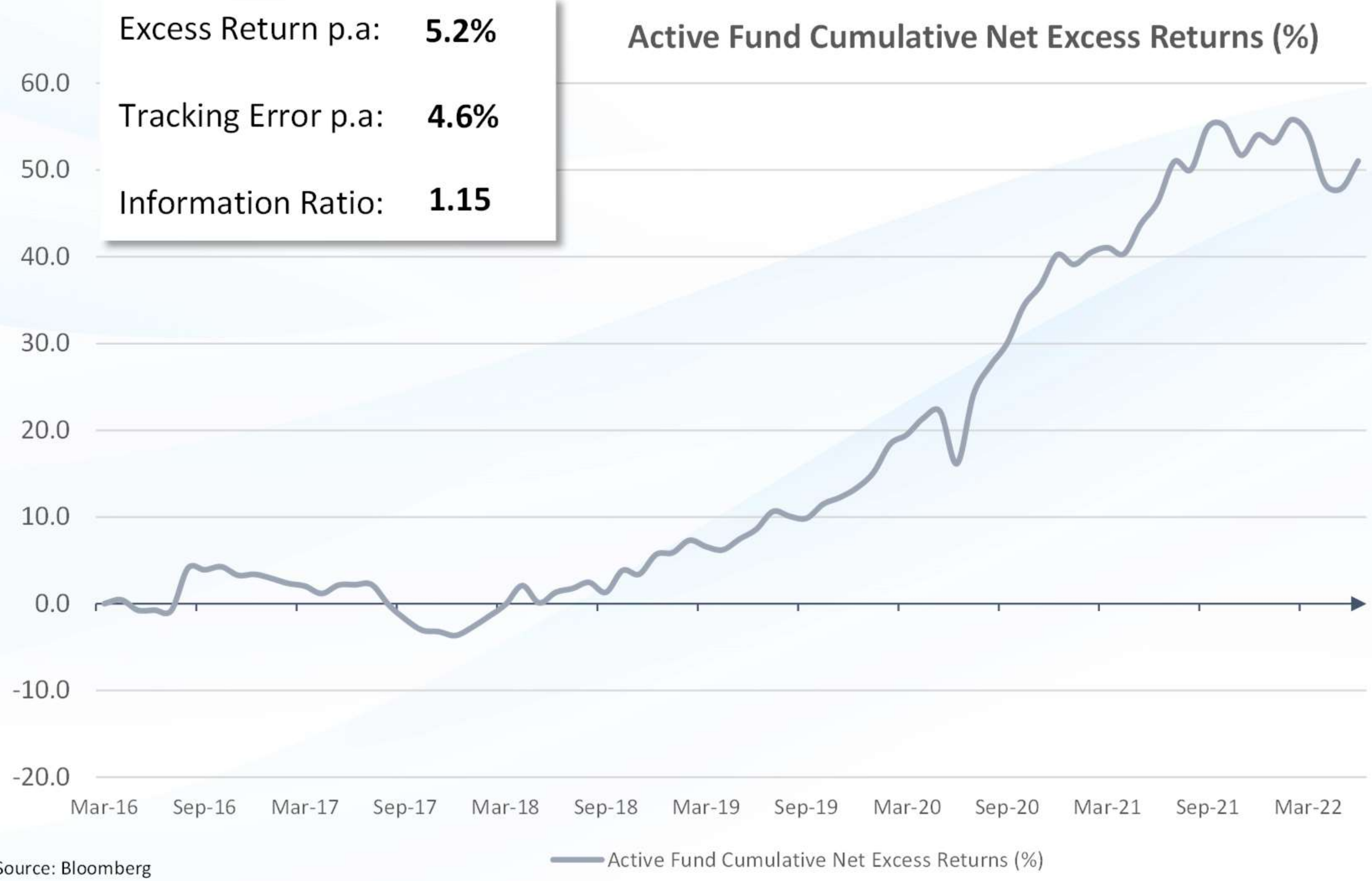


Source: Bloomberg

LONGWAVE CAPITAL

High Alpha, Low Tracking Error

Excess Return p.a:	**5.2%**
Tracking Error p.a:	**4.6%**
Information Ratio:	**1.15**



Source: Bloomberg

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Alpha Consistency and Magnitude

LONGWAVE CAPITAL

…at **Lower Fees**

Cost of Index Equities

Large Cap Passive vs Active	Fee	Benchmark
BetaShares A200	0.07%	S&P/ASX 200
iShares Core S&P/ASX 200	0.09%	S&P/ASX 200
Vanguard Australian Shares Index	0.10%	S&P/ASX 300
Average	**0.09%**	
Active fee: 80-90bps no perf fee		

Small Cap Passive vs Active	Fee	Benchmark
iShares S&P/ASX Small Ordinaries	0.55%	S&P/ASX Small Ordinaries
SPDR S&P/ASX Small Ordinaries	0.50%	S&P/ASX Small Ordinaries
Vanguard MSCI Australian Small Companies Index	0.30%	MSCI Australian Shares Small Cap
VanEck Vectors S&P/ASX MidCap	0.45%	S&P/ASX Midcap 50
Average	**0.45%**	
Active fee: 0.9 - 1.2% plus 15-20% perf fee on net excess return		

LONGWAVE CAPITAL

Source: Bloomberg

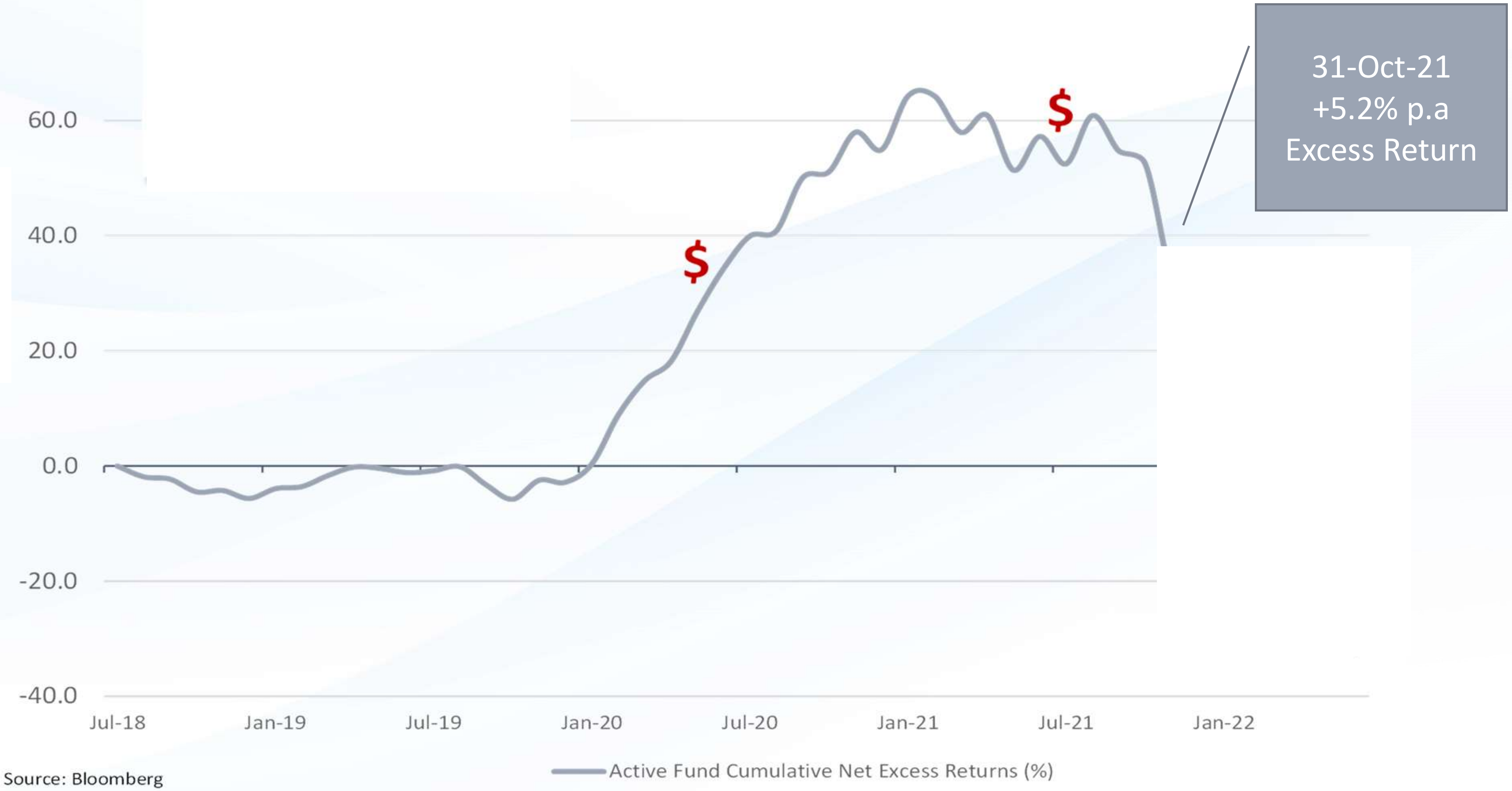
Cost of Active Small Cap Equities

Fee / Returns	Passive	Longwave Aus Small	Fund 1	Fund 2	Fund 3	Fund 4
Base Fee	0.45%	0.89%	1.00%	1.00%	1.00%	1.00%
Performance Fee	0%	0%	20%	20%	20%	20%
Gross Excess Return	0.0%	4.0%	3.5%	4.0%	6.0%	0.0%
Net Excess Return	**-0.5%**	**3.1%**	**2.0%**	**2.4%**	**4.0%**	**-4.5%**
Reported ICR	**0.45%**	**0.89%**	**1.50%**	**1.60%**	**2.00%**	**4.50%**

LONGWAVE CAPITAL

Source: Bloomberg, Longwave, Funds 1-4 for illustrative purposes. Data over a hypothetical 5-7 year holding period and not real funds.

Alpha, High Tracking Error



Source: Bloomberg

LONGWAVE CAPITAL

Innovation

Machine Learning

Digital Disruption

Cloud Model Repository

Artificial Intelligence

SaaS Research & ESG Platform

Inferenc

rocessing

Python

ssifiers

Make Better Long Term Investment Decisions

Expert System

Data Warehouse

Azure Cloud Infrastructure

Robo-Analysts

Pre-Trade Checklists

Crypto Currencies

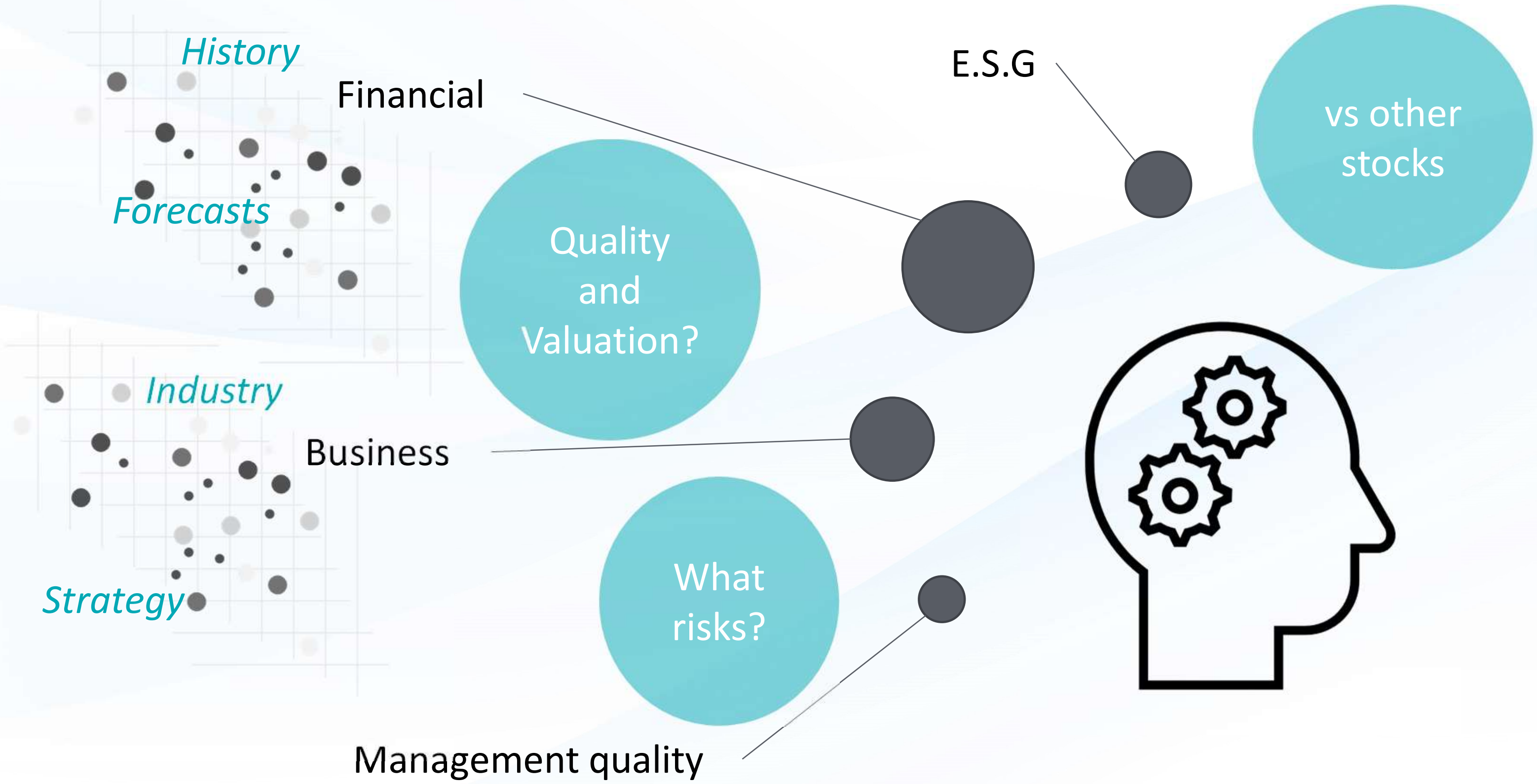
Automated Modelling

Big Data

Power BI Dashboards

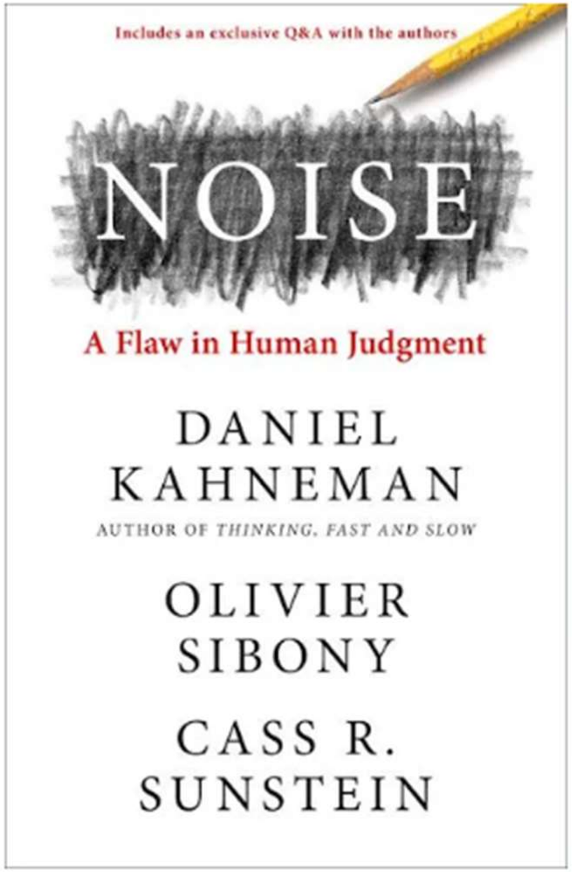
LONGWAVE CAPITAL

Unpacking an Investment Decision



Source: Longwave Capital

50 Years of Decision Making Research



Tech Assists, Humans in Control

	Table Stakes	Technology Assistance		Utopia
Automobiles	Crumple Zone Seatbelt Antilock Brakes Airbags	Radar Cruise Control Lane Change & Keeping Assist Steering Assist Blind Spot Monitoring	Collision Avoidance System Stability & Traction Control Sys. Autonomous Emergency Braking Level 3 Self Driving	Full Self Driving (Level 5)
Investing	Financial Analysis Valuation Diversification Experience	Robo-Analysts Position Sizing Algorithm Automated company modelling SaaS Research and ESG platform Cloud model repository	Small cap intrinsic value model Automated pre-trade checklists Single data warehouse & investment platform	Artificial Intelligence Alpha

LONGWAVE CAPITAL

Source: Longwave Capital

Experienced Fundamental Investors

Judgement and Insight are the domain of experienced decision makers and beyond the grasp of an algorithm

Time is the most scarce resource for all investors

Technology frees up time for our investment team to focus on high impact research, investment ideas and portfolio management

Company Meetings

Financial Analysis

ESG Assessments

Intrinsic Value Estimate

Portfolio Construction

Governance & Stewardship

Judgement & Insight

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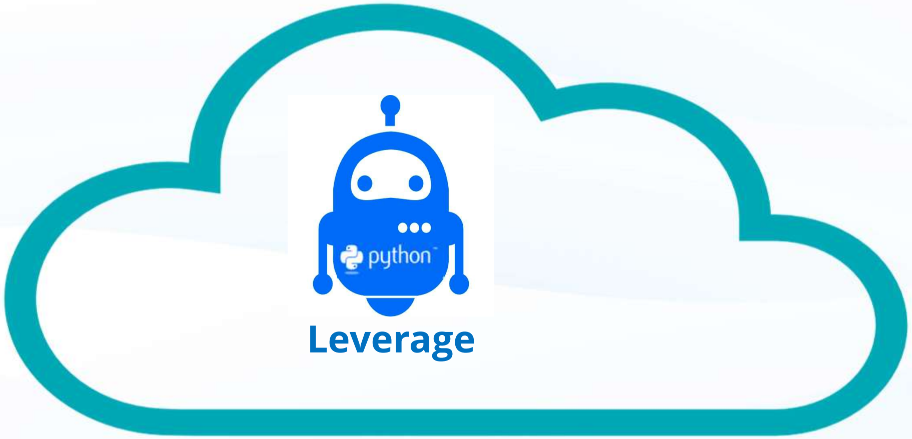
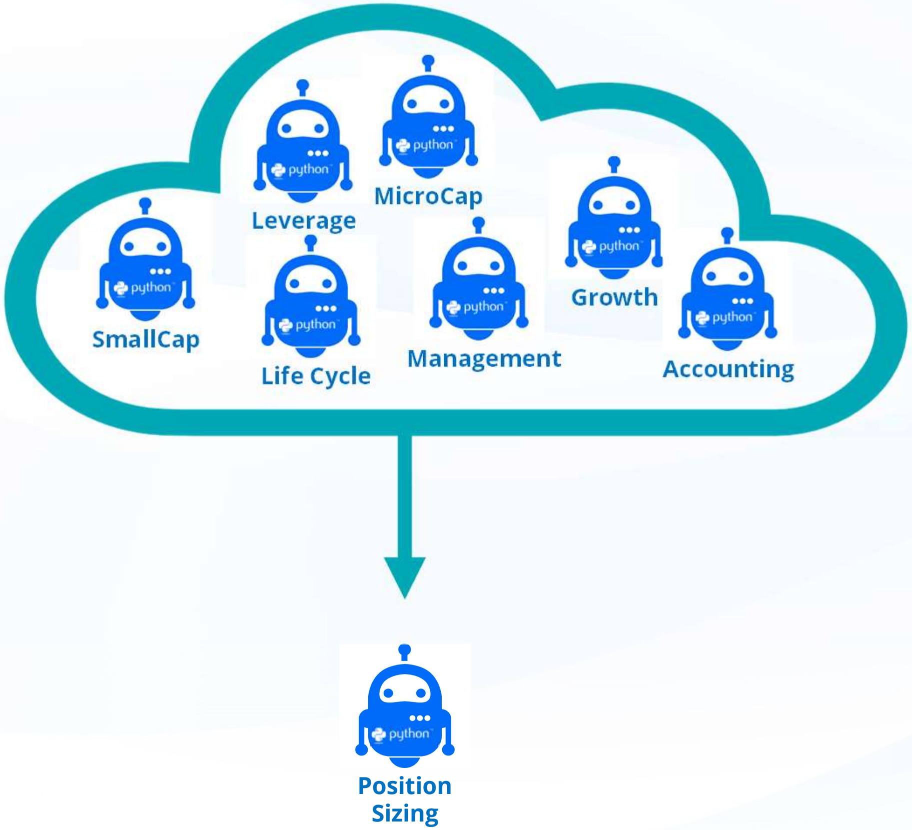
Financial Leverage Robo-Analyst



Analyse leverage within a company;

- Debt to assets and equity
- Debt to cash flow
- Debt relative to operating leverage
- Debt cycles (eg: M&A, Capex)
- Changes to accounting standards
- Off balance sheet debt
- Debt like instruments (potentially mis-classified)
- Trained as a credit analyst not as an equity analyst
- **Goal: uncover excessive risk to equity owners from all forms of financial leverage**

Longwave Trained Robo-Analysts



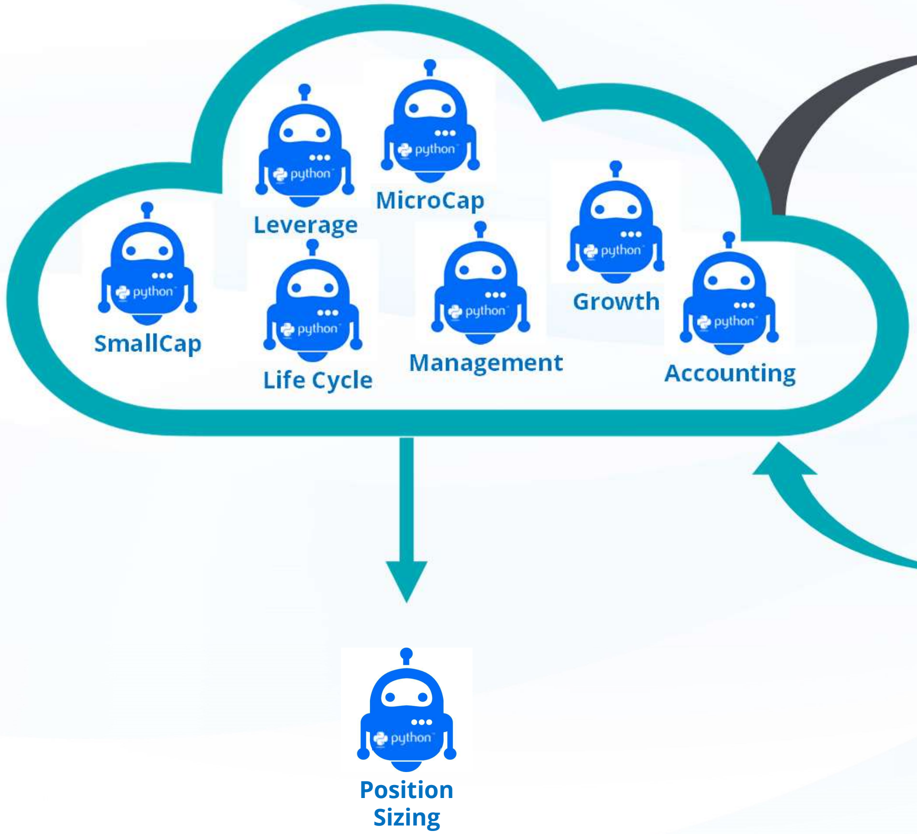
Cloud hosted specialist Python bots trained by experienced Longwave analysts

Analyse thousands of data points on 1,300 stocks in minutes across many different aspects of a business

Position sizing bot suggests a portfolio weight based upon adjudication of outputs

LONGWAVE CAPITAL

Human + Technology = Superior Outcome



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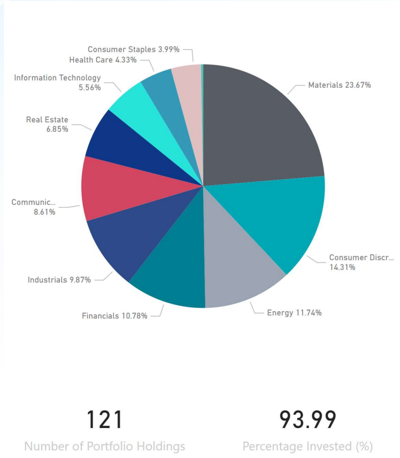

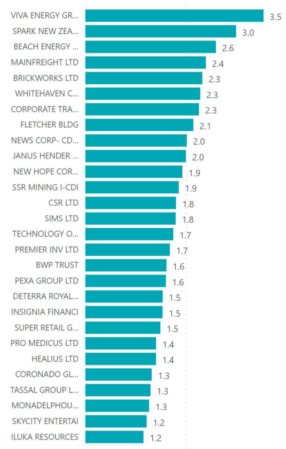

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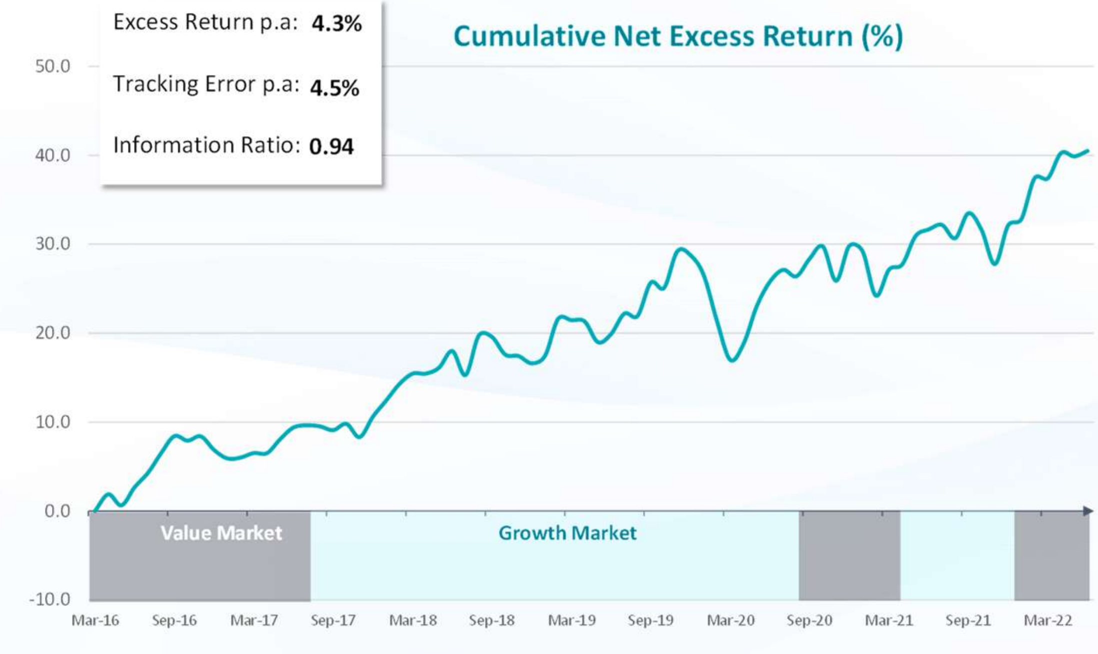
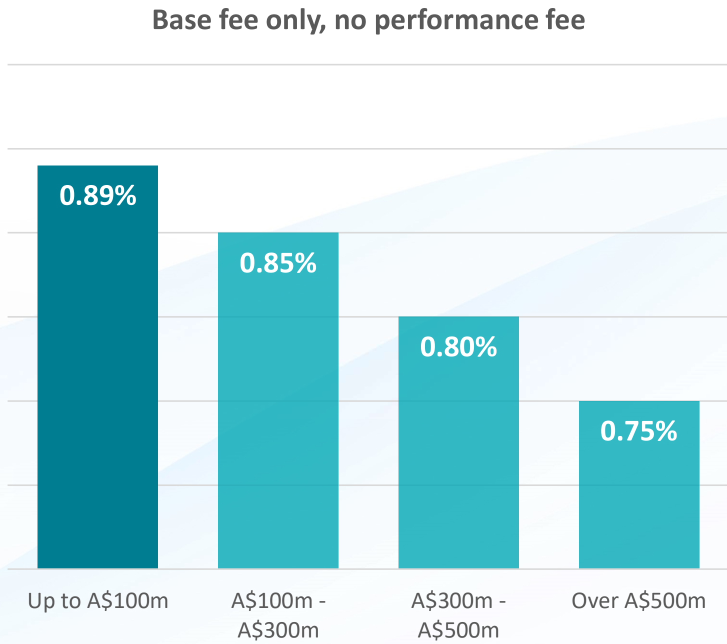
More Consistent Alpha at Lower Fees



Source: Bloomberg



Longwave A-Class Fee based upon FUM in Class

Fund / Benchmark	1 Month	3 Months	6 Months	1yr	2yrs p.a	A Class SI p.a[2]	Strategy SI p.a[3]
Fund Net	-10.3%	-15.5%	-16.6%	-12.4%	7.3%	2.8%	10.4%
Benchmark[1]	-13.1%	-20.4%	-23.7%	-19.5%	3.5%	-0.5%	6.1%
Net Excess Return	**2.8%**	**4.9%**	**7.2%**	**7.1%**	**3.8%**	**3.4%**	**4.3%**

1 S&P / ASX Small Ordinaries Accumulation Index
2 31 Oct 2019 – A Class Units net of fees
3 31 Mar 2016 – Strategy net of A Class unit fee

Source: Longwave Capital Partners. 30 Jun 2022

LONGWAVE CAPITAL

The Longwave Australia Small Companies Fund “the fund” has been operating since 01 February 2019. To give a longer-term view of our performance for this asset class, we have also shown returns for the small cap sub –portfolio of the Schroders real return fund which has been operating since March 2016. Strategy performance has been calculated using the monthly returns since 31 March 2016 to current date. The Fund employs the same systematic process as was used by the same investment team that managed the Schroders portfolio. Longwave has records that document and support the performance achieved. As such, the annualised performance periods stated are inclusive of the combined composite monthly returns, and do not include any period when the team were not managing the Strategy (the period Oct 2018 to Jan 2019 index returns are used). Fund returns are in AUD terms. Past performance is for illustrative purposes only and is not indicative of future performance. Strategy performance data prior to the 31 October fund inception, has been calculated net of the same fee as the Longwave Class A units (89bps).

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LONGWAVE
CAPITAL

Where we are looking for Growth in the year ahead Session 1

Anthony Golowenko
MLC Asset Management

ASSET MANAGEMENT

Asset Allocation

Where we are looking for growth (and opportunities)

July 2022

Anthony Golowenko
Portfolio Manger

Important information

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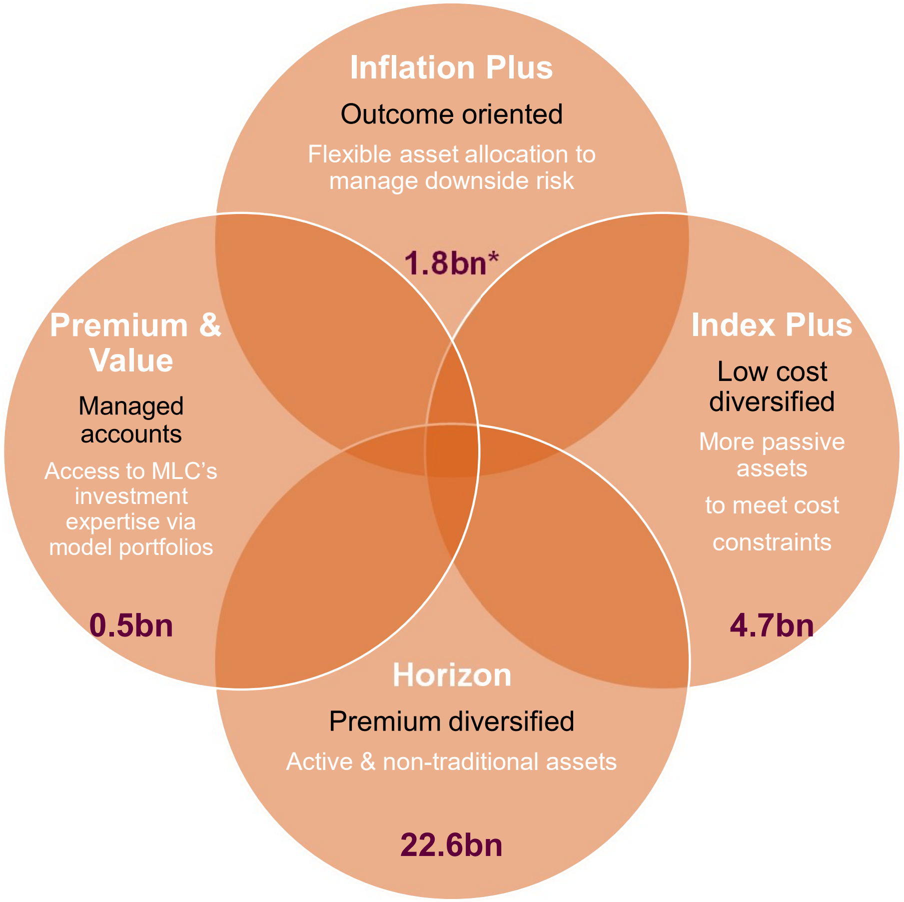
A range of multi-asset class portfolios

Underpinned by one fundamental investment process



FUM (across Super, Pension and Ordinary Money) as at 31 May 2022
*Reduction in Inflation Plus FUM due to deallocations from Horizon. Horizon has been increasing real return focused exposures (infrastructure) partially funded by reducing allocations to existing real return focused exposures (Inflation Plus and Inflation Linked Bonds).

The Investment Futures Framework

Asset allocation

Define the scenarios

Imagine a set of possible futures, including unlikely-but-impactful ones such as global conflict and pandemic

Parameterise

Specify core assumptions and relationships (e.g. market and economic variables) to ensure consistency

Model distributions

Assign scenario probabilities to create distribution of outcomes for each asset class

Robust portfolios

Portfolios designed to survive and thrive many possible futures

Evaluate trade-offs

Identify opportunities (e.g. risk-adjusted return, increase diversification)

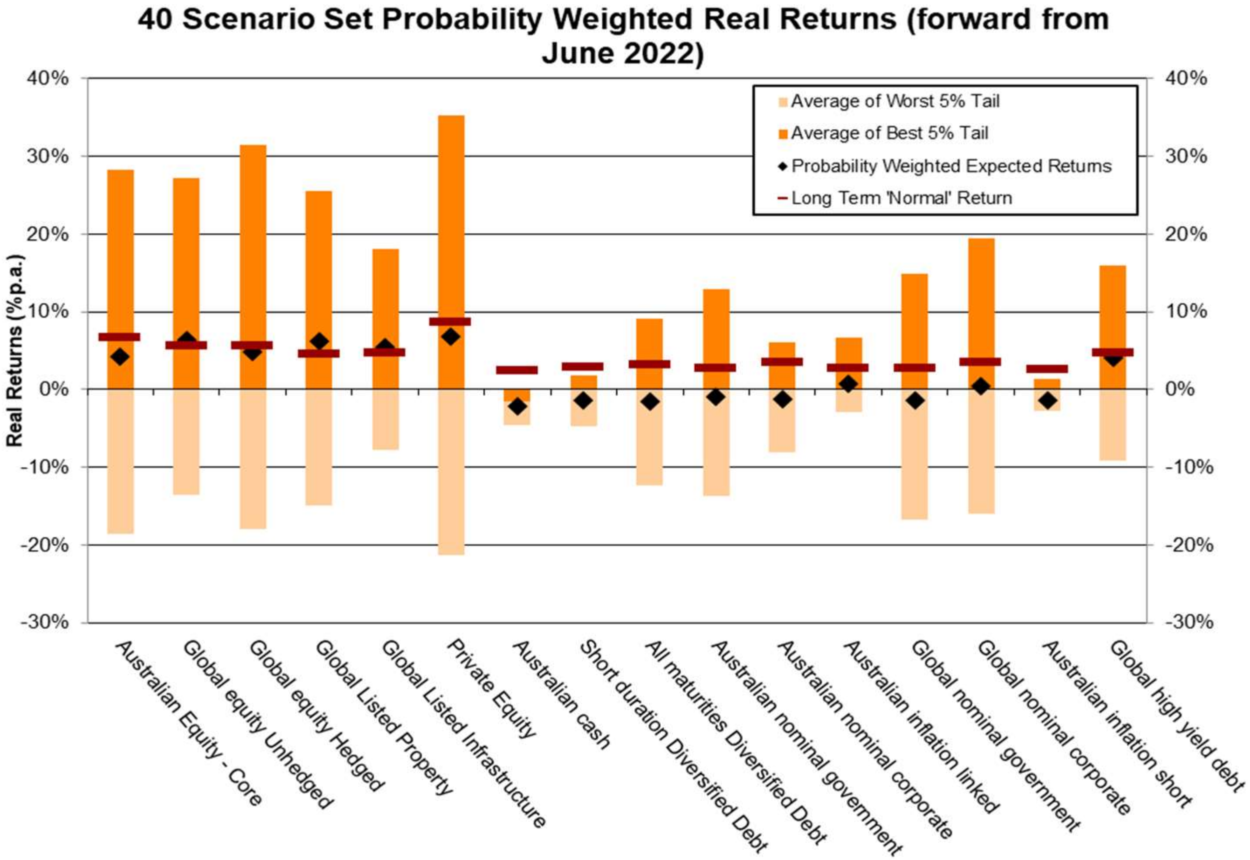
Map to portfolios

Apply distributions to get a rich picture of each portfolio's strengths and vulnerabilities

Our perspective of capital markets

A rich view of potential outcomes

- Equity return potentials look reasonable relative to long term levels.
- Fixed income has improved – particularly on the positive tail – but real returns still held down by inflation. Favour linkers over nominals for defensiveness (all mats).
- High yield is starting to look attractive based on current spreads, be aware of 'downgrade cycle' risk.

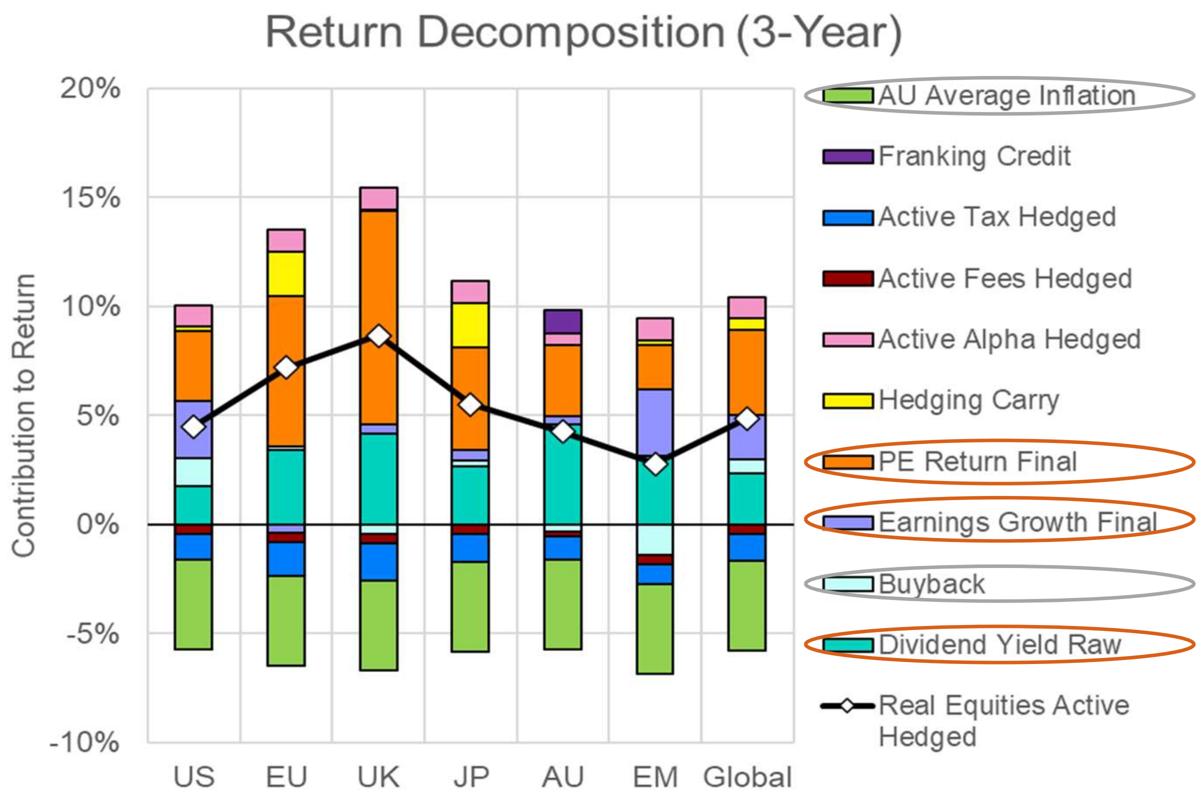


3 year real outcomes after fees, tax and alpha

What we are seeing

Contextualising major market opportunities

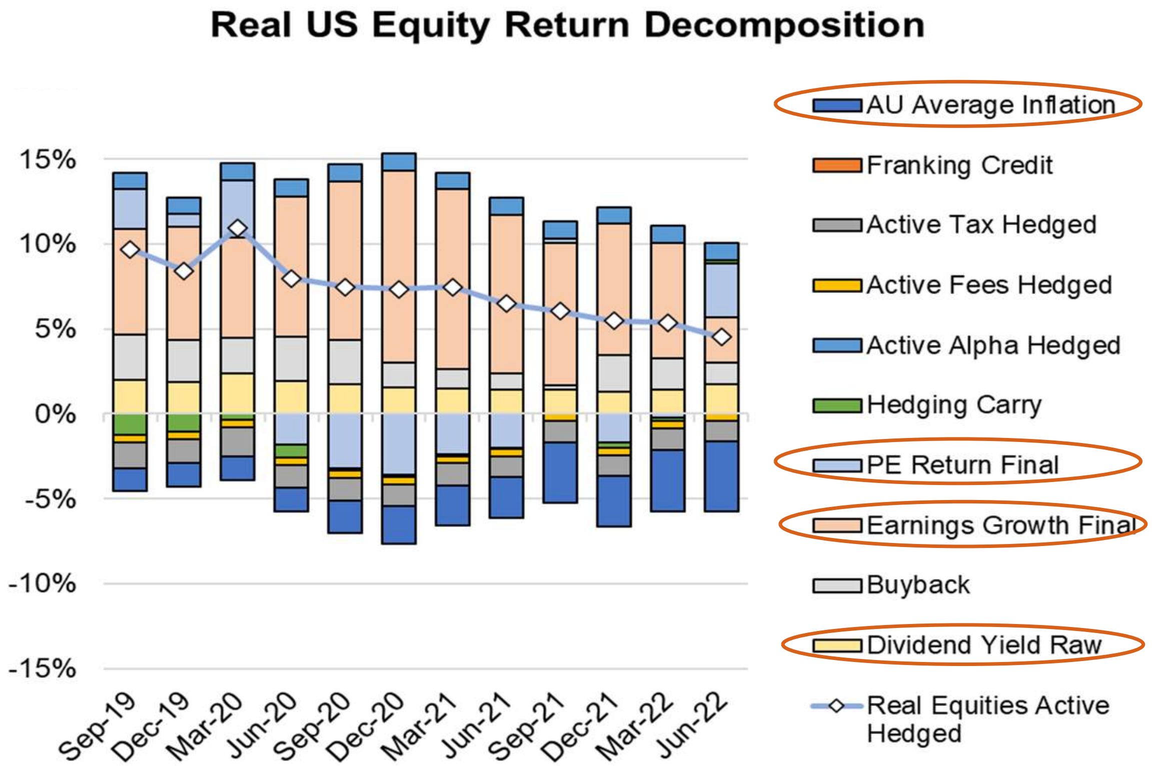
- Global ex-US returns remain constructive, largely supported by valuations.
- US and EM remain the only markets with some earnings growth – albeit with potential downside risks.
- Aussie equities supported by solid dividend yield.

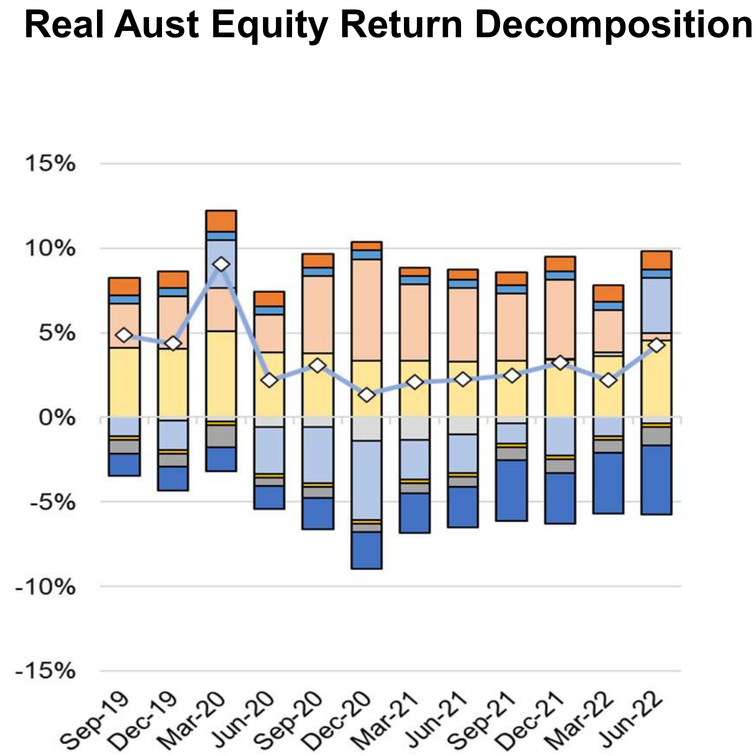


3 year real outcomes after fees, tax and alpha

What we are seeing

Different drivers of US and Aust equities





3 year real outcomes after fees, tax and alpha

What we are doing

Directing the research effort

ASSET MANAGEMENT

AU Miners & Energy

What
Capitalising on the strong, inflation-linked cash flows supporting solid dividends

How
Customised basket of mining and energy names + option protection (collars)

Status
Implemented

Global Tech Equities

What
Accessing attractively priced quality tech exposure

How
Customised basket of high quality tech names

Status
Migrating from research phase to implementation – In development

Global Credit

What
Clear improvement in yields and opportunity set

How
TBD

Status
Research phase

ASSET MANAGEMENT

Questions

ASSET MANAGEMENT

Thank you

MORNING TEA

BetaShares Exchange Traded Funds

First Sentier Investors

Franklin Templeton

Milliman

MLC Asset Management

Philo Capital Advisers

Resonant Asset Management

SQM Research