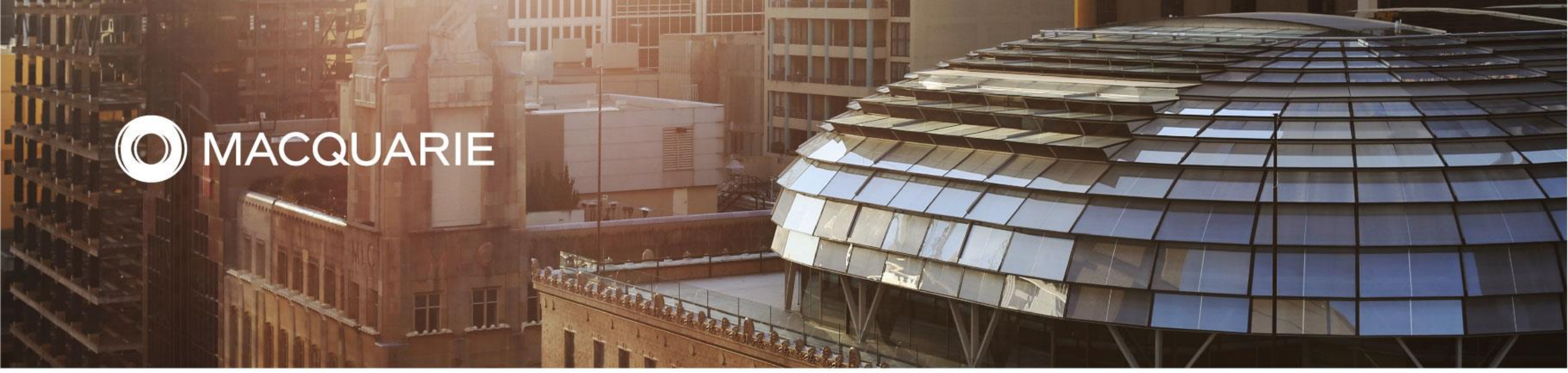


Global Economic - September 2022

The lesser of two evils

- Macquarie's Macro Strategy Team has slashed their global economic growth forecasts and now expects a deeper and longer period of challenging economic conditions, with 1H23 as the likely starting point.
- After waiting too long to begin to tighten policy, central banks have moved aggressively with the goal of reigning in inflationary pressures. While a soft landing is still possible, it appears increasingly unlikely.
- Headline inflation measures may have peaked in the US. Despite this, they are unlikely to return quickly to the 2% target. Underlying measures and wage growth both suggest there is much work to be done.
- Under Macquarie's baseline, central banks keep hiking into late 2022 or early 2023 and refrain from easing until late Q3/early Q4. Policy rates only become stimulative again in mid to late 2024.
- Macquarie see downside risks to this. It is possible that inflation has become more entrenched than initially believed. Should this occur, it may take longer for it to trend downwards, even during a recession. Central banks may be even more cautious about easing in this context- a development that could lead to a more prolonged downturn.

This is a summary of a recent report from Macquarie's global macro team "Global Economic Outlook: The lesser of two evils".

Big cuts to Macquarie's growth forecasts

Global economic activity remains volatile. While timely indicators suggest that global growth appears to have resumed in Q3, the combination of slowing demand, further central bank tightening, and elevated inventories will soon see economic growth slow meaningfully. Annualized growth over the second half of 2023 is anticipated to come in at around 0.5%, well below the 1% that typically has constituted a global recession. A sharper slowdown is more likely than a soft landing with potential headwinds persisting across each of the major economies.

Macquarie's global GDP growth forecasts

	2022 current	2022 previous	2023 current	2023 previous
US	1.9	2.3	-0.1	1.0
China	3.7	5.0	5.5	5.0
Eurozone	3.1	2.8	-0.6	0.0
Japan	1.3	1.4	0.2	1.1
UK	3.1	2.9	-1.8	-0.3
Australia	3.9	4.1	1.5	2.6
Global (MER)	2.8	3.2	1.6	2.4
Global (PPP)	3.0	3.5	1.9	2.7

Source: Macquarie Macro Strategy, June 2022

Global GDP growth to weaken over coming quarters

Source: Macquarie Macro Strategy, September 2022

Major economy outlooks

United States: Recession appears likely in 2023

Despite near-term resilience, Macquarie believe the US economy will enter a recession in 2023, with the most likely starting point in 1H23. They have slashed their US CY23 GDP growth forecast to -0.1% from +1.0% previously and forecast four consecutive quarters of negative growth in CY23.

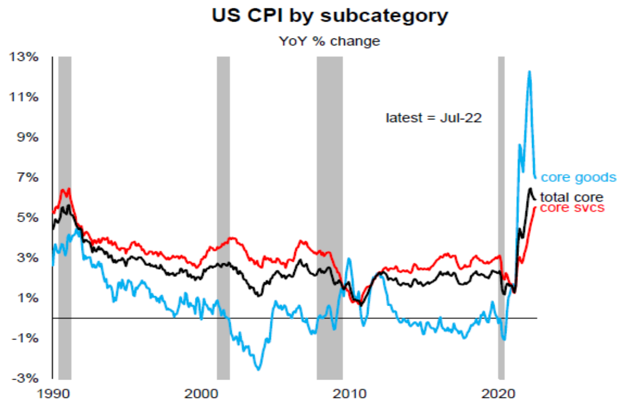
- While headline inflation may have peaked, underlying measures remain firm. Together with strong wage growth indicators, this is likely to keep the Fed on course for further rate hikes at its upcoming meetings.

- Several leading indicators are pointing towards a likely contraction, with the 2-10yr yield curve spread now deeply inverted.
- So far in 2022, the labour market has been one area that has held up comparatively well, but even this has started to show signs of a deterioration.

While recent data have shown some reprieve in the monthly pace of headline CPI inflation, this has been primarily driven by the decline in gasoline prices and other idiosyncratic developments. Measures of underlying inflation remained firm as core CPI inflation is being driven by underlying momentum in core services.

Macquarie's projection is for annualized quarterly core PCE price inflation to decelerate to 3.4% by end-22 and then move gradually lower, reaching 1.8% by end-23.

Momentum in core services inflation is not letting up



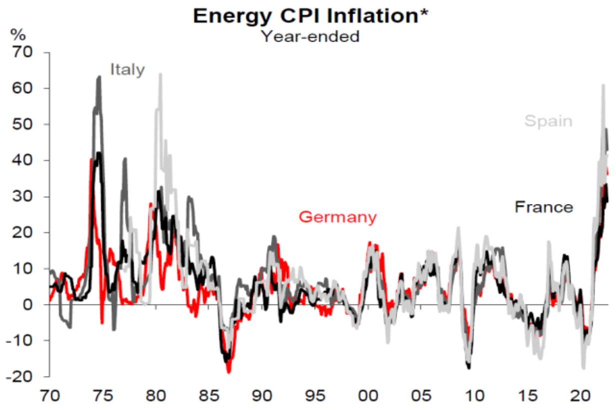
Source: Macquarie Macro Strategy, September 2022

Eurozone: Heading into recession

Growth in the Eurozone remained positive in Q2. However, elevated (and still rising) gas prices have resulted in growth slowing in recent months, with a contraction likely in Q3. Macquarie forecasts five consecutive quarters of negative GDP growth for the Eurozone from Q322 to Q323 inclusive. For the UK, Macquarie forecasts 9 consecutive quarters of negative GDP growth from Q222 to Q224 inclusive.

Even ahead of the recent gains in electricity prices, the bulk of the Eurozone was experiencing a severely negative real income shock, with headline inflation increasing to 9.1% in year-ended terms in August and wage measures running well below this.

Energy prices have spiked in Europe



Source: Macquarie Macro Strategy, September 2022

In the face of the latest energy shock, policymakers have already begun to warn of potential hardship and rationing. This has put the ECB in a tricky position as it is likely to hike rates further, even as it becomes apparent that the Eurozone has entered a recession.

China – Weak recovery amid multiple headwinds

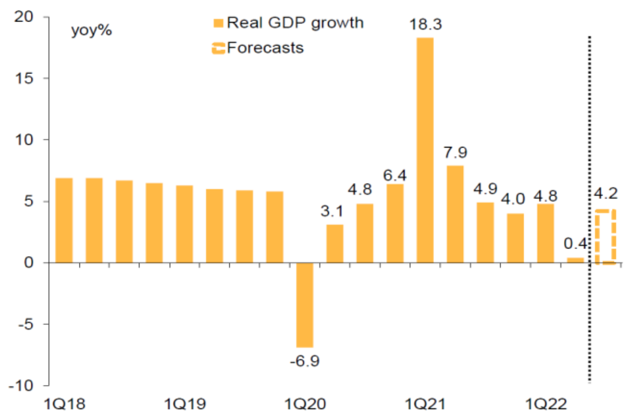
While China's economy has improved in recent months, significant headwinds (property, lockdowns) are hampering the pace of recovery. As a result, Macquarie are now expecting 3.7% GDP growth for 2022, compared with 5.0% in the previous outlook piece published in June. However, they expect growth to rebound to 5.5% in 2023, given the low comparison base, lagged impact of policy easing and a potential loosening of the Zero-COVID policy.

The current property downturn is without doubt the worst in history. This time, the credit risk from property developers is much higher than in previous downturns, leading to widespread concerns on housing delivery. As a result, policymakers have made more effort recently to stabilize the property sector.

While Macquarie do not expect that the ongoing property woes to lead to a financial crisis for the Chinese economy, they also do not see a strong recovery anytime soon. The sector is likely to have a U-shaped recovery, as it takes a long time to restore confidence among homebuyers and developers.

In terms of the cyclical position, Q3 this year looks similar to the first quarter of 2015, when sales growth hit bottom. If history is any guide, it might take another 12 months for property investment to bottom. During this period, the property sector is likely to remain the major headwind to the Chinese economy.

China growth to bounce back from Q2 trough



Source: Macquarie Macro Strategy, September 2022

Australia - Still solid but downgrading the outlook

Macquarie have cut their growth forecasts for Australia and forecast a solid rise in the unemployment rate to 4½% or more over the next couple of years. In other words, Macquarie anticipate that labour market conditions will have to ease by more than the RBA's central forecast to bring inflation back to target.

Macquarie's expectation for a greater release of pressure on the economy than the RBA is forecasting also leads us to expect a faster decline in inflation next year. In annualised quarterly terms they anticipate inflation falling below 3% in H2 of 2023. This should enable the RBA to start to ease monetary policy to support faster growth.

Macquarie continue to expect nation-wide dwelling prices to decline by ~15%, which will be one factor putting downward pressure on private demand growth.

Central banks

Fed – Elevated inflation remains the priority

We expect the FOMC will hike the fed funds rate by another 75 bps at next week's meeting lifting it into the 3.0 to 3.25% range. We expect subsequent hikes beyond this given elevated inflation. Our end-22 rate range is 3.5 to 3.75%.

In 2023, we expect a further 25 bps hike in January, which would push the fed funds rate to the 3.75 to 4.0% range, a level we anticipate will mark the peak for the cycle. We expect this to be held for 6 to 9 months even as evidence of a recession mounts, as the FOMC will want to have conviction that inflation is heading back to 2% before easing.

Together with our inflation forecast, this profile suggests that a positive real fed funds rate will be reached in 2Q23 and persist in the subsequent quarters.

ECB – hawks are firmly in control, for now

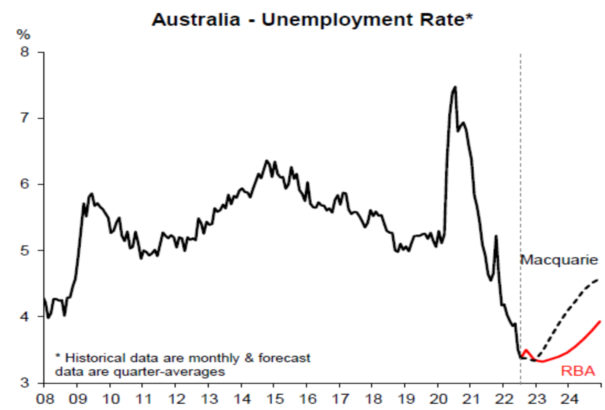
The ECB is expected to hike by a further 100bps over the remainder of this year, with the benchmark policy rate likely to reach 1.75% by December and 2.25% by early next year. Macquarie believe this tightening will cause a recession that will force the ECB to ease financial conditions by the end of 2023, resulting in modestly lower policy rates.

RBA – Some easing expected late next year

A potentially faster-than-expected decline in inflation, and a substantial rise in the unemployment rate, leaves room for the RBA to start easing monetary policy by late 2023. The unemployment rate is likely to be already close to the low for this cycle and Macquarie anticipate it to rise to 4.5% or more over the next couple of years. In other words, Macquarie anticipate that labour market conditions will have to ease by more than the RBA's central forecast to bring inflation back to target.

Australia is expected to avoid a recession (for now), but growth will slow materially with the cash rate expected to peak at 3.35% by December this year. As inflation falls below 3% in 2023, Macquarie anticipate the RBA will commence cutting rates.

Macquarie expect a more sizeable increase in the unemployment rate than the RBA



Source: Macquarie Macro Strategy, September 2022

Macquarie's economic forecasts

	Quarterly											Annual			
GDP, QoQ	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**	**Jun-23**	**Sep-23**	**Dec-23**	**Mar-24**	**Jun-24**	**Sep-24**	**Dec-24**	**2021**	**2022**	**2023**	**2024**
US	(0.1)	0.5	0.5	(0.1)	(0.4)	(0.5)	(0.5)	0.4	0.6	0.8	0.8	5.7	1.9	(0.1)	0.8
China	(2.6)	4.0	2.6	1.0	1.1	1.2	1.5	1.1	1.1	1.2	1.5	8.1	3.7	5.5	5.0
Eurozone	0.8	(0.1)	(0.3)	(0.4)	(0.2)	(0.1)	0.0	0.1	0.1	0.2	0.2	5.2	3.1	(0.6)	0.1
Japan	0.5	0.4	0.3	(0.2)	(0.2)	(0.2)	(0.0)	0.1	0.2	0.2	0.2	1.7	1.3	0.2	0.2
UK	(0.1)	(0.2)	(1.1)	(0.3)	(0.4)	(0.4)	(0.1)	(0.1)	(0.1)	0.1	0.1	7.4	3.1	(1.8)	(0.4)
Canada	0.8	0.2	0.1	(0.4)	(0.8)	(1.0)	(1.0)	0.2	0.6	0.7	0.8	4.5	3.2	(1.3)	(0.2)
Australia	0.9	0.6	0.5	0.3	0.1	0.2	0.3	0.4	0.4	0.6	0.6	4.9	3.9	1.5	1.6
New Zealand	0.6	0.5	0.3	0.0	(0.2)	(0.1)	0.0	0.3	0.4	0.5	0.6	5.7	1.4	0.4	0.9
Global (MER)	(0.3)	1.1	0.7	0.2	0.2	0.1	0.1	0.5	0.6	0.7	0.8	6.0	2.8	1.6	1.7
Global (PPP)	(0.5)	1.2	0.8	0.4	0.4	0.2	0.1	0.6	0.7	0.8	0.8	6.2	3.0	1.9	2.0

CPI, YoY	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**	**Jun-23**	**Sep-23**	**Dec-23**	**Mar-24**	**Jun-24**	**Sep-24**	**Dec-24**	**2021**	**2022**	**2023**	**2024**
US (PCE)	6.5	6.0	5.2	4.2	3.2	2.9	2.6	2.2	1.8	1.7	1.7	3.9	6.0	3.2	1.8
China	2.2	3.0	3.1	3.1	2.6	2.5	2.5	2.5	2.5	2.5	2.5	0.9	2.4	2.7	2.5
Eurozone	8.0	10.0	10.6	9.5	7.2	5.3	3.5	2.9	2.3	2.1	1.9	2.6	8.7	6.3	2.3
Japan	2.4	3.1	3.8	3.9	3.7	3.2	2.7	2.1	1.5	1.2	1.1	(0.2)	2.6	3.4	1.5
UK	9.2	11.2	14.5	13.5	11.6	8.7	5.6	4.2	3.0	2.4	2.2	2.6	10.3	9.7	2.9
Canada	7.4	7.2	6.8	5.9	3.8	3.2	2.7	2.1	1.8	1.5	1.4	3.4	6.8	3.9	1.7
Australia	6.1	6.9	7.8	6.7	5.7	4.8	3.2	2.8	2.7	2.6	2.6	2.9	6.5	5.1	2.7
New Zealand	7.3	6.5	6.2	5.4	4.5	3.6	3.1	2.6	2.4	2.2	2.2	3.9	6.7	4.1	2.4

Core CPI, YoY	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**	**Jun-23**	**Sep-23**	**Dec-23**	**Mar-24**	**Jun-24**	**Sep-24**	**Dec-24**	**2021**	**2022**	**2023**	**2024**
US (PCE)	4.8	4.5	4.1	3.7	3.3	3.0	2.6	2.2	1.8	1.7	1.6	3.3	4.7	3.1	1.8
China	0.9	1.0	1.2	1.8	2.0	1.8	2.0	2.0	2.0	2.0	2.0	0.8	1.1	1.9	2.0
Eurozone	3.7	5.9	6.9	7.4	5.3	3.0	1.4	1.1	1.0	1.1	1.0	1.5	4.8	4.2	1.0
Japan	0.9	1.5	2.3	2.4	2.3	1.9	1.7	1.6	1.4	1.3	1.3	(0.6)	0.9	2.1	1.4
UK	6.0	7.8	9.1	9.0	7.4	5.5	4.1	3.3	3.1	2.3	2.1	2.4	7.0	6.4	2.7
Canada	4.9	5.2	5.4	5.3	4.1	3.4	2.8	2.1	1.8	1.5	1.4	2.3	4.9	3.9	1.7
Australia	4.5	5.1	5.6	5.4	4.7	4.0	3.2	2.8	2.7	2.6	2.6	1.8	4.7	4.3	2.7
New Zealand	4.8	5.0	4.7	4.3	3.5	3.0	2.6	2.3	2.2	2.1	2.1	3.4	4.8	3.4	2.2

FX Rates	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**	**Jun-23**	**Sep-23**	**Dec-23**	**Mar-24**	**Jun-24**	**Sep-24**	**Dec-24**	**2021**	**2022**	**2023**	**2024**
EUR USD	1.05	0.98	1.01	1.03	1.05	1.07	1.08	1.10	1.11	1.13	1.14	1.14	1.01	1.08	1.14
USD JPY	135.8	140.0	135.0	130.0	125.0	120.0	118.0	115.8	113.5	111.3	109.0	115.1	135.0	118.0	109.0
USD CNY	6.70	7.05	7.15	7.05	7.00	6.95	6.90	6.86	6.83	6.79	6.75	6.35	7.15	6.90	6.75
USD INR	79.0	80.0	81.0	80.5	80.0	79.5	79.0	78.9	78.8	78.6	78.5	74.5	81.0	79.0	78.5
GBP USD	1.21	1.15	1.13	1.17	1.20	1.22	1.23	1.25	1.27	1.29	1.32	1.35	1.13	1.23	1.32
USD CAD	1.29	1.31	1.35	1.36	1.36	1.37	1.38	1.38	1.39	1.39	1.39	1.26	1.35	1.38	1.39
AUD USD	0.69	0.66	0.64	0.65	0.66	0.67	0.69	0.69	0.69	0.69	0.70	0.73	0.64	0.69	0.70
NZDUSD	0.62	0.60	0.59	0.58	0.59	0.60	0.63	0.64	0.64	0.65	0.65	0.68	0.59	0.63	0.65

Policy Rate	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**	**Jun-23**	**Sep-23**	**Dec-23**	**Mar-24**	**Jun-24**	**Sep-24**	**Dec-24**	**2021**	**2022**	**2023**	**2024**
US (Fed Funds rate)	1.63	3.13	3.63	3.88	3.88	3.63	3.13	2.63	2.13	1.63	1.38	0.13	3.63	3.13	1.38
China 1-yr MLF rate	2.85	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.95	2.75	2.75	2.75
Eurozone deposit rate	(0.50)	0.75	1.75	2.25	2.25	2.00	1.75	1.50	1.50	1.00	1.00	(0.50)	1.75	1.75	1.00
Japan policy rate	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
UK base rate	1.25	1.75	2.50	2.75	3.00	3.00	2.75	2.75	2.50	2.25	2.25	0.25	2.50	2.75	2.25
Canada overnight rate	1.50	3.25	3.75	3.75	3.75	3.25	2.75	2.25	1.75	1.25	1.00	0.25	3.75	2.75	1.00
RBA cash rate	0.85	2.35	3.35	3.35	3.35	3.35	2.85	2.60	2.35	2.10	2.10	0.10	3.35	2.85	2.10
RBNZ OCR	2.00	3.00	4.00	4.00	4.00	4.00	3.50	3.25	2.75	2.50	2.50	0.75	4.00	3.50	2.50

10-year yield	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**	**Jun-23**	**Sep-23**	**Dec-23**	**Mar-24**	**Jun-24**	**Sep-24**	**Dec-24**	**2021**	**2022**	**2023**	**2024**
US	2.98	3.35	3.40	3.40	2.90	2.50	2.50	2.50	2.50	2.50	2.50	1.52	3.40	2.50	2.50
China	2.80	2.60	2.80	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.78	2.80	3.00	3.00
Germany	1.44	1.80	1.80	1.30	1.10	1.00	1.00	0.90	1.00	0.90	0.90	(0.21)	1.80	1.00	0.90
Japan	0.22	0.25	0.25	0.25	0.20	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.25	0.00	0.00
UK	2.26	2.50	2.50	2.60	2.05	1.95	1.95	1.95	1.95	1.95	1.95	1.02	2.50	1.95	1.95
Canada	3.21	3.10	3.10	3.00	2.50	2.25	2.00	2.00	2.00	2.00	2.00	1.49	3.10	2.00	2.00
Australia	3.66	3.60	3.50	3.40	3.35	3.10	2.80	2.60	2.55	2.50	2.50	1.67	3.50	2.80	2.50
New Zealand	3.86	4.10	3.90	3.70	3.55	3.50	3.00	2.80	2.70	2.65	2.65	2.39	3.90	3.00	2.65

Shading represents forecasts

Source: Macquarie Macro Strategy, September 2022

Macquarie WM Investment Strategy Team