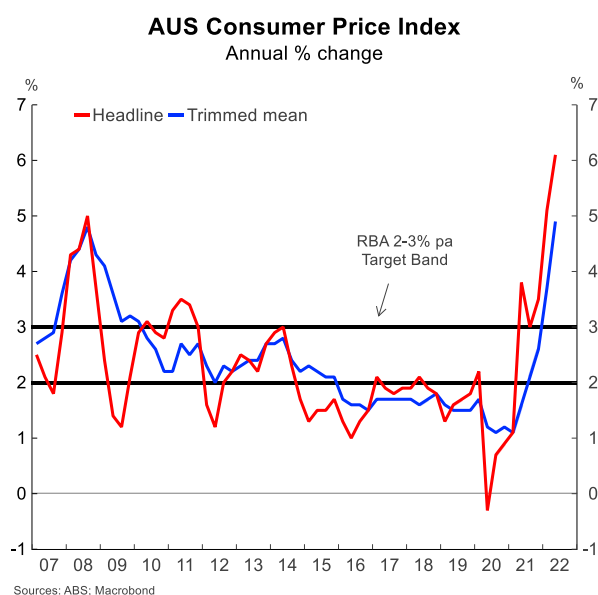
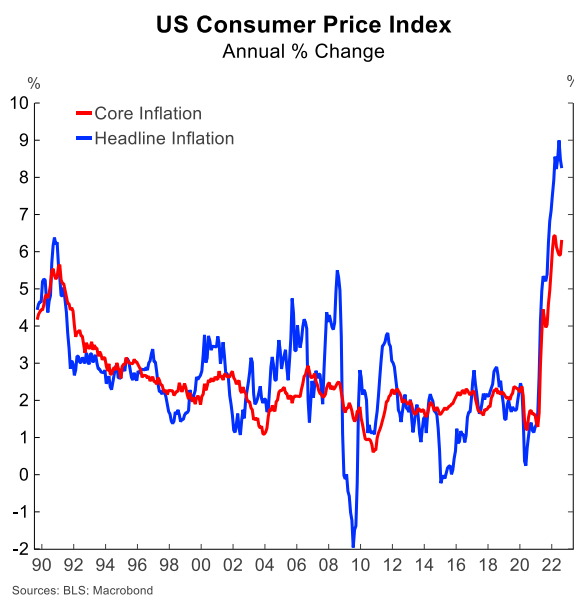


Friday, 16 September 2022

Peak in US Inflation Likely, But Risks Rife

- High inflation has taken centre stage over late 2021 and throughout 2022 after reaching levels not seen in several decades across the United States, Europe, and Australia.
- Global factors such as supply-chain disruptions and the energy price shock initially accounted for much of the increase in global prices. However, there are growing signs that these global inflationary pressures may have peaked, and US inflation with it.
- Supply-chain disruptions remain a major challenge for businesses and the global economy but there are signs of pressures easing. Several global supply-chain indicators have declined from elevated levels in recent months. Improvements in supply are likely to have a disinflationary impact through the back half of 2022 and into 2023.
- Many commodities have declined from recent peaks, underpinning a fall in several inflation measures in the US. Growing recession risks across key economies, including the US, UK, and Europe, have largely underpinned the falls.
- However, there are several key risks which could stoke the global inflation fire again. These relate to energy prices, supply disruptions and geopolitical tensions, which have been the most prolific drivers of inflation to date.
- Domestic factors – strong demand and a tight labour market – are accounting for a larger share of headline inflation as commodity prices and supply disruptions slowly normalise. These factors are prolonging the high levels of inflation, including in the US and Australia.
- In Australia, we predict inflation is likely to continue to increase before hitting a peak above 7.5% at the end of 2022. Australian inflation often lags the US, additionally, the impacts of the energy shock in Australia have not yet fully flowed through to inflation.



Historically high inflation has taken centre stage across the global economy over late 2021 and throughout 2022. Inflation has reached levels not seen in several decades across the US, Europe, and Australia.

The spike in inflation has been largely driven by three key themes:

1. Supply-chain disruptions, as goods demand increased during the pandemic and supply was constrained, and firms couldn't adequately respond. This has been exacerbated by China's zero-COVID strategy.
2. Energy price shocks resulting from an increase in demand, exacerbated by Russia's invasion of Ukraine. The war has had a significant impact on the supply of key energy commodities (including oil, coal, and natural gas).
3. Domestic factors as the household sector, in aggregate, weathered the COVID-19 shock following incredible stimulus from governments and central banks. As a result, demand recovered faster than expected and pushed economies up against capacity constraints, with unemployment falling to below estimates of "full employment" in numerous nations.

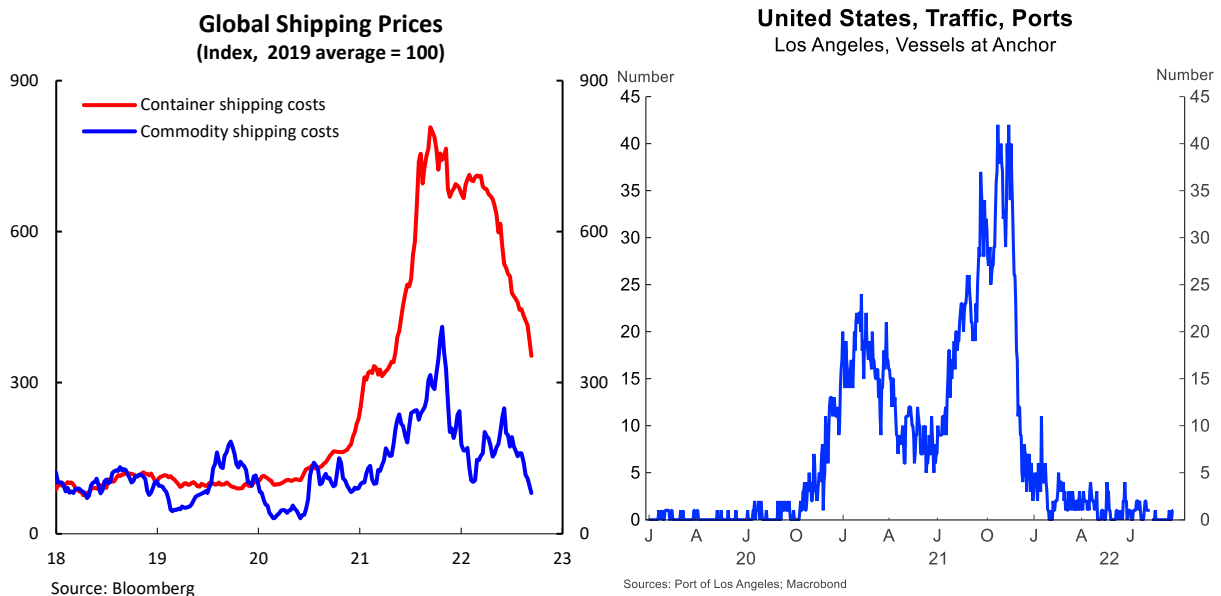
Global factors such as supply-chain disruptions and the energy price shock initially accounted for much of the increase in global prices and will underpin the exceptionally high levels of inflation associated with a potential peak. However, there are growing signs that these global pressures may have peaked, and US inflation with it. As these supply factors ease, domestic drivers of inflation are prolonging the high levels of inflation, including in the US and Australia.

A Peak in Global Inflationary Pressures?

Supply-chain disruptions

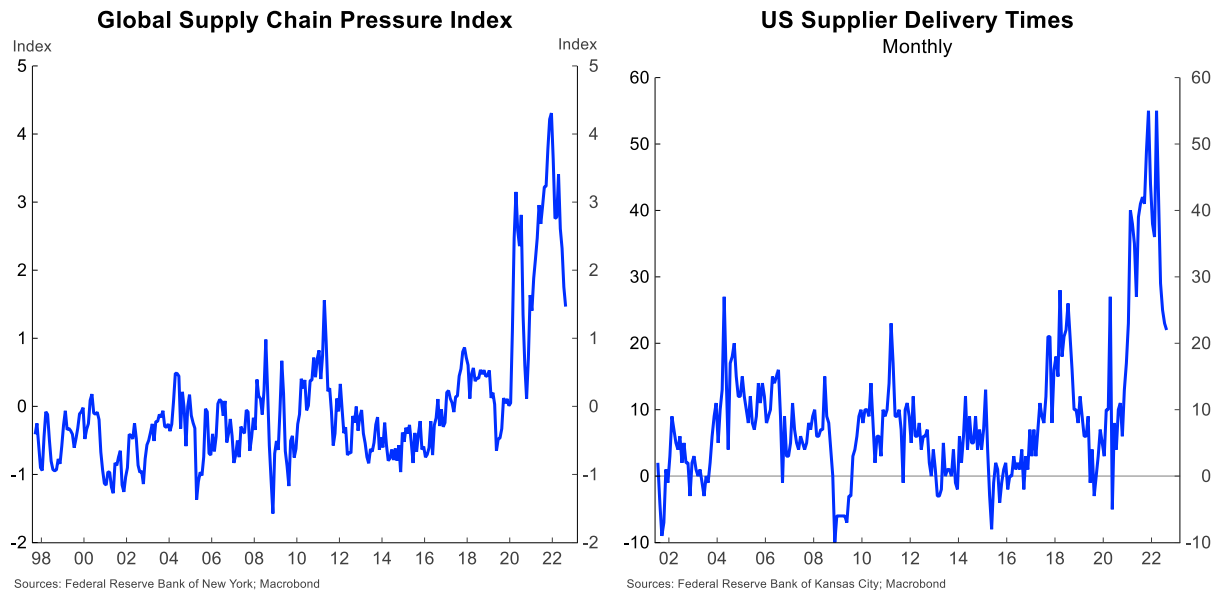
While supply-chain disruptions remain a major challenge for businesses and the global economy, there are signs of pressures easing. Several global indicators of supply-chain pressures have declined from elevated levels in recent months.

During their peak, container shipping costs surged by over seven times relative to the average level in 2019. Additionally, significant blockages emerged at ports as containers were unable to be unloaded due to bottlenecks, shortages of key labour, and congestion in warehouses. Container stocks were also thrown out of balance meaning there were not enough containers to load cargo at some ports while others didn't know where to store the excess. This led to a spike in the number of container ships waiting outside key ports, including the major port at Los Angeles.



Over time, these blockages have been cleared and the number of vessels at anchor have largely normalised. Relatedly, shipping costs have fallen rapidly as constraints gradually ease. However, costs remain elevated, at over three times 2019 average levels. Additionally, commodity shipping costs have also declined from their peak in 2021 and are around levels seen in late 2019. Falling shipping costs are likely to have a disinflationary impact through the back half of 2022 and into 2023.

Other indices which measure supply-chain disruptions have suggested that pressures are easing. The global supply chain pressure index, a composite index of a range of supply-chain measures, indicates a clear reduction of pressures over recent months. US supplier delivery times have also fallen sharply, suggesting that the movement of goods is returning towards more normal patterns.



It will take some time for supply chain issues to fully unwind due to the scale of the bottlenecks and the complexity of the global supply network. However, at least for the time being it appears that the worst of these issues could be behind us. Therefore, we expect the inflationary pressures associated with these supply-chain issues will also subside gradually.

Energy price shocks

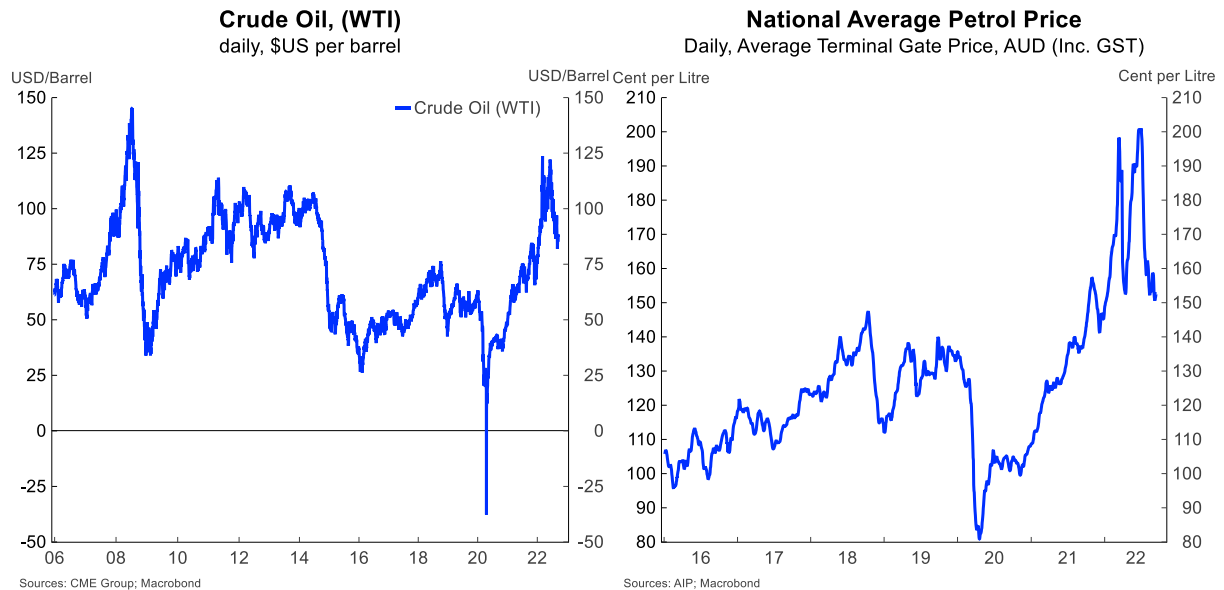
As economies reopened following strict COVID-19 lockdowns, demand for many key commodities, such as oil, spiked. This was further exacerbated by Russia's invasion of Ukraine. Russia is one of the world's largest exporters of oil and a key supplier of natural gas to Europe. Ukraine and Russia together also make up a significant share of global wheat exports and are key exporters of many other commodities, including soft timber.

Further, economic sanctions on Russia have had significant impacts on oil and natural gas supply, in addition to wheat and other commodities. Oil prices surged from US\$90.64 a barrel on 23 February 2022, immediately prior to Russia's invasion of Ukraine, to a 13-year high of US\$130.50 a barrel on 7 March. Natural gas prices also skyrocketed, particularly in Europe, given the region's significant reliance on Russian gas. The surge in natural gas prices has also contributed to higher thermal coal prices, as countries seek to increase coal-fired electricity generation to substitute away from Russian gas. The increases in these commodities have underpinned a surge in energy costs across the globe.

The jump in oil prices contributed to a spike in petrol prices in Australia (and globally), which have been a major driver of inflationary pressures to date. The average national petrol price surged to over \$2 per litre in March, following the invasion of Ukraine, and again in June, on the back of high

global oil prices, a fall in the Australian dollar, and strong demand. This was despite the price of petrol being cushioned by a 50% cut to the fuel excise rate, a temporary cost-of-living support measure in the 2022-23 Budget.

Petrol prices have subsequently declined as the global oil price has fallen back below US\$100 a barrel. Currently, the West Texas Intermediate futures contract is around US\$85 a barrel. However, the temporary cut to the fuel excise is scheduled to end on 28 September, which will add another 25.3 cents to the price of petrol when including indexation and GST. Additionally, Treasury estimates that inflation will be 0.25 percentage points higher over the December quarter on the back of fuel excise returning to its full level.



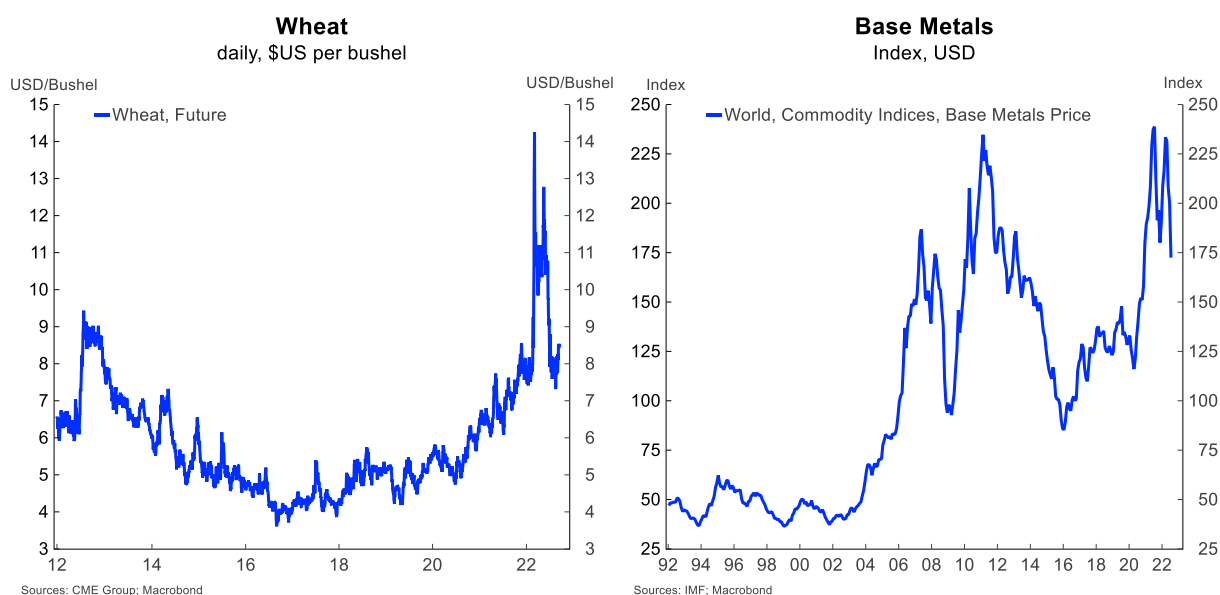
While Australia is fortunate enough to produce its own energy commodities such as coal and natural gas, it has not been immune to the implications of the global energy shock. The domestic energy market has also been shocked by a perfect combination of high prices, constrained supply, and strong demand.

Domestic gas and coal prices have jumped considerably alongside the increase in global prices, as more nations wean off Russian supply and turn to other markets, including Australia. Meanwhile, a colder than usual Southern Hemisphere winter has underpinned strong demand for electricity and gas forcing up Australia's energy generation needs. Compounding these factors, the energy market's capacity to generate the required energy has been constrained by a reduction in coal-fired power generation and maintenance-related supply disruptions.

These factors contributed to surging wholesale electricity and gas prices, culminating in the Australian Energy Market Operator (AEMO) capping prices in the spot market. AEMO also temporarily suspended the spot market in June, as they determined that it had become impossible to continue operating the spot market while ensuring a secure and reliable supply of electricity for consumers. The spot market has since been reopened and domestic wholesale gas prices have fallen. However, these pressures are expected to continue to impact the Australian market and flow through into domestic energy prices over coming quarters.

Over recent months, many commodities, such as oil, wheat, and base metals, have declined from recent peaks. The major driver of these falls has been growing concerns from market participants regarding the global growth outlook as central banks aggressively tighten monetary policy. Recession risks across key economies, including the US, UK, and Europe, have risen significantly as aggressive rate hikes are expected to weigh on economic activity, reducing global growth and

demand for key commodities. Additionally, some easing of supply disruptions has also contributed to the falls.



While prices are down from peak 2022 levels, it is important to note that commodity prices remain elevated relative to pre-pandemic levels. It is likely to take some time for prices to gradually adjust and the impact of elevated commodity prices on inflation is, therefore, not anticipated to disappear overnight. However, the easing of these price pressures accompanied with positive developments for supply chains are a clear sign that these global inflationary pressures may have reached a peak in the US.

Australia's exposure to the energy price shock and its transmission to consumer price inflation is different to the US. In contrast to the US, the impacts of the energy shock in Australia have not yet fully flowed through to inflation. So, we expect inflation in Australia will rise further as the impacts of the energy shock continue to wash through the economy.

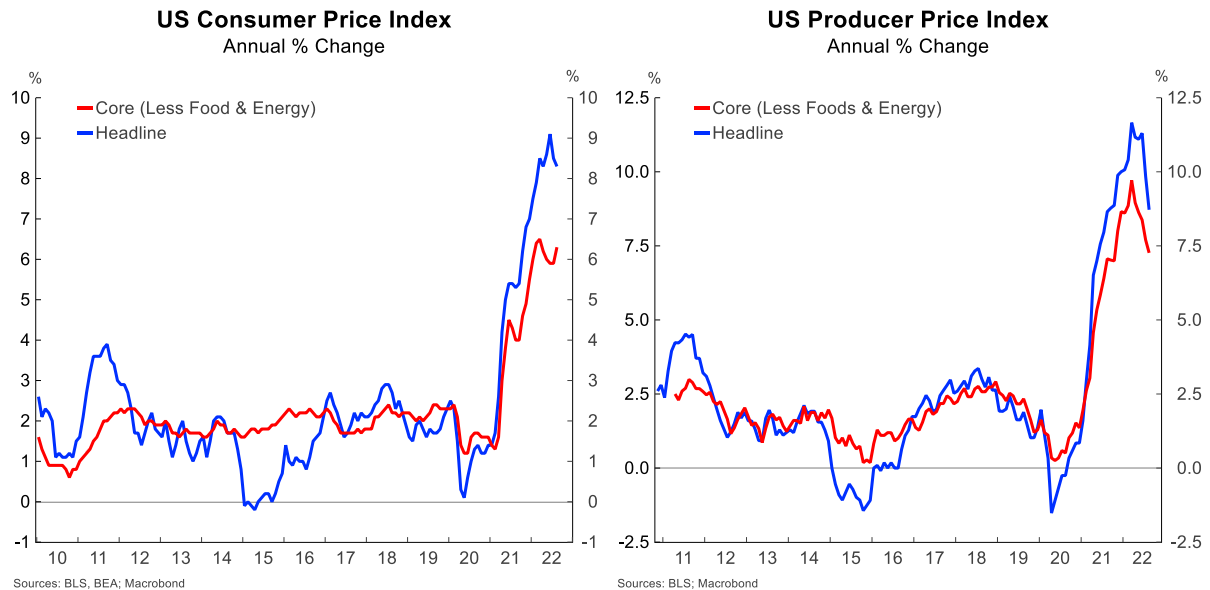
While petrol prices have already been a major driver of inflation, increases in consumer energy prices have so far not played a major role. Retail domestic gas and electricity prices are subject to caps in Australia. As a result, the pressures that have been evident in the wholesale electricity and gas markets are only beginning to flow through to consumers. Since 1 July, the Default Market Offer (retail energy price cap) has increased in price and further price increases are expected over the rest of 2022. In the near term, these increases may not fully flow through into CPI inflation as governments around the country have announced a range of support measures to assist households in dealing with rising energy costs. Government support packages reduce the impact of price rises on the CPI. But as these temporary measures end towards the end of 2022 and into 2023, increases in energy costs are expected to flow through into CPI inflation.

US Inflation

In June, annual headline inflation in the US, as measured by the consumer price index (CPI), surged to a 40-year-plus high of 9.1%. However, key data is starting to show that inflation in the US has likely hit a peak alongside the peak in supply and energy-related-price pressures.

Following the 9.1% annual rise in June, CPI inflation slowed to an annual rate of 8.5% in July and to 8.3% in August. The result was driven by declines in energy costs. However, the easing in annual headline inflation was more sluggish than anticipated owing to an acceleration of broader inflationary pressures.

The core CPI measure, which removes volatile components such as food and energy prices, increased to 6.3% over the year to August, but remains just shy of the peak of 6.5% struck in March. The acceleration of underlying inflation in August reflects that domestic factors – strong demand and a tight labour market – are accounting for an increasingly large share of headline inflation as commodity prices and supply disruptions slowly normalise.



In August, US producer prices fell for a second consecutive month after increasing rapidly over 14 months following the outset of the pandemic. The easing of pressures on producer prices adds to evidence that US inflation has peaked and supports an easing in supply constraints. Factory gate prices, as measured by the producer price index (PPI), declined by 0.1% in August following a 0.4% fall in July. Falling energy prices drove the monthly fall. In annual terms, producer prices grew by 8.7% in August, down from a peak of 11.7% in March. Like the CPI result, underlying price pressures accelerated faster than expected in August, confirming that the easing of international shocks does not necessarily ensure a rapid easing in price pressures and that domestic factors are becoming increasingly crucial to the inflation outlook.

Data on import prices also demonstrates a further easing in price pressures. US import prices fell for a second consecutive month in August, declining by 1.0%. In annual terms, import prices were 7.8% higher in August, down from a peak of 13.0% in March. Export prices also slowed in both monthly and annual terms.

Near-term consumer inflation expectations also pulled back in the latest data. Consumer expectations for inflation one-year-ahead, as measured in the University of Michigan consumer sentiment survey, declined to 4.8% in August. Inflation expectations have fallen over recent months from a peak of 5.4% in March and April. While shorter-term inflation expectations have declined, medium-term expectations are still above the Fed's target. Expectations for inflation 5-10-years ahead were unchanged at 2.9% in August, near the recent high of 3.1% in June.

The incoming data provides many positive signs and suggest that a peak in US inflation may have passed. However, policy makers will continue to closely monitor the evolution of inflation and inflationary expectations.

The Fed is expected to continue to increase interest rates over 2022. At his speech in Jackson Hole, Fed Chair Jerome Powell emphasised the central bank's commitment to controlling inflation and its expectations for interest rates to increase into contractionary territory to get inflation under

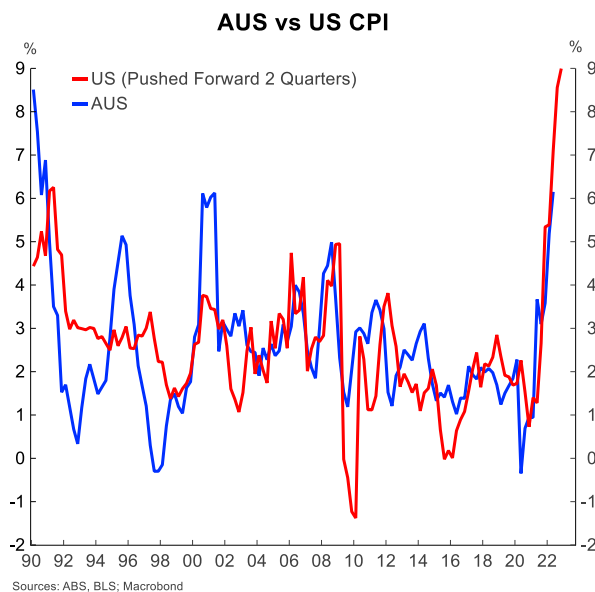
control. Indeed, the hotter-than-expected August CPI data released this week has all but assured another 75-basis point hike from the Fed next with a risk of a larger 100-basis point hike.

What About Australia?

Inflation in Australia has also increased to multi-decade highs. Headline inflation surged to 6.1% over the year to the June quarter of 2022. This was the highest level of inflation in 31½ years. Trimmed mean inflation, which dampens the impact of volatile components and provides a better measure of underlying inflationary pressures, also surged to 4.9% – the fastest pace since the series began in 2003.

Many of the same factors affecting inflation in the US and other countries are driving elevated inflationary pressures in Australia, including supply-chain disruptions and energy price shocks. However, domestic factors are playing a greater role, demonstrating the need for the Reserve Bank (RBA) to tighten monetary policy settings to reduce demand in the economy.

Historically, inflation in the US and Australia has exhibited a strong relationship. Additionally, Australian inflation often lags inflation in the US.



We predict that inflation is likely to continue to increase in Australia, before hitting a peak at the end of 2022 of a bit above 7.5%. Subsequently, we expect inflationary pressures to gradually subside over 2023 and 2024 as supply-chain disruptions and energy price shocks ease. Added to this, increases in the cash rate from the RBA are expected to weigh on domestic economic activity by reducing demand in the economy.

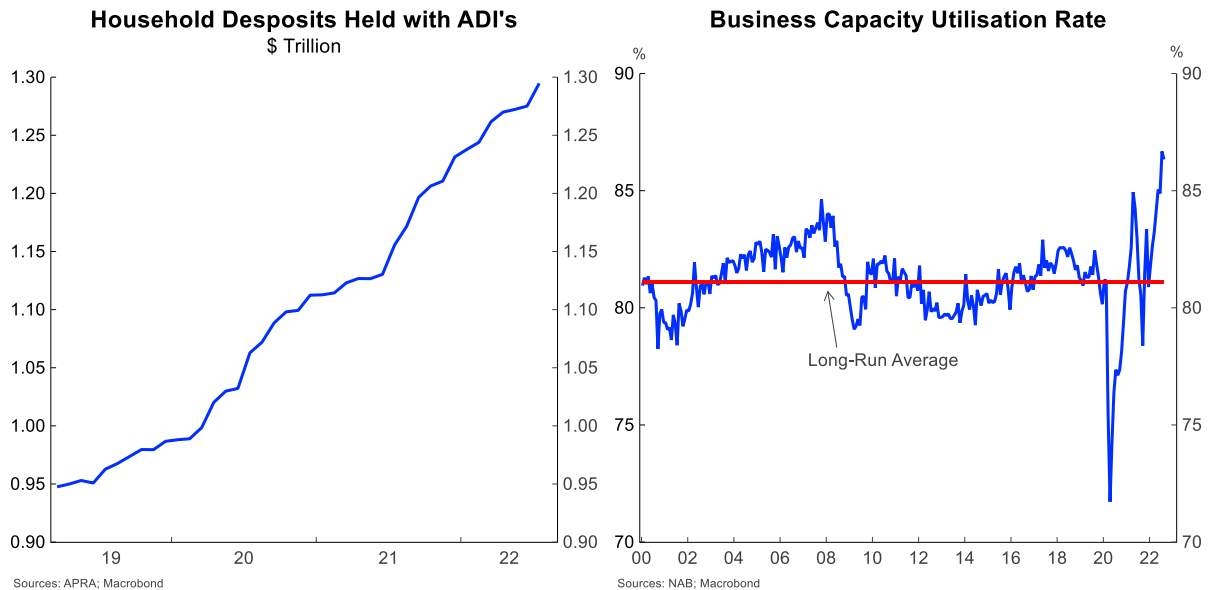
As outlined above, there are many signs that external factors contributing to inflation, including global supply-chain disruptions and energy price shocks, have peaked and are beginning to subside. However, domestic factors will be the key to how quickly inflation returns to the RBA's target band.

Domestic factors

Globally, domestic inflationary pressures have become an increasingly important driver of inflation and have underpinned the broadening of inflation beyond just a select few CPI categories.

In Australia, the rise in domestic inflationary pressures has been underpinned by incredibly robust domestic demand, supported by strong household and business balance sheets (which were boosted by fiscal and monetary stimulus throughout the pandemic).

During 2020 and 2021, household incomes were supported by Government subsidies, such as JobKeeper and JobSeeker, while the major lenders and other financial institutions provided holidays on mortgages and personal loan repayments. At the same time, spending opportunities were cut considerably as most Australian's were stuck at home. As a result, households accumulated over \$250 billion in savings. Additionally, extremely accommodative monetary policy settings contributed to a surge in asset prices during the pandemic, positively impacting household balance sheets.



Households soon escaped lockdowns with a supersized pool of savings, strong balance sheets and with considerable pent-up demand to be released into the economy. This has underpinned the elevated level of demand and has pushed the economy up against capacity constraints as we try to produce the goods and services required to meet demand. Indeed, capacity utilisation is running at around a record high as businesses try to eek every last drop of output from the resources available.

This is perhaps best reflected by the tightness of the labour market. Surging demand for labour has pushed the unemployment rate to around its lowest level in almost 50 years, as businesses increase headcount and hours to keep up with demand. This is despite the participation rate rising to around record high levels. And there are still plenty of jobs to be filled; there is around one job vacancy for every unemployed person in Australia.

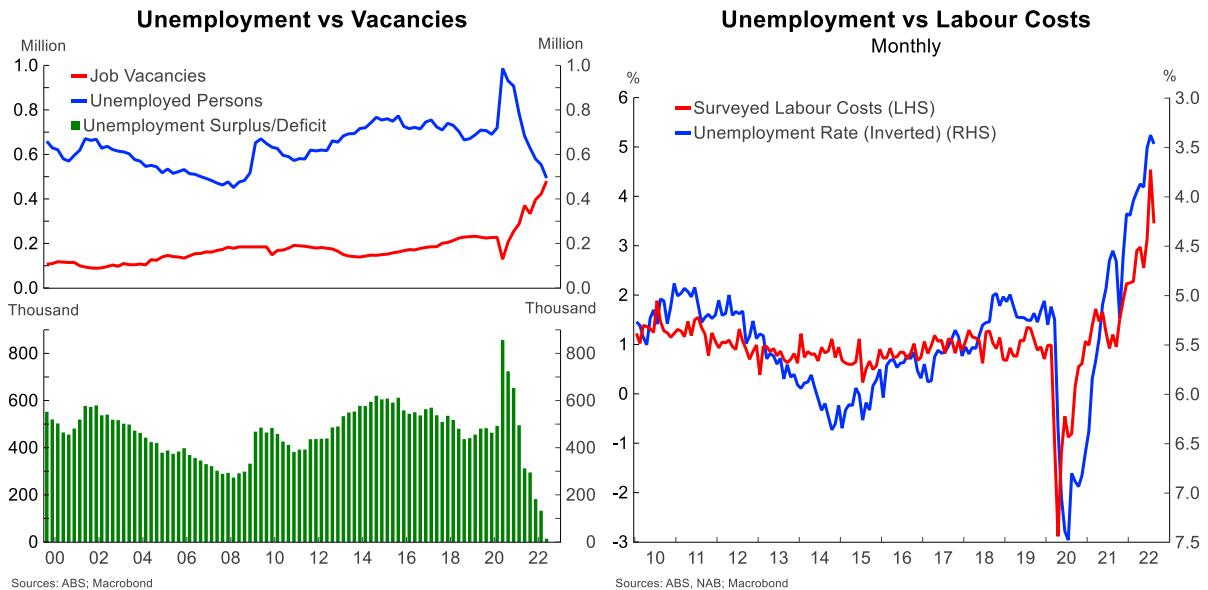
The need for workers has led to rising reports of labour shortages as businesses are unable to find the right skills within the smaller pool of available labour. On the flip side, businesses which have been able to find the right staff have been forced to pay up to get new staff on board and retain existing employees. Reflecting this, survey measures of labour costs are increasing at around their fastest pace on record. Additionally, businesses are increasingly paying bonuses and non-wage benefits to attract staff while minimising their long-term labour cost base.

The related rise in income creates a positive feedback loop for inflation, wherein higher incomes boost demand further. However, this is partly offset by the increase in prices which undermines consumer purchasing power. In fact, despite growth in nominal terms, in real terms, wages (as measured by the Wage Price Index) fell at their fastest pace on record in the March quarter.

There is a risk that if inflation expectations become unanchored and rise materially, workers will demand higher wages to offset their expectations for future inflation. This has the potential to

increase wages further and add to inflationary pressures. This would require a more aggressive and prolonged policy response from the RBA to prevent a wage-price spiral.

As labour and other input costs rise, businesses lift prices to maintain their margins. Businesses may be able to wear the higher costs for a short period but the longer their input costs remain elevated, the more likely that businesses will pass on higher costs to consumers. It is also easier for businesses to increase prices when demand is strong as consumers are more willing to purchase goods and services at a more expensive price. This change in the ‘inflation psychology’ has driven an increasingly large share of business to pass on rising costs and has been noted by the RBA Governor as an area to watch going forward.



Domestic inflationary pressures are therefore the culmination of several different factors, however, the strength of demand and the rate at which tight labour market conditions translate into wages growth (inflation expectations) are the key drivers.

As the impacts of supply-chain disruptions and the energy shock peak and begin to ease, as we are seeing in the US, domestic inflationary factors are going to become the primary driver of headline inflation. The evolution of domestic inflationary pressures is also likely to determine how quickly inflation moderates towards the RBA’s 2-3% target band.

We are, therefore, eyeing wages and consumer demand closely when considering the outlook for inflation. We expect wages growth will continue to accelerate over the next two years as the competitiveness of the labour market takes time to flow through to wages. For the time being, demand appears to be holding up well despite rapid rate rises. If these two factors are more resilient than expected, the RBA may have an even more difficult inflation fight on its hands.

Risks and Outlook

Although there are growing signs that global inflationary factors have peaked and we can pivot our focus to domestic drivers, there are several key risks which could stoke the global inflation fire. These relate to energy prices, supply disruptions and geopolitical tensions, which have been the most prolific drivers of inflation to date.

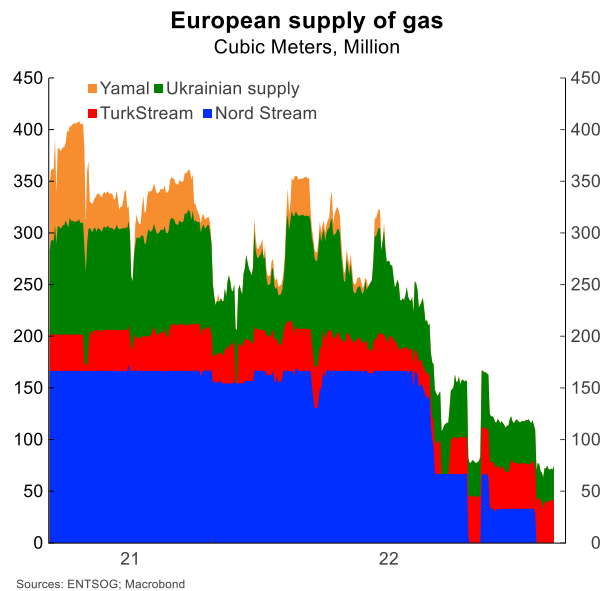
Russian Energy Escalation

The biggest risk centres on the European energy market and ongoing friction regarding the supply of Russian gas. Europe, and especially its economic engine Germany, is incredibly reliant on gas for

electricity generation and heating. Additionally, as winter approaches the demand for energy, and thus gas, will rise considerably.

European countries have been diversifying their gas supply mix away from Russia since the war commenced, however, a large share of gas is still supplied from Russia. The risk is that Russia ‘weaponises’ European gas supplies in retaliation to strict economic sanctions and cuts supply lines.

Such a move would prove devastating for some countries which have not adequately secured alternative supplies or accumulated sufficient reserves. It would also increase the demand for gas on the global market as countries look elsewhere for supply. This would likely lead to another surge in gas prices, but also other energy commodities such as thermal coal and oil as nations search and bid for substitutes.



The possibility of such action from Russia has become more apparent recently as Russian gas flows to Europe have been trimmed significantly. Recently, the Russian-owned gas supplier Gazprom cut supply to Europe via its Nord Stream pipeline for three days of maintenance. However, it was announced that supply would not resume just hours before the scheduled reopening with no timeline for restarting. This has prompted further concerns of a possible cessation to gas flows during winter.

Some nations, such as Germany, appear well-equipped for such an event having diversified away from Russian supply, built up considerable gas reserves, and already implemented strict energy usage restrictions across the country. However, how adequately each country is prepared for a gas moratorium from Russia likely varies considerably across Europe. Additionally, regardless of any one country’s preparedness to a withdrawal of Russian gas supply, there would still be a considerable amount of demand to be filled by the global market which would prompt a further surge in global energy prices and pose a potential risk to the global inflation narrative.

China’s Zero-COVID Strategy

Similarly, there remain considerable risks to the global supply chain which could cause a potential reversal of easing bottlenecks. While most of the world has shifted from a zero-COVID strategy to learning to live with the virus, China is still pursuing a zero-COVID policy which entails harsh lockdown restrictions to curb the spread of the virus.

Over recent months, China has enforced rolling lockdowns across several major economic districts to contain virus outbreaks. Strict movement restrictions have recently been imposed on millions of

people across the major economic districts of Shenzhen, Chengdu, Guangzhou and Dalian. These restrictions have huge consequences for economic activity in the region, including for goods manufacturing which represents a large share of the country's exports. Not only do the restrictions impact the production of goods, but they also have massive ramifications for the operation of logistics transport and shipping ports.

China is at the heart of the global-supply chain and accounts for the largest share of global trade of any other nation in the world. It means that any disruption to the flow of goods in and out of China can ripple through the global supply chain and have huge scale impacts to global trade flows.

We saw this happen during the depths of pandemic and are now only just seeing signs of easing pressures. For the time being COVID outbreaks in China remain relatively contained and have limited the scale of restrictions. However, there is a considerable risk that outbreaks intensify, especially heading into a Northern Hemisphere winter, which could result in more severe and widespread restrictions. This would likely unwind some of the progress we have seen in global supply lines and reignite the inflationary pressures stemming from supply bottlenecks.

Political commentators suggest that any changes to China's zero-COVID strategy are unlikely to materialise until after the Communist Party's congress on 16 October. The congress is poised to anoint Xi Jinping as China's leader for another five years and it is not expected that the party will take any risk relating to a change in COVID policy before the event. However, the passing of the event does not in itself ensure there will be a change in policy. Although the strict stance has detrimental impacts on the Chinese economy, there is a large share of China's older population which is unvaccinated, and the Chinese produced vaccine has showed mixed efficacy. There is still a considerable health risk to reopening. Accordingly, the lingering risk of larger scale outbreaks and lockdowns and their impact on global supply chains is likely to be around for some time yet.

Geopolitical Risks

The invasion of Ukraine by Russia has demonstrated the potential impact of geopolitical tensions on global markets and inflation. While there are still inflation risks linked to the war in Ukraine, there are also other geopolitical risks which have escalated recently, posing considerable risks to the global growth and inflation outlook.

Many political strategists have suggested that the invasion of Ukraine will potentially pave the way for China to pursue similar aspirations for the island of Taiwan. China has made it clear that it considers the island as part of its sovereignty, prompting reports that it will shortly invade and take control of the region. Recent visits to the Island by US officials aggravated the issue and prompted a raft of military exercises by China off the coast of the nation. It is hard to gauge the overall impact of any invasion by China, however, there is no doubt that the aftermath for the global economy would be severe and poses a significant risk to both economic activity and inflation.

China plays a much larger role in global economic activity than Russia, and such an attack would likely have larger consequences for the global economy. There is little doubt the US would react to such an event, either by directly engaging in the conflict, or by way of economic sanctions. The impacts of such interventions would be vast. Additionally, any hypothetical economic sanctions would not only impact China, but also other countries, given China's links with the global economy.

For now, such an event remains a remote possibility. However, as China continues to strengthen its military capabilities and builds stronger ties within the Asia-Pacific region, the odds of increased tension in the region are likely to rise. A more realistic risk in the near term, which could have

ramifications for inflation, revolves around the escalation of trade sanctions and tariffs between China and other nations. Such actions could be prompted by far less significant discord, including any remarks or stances adopted by nations in opposition of China's claim on the island of Taiwan or any military or economic alliances struck within the region.

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