

Introduction

This quarter has been interesting in many ways - two out of five members of team Infradebt experienced a rate hike for the first time in their working lives (guided by two veterans who have seen it all and a third who claims he is much younger), AEMO implements price caps across multiple states and then suspends the NEM for the first time in history, the unemployment rate in Australia hits a 50-year low of 3.9% and last, but not least, Australia also has a new government. As they say, may you live in interesting times!

We have four articles this quarter:

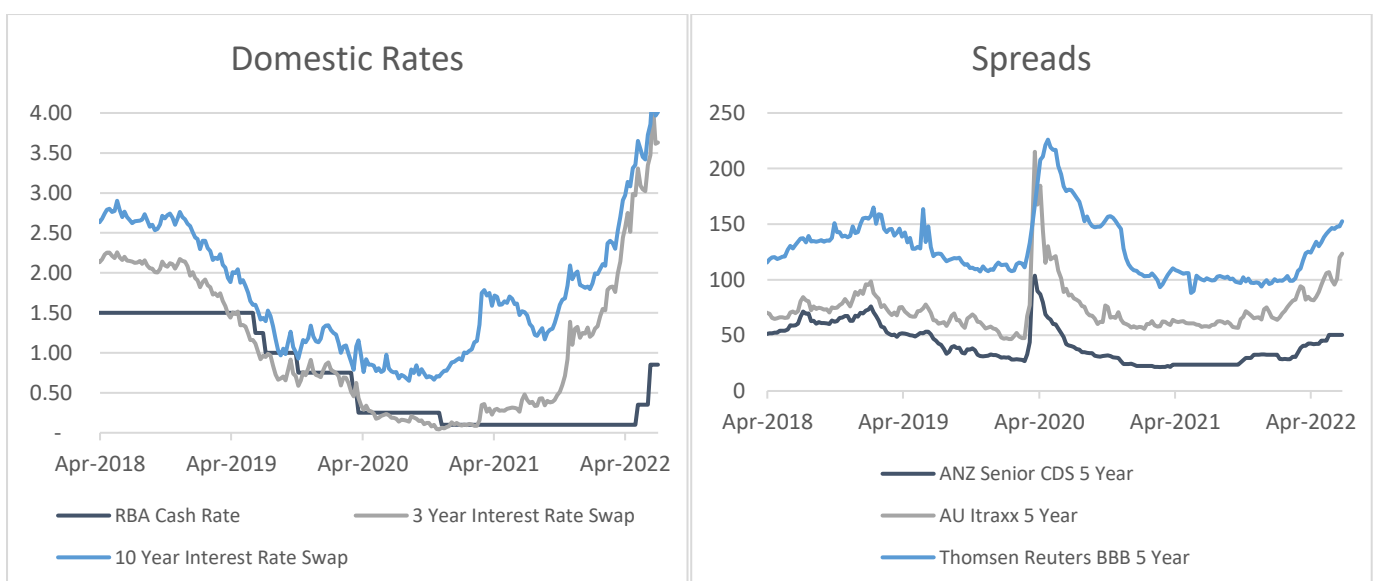
- What will it take to get inflation back to 2-3%?
- What will it take to fix Australia’s electricity market (and what wont)?
- Ready for take-off? Airports sector update.
- What happens when the hunt for yield reverses?

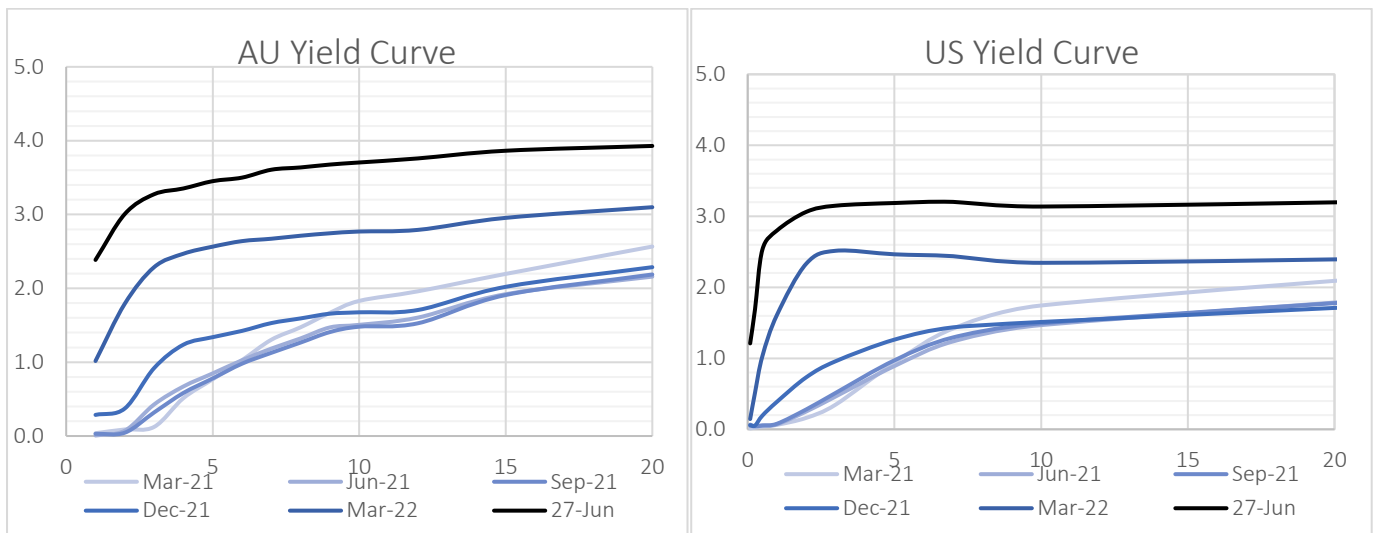
Markets update

The charts below don’t really do justice to the size and speed of the move in risk free interest rates over the last two or three quarters. With the exception of Japan (for now), central banks have pivoted sharply to become fierce inflation fighters. In Australia, this has seen the RBA abandon its attempt at yield curve control, leading to a particularly sharp increase in 3 year interest rates.

The consumer price index in the US rose to 8.6% in May on an annual basis. The market had been expecting inflation to have peaked in April when it had reached the record 40 year high, but those expectations have been shattered as the May figures are an increase of one percent compared to April. Throughout the quarter, we have observed a very steep yield curve as the Fed has suggested that a one percent rate rise is also on the table in the upcoming meetings. At home, we have seen the same tone being used by the RBA. We have seen two rate hikes so far, but the market has priced in further hikes as the yield curve suggests a three percent RBA cash rate by the end of the year.

We have also been paying attention to credit spreads, which are also marching wider. Compared to the start of the calendar year, spreads on the five-year investment grade debt have increased by around 50%. Combined with the rise in base rates, this is a significant tightening in financial conditions.





New issuance and refinancing

Date	Borrower	Instrument	Size (\$m)	Term (Yrs)
March	Endeavor Energy	Loan	920	5
March	Bungala One Solar Farm	Loan	145	4
March	Bungala Two Solar Farm	Loan	459	4
March	Pluto LNG Train 2	Loan	4,640	7
April	Westconnex	Loan	540	2
April	Longreach and Oakey 1 Solar Farm	Loan	60	5
April	Transurban	Loan	825	5
April	Nexif Lincoln Gap Wind Farm and Snapper Point	Loan	397	5
April	NSW Electricity Networks	Loan	525	5
April	Australia Towers Network	Loan	3,045	3
April	Transurban QLD	Loan	150	3
May	Ausnet Services	Loan	750	3/7/10
May	Edify Energy Riverina BESS	Loan	162	5
May	East Coast Rail	Loan	515	1/2/5
May	Aurizon	Loan	1,450	2/3/5

Equity and other news

- Australian Tower Network, owned by Australian Super and Singtel is acquiring telecoms tower company Axicom for \$3.58bn following an auction.
- Igneo Capital Partners, owned by First Sentier Investors has agreed to buy Waste Management NZ for NZ\$1.9bn.
- Igneo Infrastructure Partners has agreed to buy Elliot Green Power. EGP has 302MW of operational solar assets in Australia including the 132MW Nevertire Solar Farm, 95MW Susan River Solar Farm and the 75MW Childers Solar Farm.
- Morrison & Co, Brookfield and Commonwealth Superannuation Corporation have signed a \$3.62bn deal to acquire Australian fibre company Uniti Group.
- Federation Asset Management has agreed to buy a majority stake in Edify Energy's 150MW/300MWh battery projects in NSW.
- The new Labour government has boosted the emission target to a 43% reduction in emissions by 2030, an uplift from coalition government's target of a 26%-28% reduction by 2030.
- AGL Energy has abandoned its demerger plans as the board could not secure 75% of vote given strong opposition led by Mike Cannon-Brookes. Cannon-Brookes has purchased 11.3% of AGL.
- Jemena has suspended its investment in 14D's Aurora Energy Project in South Australia. The project included a 140MW/280MWh battery project, 70MW solar PV project and 150MW concentrated solar power facility.
- Neoen has signed a virtual battery contract with AGL for up to 70MW of its 100MW/200MWh Capital Battery project in the ACT. This contract enables AGL to virtually charge and discharge 70% of the battery's capacity to hedge its customer load.
- Spanish utility giant Iberdrola acquired the rights to the 1GW Mt James wind project in Queensland.
- Origin has acquired the up to 900MW Yarrabee Solar project located in New South Wales from Reach Solar Energy and PwC Australia.
- InfraRed Capital Partners and Macquarie capital are selling 60% equity stake in the 228MW Lal Lal wind farm in Victoria.
- Italian utility company Enel are selling a substantial shareholding in Enel Green Power's Australian platform. Enel Green Power's assets include the two 138MW Bungala Solar Farms and the 34MW Cohuna Solar Farm.
- Australian Energy Market Operator (AEMO) suspended the spot power market on June 15 to directly control dispatch.
- BP has secured a deal to buy 40.5% stake in the 26GW Asian renewable Energy Hub project in Pilbara, WA.
- Rio Tinto has launched a tender process to secure offtakes for 4GW of renewable capacity to power its aluminium assets in Gladstone, QLD. This should underpin a substantial wave of new renewable developments in Queensland (and likely also bring forward the closure of some Queensland coal generators).
- The New South Wales government has announced a \$1.2b Transmission Acceleration Facility will be included in the FY23 state budget.

What will it take to get inflation back to 2-3%?

Inflation in the United States and Australia (and most parts of the rest of the world) has broken out from the 2-3% typical range of the past few decades. For the 12 months to end May, inflation in the US was 8.6%. The RBA governor recently predicted inflation could exceed 7% in Australia. This has put bond markets in a tailspin as market participants scramble to guess the future path of monetary policy and interest rates in light of this inflation shock.

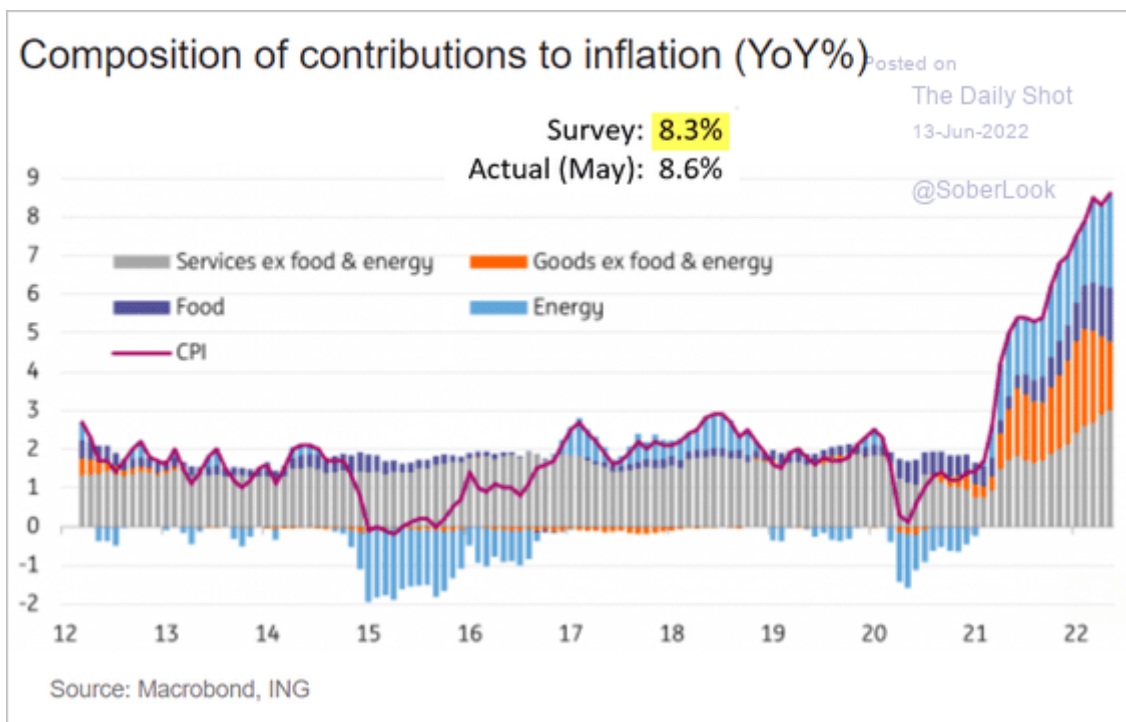
At the core of this are two questions:

- What will central banks need to do to get inflation under control?
- What level, that is medium term inflation rate, will inflation revert to after the current spike?

These are really hard questions.

Instead, this article tries to ask a closely related – but easier question. The question we are going to try to answer is what would it take to get inflation back to 2-3%? For this discussion, we are going to focus on the US CPI data, but most of the issues discussed would apply reasonably equally in Australia.

The chart below shows the US annual CPI over the past decade and also the key contributions to that outcome, split between goods, food, energy and services.



For the period 2012 to 2021, inflation in the US was incredibly stable at around 2%. This outcome was almost entirely driven by the rising cost of services. That is, wages grew steadily and the cost of increased wages fed through to services inflation (given that the biggest cost of services is labour). For the nine years to 2021, this was basically all of CPI. Goods and food prices over this period were basically flat (i.e. not contributing to inflation).

Over these nine years, there were periods where energy was a significant addition or deduction to CPI, and this pushed inflation above or below the 2% trend for a while.

Where the chart gets interesting, is in 2021. That is, when the US economy started re-opening post Covid lockdowns. Over the last year inflation has exploded. This is driven by four factors:

- Wages (and labour shortages) have seen services inflation rise moderately – up to 3% or so compared to the 2% long-term trend.
- Goods prices have exploded and are a material contributor to inflation for the first time in decades. This reflects supply chain shortages as Covid (or Covid government stimulus) sees a big substitution from services to goods (ie, everyone buys a bread maker during lockdown rather than going out to a restaurant – or for Australians, we buy a house).

- Food prices jump. This reflects a range of factors, including the strong link between food and energy (energy is a big cost contributor to food prices) as well as the impact of the Russia/Ukraine conflict (and those countries role as food and fertiliser exporters).
- Energy prices explode. This reflects the Russia/Ukraine conflict as well as likely underinvestment in the energy sector over the past five or six years (ie post the collapse of the US shale sector in 2015 and 2016) which has been highlighted by the rebound in energy demand as the global economy reopens post Covid.

This is how we have got to 8.6% inflation in the US in May 2022. But what happens from here and what would it take to get back to a 2-3% annual rate?

Mathematically this is simple – you need average prices rises to fall to 2-3%. Duhh.

But the point I am making is that so called base effects are powerful. Energy prices simply remaining where they are now – not continuing to rise from their already elevated levels – would see the energy contribution to CPI drop to zero over 12 months.

This is quite possible. We are not making a forecast one way or the other, but it is quite possible.

Similarly, spending could shift from goods back to services as travel reopens (and who needs two bread makers). This could see goods switch from being a contributor to CPI to a detractor (and this would be consistent with the recent profit warnings from big US retailers like Target and Walmart). However, it is not just Covid that has driven goods price rises, the reversal of globalisation (tariff barriers and re-onshoring of production), are also drivers of inflation. Thus, goods inflation might be a bit stickier than you think.

But putting it all together, what would you need to happen for CPI to be back at 2-3% in one or two years time? In my view, it would require:

- a recession so wage growth falls back, which would see services contribution to drop back to 2% instead of 3%; and
- Goods ex food and energy back to zero or even a mild negative. That is, back to full globalisation (or more likely, some ongoing supply/trade snarls, but more than offset by a global recession); and
- Food is probably going to still be a positive contributor. Food shortages caused by Russian/Ukraine (both direct and indirect through fertiliser supply chain) seem hard to fix quickly; and
- that basically means to get to 2-3% total inflation would need energy to be a reasonably big net negative. That is, energy prices something like 2015 when oil went from \$100 to \$50. This is not impossible – it is important to remember that oil (and energy) is a price inelastic good. Russia is only about 10% of global oil production – and the net reduction in Russian supply as a result of sanctions is only a small portion of this – but this disruption has seen a 30%+ spike in oil prices. Thus, it might only take a relatively small amount of demand destruction (through a recession) to have a quite significant impact on oil/energy prices. A reproachment between Russia and the west wouldn't hurt either.

In conclusion - it is quite possible for CPI to revert to 2-3%, but you need to have a reasonably large global recession to get this outcome. There are signs on the fringes that this might occur – EU is in a very sticky situation and the growth outlook in China is uncertain with continued lockdowns. It will be interesting to watch how quickly US growth responds to rising interest rates.

One thing you can say for certain, is that 2-3% medium term inflation is not consistent with a soft landing in the US. If the US slows growth/demand slowly then:

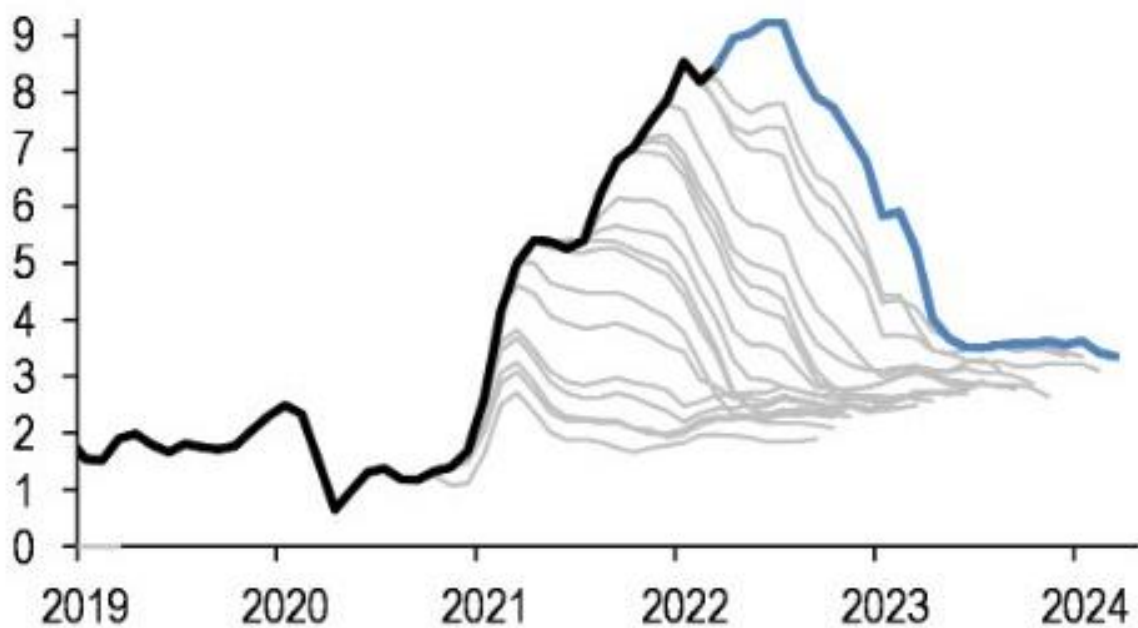
- Wages and labour markets stay reasonably robust -services CPI remains closer to 3% than 2%; and
- Oil prices stay high – no net detractor from CPI from energy (and in a worse case, a re-opening of China and its associated oil demand could see oil prices take a leg higher);

- which means to get to 2-3% inflation you need net detractions from CPI from goods and food like you haven't seen in last decade. For goods in particular it doesn't make sense, outside of a recession, that you would have a rapid detraction from CPI.

This view is consistent with the market consensus. The chart below shows implied inflation from US inflation swap curves. Note the back end of this chart, where market expectations of inflation post the current spike are gradually shifting up.

It is this shift that is particularly scaring bond markets.

Realized headline CPI inflation versus inflation implied by current inflation swap curve and historical swap curves*; %



What will fix Australia's electricity market (and what won't)?

I won't be telling readers anything new to say Australia's national electricity market (NEM – which operates the east coast grid from QLD to SA) is broken. Every newspaper and TV headline has been shouting that message. The market has been suspended by AEMO (the market operator). This suspension was triggered by the deteriorating function of the market – including in the days before the suspension, the need for AEMO to constantly direct market participants outside the normal dispatch process. The market was also experiencing daily Lack of Reserve (LOR) warnings as extensive coal outages, record gas prices, arcane market rules and a winter cold snap combined to leave the east coast short of electricity.

While many things are to blame for the crisis, I am reminded of the old adage of to “Never waste a crisis”.

All sorts of groups – each with their own agendas – are coming forward with suggestions about what to do to fix the NEM. It is always important to judge these solutions against the vested interests of the party suggesting them.

However, this is my take on the current crisis.

Let's start with a list of things that won't fix it:

- **Capacity markets.** This can't make any difference in next one or two years. If we wanted this, we should have done it five years ago! We need to be very careful about paying capacity payments for capacity that isn't actually delivered. Under the current market structure, a coal plant which is broken is potentially losing its owner in opportunity or direct costs of \$14,000/MWh while it is broken. That is an incredibly strong incentive to get coal plants back online. Most capacity market designs have lower caps on spot prices (eg the cap in WA is \$290/MWh compared to \$14,000/MWh for the NEM). This actually means there are **weaker** incentives for plant operators to ensure availability, not stronger. There is a difference between being paid to exist (which is what a capacity payment ends up being) and a penalty for not operating when needed (which is what high current spot prices are providing).
- **Gas reservation policy.** This would just be a wealth transfer from exporters to domestic users. Australia is a nation of exporters – how will we maintain the high moral ground on trade issues if we do this? Australia needs to transition, and high prices is part of what drives that transition. It's not in our long-term interests to hide from high gas (and fossil fuel) prices behind a trade wall.
- **Building new coal plants.** Too slow, too expensive (fuel and capital cost), too polluting. Building a new coal plant is trying to fix a short-term problem with a medium-term stranded asset.
- **Building nuclear plants.** Too slow, too expensive, too inflexible. Nuclear is baseload and we don't need baseload in a world of cheap renewables. Maybe nuclear does make sense for countries with an established well-regulated industry (and who can manage the waste/safety risks) and who can't access sufficient cheap renewables – but that is not Australia.

List of things that could help:

- **Rooftop solar.** This would be a small positive, but actually one of the quickest sources of new supply (ie individual installations only take a day or two). However, need to be smart, there are some suburbs that are saturated and so this isn't open to everyone everywhere.
- **Household batteries and EVs.** Anything that makes demand more flexible will be a long-term positive. Flexible demand is the equivalent of dispatchable supply. Need to start building this into regulatory frameworks that flexible demand should be able to benefit from lower costs.
- **Clear policy including specific climate objective in national electricity rules.** Our planning framework would be much simpler (and improved) if we started with an explicit orderly shutdown strategy for all coal plants. That is, start with a plan to shut all coal plants (which is the best strategy from a long-term cost and environmental perspective) and then work out an orderly process for all the things needed to replace this capacity (ie more renewables, more transmission, more storage). If we have learnt one thing in the last few months – it is the simple fact that we need the replacements for coal plants to be in place before we shut them, not after.
- **Time.** Broken coal plants will come back online (and several units have come back in the last few days). Winter will end – and Spring is a period of abundant supply from renewables. This should materially reduce pressures. However, while ever international coal/gas prices are at sky-high levels we should expect expensive electricity in Australia. Ultimately the solution is building more renewables which will take two or three years. However, let us not screwup the medium and long-term as part of the desperate search for a short-term fix (eg capacity payments for coal plants anyone).

None of the above is new, and some of it is certainly challenging (with any policy there are winners and losers), but until there is clarity in the investment environment, it will slow the transition and have unintended consequences (as we are currently experiencing!).

Ready for take-off? Airports sector update

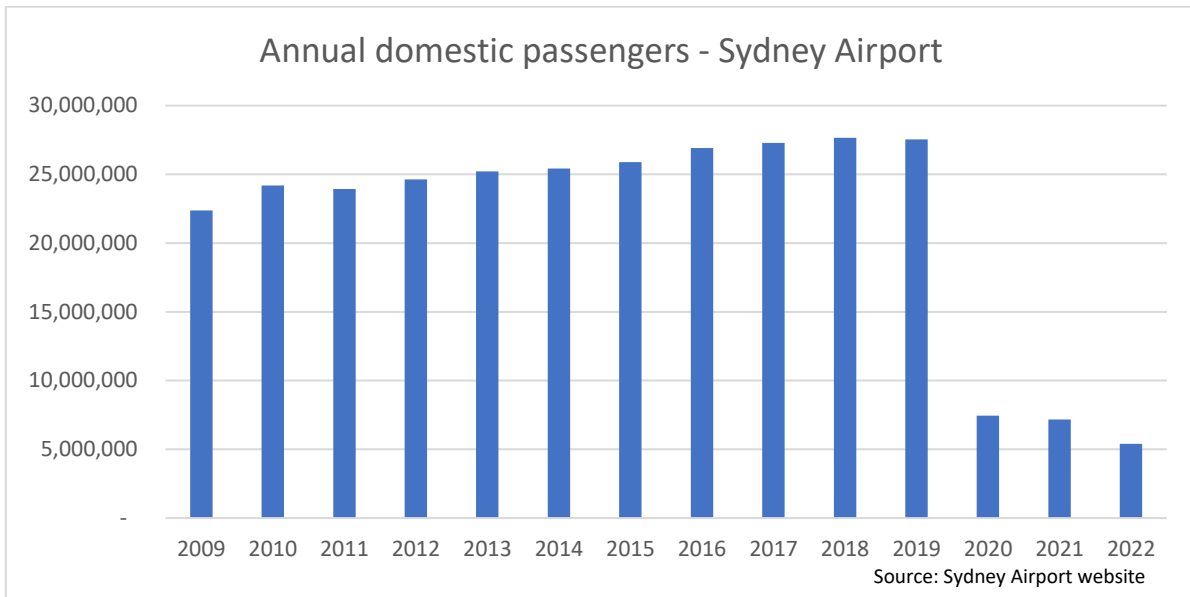
Airport and passenger volumes

Three hours before an international flight and an hour before a domestic flight (or only 40 minutes if you are in Canberra) was the rule we remember before heading to an airport pre-covid. Covid has changed many things and lately we have seen wait times at the major airports blowing out. We decided to investigate how have the airports been performing since the last time we looked at them in Q3 2021.

With no more lockdowns, state and international borders are open to domestic and international passengers. The Government has ended mandatory pre-arrival testing and airlines are also dropping mandatory inflight mask requirements to slowly transition back to a pre-covid travel environment. Elsewhere around the world, border restrictions have largely ceased and the travel rebound was well underway. We have been tracking the major airports around the world and have seen passenger numbers nearing 75% of pre-covid peaks.



At Sydney airport, domestic passenger numbers have risen very quickly and reached almost 87% of pre-covid numbers on a monthly comparison basis (see above). While it will take a while for this to feed through to annual numbers (see chart below with passengers for the calendar year), the signs for domestic passengers are good.



However, international passengers are still lagging (see chart below). This reflects Australia’s unique country mix (compared to Europe). In particular, passengers from China, New Zealand, and USA represented approximately one-third of the international travellers to and from Australia in 2019. With China still in lock down and New Zealand removing restrictions on residents and foreign visitors only in April 2022, international passenger numbers are still in the early stage of recovery.



Sydney and major airports have been facing operational challenges as they look to service surging demand from domestic travellers. With the addition of Rex on major metropolitan routes, domestic travellers have more options on routes and timings and has added pressure on the operational capability of Sydney airport. Currently the airport is going on a hiring spree and is holding a jobs fair to quickly fill the vacant positions to reach pre-covid efficiency and wait times.

In conclusion, domestic passenger numbers have rebounded quickly post Covid and are likely to soon return to pre-Covid trends. However, international numbers remain well below past trends and will remain so while ever key markets such as China remain closed. Given that international passengers are two to three times more profitable than domestic passengers (on a per passenger basis), this slow rebound hurts.

What happens when the hunt for yield reverses?

As a final article, how about a question on investor behaviour? The so called “hunt for yield” is the phenomenon of low interest rates resulting in investors reaching out along the risk curve to achieve their yield/return targets.

Investors who used to be happy with term deposits might switch to buying investment grade bonds. Investors who were happy with investment grade bonds might start buying junk bonds. Pension funds might reduce their allocation to cash and fixed income and allocate more to infrastructure equity and alternatives.

All of these trends, which have been going on for a decade, are a manifestation of the same thing – the hunt for yield. This has been a big driver of investor behaviour over the last decade.

What happens when base rates go the other way?

Investors who previously reached for yield can now go back to their natural risk profile.

Sounds simple doesn't it.

But the reality is probably not so simple. Who do they sell to and at what price? In this environment, “high yield” assets could easily underperform as sellers exceed natural buyers. This leaves those who hunted for yield sitting on a capital loss (and, having a poor risk adjusted return outcome, as they took the most risk when risk was poorly rewarded).

Historically, credit spreads and base rates have been negatively correlated. That is, higher interest rates are usually associated with a strong economy and, hence, with narrow credit spreads (as defaults would be expected to be low).

However, in a rebalancing of the hunt for yield, credit spreads (and risk premiums more generally) could widen as base rates go up, compounding losses.

This will be interesting to watch, as for many portfolios, particularly the balanced options of Australian superannuation funds, the hunt for yield has been built into the very fabric of portfolio design.

