FEATURE ARTICLE: AN UPDATE ON THE AUSTRALIAN PROPERTY SECTOR

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The 'great Australian dream' is a belief that, in Australia, home ownership is the culmination of success and security. It is considered a key cultural icon, with a detached house on a quarter acre (although in the last decade land sizes have decreased considerably in most capital cities with block sizes more like 1/15 to 1/8 of an acre!) fenced-in block of land being the pinnacle.

The Australian dream flourished following World War II, primarily due to the expansion of Australian manufacturing, low unemployment rates, the baby boom (high population growth), and the end of rent controls. Fast forward sixty years, and newspaper headlines will tell you that the Australian dream is a whole lot harder to achieve nowadays, particularly for 'Generation Y'. In addition to the home ownership has been the large and broad-based ownership of investment properties. As at the end of 2016, approximately 40% of home loans in Australia were made to investors, rather than owner-occupiers, up from just 20% in 2012. This has been fuelled by the very friendly tax regime in negative gearing alongside discounted capital gains for assets held longer than 12 months. When combined with a rising property market where a widespread view is held that property only ever increases in value and cannot fall – then you have conditions precedent for very strong demand for investment property.

House prices over the past 20 years have increased faster and longer than in any period since the data was being recorded (circa 1880) according the Australian Bureau of Statistics. Wage growth and inflation have not even come close to keeping up with the pace of growth in housing prices, making housing relatively more expensive in real terms. For example, in Sydney, in 1975 the average home cost four times the median household income, but today the average home costs 12 times the median household income.

House prices in Australia are expensive on a wide range of valuation measures, both relative to historical experience and compared with prices in other countries. This is strongly related to household debt levels, which remain close to record highs. In contrast with many other countries, Australian households have not deleveraged in any meaningful way and continue to carry a heavy debt burden. Recent experience of property market boom and bust cycles overseas highlight the risks to the economy of elevated house prices and household debt. In countries such as the United States, Ireland, and Spain, the rapid run-up in house prices has been followed by a sharp correction, leading to bank failures, financial market stress and generally poor economic performance. We are seeing these concerns being expressed more vocally from the RBA in the current climate. While the Australian market avoided a serious downturn during the financial crisis, we believe that the next downturn will not be so benign, as policymakers have considerably less scope to support markets going forward.

The buying activity in recent years has been largely driven by investors, as the persistently low interest rate environment and generous tax policies have made investing in property very attractive. Investors now make up more than half of new mortgage lending (excluding refinancing), which has led to fears that the low interest rates are fuelling an unsustainable, speculative, debt-fuelled housing bubble, in turn, leading to a build-up in financial risk.

Despite having negative implications for household debt, the strength of the Australian housing sector over the past decade has been very beneficial in terms of the implications for the Australian economy. The economy was expected to go through a 'rough patch' coinciding with the end of the mining boom at the start of this decade, however the robust housing sector (along with pickup in demand in sectors such as tourism and education) helped ease the transition towards the economy's non-mining sectors. The low interest rate environment has been particularly stimulatory for the housing sector, as has the country's population growth. As supply tries to keep up with demand, the ramped-up construction of new dwellings has provided a boost to economic growth and employment.

In October 2014, we reviewed the Australian housing sector. In this work, we had the view that the housing market was in a bubble,

although unlike many offshore doomsday forecasters, we could not foresee a likely near-term catalyst that would bring the market crashing down (catalysts were, and still are in our mind either a recession that results in a meaningful increase in unemployment or a significant increase in interest rates). The mean Australian dwelling price is now 14% higher than it was in October 2014, and 49% higher than its early 2008, pre-financial crisis peak. Two years on and we have yet to see any sort of pull back in the all-important sector (excluding the mining sensitive states of Western Australia and the Northern Territory), however, the concerns about the potential dire implications from a significant pull back in the sector remains if either unemployment or interest rates move considerably higher.

Throughout this month's feature article, we consider the current state of the Australian housing market, by discussing both the inconsistencies across states, as well as relative to other developed country markets. We discuss why housing prices have not faced much of a headwind in the last two decades, and what factors are actually working as tailwinds. We explore what the most likely factors are that could trigger a significant pull back in the property market, with a spike in unemployment likely the most far-reaching one. Finally, we examine the economic impact of a property market correction, which has the potential to be very damaging given the importance of the sector to the country.

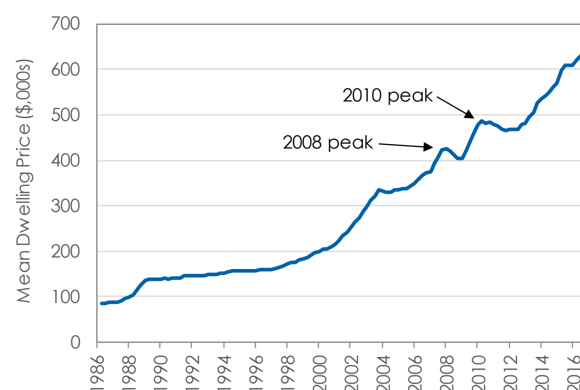
1.1 Australia's Housing Prices

In October 2014, we released a feature article called *'Australia's Property Bubble'*, in which we discussed increasing house prices across the country, to the point that the property sector appeared to be nearing bubble conditions. Since then, house prices, particularly in the nation's eastern capital cities have continued to increase at a breakneck pace. House prices in Sydney and Melbourne continue to track upwards, with no end to the trend in sight. The nation's property sector dominates news headlines and is front of mind for anyone thinking about buying or selling a house. The 1 March 2017 story in the Financial Review titled *'Sydney annual price growth hits 18.4 pc'* is certainly an attention-grabber.

The chart below shows how the mean dwelling price in Australia has increased over the past 30 years, to an eye-watering $630,000 at the end of September 2016. The property market has had two minor pull backs over this timeframe. The first was following the onset of the financial crisis, although the fall in prices was limited due to extraordinarily supportive policy in the form of a drastic reduction in interest rates and direct government support of the financial system and the property market (through First Home Owner Grants). China's huge fiscal stimulus in the financial crisis resulted in continued demand for Australian commodities during this period also helped the nation stave off a further correction to property prices. The second correction took hold as the mining boom was starting to show signs of its imminent unwinding. Australia's shift from being an economy dependent on its mining sectors to a more balanced one, including a newer found focus on its services sectors, has helped minimise the extent of the fall in property prices.

Since the start of 2012 however, house prices have been on a consistently upward trajectory. We discuss the underlying rationale for this trend in Section 1.3 below.

Chart 1: Mean Dwelling Price, 1986 - 2016



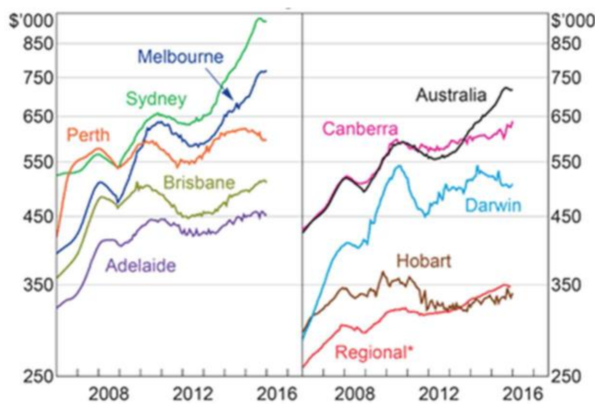
Source: RBA, ABS, Whitehelm Advisers

In the two sub-sections below, we first discuss the housing price trends at a state level rather than at a national level, as the most recent price increases are focused on a few key cities, and is not consistent across the country. We then delve into how Australia's property sector measures up to its international peers.

1.1.1 The Trend is not Consistent across States

In past cycles of house price appreciation in Australia, the trend has often been uniform in that house prices were increasing across the country. Such a statement was true in the early 2000s, following the financial crisis, and in 2012 to 2014. Recently however, house price appreciation has been most severe in key states, their capital cities in particular, as per the chart below.

Chart 2: Australian House Prices



Source: CoreLogic RP Data, RBA

According to CoreLogic data, Sydney has seen an 18% increase in dwelling prices on the year ending in February 2017, while Melbourne has seen a 13% increase over the same time frame. House prices in the western states, have decreased over the past year, with prices declining by 5% in Perth and 4% in Darwin. The full series of results of the most recent CoreLogic data release are shown in Table 1 below.

Western Australia has been particularly affected by the end of the mining boom, given the state's dependence of the mining sector. With the Perth market off around 10% from its highs, it has fared reasonably well considering the extent of the downturn in commodity prices and its knock-on implications for the state's economic growth. That said, there have been significant job cuts across the state as capex by mining companies has fallen off, and the state's unemployment rate has increased since 2012, despite the decrease in the unemployment rate at the national level. The state's labour force participation rate has also been falling, as the end of the mining boom has pushed many labourers into an earlier than planned retirement. Given the clawback in the state's economic growth, the demand pressures for housing have dissipated.

Table 1: CoreLogic's House Price Data, as of 28 February 2017

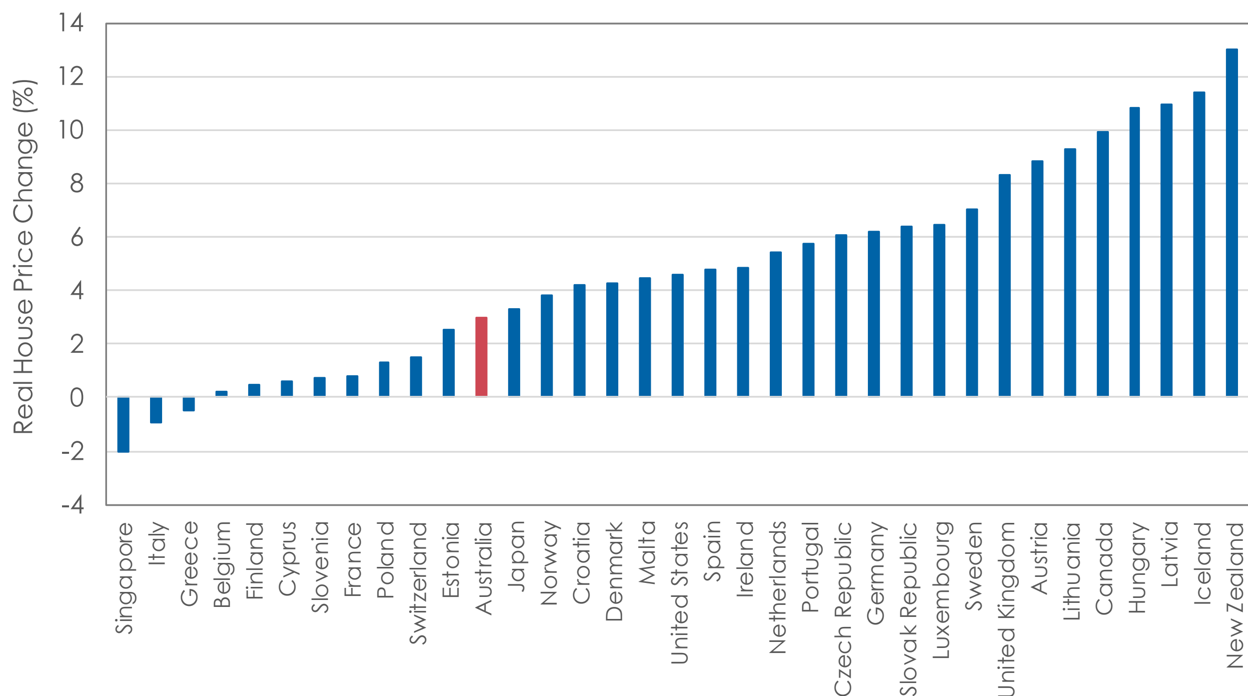
Region	Month	Quarter	Year	Median Dwelling price
Sydney	2.6%	4.5%	18.4%	$795,000
Melbourne	1.5%	5.5%	13.1%	$610,000
Brisbane	-0.4%	0.4%	2.2%	$485,000
Adelaide	0.6%	-0.9%	3.5%	$435,000
Perth	-2.4%	-0.9%	-4.5%	$477,000
Hobart	1.0%	5.8%	5.8%	$374,000
Darwin	-4.3%	-6.0%	-5.3%	$499,500
Canberra	3.2%	3.3%	10.4%	$575,000
Combined capitals	1.4%	3.6%	11.7%	$570,000

Source: CoreLogic, Financial Review, Whitehelm Advisers

1.1.2 Versus its International Peers

International comparisons continue to be supportive of the view that Australian house prices are overvalued. Australia has been found to have some of the most expensive housing in reports by the International Monetary Fund (IMF), the Bank of International Settlements (BIS) and the Economist. Direct international comparisons are difficult as the underlying data may not be consistent due to differences in quality adjustments and house sizes. With that consideration in mind, the change in real house prices for developed countries as reported by the IMF is shown in the chart below. As compared to previous years, Australia no longer sits at the right-most side of the chart, recognising that at the national level, house price gains have moderated over the past year.

Chart 3: Change in Real House Prices Over Past Year, according to IMF



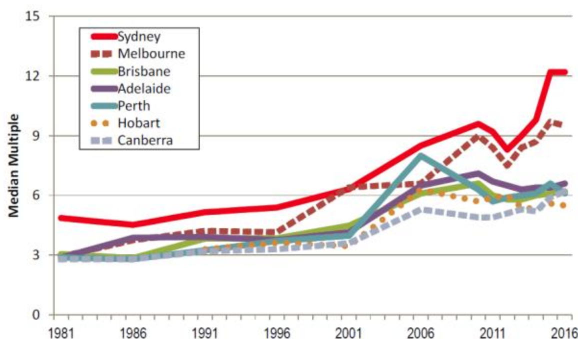
Source: International Monetary Fund, Whitehelm Advisers

Unfortunately, the disparity of house price appreciation across Australia gets muddled in the way that the IMF presents its data at a country level, because when it comes to Australian cities, they are certainly keeping pace with other cities in developed market countries in terms of house price appreciation and housing affordability.

In mid-January 2017, research group Demographia released its 13th annual survey, which assesses housing affordability in 406 urban centres across nine developed countries. The group's method for measuring housing affordability is to compare the 'median multiple' (median house price divided by the gross annual median household income) for each of the centres covered in the survey. All but seven of the 54 Australian centres included in the survey were deemed either 'Seriously Unaffordable' or 'Severely Unaffordable'. Of the seven that were deemed affordable, four of them are heavily dependent on resource extraction, and while the economies of these centres have faced a downturn in recent years coinciding with the end of the mining boom, house prices reflect this, but the broader geographic income data does not sufficiently represent the downward economic trends.

Of the 406 centres, Sydney ranks as the second most expensive, behind only Hong Kong, while Melbourne ranks fifth. The spike in median multiples for the Australian urban centres is shown in the chart below.

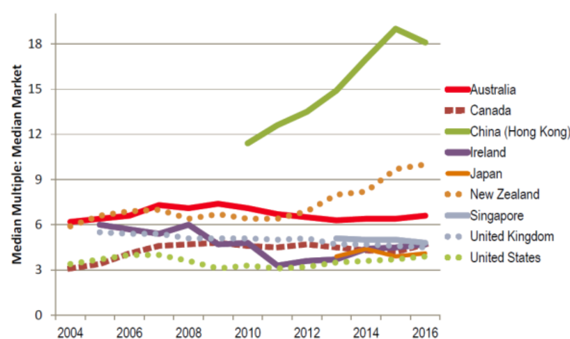
Chart 4: Capital City Housing Affordability, 1981 - 2016



Source: Demographia

In terms of country averages, Australia was ranked the most unaffordable of the major developed country markets apart from Hong Kong and New Zealand (survey only covers Auckland, Christchurch, and Wellington).

Chart 5: Housing Affordability by Country, 2004 - 2016



Source: Demographia

It is evident that the Australian property sector remains one of the most expensive relative to the property sectors of its developed market peers. That said, the story in Australia has changed from being a country-wide theme to one that is localised to the two largest capital cities in Sydney and Melbourne. Nevertheless, housing affordability is still a major issue across the country as per a variety of metrics, as we discuss in the next section.

1.2 Affordability Measures

Measures of income and wealth show that the increase in house prices have made many Australians relatively poorer. Housing affordability has become a major issue in Australia, given that property price growth far outpaces the growth of real wages or inflation.

In this section, we present a few key metrics which present the facts on housing affordability.

Prices to Household Income

If the upward trend in house prices coincides perfectly with an equally sized increase in household disposable income, the issue of housing affordability would not be nearly as severe. Unfortunately, the long run data shows that this is not the case, as there has been a significant worsening of housing affordability measures, including the price to income ratio (the cost of an average house relative to average household disposable income). Such a measure is an important one for obvious reasons – we would usually expect and hope house prices to move in line with household disposable income or else houses are becoming increasingly less affordable.

The chart below shows the increase in the ratio of the average house price to average household disposable income. While the value of the ratio depends on the measure of house prices and income used, each measure shows the same general trend. Up until the 1950s, house prices remained between one to two times average annual income. The ratio was still less than three in the mid-1980s. However, since the mid-1990s, house prices have increased faster than income and the price to income ratio has increased to a level just greater than five, as of the end of September 2016. This represents a significant worsening of housing affordability for the average household, particularly for the cities that have experienced the fastest pace of housing price growth.

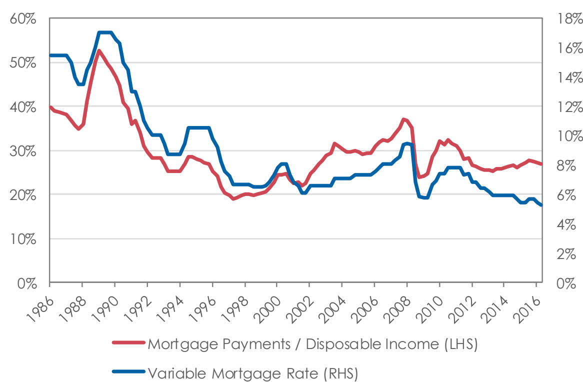
Chart 6: House Price to Household Disposable Income, 1986 - 2016

Source: RBA, ABS, Whitehelm Advisers

Mortgage Payments

The price to income ratio is the simplest measure of affordability, however, it does not take into account the other factors affecting housing affordability. The mortgage rate is the biggest determinant of housing affordability, aside from income. As interest rates have decreased significantly since the 1980s, the variable mortgage rate has also trended downwards. The chart below shows the size of mortgage repayments relative to average household income, based on a variable rate mortgage on 80% of the purchase price of an average property. The affordability measure is highly sensitive to the level of interest rates, which explains the relative stability of the ratio in the past six years, given that interest rates have fallen, but house prices have increased.

Chart 7: Mortgage Repayments as a Proportion of Household Income, 1986 - 2016



Source: ABS, RBA, Whitehelm Advisers

Focusing on current mortgage rates does not give a complete picture of affordability, as this ultimately depends on mortgage rates over the entire span of the mortgage which can stretch out to 20 to 30 years. That said, we note many new investors and home owners will borrow the maximum, or close to, what they can afford and therefore are exposed to near term interest rate rises unless they have a corresponding increase in income levels to service that mortgage.

This also exaggerates the impact of interest rates as it considers the impact on new home purchases, when in reality many homeowners have accumulated significant equity or own their home outright. Housing affordability in the late 1980s and early 1990s appears poor primarily because of the record high interest rates, which declined substantially over the next decade. Likewise, one should treat the apparent improvement in housing affordability in the wake of the financial crisis with caution, as it largely reflects low interest rates at the bottom of the cycle. Nevertheless, the chart above still clearly shows the deterioration in housing affordability during the late 1990s and early 2000s housing boom, which was largely driven by price increases rather than interest rate movements. Just prior to the financial crisis, property prices had increased to the point where mortgage payments as a share of income were at levels last seen when mortgage rates were over 14%.

The Intergenerational Divide

An increasingly significant issue when it comes to housing affordability in Australia is the widening intergenerational divide. As a country, Australia is getting wealthier, however the gains are very much disproportionate across generations. The 'Baby Boomer' generation, typically referred to as those older than 65, have been seeing their wealth increase in large part because they were able to afford houses in their mid-20s and have seen the value of their assets increase dramatically over the past forty years. The family home has quickly become their key source of wealth, which has allowed the baby boomers' to stand by and watch their wealth multiply.

For today's 'Generation Y', home ownership is much more difficult. As we have already discussed, house prices are now at a much higher multiple to income than they were even ten years ago. Wage growth and net worth, particularly for both Generation Y, but also for Generation X, has not kept up with the rate of increase for house prices, to the point that younger people are having a tough time getting into the property market at all. This has become a clear indication that housing affordability has become a serious issue in Australia.

The intergenerational divide of wealth in Australia has become a politically sensitive and polarising issue. On a radio show in 2016, when asked about young people being locked out of the housing market, Prime Minister Malcolm Turnbull suggested that young people should be tapping into their parents' wealth to be able to afford to buy a house. Further controversy developed when Bernard Salt, a columnist with the Australian, suggested that housing affordability comes down to dining habits,

'I have seen young people order smashed avocado with crumbled feta on five-grain toasted bread at $22 a pop and more. I can afford to eat this for lunch because I am middle-aged and have raised my family. But how can young people afford to ear like this? Shouldn't they be economising by eating at home? How often are they eating out? Twenty-two dollars several times a week could go towards a deposit on a house.'

While baby boomers use the argument that they paid much higher mortgage rates than the market's current rates, the actual size of mortgage payments depends on the value of the home that was bought. Mortgage payments make up more of household income today than they did 20 years ago, given the rate at which the house price to income ratio has increased.

Baby boomers bought their houses in a market when interest rates were high, but then were able to ride the wave of watching interest rates go down and the value of their assets skyrocket. Young people who want to buy a house today have to stomach the skyrocketing prices, knowing that while the mortgage rates are currently low, an increase from the current low levels will cause their interest payments to increase dramatically.

Generations X and Y have had to take on much higher levels of household debt in pursuit of the great Australian dream, which is an issue that future generations will have to grapple with. Household debt does not just go away, particularly given that, unlike in the US, homeowners cannot just send their keys to the bank if they cannot afford their mortgage payments anymore.

There are a variety of other metrics which depict the nation's worsening housing affordability, but the price to disposable income and the ratio of the size of mortgage payments to disposable income paint the same picture. Additionally, when we consider just how wide the divide in intergenerational wealth has become, it is apparent that the country is currently grappling with a very slow moving, but significant issue. We will discuss another housing affordability metric, household debt to disposable income in the latter half of the feature article, which also shows that the high house prices have led Australian households to be far more leveraged, and thus sensitive to changes in interest rates. First though, we delve into why Australian house prices have experienced the steep appreciation as we have just discussed.

1.3 Why So Expensive?

As we will highlight in this section, the state of the property sector in Australia is primarily being driven by supply side and demand side factors. In this section, we touch on the most significant of these factors, including interest rates, economic growth, and immigration.

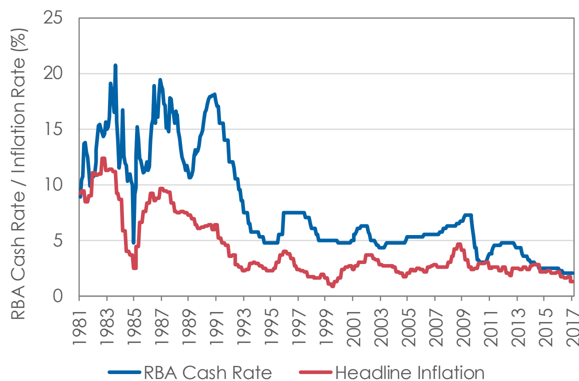
Interest Rates, Monetary Policy, and Deregulation

In the 1980s, the Australian financial sector went through a process of deregulation, and paired with the commencement of a shift to a lower inflation and lower interest rate environment at the end of the 1980s and into the early 1990s, Australian households had much easier access to credit and financing. The easier access to credit made the financing market more competitive, thus reducing its cost. The relatively low inflation combined with the increased competition in the mortgage market reduced the interest rates on housing loans. Households that had been credit-constrained in a higher interest rate environment were increasingly able to borrow more and pay higher prices for a given level of income.

Given that house prices were increasing at a much faster rate than household income during this period, the result was much higher levels of household debt, the spike of which was seen in the 1990s and 2000s. Despite the deregulation of the financial sector tapering off by the end of the 1990s, the housing sector had established a new steady state with higher prices and higher household debt levels.

Then in the latter half of the 2000s, the global financial crisis took hold of the world, sending central banks on a monetary easing path. The RBA kept its cash rate fairly steady, keeping mortgage rates low. As the impact of the financial crisis in Australia was much more moderate than it had been for many other countries, the RBA increased rates again, but not for long, as it tried to keep the country growing as it transitioned away from its dependence on resources, as the mining boom was coming to an end.

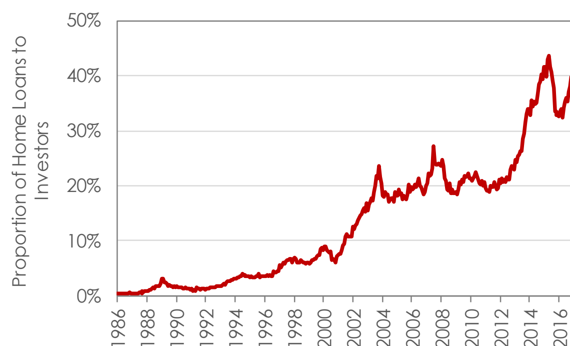
Chart 8: RBA Cash Rate and Headline Inflation, 1981 - 2017



Source: Bloomberg, Whitehelm Advisers

As a result, interest rates are at all-time lows. Not only do low interest rates make debt servicing significantly cheaper for homeowners, it also makes property a very attractive asset class for investors. Combined with the very favourable tax policies that make investing in property both feasible and appealing (we discuss the specifics of the tax policy below), investors have turned to property in increasing numbers. The chart below shows that as of the end of 2016, approximately 40% of home loans in Australia were made to investors, rather than owner-occupiers. This figure has increased from 20% in only four years.

Chart 9: Proportion of Home Loans to Investors, 1986 - 2016



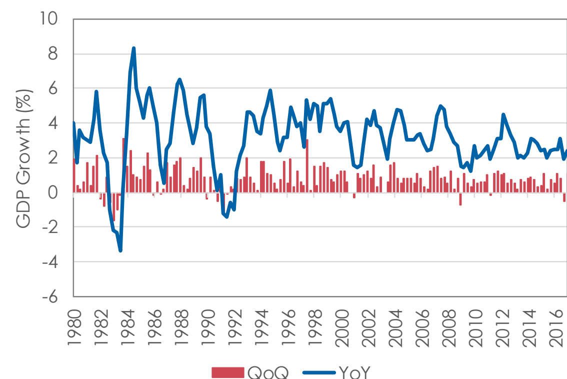
Source: ABS, Bloomberg, Whitehelm Advisers

An excellent example of the relationship between the cash rate and the popularity of property as an investment is also shown in chart below. The RBA cut its cash rate twice in 2016, by 25 basis points in both May and August. These cuts caused investors to jump on the opportunity to buy investment properties at even lower rates.

25 Years of Economic Growth

As compared to many of its developed market peers, Australia has had a relatively robust track record of economic growth. Calendar year 2016 marked the 25th consecutive year of economic growth, with only four quarters with a negative GDP print during that time. Most developed nations are not able to boast about such an impressive track record because the global financial crisis had a much more devastating impact on them than it did in Australia. The Australian GDP growth rates are shown in the chart below.

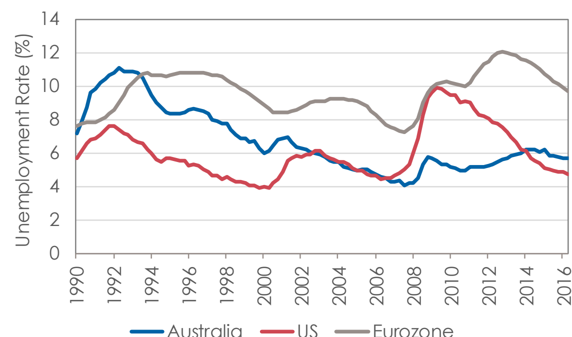
Chart 10: Australia's Annual and Quarterly GDP Growth Rates, 1980 - 2016



Source: Bloomberg, Whitehelm Advisers

Unlike its peers, Australia did not suffer from the same magnitude of rise in unemployment, did not see its productivity diminished by as much, and was able to get back on its feet much quicker. The unemployment rate since 1990 is shown in the chart below, as well as the unemployment rates for the United States and the Eurozone for comparison.

Chart 11: Unemployment Rates in Australia, United States, and Eurozone, 1990 - 2016



Source: Bloomberg, Whitehelm Advisers

Australia was able to avoid the fate of the United States and much of Europe during the financial crisis in large part because of a substantial fiscal stimulus package implemented by then Prime Minster Kevin Rudd, as well as China's continued appetite for Australian-produced commodities (in turn supported by a huge fiscal stimulus package inside China). The additional bonus of the government not having to bail out the country's banking sector beyond that of lending support with a Government Guarantee helped sustain economic growth during a period where many countries were experiencing the opposite.

Immigration and Population Growth

Population growth is a key driver of economic growth and strength in the property sector. Australia's population ticked over 24 million in 2016, having added the last million people in a record time of just three years. Since just before the financial crisis, immigration has been the most significant driving force to the population growth. For the year ended 30 June 2016, net migration accounted for 55% of the population growth, while the other 45% comes from natural growth (births minus deaths). While this figure has come down from its 2009 peak of 66%, it is still very high.

An increase in population is good for the demand side of the housing sector equation, but at a certain point, supply cannot just keep up. House prices, particularly in cities that experience the most significant increases in population growth, increase accordingly.

The design of Australia's immigration system has made the demand problem worse because the system favours highly skilled working-age migrants who bring the necessary skills with them to land well-paying jobs.. Such migrants will typically move to cities such as Melbourne and Sydney and will be in the market to buy a house. While such an immigration scheme is incredibly beneficial for supporting economic growth and improving productivity, it can be damaging for already inflated housing prices.

Urban Consolidation

Per Demographia's study that was earlier referenced, one of the main contributors to the drastic increase in property prices in Sydney and Melbourne has been the implementation of 'urban consolidation' or 'urban containment' policies. Such policies restrict the extent of the competitive market for land on the urban fringe, and are typically implemented so that governments and their planning departments can determine where new housing is allowed to be built. In an effort to contain urban sprawl, and to protect green belts, parks, and environmentally protected areas, the policies encourage greater density in existing residential areas rather than allowing houses to be built on yet to be developed land.

Essentially, by limiting what can be built on the urban fringe of Australian cities, a key supply pathway is blocked. As the current Prime Minster of New Zealand Bill English said in a previous Demographia study,

'Housing affordability is complex in the detail – governments intervene in many ways – but it is conceptually simple. It costs too much to build a house in New Zealand. Land has been made artificially scarce by regulation that locks up land for development. This regulation has made land supply unresponsive to demand. When demand shocks occur, as they did in the mid-2000s in New Zealand and around the world, much of that shock translates to higher house prices rather than more houses. It simply takes too long to make new land available for development.'[1]

Homeowners in many suburbs of the main cities in Australia have pushed for the urban consolidation regulations in an effort to preserve their own quality of life. Housing affordability has only worsened as a result, and has been particularly noticeable in Sydney and Melbourne. It is a case of the 'Not In My Backyard' sentiment in which people recognise that housing affordability is a problem in Australia, but they would rather have there be no impact on their lifestyle than have the problem fixed.

Tax Policy

Australia's tax system facilitates speculation in housing, most notably through negative gearing, which allows full deduction of losses on investment properties against their income.

[1] Refer to the 13th Annual Demographia International Housing Affordability Survey

Australia is one of few countries to allow negative gearing, along with Canada and New Zealand, both of which have relatively expensive housing markets. Combined with the 50% capital gains tax discount on assets held for greater than a year, this provides a strong tax advantage for investing in property. Investors can claim most property expenses and this can be used as a deduction against their total income reducing their tax liability, while capital gains are taxed at a discounted rate, with payment deferred until when the property is sold.

In a speech given to the Standing Committee on Economics at the end of February, RBA Governor Philip Lowe addressed the implications that negative gearing and the capital gains tax has had on housing affordability. According to Lowe, the combination of the two tax policies has fuelled investors' demand for property, which has, in turn, driven up property prices. Speaking about the effect of getting rid of the two tax policies, he said *'It's likely it would reduce investment demand for a while, and if you have less demand for a while, you'd have lower prices and that would take the heat off the housing market.'*

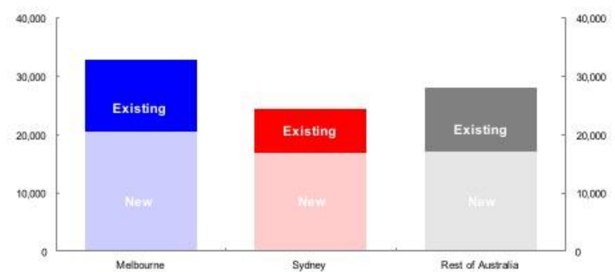
Foreign Investment

Foreign investment in Australian property remains strong, which has been another contributor to the increase in housing prices. Increasing foreign investment reflects low interest rates globally and Australia's growing reputation as a relative safe haven given the nation's relatively strong economic performance. The implications of foreign money on domestic property prices has been a much-discussed issue amongst homeowners, investors, and politicians.

Foreign investment has been thought to increase Australian property prices because it seemingly adds fuel to the supply shortage fire. A report released by the Australian Treasury in late 2016, however, suggests that the impact that foreign investment has had on property prices is much smaller than previously believed. According to the report, foreign demand for real estate increased house prices in Sydney and Melbourne by just $122 per quarter from July 2010 to March 2015. The impact is thought that it could be as small as an $80 increase in house prices per quarter. In comparison to the $12,800 average increase in overall house prices per quarter, this impact could be considered almost negligible.

This report shows that in large part, the fears of the impact of property investment by foreign investors is somewhat overblown. Nevertheless, several state governments have implemented an additional transaction tax for foreign investors buying residential properties, to both slow the rate of foreign investment and to make a profit from the foreign investment that will occur regardless. The issue of foreign investment is also very much centred on Sydney and Melbourne, and is not a country-wide trend, as in shown in the chart below.

Chart 12: Location of Foreign Investment Approvals, 2010 - 2015



Source: Australian Treasury

Supply/Demand

The points discussed in this section indicate that the drastic increase in Australia's housing prices has largely been as a result of relatively simple economic theory. The country's economic growth, population growth, low interest rates and generous tax policies (in terms of property ownership) have increased demand for housing, particularly in the main cities. Construction activity not being able to keep up with demand, as well as strict regulation over land use, particularly in the main cities, has choked off supply. Based on economic theory, when supply decreases (or stays the same) and demand increases, prices will go up.

1.4 What are the triggers for a correction?

On 1 December 2016, the former Chief Executive Office of the Commonwealth Bank of Australia David Murray warned that the entire Australian economy is vulnerable as a result of the overvalued house prices in several key Australian cities. He compared the speculation

and mania surrounding house prices in Sydney and Melbourne to the bid up of the price of tulip bulbs in the Netherlands in 1634. It is worth noting the details of the tulip price bubble to gain perspective on the current situation in the housing market in Australia.

Tulips were introduced in the Netherlands in 1593 by a botanist who planted a small garden with the intention of conducting research for medicinal purposes. One of his neighbours stole some of the bulbs from his garden and began trading them for money, which kicked off the Dutch bulb trade. Over the decades that followed, tulips became a fad among the country's elite. Soon, ordinary tulip bulbs were selling for very high prices and rare bulbs were being sold for astronomical prices. A single rare bulb could sell for upwards of $3300 in current Australian dollars. At the peak of the mania, often, bulbs were deemed too valuable to plant at the risk of not growing as expected, so it became popular to display the un-grown bulbs.

In 1637, the tulip bubble was at its height. Tulip traders were making fortunes and the government was not having any luck at implementing policies to rein in the prices. It only took one buyer not showing up to pay for his bulb purchase to send panic across the country, leading to a collapse in tulip bulb prices. Bulbs were suddenly worth a hundredth of their former prices.

Murray, who headed up the 2015 Financial System Inquiry, which called for Australian banks to become *'unquestionably strong'* and to strive to be in the top quartile of the banks in terms of safety, was not indicating that he necessarily believes that the Australian property market is on the verge of collapse. Rather, he is trying to show the potentially disastrous implications if house prices in Sydney and Melbourne continue to forge ahead and the RBA and APRA are not able to stay on top of the issue.

In this section, we discuss the key triggers that could be the sign of difficulty to come in the way of a property market correction, much like the one buyer not able to front up the cash for a bulb that caused the tulip bubble to burst. A rise is unemployment could have the ability to destabilise confidence in the Australian economy, and have significant direct implications for Australian financial institutions as homeowners would have much more difficulty meeting mortgage repayment obligations. Additionally, should the RBA opt to increase interest rates in the future, this too could be a trigger for troubling times for the property market.

1.4.1 Unemployment

We view unemployment as being the single biggest concern for the future of Australia's housing market (followed by a meaningful increase in interest rates). A sustained period of high unemployment is one of the main determinants of mortgage delinquency rates. In this subsection, we will discuss both why a spike in unemployment would create considerable downside risks for the housing sector, and in turn the financial sector, and then discuss if we deem unemployment to be one of the housing market's main concerns.

What makes unemployment an issue for the housing sector?

Since the financial crisis, global growth has been subdued relative to historical averages. This has led to dampened growth in labour demand, which in turn, which, in turn, has caused there to be spare capacity in the labour market. In Australia, this has been paired with the end of the mining boom, which has had a significant impact on economic activity. A slowdown of economic activity (but not to the extent of an economic shock) will typically make firms try to contain their costs, leading to minimal or no change to wages one year to the next.

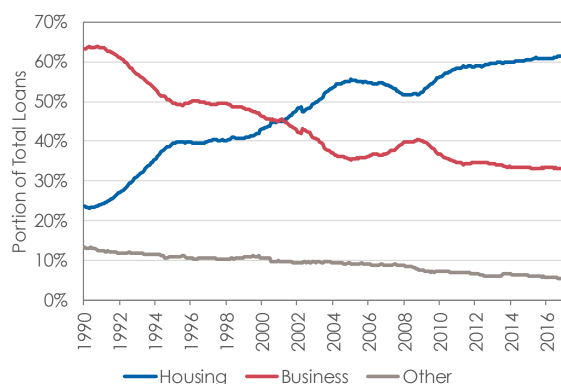
Taking it one step further, an economic shock, including a significant downturn in a trading partner, trade wars, or geopolitical uncertainty, has the ability to significantly disrupt the Australian economy. When costs are already being contained, the next step for firms will be to lay off employees, causing unemployment to increase across the country. This is obviously not an ideal situation for a country to be in, but what are the knock-on implications for the housing market?

Losing a job means a temporary end to an income stream. It usually comes without much notice, so preparation (through adequate savings) is not typically the case. All of the sudden, mortgage payments, which usually account for the largest portion of disposable

income, are significantly more difficult, if not impossible, to make. The average household is very highly leveraged so a significant fall in disposable income (or a wiping out in the case of a single-income household) will only exacerbate already high household debt levels.

This is a particularly tricky issue in Australia given the dominance of housing loans on banks' balance sheets. The chart below shows that housing loans (both for owner-occupiers and investors) account for over 60% of loans made by Australian banks, while loans made to businesses only account for 33%. Even for the business loans, these are typically made to small and medium sized companies for commercial real estate and are often backed by the real estate of the business owner.

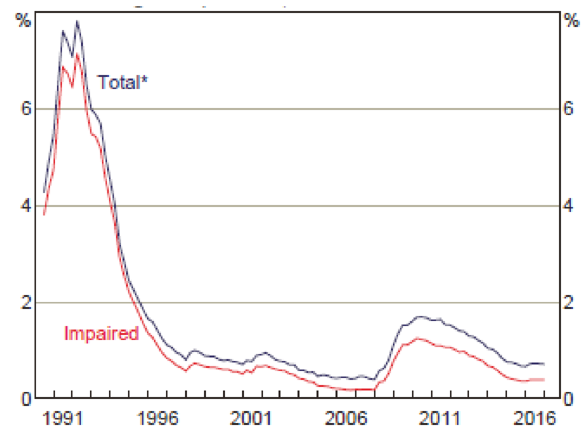
Chart 13: Loans Made by Australian Banks, by Purpose, 1990 - 2016



Source: RBA, Whitehelm Advisers

The dominance of property (both residential and commercial) for Australian banks' balance sheets poses a significant risk for the country's financial sector, in general, but particularly if there were to be a large spike in unemployment. Despite Australia dealing with the financial crisis relatively well, the 1% increase in unemployment that was experienced from the end of 2008 to mid-2009, coincided with a 1.5% increase in non-performing loans for Australian banks, as shown in the chart below.

Chart 14: Australian Banks' Non-Performing Assets, 1991 - 2016



Source: APRA, RBA

A spike in unemployment, caused by any sort of economic shock (most likely a recession), would have a considerable impact on Australian property prices, likely at the first sign that home-owners and investors are having trouble meeting their repayment obligations.

What is the outlook for Australia's unemployment rate?

As previously discussed, Australia just ended another year of economic growth, marking 25 consecutive years of relative economic prosperity. Unemployment was high during the country's last recession in the early 1990s, greater than 11% at its peak, however, since then, unemployment has generally fluctuated between the 4-6% range. Even during the financial crisis, unemployment only got as high as 5.7%. As a result, the housing market and financial system have not been seriously tested by a period of high unemployment, which is one of the main determinants of mortgage delinquency rates.

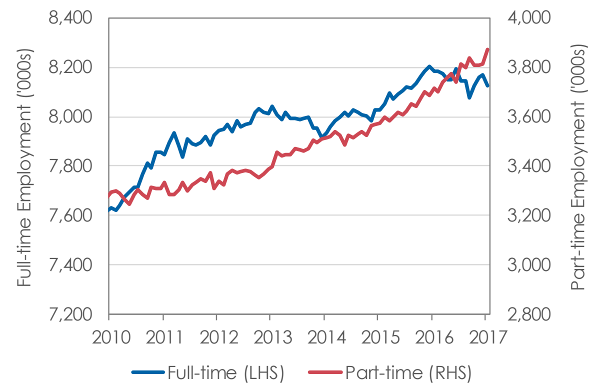
The past 25 years have been marked by exceptional circumstances for Australia, some driven by good management, but many driven by good luck. During the 1990s, Australia allowed its currency to float versus other global currencies, it slashed import tariffs, and implemented labour market reforms. These economic reforms were a catalyst for strong productivity gains, which, in turn, drove income growth. The story of the 2000s was the China-driven mining boom, which led to increased investment and a substantial increase in commodity prices and terms of trade.

The mining boom was largely deemed over in 2015 because of the fall in commodity prices, which saw the sector shed jobs and significantly cut capital expenditure. This has put the labour market on its backfoot, an unfamiliar position for it given its prior track record. Commodity prices have ticked back up in the past several months, however their future levels are nowhere near certain. Commodity prices are particularly dependent on demand from China, a country with an economic outlook plagued with uncertainty. Reduction in supply from Chinese mines for environmental reasons provides some structural support. That said, there is considerable new supply coming online from Australia and other commodity rich countries.

While, in general, the Australian economy has responded surprisingly well to the end of the commodity boom, there have been signs emerging that show that the labour market is not as strong as the headline unemployment number would have you believe.

The headline unemployment rate has been decreasing in Australia over the past three years, however, the underlying data tells a slightly different story. Throughout the latter half of 2015 and throughout 2016, labour market data showed that a shift from full-time employment to part-time employment was occurring, as shown in the chart below. This trend is also noted in the country's underemployment rate[2], which has been stuck at a persistently high 8.5%. The shift in the labour market is largely due to the end of the mining boom and the shift of focus towards the services sector, a sector that relies much more on part-time work than on full-time work.

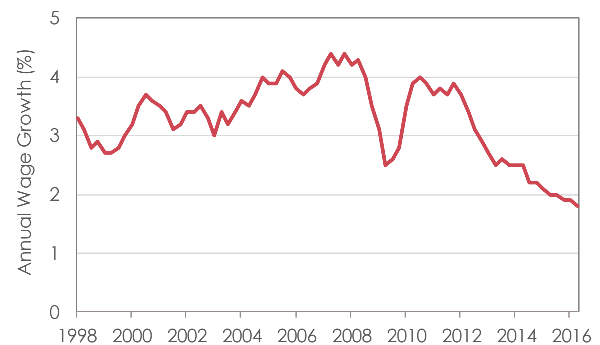
Chart 15: Full-time and Part-time Employment, 2010 - 2016



Source: ABS, Whitehelm Advisers

The high level of underemployment goes hand in hand with a slowdown in wage growth. Wage growth has fallen to its lowest ever level in Australia, at 1.8% to end the 2016 calendar year.

Chart 16: Annual Wage Growth, 1998 - 2016



Source: ABS, Whitehelm Advisers

Current conditions do not suggest that there will be a spike in unemployment over the coming months or years, some sort of economic shock would likely need to be a catalyst for that to occur. That said, we are in the midst of a period of uncertainty – marked by Brexit, the election of Donald Trump, and political uncertainty across Europe, as well as China-related risks, so a shock could be on the horizon. While the current rate of Australians not being able to make their mortgage payments is low, it could change quickly in the event of an economic downturn. This is particularly concerning given that household debt remains

[2] The underemployment rate is calculated by adding those in the workforce that are wanting and able to work more hours than they currently do plus those in the workforce who are currently employed full-time but working part-time hours because they are being stood down.

at record levels, increasing the susceptibility of an income shock.

1.4.2 Interest Rates

Although we view unemployment as the main determinant for stress in the property sector, increases to interest rates are also a cause for concern. While small and steady increases are likely manageable, and positive in that it would kerb further property market overheating, large increases can potentially cause serious stress for homeowners and financial institutions alike.

What makes interest rates an issue for the housing sector?

It is an obvious statement to make that housing affordability is largely contingent on interest rates. Most mortgages in Australia are floating rate mortgages, which means that as interest rates change, so too do mortgage payments (assuming loan period does not change). While Australia's main banks have not always passed on cash rate cuts made by the RBA, it would be expected that if the RBA were to raise the cash rate, the banks would pass the entire rate increase on to mortgage holders.

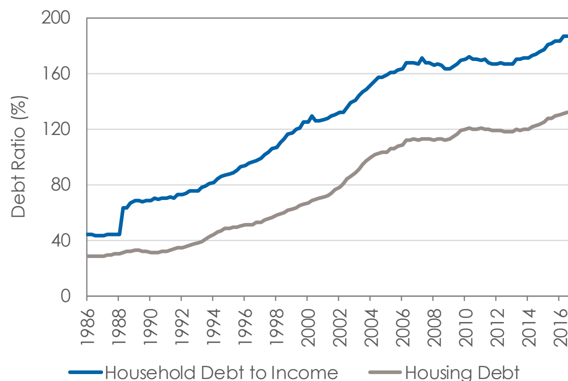
A key issue in Australia has been the increasingly popular concept of interest-only home loans, which involves a homeowner only paying back the interest repayments on their mortgage, rather than the principal of the mortgage. Historically, such loans were more popular with property investors rather than owner-occupiers, however this trend has changed over the past few years. In a low interest rate environment, such as the one we are in now, the concept makes sense for property investors who can claim the interest as a tax deduction, or buyers who only plan to hold the property for a few years before selling it again. But for everyday homebuyers, it is not always a sensible idea because the less that is paid of the principal, the more interest that will need to be paid over the life of the loan. This is particularly pertinent in an environment when interest rates are expected to increase, as the payments on the interest-only loan will increase, and it will make it more difficult and expensive to pay back the principal. Homeowners should be trying to pay back as much of the principal as they can while low interest rates persist.

Another issue with interest-only loans is that borrowers do not build any equity in their house until the interest-only mortgage contract requires them to start reducing their principal. In the case of an economic downturn, particularly if a spike in unemployment is a result and interest-only borrowers lose their jobs, the borrowers have little room to renegotiate mortgage payments with their bank. Furthermore, for homeowners with no other assets and minimal savings, such an economic downturn could force them to sell the property at a loss. This would be disastrous for house prices, particularly those where they have been deemed most overvalued – Sydney and Melbourne.

Further to this issue, and as we have already discussed, Australian households are extremely leveraged, with levels of household debt well above historic averages and extremely high compared to Australia's developed country peers. The decline in interest rates since the 1990s has been one of the key factors cushioning the property market over the past 25 years, and has fuelled the increase in household debt.

Australia underwent a period of financial market liberalisation in the 1970s and 1980s, which made it easier to access credit. At the same time, Australia's workforce participation rate increased, with a large number of dual employment households able to sustain higher levels of debt. As a result, the level of household debt has increased rapidly from around 40% of household disposable income in the mid-1980s, to more than 180% today. This level of debt is historically high as well as high relative to most developed countries. This is in large part because Australia was relatively unscathed as a result of the financial crisis, so its households were not forced to deleverage in any meaningful way, unlike households in other parts of the developed world. The vast majority of this debt (more than 70%) is housing debt and this has been a key contributor to rising house prices. The continuation of high house prices depends on whether these debt levels can be sustained.

Chart 17: Household and Housing Debt to Household Disposable Income



Source: RBA, ABS, Whitehelm Advisers

Such high debt levels were ultimately shown to be unsustainable in other developed economies. In the United States, the household debt to income ratio peaked at around 133%, but has since fallen to 104%. While deleveraging was a painful process for the US given that it was a significant drag on growth for the years following the financial crisis. The US has generally rebounded from the financial crisis, with stronger economic growth, a tight labour market, and the prospect of inflationary pressures, but it has not always been an easy road for the US.

The risks that come with the high levels of leverage within the property market have often been downplayed by investment professionals. An example should help clarify the risks. Suppose a couple buys a $500,000 house with a 20% deposit (the minimum amount required to avoid having to pay mortgage insurance). The amount left owning on the house is $400,000. A significant but still very plausible correction to the property market in which property values fall, say by 20%, would mean that the couple's house is now currently worth $400,000. While they have essentially 'lost' the value of the deposit, they could still sell the house and break-even on the amount owing.

If we consider an example where the homebuyer is much more leveraged, the outcome is uglier. Typically, investors will not pay a full 20% deposit on purchase of the investment property. For the sake of this example, say the investor paid a 5% deposit on a $500,000 house, so the amount left owing is $475,000. If property values were to fall by 20%, the investor now owns a house worth $400,000, but owes $475,000 on it. They have negative equity at this point. The implications of leverage are often overlooked in discussions around the risks in the Australian housing market. However, those with high levels of leverage could see serious downside implications should there be even a moderate price correction.

As compared to the US following the financial crisis, Australia followed a different trajectory. Australia's cash rates were higher leading up to the financial crisis than most other developed countries, which provided more of a buffer in dealing with the crisis' implications. However, this has only delayed the inevitable deleveraging that must occur at some point. Because interest rates have stayed low for so long, and household debt has increased as a result, the deleveraging, when it occurs, will be more painful. Should interest rates increase, it is likely that the debt levels cannot be sustained.

What is the outlook for Australian interest rates?

At its 7 March 2017 meeting, the RBA decided to leave the cash rate unchanged at 1.50%. In the corresponding statement, RBA Governor Philip Lowe included the following regarding the Australian housing sector:

'Conditions in the housing market vary considerably around the country. In some markets, conditions are strong and prices are risking briskly. In other markets, prices are declining. In the eastern capital cities, a considerable additional supply of apartments is scheduled to come on stream over the next couple of years. Growth in rents is the slowest for two decades. Borrowing for housing by investors has picked up over recent months. Supervisory measures have contributed to some strengthening of lending standards.'[3]

With the RBA's cash rate sitting at a historic low of 1.50%, there is limited scope for the RBA to react in the case of an economic shock. While inflation continues to be very low, the central bank is trying to avoid cutting the cash rate

[3] Refer to Statement by Philip Lowe, Governor: Monetary Policy Decision, 7 March 2017

further in an attempt to stimulate inflation, because it would further reduce the small buffer that it currently has.

The RBA has been cognisant of the implications of changing the cash rate from its historic low that it is at now. Decreasing the cash rate (as it did twice in 2016) adds fuel to the fire when it comes to the property market, which ultimately does not need to burn any further.

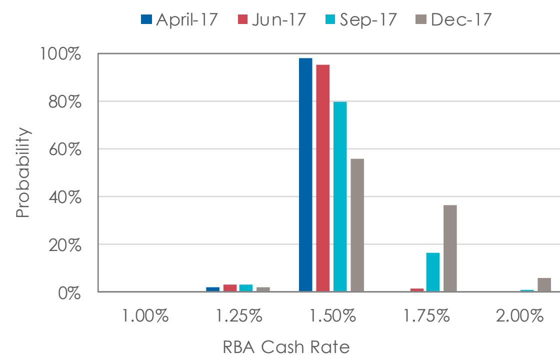
At a parliamentary inquiry in late February, Lowe said that he has received pressure, even within his own staff, to further cut the cash rate. In response, he said

'The counter argument is that lower interest rates would mainly work through encouraging people to borrow more. That would probably push up house prices a bit more, because most of the borrowing would be borrowing for housing. While that may have some positive effect on the economy, the issue we are dealing with internally is how that would add to the fragility. Household debt is at record levels. Is it really in the national interest to get a little bit more employment in the short term at the expense of encouraging that fragility?'

Many central banks have a much more limited mandate in terms of scope than the RBA does, in that they use monetary policy to target inflation. The RBA, however, is also responsible for ensuring *'the general welfare of the Australian people'*. Thus, the implications of changing the cash rates must be considered. Following the two rate cuts by the RBA in 2016, a noted increase in lending for property investment was observed.

As a result, the market is widely expecting that the RBA will keep the cash rate at its current level for as long as it can. Indeed, unless there is considerable economic weakness, Australia is probably at its low point in the interest rate cycle. The chart below shows that as of mid-March, the market expects that the probability of the cash rate being cut before the end of the year is less than 2%, while there is a 40% chance that the cash rate could be moderately higher by the end of the year. That said, should the Trump reflation trade come to fruition, we could see growth and inflation tick up around the world, which would likely put the RBA on a rate increasing path.

Chart 18: Implied Probability of RBA Cash Rate



Source: Bloomberg, Whitehelm Advisers

In its Australian Mortgage Industry Report, JP Morgan warned that it expects Australian banks to increase their mortgage rates in an effort to comply with ever-changing regulatory requirements, regardless of cash rate decisions made by the RBA. The report addresses that there will be continued pressure on banks to significantly increase their capital levels on specific types of investor lending. The report addresses that the most likely regulatory change relates to investor loans that are *'materially dependent on property cash flows'* to service the repayments. The changes would address that such loans are riskier than the typical homeowner-occupier loan and as a result would force banks to raise rates to manage the associated risk. The report warns that banks could have to increase the interest rates on such loans by up to 3% in an extreme scenario. Should such regulatory change come through, it would have significant implications for property investors, particularly in Sydney and Melbourne, where the house prices are higher and loans bigger.

1.4.3 Oversupply

Given the discussion in the first half of this feature article, it seems unlikely that oversupply will be an issue for the property market anytime soon, given the demand pressures caused by economic growth, population growth, and urban consolidation. Yet, as we will discuss in this section, the long-term nature of construction projects reduces the market's ability to predict when supply is perfectly in line with demand.

What makes oversupply an issue for the housing sector?

Compared to previous property market cycles, the construction activity in this one has been dominated by higher-density housing, including high-rise apartments, rather than detached houses. Higher density housing takes much longer to build than detached houses or low to mid-rise buildings, so the average completion time of the residential construction projects in the pipeline is currently longer than it would have been in past property cycles. Building projects that get approved now could take anywhere between six months and two years to be move-in ready. The long-term nature of the construction pipeline has made housing supply harder to predict. It is not as simple as looking at how many houses and apartments are for sale and how many potential buyers there are.

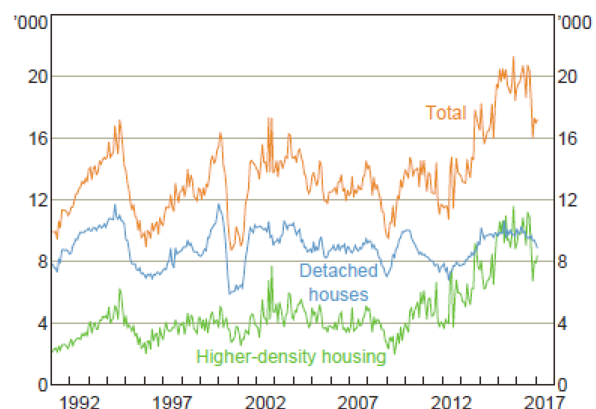
Because of this lag, the concern for the property market is that building approvals outpace the need and demand for additional housing, to the point that the market gets flooded with new apartments and houses that sit unsold for long periods of time. If demand were to taper off, or to stay flat, while supply ramps up, the vacancy rate will increase, and prices will fall as a result. It is unlikely that demand will fall sharply in the major cities, however an unpredicted flooding of the market could see prices fall, like the oil price did when the oil market was flooded with significantly more oil than was needed.

Will this be a problem for Australia?

While we do not anticipate oversupply being a problem that will affect the entire country, it does have the potential to hit some key, specific markets. One example is Brisbane, which saw its vacancy rate increase in 2016. The city has seen a huge swath of high-rise apartments go up over the past several years, many of them bought by property investors who then rent them out to tenants. Landlords have been increasingly required to lower rents, as well as offer rental incentives to find tenants. While the impact on house prices has not yet come through, it would be expected that if the market continues to see this oversupply, house and apartment prices would be expected to decrease. If this hampers consumer and business confidence, we would expect the prices to fall sharply.

At the end of 2016, a much-discussed topic was the downturn in the number of residential construction approvals, particularly for high density housing, including high-rise apartment buildings. Over the past two years, residential building approvals have been almost 50% higher than their long-term average. Compared to previous property booms, the construction activity has been dominated by higher-density building (high-rise apartments) rather than detached houses. The number of apartment blocks with four or more storeys now accounts for a third of total approvals, which is a 10% increase from 2010.

Chart 19: Private Residential Building Approvals, 1992 - 2017



Source: RBA, ABS

The downturn in the number of approvals over the past few months has been viewed as the ominous sign that the construction boom is coming to an end, which is of particular concern given that the estimated value of work to be done on residential dwellings was equivalent to 12% of GDP in 2016. In cities like Brisbane where supply is starting to catch up and outpace demand, the downturn in building approvals is good news given that it provides an indication that the property market will not be flooded with more housing than it needs.

Because of the long-term nature of the construction phase of housing projects, this fall in approvals would likely not be felt in the markets for at least two years. This is good news for cities where demand is still currently high, like Sydney. However, should demand stay elevated, the reduced supply to be seen a few years from now could push prices up even further.

1.5 Improved Regulatory Standards are Helping

This feature article has so far painted a relatively gloomy picture of the health and stability of Australia's property sector to date. House prices are at levels that suggest that there is a bubble (and bubbles often burst), and wage inflation has not kept pace to support housing affordability (in fact, we have experienced wage deflation in recent years). Is a housing market correction inevitable or can the improving strength of the regulatory frameworks help avoid this outcome?

As we have discussed throughout this feature article, lower interest rates and generous credit conditions have made borrowing for housing purchases extremely attractive. Because of the dominance of residential housing loans on the balance sheets of almost all of Australia's banks, a property market correction would be extremely painful for the country's financial sector. As a result, the Australian Prudential Regulation Authority (APRA) has intervened on multiple occasions to ensure that the country's lending standards are sound. APRA set a limit of 10% on the pace of loan growth by banks to investors, and also implemented additional requirements on how mortgage lenders should assess loan affordability.

APRA has also implemented several Basel standards, including the counter-cyclical capital buffer, which requires banks to hold more capital during periods when excessive credit growth poses the issue of higher systemic risk. In times of stress, capital can be reduced to ensure that access to credit is not suddenly blocked. While such standards have been implemented across all forms of credit risk, APRA's focus has been on residential mortgage lending because of the dominance of this space for Australian banks.

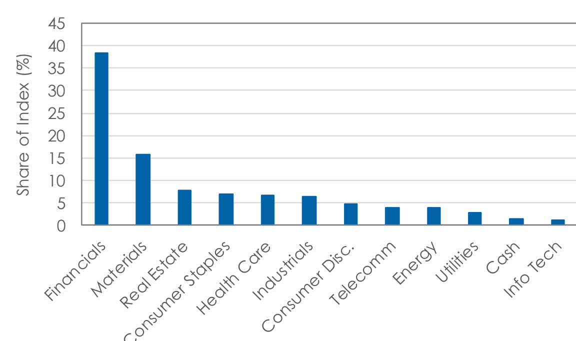
Despite the increasing regulatory requirements, banks cannot be complacent because the risks of a property market correction are very real. An increase in employment or a sudden and sharp increase in interest rates would send mortgage delinquency rates skyward, and if the situation is bad enough, it could lead to bank failures. Should that be the case, in an already concentrated financial sector, any more concentration (through a bank failure), translates to a less competitive system and more expensive banking products.

1.6 Financial Market Impact

As we have already discussed, Australian banks are heavily exposed to property prices due to their large holdings of domestic mortgages. Residential property loans make up 60% of overall lending in Australia, a much higher share relative to many other countries. Mortgage lending has been a key source of profitability for the major banks, and have benefited from rising household leverage. Should the property market experience a sustained downturn, Australian banks are likely to take a significant hit.

The Australian share market is a concentrated market in terms of its exposure to certain key sectors, with the financial sector being the most dominant sector. As of mid-March, 38.5% of the ASX 200 Index was made up by financial sector stocks, with the four big banks alone accounting for 29% of the index. Therefore, a significant hit to the banks because of pressure in the housing market would have negative implications for investors heavily invested in the Australian share markets. According to SuperRatings data, Australian super funds have typically maintained a 25-30% exposure to Australian equity.

Chart 20: Sector Breakdown of ASX 200 Index



Source: Bloomberg, Whitehelm Advisers

Note: The iShares ASX 200 ETF has been used as a proxy for the S&P / ASX 200 Index

If the financial sector were to come under pressure because of trouble in the housing market, it is unlikely that equity market would be the only asset class to experience downside implications. Banks would pay far lower interest rates on cash accounts, so super funds

with large cash holdings would receive lower rates of return (albeit positive). Australian government bonds would likely be the star performer in this type of investment environment, notwithstanding their current low levels of return offered. Debt issued by the government rather than financial institutions would quickly become far more attractive.

For a gentle downturn, Australian banks are relatively well positioned. There is limited subprime lending activity and a significant portion of mortgages have initial loan-to-valuation ration below 80%, providing a buffer against price declines. Default rates and mortgage arrears have remained low and low interest rates have helped to reduce mortgage stress. That said, a sharp and sudden increase in interest rates could increase such stress.

As discussed, the key risk is a period of weaker employment and income growth or the downside case of rapidly rising unemployment. Australian banks also continue to be vulnerable to changes in financial market conditions due to the presence of foreign financing on its balance sheets. It should be noted that the levels of foreign financing have decreased significantly over the past few years as the major banks have progressively changed their lending rules to restrict foreign lending. Nevertheless, property market weakness would result in a reduction in profitability, loss of confidence leading to higher funding costs and the possibility of needing to raise more capital, most likely at steep discounts.

House prices also have a much broader macroeconomic significance, due to their impact on confidence and spending. Housing makes up a significant proportion of household wealth, and is the single largest asset for many individuals. Changes in the value of housing can have a large impact on consumer spending due to the 'wealth effect'. The Australian Housing and Urban Research Institute estimates that for every $100,000 increase in housing wealth reflects an increase in consumption of between $1,000 to $1,500 in Australia. The impact of falling house prices on the economy could be significant, particularly if combined with poor credit availability due to a weak financial system.

Self-managed super funds, particularly those with high exposure to Australian bank stocks, property, and term deposits, could be significantly impacted by a property market correction.

For most infrastructure assets, the impact would likely be small, particularly those that have lower levels of economic sensitivity.

Warning Signs

As should be evident at this point in the feature article, the Australian property market is a key concern for the country at the moment. There are a couple of key warning signs that we will continue to monitor when it comes to gauging the health of the all-important sector. As we have already discussed, rising unemployment and rising interest rates are likely to be the two main triggers that could set off a market correction, but what are some of the subtler warning signs that we will be monitoring?

Auction clearance rates, number of listings, average number of days its taking to sell homes are all early signs of the health of the underlying market. We can also look to new housing starts (construction) and approvals (financing) as additional upstream measures.

The rental market also provides insight into the health of the market, particularly given the growing prominence of investor-owned rental properties. A rise in vacancy rates among rental properties would be another indicator of supply outpacing demand in that there are more apartments and houses for rents than there are wiling tenants. Landlords would either have to lower the rents charged to attract tenants, or sell the property because it is not earning the return to justify the investment. In a market with high vacancy rates, potential buyers would be unlikely to pay as high of prices. This indicator will be of particular interest with respect to units where there is currently considerable excess construction underway.

For the financial system health, we will pay close attention to trends in bank arrears as well as reserving for bad debts. The level of bad debts and mortgage payments in arrears on home loans is currently very low, but an important metric to keep a close eye on.

1.7 Conclusion

The perfect storm of market conditions has driven a period of property price appreciation

like never seen before in Australia, in terms of both magnitude and duration. The country's relatively favourable economic experience and 25 years of consecutive economic growth have created ideal conditions for increased demand for housing, through population growth, immigration, and foreign investment. A long period of historically low interest rates and a generous tax policy has also fuelled the property boom, from both a homeowner and an investor perspective. As a result, supply has not been able to keep up with demand, which has sent prices skyrocketing.

The capital city prices in Sydney and Melbourne relative to affordability, historical averages and when compared with capital cities in major developed countries points to a bubble.

While there are differing views from experts regarding the bubble-like nature of the property market (OECD claims there is a bubble, Bank of International Settlements has played down the risk), we consider that there is a bubble, however as compared to in the past, we believe that this is a much more localised bubble, pertaining primarily to Melbourne and Sydney. That said, the employment situation is the key factor that will either support the bubble, or burst it should there be a significant deterioration from current levels. Obviously, a scenario of long-term flatlining of housing prices giving time for wage inflation to make housing more affordable would be an ideal scenario, however markets rarely work like this.

The Australian housing market was able to avoid a substantial correction during the financial crisis due to extraordinarily supportive monetary policy, including a total of 4.75% in RBA cash rate reductions and a substantial boost to First Home Buyer grants. Unemployment increased during the crisis, but not substantially, so the market was not seriously tested. Today, the cash rate sits at 1.50% so the government will be much less able to be generous in terms of supporting the country through another economic downturn, whenever that may be.

While we try to be optimistic with regards to supply catching up to demand and constantly improving regulatory standards, we recognise that the housing market is one of the nation's key risks at the moment. That said, the key to this risk materialising into a huge problem lies in unemployment and to a lesser extent interest rates. A considerable rise in either of these two factors would present the catalyst for the downside scenario to eventuate. While we acknowledge the risk and scenario, we find it difficult to see a near term catalyst for either of these events to occur. It is a space that will continue to be of great interest.