Safe as Houses?

MEMO

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About

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Whig Capital Management Pty Ltd is a private investment company located in Melbourne, Victoria. The company seeks to identify long-term investment opportunities from the mispricing of policy, political and sovereign risk. It applies a 'classical liberal' framework to issues of political economy and a value investing method to business evaluation.

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"Australian house prices will fall 40%" said Steven Keen. So confident in his prediction – was the economist from Western Sydney – he agreed to a bet. The opponent? An interest rate strategist from Macquarie, named Rory Robertson. The stakes? An unaided walk from Parliament House to the summit of Mt Kosciusko. It was September 2008. Lehman Brothers had just failed and the world was at panic stations. Australian house prices would dip 5.5 percent, but then begin their decade-long march upward. And in 2010, Keen would set off on his own 225-kilometre long march. With a T-shirt bearing the phrase: "I was hopelessly wrong on house prices – ask me how". Undeterred, he said to a reporter: "To me the irony is I'm marching uphill and house prices will start marching down". Defiant to the end! The story attests to the old adage: "*being too far ahead of your time is indistinguishable from being wrong*". And, "*there are two kinds of forecasters: those who don't know; and those who don't know they don't know*". Reflecting on his bet, Robertson described Keen as "often wrong, yet frequently unsure". Over confidence is a fulcrum of investment error. Yet, investing is all about allocating capital today, to receive more of it tomorrow. So, how might we invest *without* making assumptions about the future? The challenge is to *distinguish between price and value*. To distil signal from noise. Prices embody the sentiment of today – the headlines, emotions, the overconfident predictions. While value bears the true worth of an asset – the calculated, dispassionate, the informed and critical assessment. My aim in this memo is to decipher the state of price and value in Australia's property market today. Not offer a prediction, but understand where we are, what has happened and why. Perhaps, to answer the question: is Australia really in a property bubble? (Full disclosure, this is not a short memo. So, be sure to download the PDF version here).

I. Housing, Price & Value

<u>The Value of Real Estate</u>

What's the value of a residential property? A simple question, but is there a simple answer? Say you decide to buy a vacant block of land – in the leafy suburbs of Melbourne – for $400,000. You then elect to build a modest family home, equipped with all the modern-day comforts – three bedrooms, two bathrooms, a jacuzzi perhaps – for a further cost of $350,000. At the risk of stating the obvious, your total investment is $750,000. So, that's the value, right? But what if you'd invested that same amount to buy another block and build the exact same house. Except this time, it's in the middle of the Simpson Desert. Sure, you get a reprieve from peak hour traffic and pesky neighbours, but is that property also worth $750,000? Of course not. Why? Because even if you're willing to go full Bear Grylls for a while, good luck finding someone else to rent the place! In other words, *the property's value is a function of its potential earning power – the net rental income*. Not the amount paid for house and land, which is just the asset base (or left side of the Balance Sheet). In this case, your $750,000 oasis is what they call "overcapitalised". Even though you paid handsomely for it, the assets generate no income and should be written off (impaired). In brief, you over paid. On the other hand, say your suburban castle is more favourably located. Next to a train station, quality public schools, a chic shopping precinct – and prospective tenants are banging down the door. The more they pay you in rent, the higher your gross return on capital will be. I say "gross" because you still have to deduct the cost of owning and letting the property. Land tax, council rates, agent fees, general repairs – after the new tenants' house warming gets a bit out of control. Then there's the expected cost of improvements over time. A new bathroom, dishwasher, roof – so the place doesn't deteriorate and encourage your tenants to jump ship (or at least resist a slight rental increase). If you take all these expected cash flows and discount them back to today (to account for the time value of money), you get a rough estimate of value. There's no exact figure, because you're dealing with an uncertain and unknowable future. A storm may damage the rafters, your tenants might renege on their rent, or the entire house might need to be re-stumped (you forgot to check those damn footings!) These are just some of the risks of owning a property (I haven't even mentioned debt yet). The key point is that *rents drive property values. The more net income you can derive, the more valuable the property will be*.

<u>Risk is a Function of Price</u>

Investing in property is clearly not rocket science. But it's also not fishing with dynamite either. The challenge is to form a *correct* view of the economic characteristics of a property. Is the neighbourhood a desirable one? How much will people pay for that privilege? Will traffic become a problem? Will zoning laws change? When will the house need to be refurbished? How durable is the structure? Those questions shape your expectation about the sum and likelihood of potential income. Of course, the future is not set in stone – value is more a range of potential outcomes, than a single end state. And it's the difference between this *expected value* and the price you pay that determines the *risk* of your investment. Still following? Nope. Let's imagine you're playing poker – Casino Royale style! Your hand is a six of spades and five of hearts. You think "sweet! I'm in for a straight" – and bet heavily. The flop is drawn – seven of diamonds, pair of jacks. "Awesome! All I need now is a four and eight, or eight and nine, or three and four". You go all in. A couple of players call and the final cards are dealt – ace of clubs, four of diamonds. "Bugger!" You've got zip. While Daniel Craig over there has a pair of aces (full house, ace high). And apparently, you're not that good at poker! So, what went wrong? You overestimated your chance of winning with that hand. And by betting heavily on a low probability event, you increased the risk of losing money. The bet *could* have worked, but it was still a risky one. Just like paying $750,000 for a shack in the Simpson Desert, your expectations were unrealistic, too rosy, and divorced from value. So, what's the point I'm trying to make? For one, the logic of poker and investing are very similar. But two, that *price and value are not the same thing*. *Price is what you pay, value is what you get. And if you pay a high price for value, you increase the risk of losing money*. Similarly, if you pay a low price, you can decrease that risk. This has some counter-intuitive implications. Firstly, it means a high-quality property – if you pay through the nose for it – can be a risky investment.

And a low-quality property – if you get it for a bargain – can be a safe investment. In fact, *buying an asset for less than it's worth is the essence of intelligent investing*. *It all depends on the price you pay*. But the problem in Australia today – especially in Melbourne and Sydney – is residential properties sell for very high prices. Across our major cities, the average residential property sells for 30 times its current rental income (this price-to-rent ratio is the inverse of a rental yield. And is akin to the "P/S multiple" often used as a rough valuation metric for stocks). Since the early 90's, average house prices in Melbourne have grown at double the rate of average rental income. And in Sydney, they've grown at triple that rate. Any way you slice it, property prices are high (rental yields are low) and, therefore, risk is also high. But prices have been high for years – decades even. And just because they're divorced from value, doesn't mean the next move is down (as Keen discovered). So, what gives? What's driving these nosebleed prices?

<u>Why Do Prices Go Up?</u>

One of my favourite movies in recent years was "the Martian", starring Matt Damon. If you haven't seen it, Damon plays Mark Watney; an astronaut stranded on Mars, after his crewmates mistakenly think he was killed in a dust storm – and they evacuate without him. The movie is like an intense obstacle course where Watney has to "science the shit out of" everything to survive. Critically, he has to grow 3 years' worth of food on a planet where nothing grows. "The problem is water," he says. "I've got to make a lot of water". "Good thing is, I know the recipe. You take hydrogen, add oxygen, and you burn". After building what looks like a small cannabis farm, he takes the unused rocket fuel, separates the hydrogen, and then … blows himself up. What went wrong? "I forgot to account for the excess oxygen I've been exhaling, when I did my calculations," he says. "Because I'm stupid". And I would argue most commentators of the Australian property market are also "stupid". Why? Because they too forget to account for the impact of property investors on their environment. Just as Watney's breathing changed his physical surroundings, so too the behaviour of home buyers changes the market itself. The great financial speculator, George Soros, called this process "reflexivity". It means the Australian property market – like all other markets – is a *dynamic* phenomenon. Academics like to treat it as some kind of static absolute – suspended in time and space. They point to immigration, zoning laws, or supply shortages, as driving a "rational" surge in prices. But this commits the cardinal sin of confusing price with value. If those factors were truly constrained, wouldn't they show up in higher rental incomes? *Value lies in economic fundamentals, but prices are psychological*. And it's the psychology of investors – their expectations, biases, foibles – that determine prices. It's why prices that go up, usually continue to go up. And prices that go down, usually continue to go down. *Investor behaviour is self-reinforcing, and it creates market cycles or "trends"*. For example, I often hear that investors borrow more today because property prices have gone up. But reflexivity tells us this is only half the puzzle. *People don't just borrow more because property prices rise, property prices rise <u>because</u> people borrow more*. Don't believe me? Think about the average home buyer. What shapes their investment budget? Is it the potential net income stream? The imputed rental gains? The asset's depreciable life? Or does it depend on how much they can borrow – either from a financial institution, or the generous Bank of Mum & Dad? This capacity and willingness to leverage – to take on more and more (and more) debt – is what's really driving property prices.

II. The Credit Cycle

<u>A Mortgage Bonanza!</u>

As of June, this year, total housing debt in Australia was just over $1.7 trillion. The market value of all residential property was $7.7 trillion. I know what you're thinking – those numbers are so big, they're meaningless ("did you say trillion?!") So first, a bit of context. Australia's Gross Domestic Product (GDP) – our total national income – was about $1.8 trillion last financial year. That's the output of every household, corporation, and government entity across the entire country. Even the combined market value of all ASX-listed companies is only $2 trillion. So, the mortgage market is truly massive. But it didn't get that way overnight. The mortgage boom really began in the early 90s, shortly after Australia's last recession (we are currently riding the longest "winning streak" in economic history for time without a recession). Since then, the stock of mortgages has doubled every 6.5 years (or grown at 11% per annum). That's an astounding rate. And it explains why Australian households are now some of the most indebted in the world. But there's nothing inherently wrong or evil about debt. *In the right circumstances, leverage can be both intelligent and prudent. It all depends on how risky the investment is*. Let's imagine you borrowed $600,000 to purchase our suburban retreat – and have $150,000 worth of equity or an 80% LVR (Loan to Value ratio). Now assume – for simplicity's sake – that the rental income exactly covers all costs, including interest expenses – so any investment gain (or loss) must come from the asset value. If the market price were to increase by, say, 20% over the next 7 years (to $900,000), then your total equity will have doubled. Instead of a modest 2.5% annualised gain, your return on invested capital – thanks to leverage – is just over 10% a year (something to phone home about!) On the other hand, if the price had fallen by 20%, your equity would be zero – gone. And all those years of toil and saving would've been for nothing. The point is that *debt does not add value. it simply magnifies gains and losses*. And the potential for blow-ups is why debt is best used sparingly, or to buy low risk assets. *The riskier an investment, the less leverage should be used*. In stark contrast, Australian property buyers have piled on ever more debt to buy ever riskier assets. Property may be regarded as a safe investment, but today's prices make it a risky proposition (remember, price and value are not the same thing). So, who's taking on all this risk?

<u>The Marginal Borrower</u>

A cursory look at the last 25 years of mortgage data reveals some key trends. *Rise of individual investors; increased refinancing; a shift toward third-party brokers; and greater use of interest only loans and offset accounts*. Now I could list statistic after statistic to illustrate these points. But it'd be like asking for a glass of water and getting served with a firehose. Moreover, you don't need an economics degree to know it's the marginal borrower – not the average – who moves prices. Or maybe you do need one? Imagine we're playing Jenga. We're a couple rounds in and each removed a few blocks. If I asked you how risky the remaining stack is, on average, what would you say? You'd say it doesn't matter. What matters is how risky the next block is – the *marginal* piece. Likewise, It's the incremental borrower who drives property prices. The so-called "hot money" – the last man standing at the auction. So, rather than drown you in every piece of data, I'll just give you the gist of who and what has changed – a profile of the marginal borrower (If you'd prefer the firehose option, please email me). Firstly, *individual investors have become a key source of new loans*. Today, there's around 2 million of these people, and 600,000 of them have multiple properties. Most have an interest only mortgage, and the majority that do earn over $100,000 a year (think doctors, lawyers, white-collar professionals). They mainly invest in apartments, owning more than half of all units across Melbourne and Sydney. And nearly two thirds are "negatively geared" (or in normal terms, they lose money). Second, more and more owner occupiers (non-investors) are taking out mortgages to refinance existing ones. These people tend to buy existing houses, with an 80% LVR, and an offset account. They too have become more reliant on interest only loans. And the majority that do, usually have higher incomes and apply more leverage. Finally, new loans to both owner occupiers and investors are increasingly issued through mortgage brokers. Broker-issued loans are more likely to be interest only, have higher LVRs, and lower servicing capacity (i.e. a higher debt to income ratio, so a higher risk of default). Can you see a pattern? There are two clear profiles: the high-income earner who's paying interest only on a negatively geared apartment; and the house-flipping owner occupier who's refinancing an interest only loan every few years to take advantage of rising house prices. Now remember, these changes are *within* the mortgage market itself. So, the absolute trend is even more pronounced than the total build-up of debt (i.e. they've grown at an even faster pace). But the question is why? Why are these people so willing to take on huge amounts of debt?

Economic Superpowers

Earlier this year I had the unenviable task of transferring our utilities. Moving house is painful enough let alone dealing with such administrative chores. Luckily, our agent recommended a connection service. They took my details and I didn't lift a finger from there. I was rather chuffed with the whole process until we got our first bill ("what the hell is this?!") The monthly account was equal to our old quarterly bill. It dawned on me – I'd just been served the "lazy man tax". A red flag should've been the so-called "free" service (you always pay for it in other ways – think Channel 7, public roads or a Gmail account). As the saying goes, "there's no such thing as a free lunch". It took an entire Sunday afternoon, but I eventually figured out the various energy tariffs and rectified the cost of my inertia. The lesson? *Incentives are like economic superpowers*. By not doing my homework, I left myself exposed to a litany of market forces that set my utility bill for me. And the same applies to mortgages and mortgage brokers. Most borrowers see their broker as a trusted advisor – out shopping for the lowest interest rate on their behalf. In reality, *brokers are paid by the lenders*. *So, their incentives determine the mortgage you get.* And how are these brokers paid? First, they get a combination of "upfront" and "trail" commissions. The upfront fee is a percentage of the amount borrowed. While the trail commission is paid every year thereafter, as a percentage of the balance outstanding (over the life of the loan). Harmless enough, right? But if you think about it, the incentive here is for brokers to lend as much as possible (more upfront fees) and to have it paid back as slowly as possible (more trail fees). Effectively, they want borrowers more indebted for longer. This not only explains the rapid growth of mortgages, but also the rise of investor and interest only loans. Investors have less cause to pay down principal, to maximize the potential tax benefits (more on this later). While interest only borrowers get a holiday from principal repayments, but end up paying more over the life of a loan (as interest is accrued against a larger loan balance). So, both loans lead to higher trail fees. But the boondoggle doesn't stop there. Brokers also get volume-based commissions, campaign commissions, and other "soft-dollar benefits" – like loyalty programs (called "broker clubs") and travel perks. This second set of fees is solely designed to get lenders special treatment from brokers (i.e. more mortgages sent their way). The extra commission can often mean an order of magnitude more income for a broker (2 to 3 times more). Faced with the choice of a lower interest rate for a borrower, or doubling their commissions, it's hard to see how a broker doesn't chose to feather their own nest. Think I'm overstating it? Well, let me ask you this: what percentage of a mortgage broker's annual income do you think comes from commission? Would you say 10%? 20%? 50% even? The answer is 100%. Yes, *the majority of brokers earn <u>all</u> their income from commission*. How would *you* behave under those conditions? You'd be shovelling mortgages out the door as well! Regardless of a borrower's needs.

The Benevolent Hand

Mortgage brokers are only half the equation. Although their incentives are skewed toward rampant lending, they still need a borrower to walk through the door. So, what's happening on the demand side? Let's start with the conventional wisdom, "rent money is dead money". How often have you heard this platitude? Generally, people weigh up whether to buy a home based on the relative cost of renting or servicing a mortgage. "If you can cover the loan, why pay someone else's mortgage?" Or so the thinking goes. It means more people enter the market as interest rates fall. And this is what happened after 2012. As the mining boom ended, our almighty mandarins at the RBA (Reserve Bank of Australia) steadily lowered interest rates to record lows. The cost of debt came down, the appeal of buying went up, and the ability to borrow rose (lower rates made it easier to service a bigger mortgage). This explains the boom in owner-occupier refinancing. People refinanced their mortgages as rates came down. Not only to take advantage of lower borrowing costs, but to tap the growing equity in their home (from rising prices). Are you seeing that positive feedback loop yet? The influence of our benevolent overlords doesn't stop there. As you're probably aware, Australian tax law ensures your primary residence is capital gains tax free (CGT). So, in effect, the family home is a tax haven. Have you ever driven through the more affluent suburbs of Melbourne or Sydney and wondered why tradies are renovating already monstrous sized homes? Well, the tax break encourages people to plough capital into their homes, and then upgrade a couple years later using the outsized gains. On top of this, Australia is the only nation (alongside New Zealand) that allows you to offset losses on an investment property against your personal income. Remember our suburban palace, with that $600,000 mortgage? Say you were paying 5% on an interest only loan and charging $500 a week rent. You take off, say, $6,000 worth of running costs, depreciation, and you have a loss of $10,000 (ergo, you are negatively geared). That loss is then deducted from your salary – reducing your personal tax bill. And if your income puts you in that illustrious top marginal tax rate, you benefit the most (because you have the most to gain from paying less tax). So, the more you borrow, the more interest you claim, the greater the potential loss, the bigger the tax deduction. This has some perverse consequences. First, it means investors prefer to buy properties that generate less rent, but have more opportunity for capital gain. So, *the incentive is to speculate on rising prices, rather than buy value at a discount (the opposite of intelligent investing)*. Second, by paying less tax than they otherwise would, high income earners effectively get a subsidy from the government for their investment. Yes, you read that correctly. Let's call it white-collar welfare for kicks! So, incentives on both the demand *and* supply side have fuelled a mortgage boom. The irony is that our regulators (and most other people for that matter) are well aware of these intervening forces. I mean, who hasn't heard of negative gearing? The problem is that everyone underestimates their impact. Has anyone thought about *how many people would* <u>*not*</u> *invest in property, if it weren't for the tax benefits?*

III. Blowing Bubbles

<u>The Unknown Known</u>

In 2002, US Secretary of Defence, Donald Rumsfeld, delivered one of the most famous press conferences in US history. Asked about an apparent link between Saddam Hussein's regime and terrorist groups like Al Qaeda, he delivered a remarkable response. "There are *known knowns*," he said. "There are things we know we know". But, "we also know, there are *known unknowns,*" he added. "That is to say, we know there are some things we do not know". And "there are also *unknown unknowns*". There are things "we don't know we don't know". So, what are the things we know we know about Australian property? The known knowns. We know that prices are high compared to value. That risk is also high. We know that prices are fuelled by rising debt levels. That there has been a boom in interest only mortgages, to investors and owner occupiers. And that this was propelled by warped incentives for mortgage brokers and home buyers. But, what are the things we known we don't know? The known unknowns. There's the future direction of interest rates. Whether a Labour government will change negative gearing laws. Potential fallout from the Royal Commission into Financial Services. Or the short-term direction of property prices. And what about the unknown unknowns? Those events no one can foresee, but disproportionately shape the course of history (think 9/11, Pearl Harbour, or President Donald J. Trump). By their nature, these things are confined to the realm of imagination. And its why *investors should always buy value at a discount – as protection against the unknowable*. But, there's one final combination missing. One that also became the title for a brilliant documentary of Rumsfeld's career (by Errol Morris). *The Unknown Known*. The "*things that you think you know, that it turns out, you did not*". Unknown knowns are those common-sense mantras, conventional beliefs and platitudes – the things everybody knows to be true – that turn out to be flawed. Rather than a collective truth, they derive from false hope, greed, irrational exuberance and herd-like behaviour. *The madness rather than the wisdom of the crowd*. Unknown knowns are the foundation of all financial bubbles. Those speculative mania, which seem so obvious in hindsight (tech stocks in '99, sub-prime loans in '07, cryptos in '17). As Mark Twain said, "*it ain't what you don't know that gets you into trouble, but what you know for sure that just ain't so*". So, what might be the great unknown knowns of the Australian property market? Are people missing something – if anything at all?

<u>A Loss Is Still A Loss</u>

Now for the fun part… Imagine you own a small business – nothing fancy, just a humble florist. You invest $100,000 to get it up and running – a 2-year lease, some inventory, a couple of uninterested teenagers to staff the counter. And with the help of an $80,000 loan from the bank. At year's end, you've turned out $10,000 of income (after interest but before taxes). Not bad. But being the crafty entrepreneur that you are, you also own a small café. It has all the usual trimmings – uncomfortable chairs, exposed wiring – and a selection of poached egg dishes. Again, you borrow $80,000 to invest the same amount as your other venture. But unlike the botanical boutique, your hipster hangout only manages a $5,000 loss (and you are negatively geared). See where I'm going yet? Thankfully, the generous technocrats at the ATO have said you can offset this loss against the florist's income. Rather than pay 30% tax on $10,000, you'll only fork out $1,500 (30% of what's left after deducting the $5,000 loss). So, instead of $7,000 of net income for the year, you finish with $8,500. The old "win-win", right? But let's say the same thing happened next year. And the year after. And the year after that. Your florist keeps chugging along thanks to a rather lucrative niche (husbands with an adultery problem). But the café remains a headache. Your hopes of Silicon Valley style growth were off the mark. Turns out, every man and his dog can start a café – so you're swarmed by competitors. And the losses keep piling up. Although you benefit from the tax offset each year, *that loss is still a loss*. At some point, you'll either have to close up shop, or write down the investment. But then, something strange happens. Word on the street is investors are keen to buy your café. And not just yours – all your competitors too. Apparently, they don't care if it loses money. In fact, they like it so much, they offer you $150,000. You can't believe it – god is truly shining down upon thee! Maybe it's got something to do with helping male delinquents find redemption in a bouquet of tulips. But who cares!? You've managed to sell a loss-making venture for a monstrous profit. After the sale goes through, you ponder what the buyer must've found so appealing about your business. Or what his strategy might be for turning it around. Maybe he has plans to renovate? To out-fox the competition with a superior marketing game (you never really got your head around Instagram)? Or perhaps he knows something about consumer tastes that you don't (like everyone is about to give up drinking beer for macchiatos)? Out of sheer curiosity you ask him. "Oh no", he says. "I don't know anything about the café business. I just plan to sell it in a few years for more than what I paid you. Meanwhile, I'll use the losses to offset my taxable income". …Pardon? "But how will you sell it for more if it's still making a loss?" you ask. "Mate, everybody knows café prices don't go down. And besides, the tax deduction is making me richer every day!" Now you're really confused. "But don't you eventually need to turn a profit. I mean, isn't the whole point to generate income?" you reply. He offers you a blank stare – like you're from another planet. And an awkward silence ensues. If we replace "florist" with "salary", "investor" with "high-income earner" and café with "property", you start to see the scope of Australia's property bubble. The flaw at the heart of it all? *Negative gearing is not an investment strategy. It's a tax minimisation scheme*. People have taken their accountants' advice and treated it as a wealth management solution. But *accountants are not investors*. They just bang the metaphorical hammer of taxation on the nail that is your capital. Think about it. If they were so good at investing, wouldn't they be out making money for themselves rather than giving you tax advice? *Investing to generate a loss – in the hope that a greater fool will come along and pay a higher price – is utter nonsense*. Sure, the whole scheme works if prices keep going up. But, is betting on continual price gains when they are already divorced from value – and net income is negative – really such a wise idea? Let's add a bit more colour to the picture. Imagine you said to a bank, "I want to buy this café and for you to put up 80% of the purchase price. The cash flow won't even cover the interest repayments – and I don't think they ever will – but I plan to flick the café for a profit in a few years' time". You'd be politely laughed out the door. And yet, that is exactly what happens in the property market today. But aren't lenders making sure people don't borrow excessively, you ask? Don't they act as a check on such foolish behaviour? Well, let's find out.

How the Sausage is Made

Back in our grandparents' day, people would walk into a bank and be greeted by their local branch manager. Not the sterile chit chat we suffer today. Because they knew you and you knew them – you were members of the same community, the same footy club, the same AA meeting. There'd be some friendly banter and the usual pleasantries – inquire about the kids' health, make an oft joke about your overbearing spouse ("I swear she's trying to poison me!") And then come to terms on a new financing agreement. It was a much more intimate affair. And the bank manager would decide to lend you money – not because you wanted or needed it – but because *he trusted you*. The great financier J.P. Morgan – the Warren Buffett of his day – famously said "the first thing is character… a man I do not trust, could not get money from me on all the bonds in Christendom". Can you imagine that today? "I'm sorry sir, but your mortgage application has been denied, because we think you are not of sound character!" Such relationship banking is long gone. In its place, we have the automated lending practice of behemoths like the "Big 4" banks. Rather than evaluate the merit of a particular borrower, lenders now adopt a "portfolio approach". A top-down view of their "exposure". Mortgages are not issued according to a manager's judgment. Their critical assessment of how likely you are to default – or your strength of character. Such micro decisions have been replaced by benchmarks, algorithms and risk models – which turn the lending spigot on or off. Clear as mud? Banks may not assess individual loan risk anymore, but they still need to interact with customers. But running retail branches is expensive – think of the leasing costs, staffing, workers compensation claims. Enter the beloved mortgage broker. About 20 years ago, the broking industry started turning what was a fixed cost for the banks (branches) into a variable one (commissions). So, banks go to outsource the collection and verification of mortgage applications, but also got a very motivated sales force (as we saw earlier). Such outsourcing and automation are what allow them to operate at massive scale. Despite my nostalgia for the old relationship banking, that business doesn't scale well. But, the "Robo-banking" model isn't fool proof either. It relies on accurate information from brokers. The integrity of the automation process (bad applications must actually get rejected by the system). And the quality of underwriting standards (i.e. the criteria used need to effectively account for the risk of default). If there is a breakdown at any stage of the chain, a bank will suffer issues across its entire loan book. And that is precisely what's happened.

A Systematic Failure

If you've been following the Royal Commission, you'll have an idea of how inept current banking practices are. But the most flagrant for our purposes has to do with something called the Household Expenditure Benchmark or "HEM". Now, this stuff isn't meant to be interesting, so bear with me. Let's say you'd gone to a broker to organise the $80,000 loan for your café. The broker knows it will lose money – every other café is losing money too. But, as long as the loan is well collateralised (you borrow 80% of the value) and your income from the florist can service the loan, it'll get approved. The bank – having watched the fallout from sub-prime mortgages in '08 – has learned to ask for at least three months' of sales figures (i.e. your personal payslips). The broker then gets you to "declare" the expected running costs for the year, packages up the documentation, and sends it to the bank for processing. But here's where the wheels fall off. The bank wants to make sure your florist has enough "income surplus" to cover the café loan. It has hard evidence of tulip revenue, but not expenses – just a declaration of what you think the costs will be. So, it compares your "declared expenses" against a benchmark called HEM. HEM lists running costs for florists of different size (the higher the sales, the higher the expenses). It then takes the higher of your declared expenses and this benchmark to calculate your "income surplus". If the surplus is negative, the loan is rejected. If it's positive, the loan is approved. Simple enough, right? Maybe not. At the peak of the mortgage boom Westpac was approving thousands of loans using the HEM figure, even when declared expenses were higher. Its automated lending system failed. The bank also approved thousands more loans using the wrong repayment method (it calculated principal and interest, rather than interest only). Incompetence? Yes. Poor lending standards? Yes. Westpac even got taken to court for breach of responsible lending laws – settling with the regulator for a paltry $35 million fine. But, it gets worse. Much worse. Say you surveyed a group of florists to estimate their basic running costs – power bills, land tax, dandelions. You also survey discretionary costs – social media, audio equipment, soothing incense. You then take the 25th percentile of these discretionary costs, combine it with the median (middle) for basic costs, to get a modest estimate of florist business expenses. That's essentially what HEM is. It's a very *conservative* estimate of a household's expenses, ranked by annual income. So, what's the problem? In 2015, the regulators noticed lenders were deferring to HEM more often than seemed reasonable. In fact, some were using it in *all* cases. The mandarins fired a warning shot – pointing out that HEM was no substitute for verifying actual expenses. But in 2017, a follow-up audit showed that the lenders hadn't listened. In fact, they found the majority of mortgages had declared expenses either below or exactly on the HEM benchmark. Now remember, HEM uses the *median* for basic costs and the *bottom quartile* for discretionary ones (meaning 50% of applications should be above the basic costs figure and 75% above the discretionary one). So*, how could the majority of mortgages be on or below the benchmark*? In other words, how can 80% of people be in the bottom 25%!? …Oops. But wait, there's more! HEM only lists expenses for people earning up to $100,000. There's no estimate for those on higher salaries. And do you remember our marginal borrower? The common thread was high-income earners. At the peak of the lending boom, 80% of interest-only loans to investors, and 70% of interest only loans to owner-occupiers, were for people earning more than $100,000. These borrowers *undoubtedly* have higher living costs than their low-income brethren – think private school fees, overseas holidays, luxury SUVs. So, they have much less ability to service their mortgage than lenders have estimated. What's the point? The point is *a large share of the riskiest mortgages (interest only loans) have been issued to the most speculative class of borrowers, using a flawed method to assess their chances of default.* How did this happen? *Mortgage brokers gamed the system*. They knew lenders would defer to HEM rather than verify expenses. So, they either encouraged people to underestimate their living costs, or simply looked the other way – ensuring approval of the loan *and* the broker's commission. In the end, *there was a widespread failure of lending standards*. Don't believe me? Ask anyone who's used a mortgage broker. They'll tell you straight out: "my expenses didn't matter – I could've put down anything".

IV. Reversion to the Mean

<u>Has the Tide Turned?</u>

Australia has a property bubble – no two ways about it. Exorbitant prices fuelled by a surge in mortgages, warped incentives and a deterioration in lending standards. And it's been exacerbated by a widespread belief that "prices never go down". But bubbles often persist for longer than we think. As the old adage says, "*the market can stay irrational longer than you can stay solvent*". We may not be able to forecast the prices of tomorrow, but we can still take stock of where we are today. To try and understand where we are in the cycle and if the tide of capital has already turned. In 2012, I was working as a lowly graduate trainee at the Department of Prime Minister & Cabinet. Julia Gillard was in power and the topic "du jour" was taxation of mining "super profits" (then dubbed, "the Minerals Resource Rent Tax"). China's economy was on fire, commodity prices at all-time highs, and there was no limit to the growth of local miners. Of course, this was the peak of the boom and the government's tax was later disbanded – as rosy times gave way to more normal conditions. The lesson? Governments are always – and necessarily – last to the party. Why? Because they do not have the incentives to do otherwise. The foray of bureaucrats is usually a sign the cycle has peaked, rather than beginning to ramp up. And this is what's happening with mortgages today. Both APRA and ASIC – two of our financial market regulators – first noticed a surge in mortgages in 2015 (the peak of investment property loans). They tinkered around the edges for a couple years, but began a real crackdown in 2017 – after it became clear their "guidance" hadn't worked. Then, a smorgasbord of banking violations went public – money laundering, price-fixing, overcharging – and the Royal Commission into Financial Services was announced. A cap was put on interest only loans, more stringent buffers around "income surplus", tighter checks on borrower expenses, and changes to broker compensation. It all amounted to tighter lending standards – a dialling back of the credit spigot. As a result, the issue of new mortgages has slowed – particularly, interest only loans to investors. But the full impact is yet to come. No doubt, many people took out interest only loans with the idea they could refinance every few years. Not out of foolishness, but because they had done so in the past, or because their broker said it wouldn't be a problem. But tighter lending standards mean refinancing is now more difficult. Less people will be able to rollover their loans and will have to incur the extra cost of repaying principal. Banks are also less willing to refinance, as the recent dip in property prices has eaten into borrowers' equity cushions. Can you see how the cycle starts to work in reverse? Over the next 3 years, $360 billion of interest only mortgages will rollover to principal and interest. The majority of these were issued in 2014 and 2015, when lending standards were most egregious, borrowers were care-free and the regulators were nowhere to be seen. Many will fail today's tighter standards – prompting either an uptick in repayment costs or increased selling. This is especially true for negatively geared investors, who have less incentive to pay off principal. So, instead of curbing the property bubble, regulators may actually be the catalyst for bursting it. *Just as the benevolent hand giveth, the benevolent hand taketh away.*

<u>Risks on the Horizon</u>

The RBA – and others – don't seem too worried about all this. They're confident borrowers can handle the extra repayments. Or that interest rates will remain low – shielding borrowers from the burden. But there are many other forces at play. Although the RBA is a key driver of bank funding costs (and thus mortgage rates), they're not the only ones. Banks are also impacted by overseas capital markets. Why? Well, a bank needs deposits to fund its activities. But in Australia, there aren't enough local depositors to go around. So, the banks turn to foreign wholesalers to fill the gap. This dynamic is what got them in trouble during the GFC. Despite avoiding toxic sub-prime loans, the banks still relied on easy access to foreign lenders. And when Lehman Brothers went under, those investors vanished – leaving the banks starved for capital, and prompting the RBA to step in. Today, Australian banks are much less dependent on foreigners, but still require their seal of approval. So, what does this all mean? It means mortgage costs are not just a function of RBA dictates. *Changes in global capital flows also shape borrowing costs*. And although the RBA has kept interest rates at record lows, wholesale lending costs are rising – fast. Last year, the ratings agencies downgraded major bank bonds – citing heavy exposure to the property market. Meanwhile, the Federal Reserve has steadily raised US rates, prompting capital to flow away from economies like Australia. Both forces have put pressure on bank profit margins, forcing them to raise mortgage rates. So, the lending spigot is being turned off – both by tighter lending standards and by forces beyond our regulators' control. Of course, there could also be some positive risks on the horizon. Say, the potential for rental incomes to rise – maybe from a surge in migration, or another baby boom. Just as the value of a start-up looks detached from its severe cash burn, so too property prices may just reflect a pending boom in rental incomes (justifying their high prices). However, this appears unlikely. Alongside the mortgage boom, there's also been a surge in construction. You don't need the latest housing statistics to know a flood of apartments has hit Melbourne, Brisbane and Sydney. In fact, since 2013, the rate of new units has not only grown, but accelerated. And this supply overhang will constrain any growth in rental incomes (just because a landlord needs extra rent, doesn't mean the market will give it to him). Combined with rising mortgage costs, extra housing supply will put more pressure on investors. *There are simply too many property assets, chasing too few renters*. Granted, a range of other things could happen – the Royal Commission might charge banks with criminal activity, the RBA may move to negative interest rates, and Australia could decide to invade New Zealand. Stress testing every conceivable scenario is impossible. And events that will have the biggest impact are likely to be the ones we cannot even foresee (remember those *unknown unknowns*). But, it's also true that *if something can't go on forever, it won't*. As Howard Marks likes to say: "*Trees don't grow to the sky; few things go to zero. At some point, valuation has to matter".* Likewise, Australia's property bubble can't go on forever – *at some point, rental income has to matter*. Again, this is not a prediction, but an assessment of where we are today – and why. You may disagree with me – and most people do. But that's the point. *If everyone could see the bubble, there wouldn't be one*. And when it does eventually burst (if it hasn't already), *those factors which drove a virtuous cycle of rising prices will start to work in reverse – creating a negative feedback loop*. Then, the only question will be: who's most exposed? Or to put it another way, *who's left holding the bag*?

If you have any thoughts or feedback, please email me. Otherwise, thank you for your interest and until next time, happy reading.

Jordan J. Shopov.

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