Is a financial crisis looming?

- The most likely consequence of the rapid build-up of household debt over the past decade is a number of years of softer GDP growth and lower interest rates than widely expected. But the risk of a more painful consequence, namely a recession or a financial crisis, has risen. There’s a danger that the Royal Commission investigation into the banks results in a slump in credit growth that causes house prices to fall sharply and the economy to weaken which, in turn, casts doubts over the quality of banks’ assets.

- The consensus view appears to be priced for perfection as despite the leap in the household debt ratio to a record high since the Global Financial Crisis it assumes that over the next few years the economy will grow at or above its current potential rate of around 2.75%. But economic history shows that more often than not a rapid build-up of debt usually comes with a consequence. The only question is how bad will that consequence be? Three scenarios are worth considering.

- In a soft growth scenario, the Royal Commission banking investigation prompts a small tightening in credit conditions that contributes to house prices edging a bit lower. Credit growth slows a bit and real GDP growth over the next few years averages 2.5% instead of close to, or above, the economy’s potential rate of 2.75%. Interest rates stay at, or very close to, their current record low of 1.5%, government bond yields stay reasonably low and the Australian dollar perhaps weakens from US$0.76 to close to US$0.70.

- In a recession scenario, a larger tightening in credit conditions and a bigger fall in house prices result in the outstanding amount of credit stagnating. That causes a mild recession, the first in Australia in 26 years, and a rise in the unemployment rate large enough to prompt the RBA to cut interest rates from 1.5%.

- In a financial crisis scenario, credit conditions tighten significantly, credit falls outright and the resulting bigger fall in house prices and weakening in the economy calls into question the quality of banks’ assets. Banks then tighten credit criteria further, triggering further falls in house prices and a deeper recession. Policymakers would cut interest rates close to zero, start quantitative easing and perhaps use public funds to support the banks. Bond yields may fall to new lows and the dollar may drop to US$0.60 or below.

- Much hinges on the extent of the forthcoming tightening in credit criteria. The good news is that politicians and regulators can, to some extent at least, control this. And if needs be, the RBA could support credit growth by reducing interest rates. So unless we see evidence that tighter credit conditions are prompting a slump in credit growth that the RBA is ignoring, the soft growth scenario will be our central case.

- But the situation requires close monitoring and with credit conditions set to tighten at a time when household debt is at a record high and house prices are already falling, the risks of the recession and financial crisis scenarios have risen. In the next five years there may be a 20% chance of the recession scenario and a 10% chance of the financial crisis scenario. Put another way, there’s almost a one-in-three chance that the surge in household debt ends badly.

Paul Dales
Tel: +61 2 9083 6801
Is a financial crisis looming?

Australia was one of the few economies to escape the Global Financial Crisis (GFC) of a decade ago without a recession. Since then, its household debt levels have risen to new record highs, its housing market has boomed and there are concerns that lending standards have been too loose. As these are typically the precursors of a financial crisis, in this Focus we consider if Australia is heading for its own financial crisis or if the consequence of high household debt will be more benign.

What do we mean by a financial crisis?
Our definition of a financial crisis is fairly wide as it includes any adverse interaction between falling asset prices and a deteriorating economy that weakens the banking sector. This captures a severe crisis similar to that experienced by the US ten years ago, when falling house prices and the seizing up of global funding markets placed question marks over the solvency of the banks. But it also captures a milder version where falling asset prices and a weakening economy place some doubts over the quality of banks’ loan book, which prompts banks to inadvertently exacerbate the situation by restricting credit. Recessions, which we define as two consecutive quarters of falling real GDP, can trigger financial crises as well as be a result of them. So you can have a recession without a financial crisis, but we assume that any financial crisis would be accompanied by a recession.

Complacency surrounding the debt burden
Australia survived the GFC better than most, partly due to swift policy decisions but mostly because the economy was being boosted by the once-in-a-generation mining boom generated by China’s strong demand for Australia’s iron ore and coal exports. So while many advanced economies had a clear incentive to reduce their debt burden after the GFC, Australia didn’t. The result is that Australia is one of the few major economies that has increased its debt burden since the GFC. This has been mostly confined to the household sector, has been largely due to housing debt and has resulted in the household debt to GDP ratio hitting a record high. (See Chart 1.)

What’s really odd is that most analysts and financial market participants believe this won’t have many consequences. By and large, they are assuming that over the next few years GDP growth will gradually rise from 2.3% last year to, or above, the economy’s potential rate of about 2.75%, that inflation will steadily climb from 1.9% in the first quarter to the midpoint of the Reserve Bank of Australia’s (RBA) 2-3% target and that the RBA will eventually raise interest rates from the current record low of 1.5% to the neutral level of about 3.5%. In other words, the expectation is that everything carries on as normal.

Unfortunately, it doesn’t always work like that as economic history shows that there is usually a consequence of a prolonged period of rapidly rising debt, the only question is how bad will the consequence be? There are many possible scenarios, but three stand out:

- The soft growth scenario. Household debt either rises at the same pace as nominal GDP or a bit slower, resulting in the debt to GDP ratio flat-lining or falling. This stabilisation or steady deleveraging results in the average rate of real GDP growth over a number of years being below the economy’s current potential rate of 2.75%.
- The recession scenario. The deleveraging takes place quicker, triggering a mild recession.
- The financial crisis scenario. Concerns over the quality of banks’ assets creates a vicious circle of falling asset prices, a weaker economy and a weaker banking sector, which causes a deeper and longer recession.

The current situation
In order to establish the most likely scenario, we take a look at the situation as it stands now and then consider what may change over the next few years.
Although some of the usual precursors of a financial crisis appear to have been met, including high debt, rapidly rising asset prices and lax lending standards, there are three valid reasons to believe that the situation may not be as bad as it looks.

First, as the value of assets has risen by more than the value of debt, when you look at both sides of the balance sheet the household sector looks in rude health. (See Chart 2.) Of course, debt is fixed in value while asset values can fall. But an almighty crash in asset values would be needed to place a significant dent in net wealth.

Second, the “true” rise in debt probably isn’t quite as large either. The rising amount of cash households have saved in mortgage offset accounts hasn’t been netted off even though it could instantly be used to repay some of the debt. This could mean the rise in the household debt to GDP ratio since the GFC is about five percentage points smaller, thereby leaving it only just above the level seen during the GFC. On top of that, the available data on the distribution of the debt suggest that, by and large, the households who have raised their debt-to-income ratio the most are the ones with the highest incomes, so they are best placed to cope.

And while the Royal Commission investigation into the behaviour of the banks has revealed many examples of lax lending, the aggregate data suggest that lending standards haven’t been extremely loose. Loan-to-value ratios have fallen since the GFC. And while the share of the riskier interest-only loans is still high, it has fallen since the regulators put in place restrictions on this type of lending in early 2017. At the same time, the share of low documentation and non-standard loans, which are most like America’s sub-prime loans, is small and falling. (See Chart 3.)

Third, other wider financial crisis warnings aren’t flashing red either. The Bank of International Settlements (BIS), aka the central bankers’ central bank, uses four different indicators and some thresholds to judge if a financial crisis is looming. The thresholds are derived from the experience of 40 economies over the past 40 years and they indicate the levels that have preceded 70% of financial crises, with only one false call for every five correct ones. Once these thresholds are breached, the risk of a financial crisis is high for the following three years.

The first BIS indicator is the debt to GDP ratio of the combined household and private non-financial corporate sectors relative to the long-term trend. This attempts to highlight when credit in the private sector is rising too fast (the message is currently the same if we just look at households). And comparing debt to the long-term trend strips out the structural rise in debt over the past few decades due to financial liberalisation and the decline in the neutral interest rate. In other words, it puts more emphasis on the change in credit rather than the absolute level. This indicator was above the danger threshold in the years before the GFC, but it is well below it now and is falling. (See Chart 4.)
The second indicator measures the speed at which Australian financial institutions are borrowing from overseas counterparts in foreign currencies. This is a useful barometer of risk as during credit booms it is common for financial institutions to borrow from overseas to fund domestic loans. This indicator also rose above the threshold before the GFC and it breached it again in 2016. But it has since fallen back and is now heading south. (See Chart 5.)

Chart 5: Overseas Borrowing in Foreign Currencies by Australian Financial Institutions

![Chart 5](image)

Sources: BIS, Capital Economics

The third indicator is the household debt servicing ratio, which is the share of disposable income used to meet interest and principal payments on all types of loans. According to the BIS, this is the single most important barometer as it has a closer relationship with financial crises than the other indicators, mostly as it tells us something about future loan defaults that could hurt the banking system. As Chart 6 shows, it breached its danger line ahead of the GFC, again in 2010/11 and it is only just below it now.

Chart 6: Household Debt Servicing Ratio

![Chart 6](image)

Sources: BIS, Capital Economics

The last indicator is the change in real residential property prices relative to the long-term trend. On its own this isn’t as good a warning sign as the others. But because of the way property prices interact with the banking system and the economy, when its danger threshold is breached it lowers the danger thresholds for the other indicators. So a large boom in house prices isn’t necessary to cause a financial crisis, but it does increase the chances of one.

Chart 7 shows that the surge in house prices in the years before the GFC was enough to breach the threshold. But the increase in prices in the past few years fell just short. Interestingly, had the property threshold been breached last year, then all the other indicators would now be flashing red as they would be above their lower thresholds.

Chart 7: Real House Prices

![Chart 7](image)

Sources: BIS, CoreLogic, Capital Economics

These early warning indicators suggest that if there was going to be a financial crisis, it should have happened during the GFC. And it appears that the risk isn’t as grave now. That’s partly due to the restrictions on lending implemented by regulators in recent years, which has contributed to an easing in credit growth and house price inflation.

What could change the situation?

Even so, it would be complacent to sound the all-clear when the threshold for overseas vulnerability was recently breached, the property one got close and the debt servicing ratio threshold has been all-but hit. As the BIS itself says, while none of the indicators are flashing red, two are on amber.

So what could make things worse? In recent months, three possible triggers for the recession and financial crisis scenarios have emerged:

- A fall in house prices that weakens the economy and banks’ balance sheets.
- A credit crunch triggered by the Royal Commission investigation into the banks.
- A rise in interest rates, either due to domestic or overseas events.
Potential trigger – house prices

The tighter lending rules implemented by regulators in early 2017 have taken some heat out of the housing market. Although this helped prevent house prices from breaching the BIS danger threshold, it does mean that prices are now falling. And a large fall in house prices could plausibly trigger a recession or a financial crisis if it meant that banks’ assets were hit by a rise in mortgage defaults. That could happen if the soft housing market resulted in the economy being weaker and unemployment being higher or if lower prices led some homeowners in negative equity to walk away from their loans.

So far house price inflation has fallen from +11.4% in May last year to -1.1% in May of this year. And the level of prices has fallen by 1.6% in the combined eight capital cities since the peak last July and by 4.3% in Sydney and by 1.5% in Melbourne. Moreover, the fall in the number of properties sold relative to the number of newly listed properties for sale suggests that house price inflation may soon fall to -5%. (See Chart 8 and our Australia Economics Focus “What next for house prices?” 10th April.)

A 5% fall in prices wouldn’t cause mortgage defaults to leap as it wouldn’t weaken the economy enough to cause a big rise in unemployment and it wouldn’t prompt people who bought near the top of the market to walk away even if their loan is worth more than their home. For the latter to happen, various studies suggest that prices would need to fall by 15% or more. Of course, Australian mortgages are full recourse, so the banks can seize other assets as well as the house. But that didn’t stop defaults from rising during the US housing crash in states with similar rules. Most borrowers just don’t have other assets for the banks to take (superannuation is ring-fenced).

And in the wrong set of circumstances, there is scope for house prices to fall by 20% or more. Our calculations suggest that housing is overvalued in most cities. For the ratio of house prices to disposable incomes per employee to fall back to our estimate of the sustainable ratio, house prices in the eight capital cities would need to fall by 20% and in Sydney and Melbourne they would need to drop by almost 30%. (See Chart 9 and our Australia Economics Focus “How overvalued is housing?” 20th September 2017.)

Potential trigger – credit crunch

The Royal Commission investigation into the banks, which began in earnest in March and is due to recommend changes to current regulation in February, is designed to weed out bad conduct and increase the stability of the financial system in the long-term. But as it already appears to be prompting banks to tighten their lending standards, there’s a danger it could cause instability over the next few years by weakening the housing market and the economy. It may mean some new borrowers won’t be able to get a loan, others won’t be able to get one as big as they hoped and some current borrowers may not be able to refinance existing loans.

There is no way of knowing when or by how much credit criteria will tighten. But we can illustrate the kind of tightening that could cause a problem. Chart 10 shows that there is a fairly close relationship between the value of housing finance commitments (loan approvals) and house prices. If finance commitments fell by 30%, as they did during the GFC, then the chart suggest that house prices would fall by between 5% and 10%. For prices to suddenly fall by the 15% or more that could prompt defaults to rise, the blue cross shows that housing finance commitments would need to fall by 40% or more.
As for the wider economy, Chart 11 shows that the relationship between nominal credit growth and real GDP growth is not quite as close. Even so, the horizontal line shows that for the annual growth rate of real GDP to fall to zero, the level of outstanding credit to both households and firms would need to decline by about 3%. That would be worse than during the GFC, when credit continued to grow, but similar to the 2% fall during the 1991 recession.

**Potential trigger – higher interest rates**

The high level of debt means that mortgage rates may not need to rise far for some borrowers to struggle to meet their monthly mortgage payments. This is why the household debt servicing ratio we showed in Chart 6 is already close to the BIS danger line. Chart 12 is similar, but rather than show the debt servicing ratio for all borrowers it shows it for new mortgage borrowers. This is useful as it allows us to show the influence of changes in mortgage rates for the most vulnerable borrowers – those who recently borrowed a lot to buy an asset that is now falling in price.

The grey line shows that if incomes rise at a moderate pace and mortgage rates are unchanged then the debt servicing ratio would fall further below the BIS danger threshold (we have adjusted the threshold for the change in coverage).

If everything else was the same but mortgage rates rose by 1.0 percentage point (ppt) over the next three years, then the dark blue line shows that the debt servicing ratio would rise some way above the BIS threshold. If the spread between the official interest rate and mortgage rates were unchanged, then this scenario would be similar to the RBA raising interest rates from 1.5% to 2.5%. If mortgage rates rose faster, by 2.0 ppts by the end of 2021, then the black line shows that the debt servicing ratio would climb close to a new high. That would be akin to the RBA raising interest rates to the neutral rate of 3.5%.
Which scenario?
The likelihood of our three scenarios therefore depends on the likelihood of the three potential triggers.

We can’t completely rule out the possibility that house prices fall by 15% or more, but that would probably require one or both of the other triggers. And it is encouraging that during the boom residential investment didn’t rise to a record high as a share of GDP. (See Chart 13.) That means it’s unlikely to fall as far during a downturn. In other words, the direct impact on the economy from a weaker housing market may not be large enough on its own to generate a surge in default rates.

What’s more, the RBA is unlikely to stand by and watch if a sharp fall in house prices is weakening the economy and if credit growth is slumping. In that situation, the RBA would probably cut interest rates.

At the least, RBA Governor Philip Lowe has been playing down the chances of an interest rate hike since late last year by regularly stating that current economic conditions mean there is “not a strong case for a near-term adjustment in monetary policy”. And the RBA has recently hinted that this is partly due to the Royal Commission. In the minutes of May’s policy meeting the RBA said “it would be appropriate to hold the cash rate steady and for the Reserve Bank to be a source of stability and confidence”. The implication is that the RBA won’t rock the boat by raising interest rates until the cloud of uncertainty that the Royal Commission is casting over the banks and the economy has lifted.

Of course, it is possible that the Royal Commission prompts banks to raise their mortgage rates even if the RBA keeps the official rate unchanged. After all, raising the cost of borrowing is an effective way to improve the quality of all new loans. But we doubt that the banks would be bold enough to respond to the Royal Commission’s accusations of greed by significantly raising their profits margins!

Global developments could also force banks to raise their mortgage rates independently of the RBA, and the recent spike in banks’ short-term funding costs is a concern. Chart 14 shows that the rise in the spread of US three-month interbank rates over expectations for the path of official rates has filtered through to a higher spread for Australian banks. And this rise in the cost of securing funds in the short-term wholesale market has already caused some smaller Australian banks to nudge up their mortgage rates.

As for credit conditions, obviously a lot depends on the banks, but presumably politicians and regulators can influence by how much and when credit conditions are tightened. Indeed, the government will be able to decide which of the recommendations of the Royal Commission it implements. And it will presumably consult with the regulators to decide when and how to implement them. For example, to avoid a sudden change in lending behaviour, banks may be given some time to adopt any new rules.

We don’t place much faith in the ability of the politicians and regulators to judge what changes are necessary to weed out the apparent misconduct in the banking system without damaging the housing market and the wider economy. But there is a clear incentive for them to err on the side of caution as politicking and regulating is much harder when the economy is weak.

Our hunch is that credit conditions won’t be tightened by enough to cause a 40% drop in housing finance commitments or a 3% fall in the stock of credit that may be needed for real GDP to stagnate.
However, and despite the latest rebound, we suspect that the cost of funding in short-term markets will fall back as the distortions caused by changes to tax rules in the US that caused it in the first place fade. In any case, Australian banks have cut their reliance on short-term funding since the GFC. Short-term sources now account for 20% of banks’ total funding costs rather than 40%. That means mortgage rates are half as sensitive to changes in short-term funding costs as 10 years ago. It follows that the three-month bank spread would need to be three times as large as now to increase banks’ total funding costs by enough to warrant them raising their mortgage rates by 0.25%.

Our assumption is that mortgage rates won’t rise much until the RBA starts to increase interest rates. And we doubt that economic conditions will be strong enough to warrant higher interest rates until late next year at the earliest. And even then, the lingering effects of the Royal Commission may mean the RBA keeps rates on hold until well into 2020.

It is also encouraging that banks appear well placed to weather a further fall in house prices and any resulting rise in default rates. Mortgages do account for a whopping 40% of banks’ assets. But as Chart 15 shows, even though Australian banks escaped the GFC relatively unscathed, they have raised their Tier 1 capital ratio by more than American banks. And the mortgage default rate would have to rise to astronomical levels to generate losses big enough to significantly reduce that ratio.

So our view is that the slow growth scenario is more likely than either the recession or the financial crisis scenarios. But it also has consequences. In our view, the legacy of the run-up in household debt in recent years will be a number of years of real GDP growth of 2.5% instead of close to, or above, the economy’s potential rate of 2.75% and inflation of 2.0% rather than close to the centre of the RBA’s 2-3% target.

And we aren’t willing to completely rule out the recession or financial crisis scenarios. With house prices falling and credit conditions tightening, the chances of these scenarios are higher now than they have been for a number of years. It’s very hard to put a number on them, but it might be the case that there is a 20% chance of a recession within the next five years and a 10% chance of a financial crisis.

How would policymakers respond?

Given that, it is worth pondering how policymakers would respond in all three scenarios. Some of this is circular given that the actions of policymakers can influence which scenario is most likely. Even so, in the soft growth scenario, the RBA isn’t going to raise interest soon or far. We believe that interest rates will remain on hold at 1.5% until late in 2019 and there is a growing chance that a tightening in credit conditions will mean they aren’t raised until 2020 or even 2021. And when rates are eventually raised, they will surely be raised very slowly.

It follows that in the soft growth scenario Australian 10-year government bond yields will stay fairly low over the next five years. They may not move much from the current yield of 2.70% by fluctuating between 2.50% and 3.00%. And the Australian dollar may weaken a bit from the current rate of US$0.76, by moving around in a range of between US$0.70 and US$0.75 for the next few years.

Even if the recession or financial crisis scenarios materialise, there is a lot policymakers could do to limit the damage and break any vicious circle that develops between falling house prices, a weakening economy and a weakening banking system.

In the recession scenario, which involves a slow burning problem of falling house prices, tightening bank conditions and a weakening economy without any financial crisis, then the RBA would probably be fairly slow to react as it would want to wait to see firm evidence that the unemployment rate is heading...
from 5.6% now to some way above 6.0% before cutting interest rates. But once that became clear, the RBA would presumably cut interest rates from the current level of 1.5% to below 1.0%.

If there were any signs of a financial crisis, the RBA would react quicker. At the first signs that financial institutions were struggling to access short-term funding, the RBA would probably cut interest rates close to zero and provide banks with plenty of US dollar funds and Australian dollar funds at favourable rates.

In contrast, even if there were concerns about the solvency of the banks, we suspect that the politicians would be fairly slow to react. In theory, they would be able to end any such concerns by using public money to recapitalise the banks and/or by buying any bad assets from the banks. They could also support the economy by using public funds to give households an instant tax rebate and to support the housing market and banks by establishing mortgage default prevention schemes.

In practice, though, in order to take such drastic steps, which would require them to abandon current hopes of running a budget surplus and reducing the Federal government debt to GDP ratio, politicians would need to see the pain first. Even in a dire situation, politicians probably wouldn’t step in until the unemployment rate has started to rise rapidly, which usually means a lot of the problems have already happened.

Eventually, though, in the financial crisis scenario the RBA and politicians would step in to shore up the banking sector, the housing market and the economy. In both the recession and financial crisis scenarios, Australian government bond yields would presumably plunge to new historic lows, equity prices would fall sharply and the Australian dollar would weaken significantly. In either scenario the Australian dollar could fall from US$0.76 now perhaps to US$0.60 or below. While that would concern some people, we would view it as a crucial release valve.

**Conclusion**
Overall, as long as the imminent tightening in credit standards is not too severe and interest rates don’t rise soon or far, then Australia will probably avoid a recession or financial crisis for another few years. The consequence of the rapid rise in household debt may therefore just be more years of subdued real GDP growth, low inflation, low bond yields and a fairly weak Australian dollar.

But while the risk of a financial crisis is lower than before the GFC, the falls in house prices and the prospect of tighter credit conditions means that it is higher now than for a number of years. And at some point, interest rates will have to rise. It is only then that we will really find out how lax lending standards have been and if households can afford their loans.

So even though a financial crisis in the next five years is not our central forecast, the severity of the consequences means that the risk is worth taking seriously. Clients should be mindful of the possibility of much lower house prices, a deterioration in the quality of banks’ assets, much lower interest rates, much lower bond yields and a much weaker Australian dollar.
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