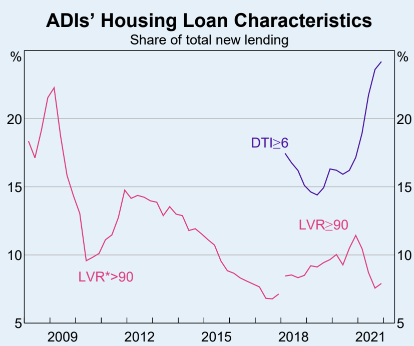
Box B

How Risky is High-DTI and High-LVR Lending?

The share of new high debt-to-income ratio (DTI≥6) mortgage lending increased significantly to 24 per cent in the December quarter of 2021 (Graph B.1). More timely information from a subset of lenders suggests that the share of such lending has remained at a high level during early 2022 (see 'Chapter 2: Household and Business Finances in Australia'). There was also notable growth in the share of new high loan-to-valuation ratio (LVR≥90) loans over 2020 as the share of lending to first home buyers increased, though this has since declined.

Household survey data indicate that high-LVR and high-DTI borrowers have been more likely to self-report missing a mortgage repayment due to financial difficulties than other borrowers. Previous Bank research has shown that borrowers who previously missed a mortgage payment were more likely to miss subsequent payments and so are at greater risk of default.[1]

Graph B.1



* LVR series breaks at March 2018 due to reporting changes.
Sources: APRA; RBA

Borrower characteristics influence the riskiness of high-DTI and high-LVR lending

The higher incidence of mortgage stress among high-LVR and high-DTI borrowers could be due to their high LVRs or DTIs alone, or it may be that borrowers who take out these loans have other characteristics that make their loans riskier. The risks associated with high-DTI and high-LVR lending may also vary at different points in the economic cycle depending, for example, on the outlook for housing price and income growth as well as interest rates.

For a given borrower, a high-LVR or high-DTI loan will be riskier for the lender. All else equal, having a higher DTI – and so higher repayments relative to income – makes it more likely that a borrower who experiences an adverse shock to their income or expenses will miss mortgage repayments. High-DTI loans can also increase macroeconomic risks as these borrowers are more likely to need to reduce their consumption when faced with a cash flow shock. Borrowers with high-LVR loans may also be more likely to face repayment difficulties in the event of a shock because their lower levels of equity mean they are less able to avoid such difficulties by selling their property or refinancing their loan.[2] A loan with a higher initial LVR is also more likely to lead to larger losses for lenders in the event of default, as the loan is more likely to be in negative equity at the point the property is actually sold (for a given rate of amortisation and housing price growth).

However, the riskiness of these loans will also be influenced by borrower characteristics such as their levels of income and wealth, and the size of their liquidity buffers (i.e. their holdings of liquid assets such as cash and bank deposits relative to disposable income).

This box uses data from the Household Income and Labour Dynamics in Australia (HILDA) survey to examine whether borrower characteristics amplify or mitigate the risks represented by their reported difficulties repaying their mortgages.[3] Limitations of this approach include that the most recent available data are from 2018, as well as that the relatively small sample size may introduce some uncertainty. It should be noted that the characteristics of the relevant borrowers may have changed since the last survey, particularly given the significant increase in the number of borrowers taking out high-LVR and high-DTI loans over recent years. Moreover, it is not possible to observe all borrower characteristics that could influence their decisions to take out these loans and their potential to experience repayment difficulties (such as their willingness to take risks and attitudes towards saving).

Borrowers with high initial LVRs have tended to be riskier, but the riskiness of those with high initial DTIs has varied widely

The survey data indicate that borrowers with high initial LVRs have tended to have certain characteristics that increase the likelihood of repayment difficulty. In particular, they have tended to have lower liquidity buffers, lower incomes and lower total wealth than other borrowers.

In contrast, the risk characteristics of borrowers with high DTIs have historically been mixed. High-DTI borrowers tend to have slightly higher liquidity buffers than low-DTI borrowers, which, on average, reduces the risks associated with these loans. However, there is considerable variation among borrowers with high DTIs: those with low liquidity buffers have been more likely to report mortgage repayment difficulties than other borrowers, while those with high buffers have generally been less likely to report repayment difficulties. The income and wealth characteristics of high-DTI borrowers vary depending on whether the borrower is an owner-occupier or an investor. Within both groups of borrowers, those with high DTIs are more likely to have lower incomes (which tends to amplify the risks associated with these loans) but higher wealth (which tends to reduce risks). But among high-DTI borrowers, owner-occupiers have tended to be riskier than investors as they tend to have lower income and lower relative wealth. Borrowers with loans that have high DTIs and other high-risk characteristics such as high LVRs, low net income surpluses (NIS) or interest-only payments are likely to be especially risky. Taken together with the complex nature of high-DTI borrowers' risk characteristics, this underscores that lenders should closely scrutinise their high-DTI loans to ensure their overall portfolio risks remain contained.

Owner-occupiers with high LVRs have had lower liquidity buffers, incomes and wealth than other borrowers

Owner-occupier borrowers whose initial LVR was greater than or equal to 90 have been more likely to report mortgage repayment difficulties than owner-occupiers with lower LVRs. This is consistent with evidence that borrowers with high LVRs are more likely to have lower liquidity buffers, lower incomes and lower total wealth than other borrowers

– partly reflecting the fact that first home buyers account for a large share of high-LVR loans.[4]

Owner-occupier borrowers with high initial LVRs have tended to have lower liquidity buffers than other owner-occupier borrowers (Graph B.2). Households with small liquidity buffers are less able to use those liquid assets to make mortgage repayments if they experience unanticipated shocks to their income or expenses. They are therefore more likely to fall behind on their debt repayments. While low buffers increase the incidence of mortgage stress for all borrowers, the effect has been more pronounced for borrowers with high LVRs.

Owner-occupiers with high initial LVRs have been more likely than other borrowers to have low liquidity buffers and report mortgage repayment difficulties throughout the life of their loans. The persistence of low liquidity buffers and mortgage stress among borrowers with high initial LVRs might reflect that high-LVR owner-occupiers have also been more likely to have a low NIS at origination.

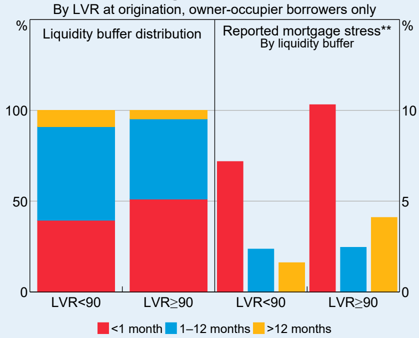
Owner-occupiers with a high initial LVR have also tended to have lower incomes than other borrowers (Graph B.3). This amplifies the riskiness of these loans, in part because lower income borrowers are more likely to face repayment difficulties in the event of an unanticipated increase in their expenses. This is not surprising as lower-income borrowers are less able to save a large enough deposit to avoid paying lenders mortgage insurance (LMI) (borrowers with an LVR>80 are required to pay LMI). While a lower income increases the probability of mortgage stress for all borrowers, this has been especially true for lower-income borrowers with high LVRs.[5]

High-LVR owner-occupiers have also been much less likely to be wealthy than other borrowers: only around one-quarter had wealth exceeding $1 million in 2018, compared to around half of other (lower-LVR) owner-occupiers.[6] Borrowers with lower total wealth are likely to be more risky as they are less able to sell other assets in order to maintain loan repayments or avoid default.

Graph B.2

Risk Metrics for High and Low LVR Borrowers*

By LVR at origination, owner-occupier borrowers only



* Liquidity buffers are a ratio of liquid assets to disposable income.

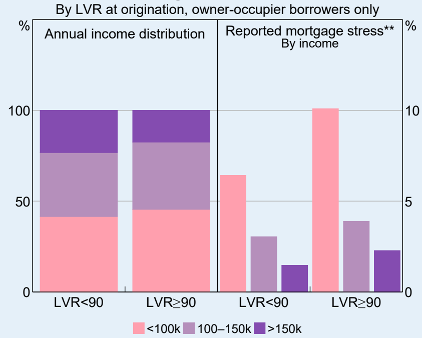
** Reflects an inability to meet a housing loan repayment due to financial difficulties.

Sources: HILDA Survey Release 20.0; RBA

Graph B.3

Risk Metrics for High and Low LVR Borrowers*

By LVR at origination, owner-occupier borrowers only



* Incomes are expressed as 2018 dollars.

** Reflects an inability to meet a housing loan repayment due to financial difficulties.

Sources: HILDA Survey Release 20.0; RBA

High-DTI borrowers have been more likely to report mortgage stress, but only those with low buffers

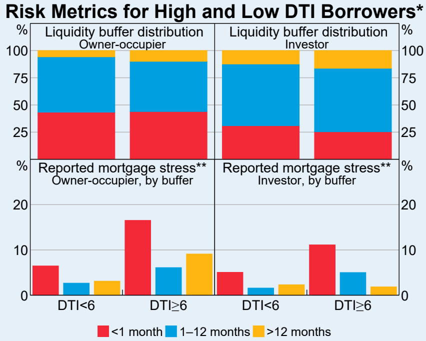
Similar to borrowers with high LVRs, borrowers with high DTIs have been more likely to report mortgage stress than other borrowers.[7] However, in contrast to high-LVR borrowers, high-DTI borrowers have tended to have slightly higher liquidity buffers than other borrowers, which mitigates the risks associated with some high-DTI loans (Graph B.4). This is particularly true for investors with high-DTI loans – who are actually more likely to have high liquidity buffers (>12 months of income) than other borrowers. These investors with high-DTI loans and high buffers have, in turn, been less likely to report mortgage repayment difficulties than other borrowers. In contrast, those owner-occupiers and investors with high DTIs and low buffers have been more likely to report mortgage stress than other borrowers.

The income distribution of high-DTI borrowers varies depending on whether the borrower is an owner-occupier or an investor. Overall, owner-occupiers with high-DTI loans have tended to have lower incomes than other borrowers (Graph B.5). This adds to the risks associated with these loans, as a lower income increases the probability of mortgage stress. In contrast, investors with high DTIs have tended to have higher incomes than owner-occupier borrowers (regardless of their DTIs) but lower incomes than low-DTI investors.

Borrowers with high-DTI loans have tended to be wealthier than other borrowers, which could mitigate the risks associated with some of these loans. This has been particularly true for investors with high-DTI loans, with around three-fifths holding more than $1 million in net wealth in 2018 compared to around one-third of all indebted households. High-DTI investors are also likely to face fewer barriers to deleveraging by selling their investment properties, further reducing both their probability of default and the lender's loss in the case of default.

Graph B.4

Risk Metrics for High and Low DTI Borrowers*



* DTIs are calculated at loan origination for owner-occupiers, but dynamic DTIs are used for investors as the age of an investment loan – and therefore the borrower's debt and income at origination – is not available. Liquidity buffers are a ratio of liquid assets to disposable income.

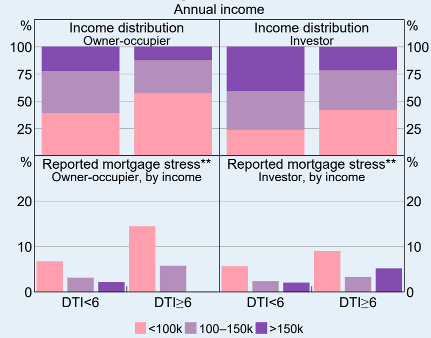
** Reflects an inability to meet a housing loan repayment due to financial difficulties.

Sources: HILDA Survey Release 20.0; RBA

Graph B.5

Risk Metrics for High and Low DTI Borrowers*

Annual income



* DTIs are calculated at loan origination for owner-occupiers, but dynamic DTIs are used for investors as the age of an investment loan – and therefore the borrower's debt and income at origination – is not available. Incomes are expressed as 2018 dollars.

** Reflects an inability to meet a housing loan repayment due to financial difficulties.

Sources: HILDA Survey Release 20.0; RBA

Borrowers with both a high DTI and a high LVR appear especially risky, but account for a very small share of new loans

APRA data show that new loans that have both a DTI≥6 and an LVR≥90 continued to account for a very small share of loans in the December quarter of 2021, at around 1½ per cent. Most of these loans are owner-occupier loans. Owner-occupiers with both high DTIs and high LVRs have historically been around four times more likely to report mortgage stress than other borrowers, and three times more than those with only a high DTI *or* a high LVR. Consistent with this, these borrowers have also been much more likely to have low liquidity buffers and lower incomes than other borrowers.

Endnotes

[1] See Read M, C Stewart and G La Cava (2014), 'Mortgage-related Financial Difficulties: Evidence from Australian Micro-level Data', RBA Research Discussion Paper No 2014-13.

[2] See Bergmann M (2020), 'The Determinants of Mortgage Defaults in Australia – Evidence for the Double-trigger Hypothesis', RBA Research Discussion Paper No 2020-03.

[3] The survey asks respondents if they have been unable to meet a payment by the due date on any housing or property loan in the previous 12 months because of financial difficulties. This question has been asked in 'wealth modules' every four years since 2006.

[4] For more detail on the drivers of recent trends in first home buyer lending, see Alfonzetti M (2022), 'Are First Home Buyer Loans More Risky?', RBA *Bulletin,* March.

[5] While the increased incidence of mortgage stress among lower-income borrowers is likely to partly reflect their lower liquidity buffers (which is also an important determinant of mortgage stress), there is evidence that income is important in its own right.

[6] Data limitations do not allow for a comparison of the wealth distributions of high- and low-LVR investors.

[7] The results of owner-occupiers and investors are not directly comparable. DTIs are calculated at loan origination for owner-occupiers, but dynamic DTIs are used for investors as the age of an investment loan is not available in the survey data. This means the estimates are biased towards investors with higher initial DTIs, which could overstate the differences in risk characteristics for high- and low-DTI investors based on the threshold of 6. Acting in the opposite direction, the surveys also report net rental income (net of interest costs) when gross rental income would be the better measure. This causes DTIs for investors to be overstated, and could understate the differences in risk characteristics for genuinely high- and low-DTI investors.