Trading Equity for Liquidity: Bank Data on the Relationship Between Liquidity and Mortgage Default

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INTRODUCTION

In this report, we present a combination of new analysis and previous findings from the JPMorgan Chase Institute body of housing finance research to answer important questions about the role of liquidity, equity, income levels, and payment burden as determinants of mortgage default.

DATA ASSET & METHODOLOGY

Analyzing a sample of de-identified Chase customers with both a Chase mortgage and a Chase deposit account, we measure borrower liquidity by observing the borrower’s checking and savings account balances in the month after closing and over the life of their mortgage. We then normalize the sum of their account balances by dividing by their scheduled mortgage payment (where mortgage payment = principal + interest + taxes + insurance + association dues, or PITIA), and use this “number of mortgage payment equivalents,” or MPEs, to quantify their liquidity. For each specific finding and figure, we focus on a slightly different part of this population, described below.

FINDINGS

[1] Borrowers with little post-closing liquidity defaulted at considerably higher rates than borrowers with at least three mortgage payment equivalents of post-closing liquidity.

- Borrowers with less than one mortgage payment equivalent (MPE) of post-closing liquidity had three-year default rates (1.8%) that were more than five times higher than the default rate of borrowers with between three and four MPEs of liquidity (0.3%).
- Borrowers with little liquidity made up a disproportionately high share of defaults: borrowers with less than one MPE of post-closing liquidity made up 20 percent of our sample but accounted for 54 percent of defaults.

[2] Borrowers with little liquidity but more equity defaulted at considerably higher rates than borrowers with more liquidity but less equity.

- Regardless of their 2013 LTV, borrowers with less than one MPE of liquidity had higher default rates than borrowers with a 2 percent point higher LTV but three to four mortgage payments of liquidity.

[3] Default closely followed a loss of liquidity regardless of the homeowner’s equity, income level, or payment burden.

The relationship between liquidity and default persisted over the life of the mortgage.

- Borrowers with less than one MPE of 2013 liquidity had a 2014 default rate (3.2%) that was more than six times higher than borrowers with between three and four MPEs of liquidity (0.5%).
- Borrowers with little liquidity made up a disproportionately high share of 2014 defaults: borrowers with less than one MPE in 2013 liquidity made up 33 percent of our sample but accounted for 75 percent of defaults.

If the inherent effects of liquidity and equity on default during the life of the mortgage are similar to the effects at origination, then our analysis provides suggestive evidence that trading a slightly higher LTV for increased liquidity at origination could reduce default rates.

- Selection bias confounds the analysis using origination LTV, making it less robust and generating noisier, albeit consistent results.
- At origination, the share of loans exhibits bunching and average liquidity spikes at “price-break” LTV bins that is likely caused by pricing incentives, highlighting that there are important differences in borrower characteristics related to underwriting in adjacent LTV bins.
- For most levels of origination LTV, borrowers with a smaller amount of post-closing liquidity had higher default rates than borrowers with a larger amount of post-closing liquidity; the default rate for borrowers with less than one MPE of liquidity (2.4%) was on average 1.9 percentage points higher than the default rate for borrowers with between three and four MPEs of liquidity (0.4%).

CONCLUSION & IMPLICATIONS

Our findings suggest that liquidity may have been a more important predictor of default than equity, income level, or payment burden, especially for those borrowers with little liquidity.

A policy or program encouraging borrowers to make a slightly smaller down payment and use the residual cash to fund an “emergency mortgage reserve” account might lead to lower default rates. If impactful and cost-effective, the program could serve as an alternative to underwriting standards based on measuring the borrower’s static ability-to-repay (ATR) using their total debt-to-income (DTI) ratio at origination.

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