

### *III.A.3 Summary of Aggregate Facts*

The aggregate facts we document are consistent with the idea that banks and shadow banks differ in their ability to extend jumbo and conforming mortgages, resulting in market segmentation. We argue that this market segmentation arises because jumbo mortgages are mainly kept on the balance sheets of lenders. Since shadow banks do not have much balance sheet capacity, they mainly originate to distribute, which is limited to the conforming market.

Such market segmentation implies that a decline in the balance sheet capacity of the banking system leads to a relatively larger contraction in traditional jumbo mortgage supply through two channels. First, shadow banks, lacking balance sheet capacity, respond to rising bank constraints by expanding in the conforming market, but cannot do so in the jumbo market. Second, traditional banks, lacking balance sheet capacity, tilt their activity towards conforming originations and away from retaining loans on balance sheet. The larger contraction in the supply of jumbo mortgages leads to an increase in their relative price, i.e., an increase in the jumbo-conforming spread.

### **III.B Micro evidence**

In this section, we provide micro-level evidence consistent with the aggregate facts, which narrows down the potential interpretations of the forces driving the aggregate data.

#### *III.B.1 Market Segmentation at the Conforming Loan Limit*

We exploit the conforming loan size limit discontinuity to reject alternative explanations of market segmentation between banks and shadow banks. One alternative explanation of traditional banks' large market share in the jumbo market is that wealthy borrowers who are more likely to take up jumbo mortgages also have larger demand for other banking services. In other words, the alternative explanation is that banks specialize in large loans, which also happen to be jumbo loans. As we discussed in Section II, there is a sharp loan amount cutoff to qualify as a conforming loan. Borrowers' demand for banking services should increase somewhat continuously with mortgage size, rather than jump exactly at the conforming cutoff. The ability to securitize a mortgage, on the other hand, discontinuously drops at the conforming loan amount. Thus, observing a discontinuous jump in the bank market share at the conforming limit would reject the demand alternative.

We first confirm that the probability of a loan being retained on balance sheet indeed discretely jumps at the conforming loan limit. As Figure 4A shows, the fraction of loans retained on lenders' balance sheets discontinuously jumps from about 25% just below the conforming loan limit to about 70% just above the conforming loan limit.

To test whether banks specialize in large loans or in jumbo loans, we confirm that their market share discretely increases at the conforming loan limit in Figure 4B. Banks' market share of loans just below the cutoff is roughly 65%, whereas bank market share above the cutoff is roughly 80%. The results suggest that banks have a comparative advantage in originating jumbo loans because these loans are difficult to sell.

We next more formally test whether balance sheet financing share and bank market share discretely jump at the conforming loan limit discontinuity. We focus on mortgages within 1% of the conforming