and log of the number of unique census tracts in which the bank lends. These specifications are estimated for both levels and changes in these variables.[6]

Table 4 shows that banks that experience a 1 pp increase in their capital ratio increase the share of originations retained on their balance sheets by about 4.5 pp (Column 2). Columns 3 and 4 show that across banks, better-capitalized banks originate more jumbo loans, but this effect disappears within banks. Columns 5 and 6 show that the within-bank balance sheet retention margin occurs on the dimension of conforming loans. In other words, as banks capitalization increases, they increase the share of conforming loans they retain on the balance sheet. Because the secondary market for jumbo loans is limited, banks can only adjust their balance sheet effect by adjusting originations, which is costly. The large effect of capitalization on retention of conforming loans suggests this is the easiest margin of adjustment, which banks can make without adjusting their originations substantially.[7] These micro-level results support the aggregate evidence, which suggested that banks vary their business models on the conforming side in response to changes in their own capitalization.

III.B.3 Relative Product Pricing

The aggregate results indicate that balance sheet contraction of traditional banks leads them to contract supply of jumbo mortgages, increasing the jumbo spread. The aggregate jumbo spread may partially reflect the differences in the mortgage composition, since jumbos are larger and cater to a different population segment. To shed more light on conforming and jumbo loan pricing, we examine the mortgage interest rates around the conforming limit in Figure 6 and compare the period during which the spread was high (2008) with the period in which the spread was low (2014). Similar to aggregate data, there is a sharp discontinuity of about 30 to 40 basis points at the conforming loan cutoff in 2008 (Figure 6B). By 2014 (Figure 6C), on the other hand, we observe much more modest increase in mortgage rates on loans above the conforming loan limit.

As we discussed above, the positive correlation between aggregate price and quantity and bank capitalization suggests that supply shocks were at least partially responsible for driving the aggregate trends. If the contraction in jumbo lending in the 2007–2009 period was solely driven by demand for jumbos (e.g., due to a decline in house prices), we should also observe a decrease in the pricing of jumbo mortgages. Instead we find the opposite effect: jumbos are relatively more expensive in times of low jumbo-market share.

III.B.4 Consumer "Bunching" at the Conforming Loan Cutoff

There is well-known bunching at the conforming limit—i.e., there is a mass of borrowers right below the conforming loan cutoff (e.g., DeFusco and Paciorek (2017)). A consumer who would, all else equal, prefer a jumbo mortgage may therefore prefer to choose a cheaper conforming mortgage

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[6] Mian and Sufi (2018) show that non-core deposit liability financing played an important role in the run-up to the financial crisis. Our main results on capital ratios are robust to the inclusion of non-core deposit financing share and the core deposit financing share (Table A3).

[7] Due to differences in risk weighting due to regulation, jumbo origination requires more capital than conforming loans. An alternative explanation of our findings could be that some banks have a desire to originate more jumbo loans and, because of regulatory reasons, such banks have to increase their capitalization. This is unlikely to be driving our findings. The reason is that we find this relationship also holds for conforming loans.