

Another way banks can obtain additional balance sheet capacity is to sell existing assets. Recall that banks hold assets other than mortgages on its balance sheet. In the baseline model, the quantity of these assets is fixed. Since adding mortgages on the balance sheet is increasingly more expensive, the bank could choose to sell its assets and substitute these for mortgages. We assume these other assets have a fixed opportunity cost (return). For ease of modeling, we assume that these assets yield a premium over GSE-securitized mortgages that the bank could instead hold.

Intuitively, allowing banks to choose balance sheet capacity changes the model the following way. When a bank is close to its capital requirement, balance sheet lending becomes very expensive. At that point, banks have the option to finance new jumbo originations by raising external financing or selling assets. The advantage of doing this, from the bank's perspective, is that it does not raise the financing costs on its inframarginal assets. Since equity issuance is more expensive than GSE financing, banks will always finance conforming mortgages through GSE financing or existing balance sheet equity, rather than through new equity issuance.

To understand the effect of endogenous balance sheet capacity, we study the impact of raising capital requirements. We set the cost of issuing external funds and the opportunity cost of holding nonmortgage assets at 25 bps above GSE funding. Note that this is not the cost of equity financing—it is the cost of external financing holding leverage ratios fixed. The results are shown in Appendix Table A1. As one would expect, endogenous balance sheet capacity mutes the effects of raising capital requirements. Raising capital requirements to 9% decreases lending volumes by only \$1 billion and increases jumbo interest rates by 7 basis points. The effects on consumer welfare are also muted. The large adjustment occurs on the share of loans that are financed through expanded balance sheet capacity. With the baseline capital requirements of 6%, roughly 8% of loans are financed through new balance sheet capacity. Increasing capital requirements to 9% increases this to 21%. As shown in Figure A3, when capital requirements are 3% no jumbo loans are financed through new issuance; with capital requirements at 9%, nearly all jumbo loans are financed with new capital.

### *Jumbo Mortgage Securitization Market*

We conduct our policy analysis using the institutional environment from 2015: While conforming mortgages can either be securitized or retained on the balance sheet, there is no securitization market for jumbo mortgages. As our model suggests, if bank balance sheets become significantly impaired, the premium on jumbo mortgages rises. If the effect is persistent, one might imagine that a securitization market for jumbo mortgages would arise, as they did pre-financial crisis. We introduce a securitization market for jumbo mortgages by allowing jumbo mortgages to be sold on a secondary market. Similar to how conforming securitization has a fixed cost  $\sigma_t^{gse}$ , we assume that jumbo securitization has a fixed cost  $\sigma_t^{jum}$ .

The introduction of jumbo securitization has two effects. First, traditional banks now face a tradeoff between financing jumbo mortgages on balance sheet versus financing jumbo mortgages through securitization. When bank capital is closer to the capital requirement, on-balance sheet financing costs for jumbo mortgages rise. When these costs are sufficiently high, banks choose to switch to external financing through securitization. Second, the introduction of jumbo securitization allows shadow