consumer welfare are similarly asymmetric, with a 100 bp decrease leading to origination volume increases of roughly $1,012 billion and consumer surplus gains of $169 billion, compared to origination volume decreases of $249 billion and welfare losses of $51 billion for a 100 bp increase.

Unlike banks, shadow banks are very sensitive to changes in the securitization market: a 100 bp increase in the GSE financing costs leads to a 13 percentage point decline in the overall shadow bank market share and a 16 percentage point decline in the shadow bank share of conforming loans. Shadow bank lending volume shrinks substantially by around 44%. Banks' ability to shift to balance-sheet conforming loans gives them a comparative advantage when GSE rates rise.

Bank Stability

In the baseline scenario, conforming loans comprise roughly 42 percent ($280 billion) of balance sheet lending, but even a slight decline in GSE funding costs creates large enough incentives to move these loans from bank balance sheets to be sold. In other words, banks respond to QE by shifting conforming loans off the balance sheet along the balance sheet retention margin. This endogenous shift explains why conforming interest rates are so sensitive in particular to *decreases* in GSE financing costs: when GSE financing is cheaper, all conforming originations are GSE financed, and so further changes to GSE rates are passed through roughly one-to-one to conforming loan rates. QE also expands traditional bank profits, increasing them by $8 billion, or roughly 6% for a 25 basis points decrease in GSE rates.

In contrast, banks are able to respond to increases in GSE financing costs by shifting originations onto their balance sheets. In response to the 100 bp GSE cost increases, the balance sheet financing share increases substantially, from 37% to 75%, which mutes the effect on rates and aggregate lending volumes. Once GSE financing costs increase, the cheap on-balance sheet funding of banks gives them a large comparative advantage and banks adjust on the balance sheet retention margin. Bank profits are initially unaffected as GSE costs increase because lending volumes decrease overall, which is offset by increases in more profitable balance sheet lending. However, for larger increases in GSE costs, the latter effects dominate as borrowers substitute more and more towards loans financed on bank balance sheets, and bank profits increase by a small amount.

This counterfactual illustrates how the effects of QE differ substantially from capital requirements. Both increases to capital requirements and increases to GSE financing costs have the effect of contracting mortgage origination. However, an increase in GSE financing cost leads to much larger contraction of aggregate lending volume compared to the increases in capital requirements. This is because an increase in the GSE financing costs directly affects the lending ability of *both* banks and shadow banks and ends up contracting lending substantially. On the other hand, increases in the capital requirements target only banks. As a result, shadow banks end up alleviating the adverse effects of an increase in the capital requirements on aggregate lending volume by increasing their lending though the migration margin.

V.C GSE Reform: Changes to Conforming Loan Limits

We next consider changing conforming loan limits, which has been actively debated in the context of GSE policy reform (see Hurst et al. (2016)). This policy has been actively changed since the beginning