The Effect of Macroprudential Regulation on Homeownership

Elio Bolliger[a], Adrian Bruhin[a], Andreas Fuster[b], Maja Ganarin[b]

[a]University of Lausanne

[b]Swiss National Bank

Extended Abstract

Introduction

In the aftermath of the global financial crisis, regulators and supervisors introduced various macroprudential policies to enhance financial stability. On the one hand, these policies aim to mitigate the build up of systemic risk and strengthen the banks' resilience during a systemic crisis. On the other hand, additional capital requirements for banks could lead to tighter borrowing constraints for households and make transitioning into homeownership harder. In an environment where house prices grow stronger than other assets, distributional effects could be the consequence.

In this paper, we exploit a unique administrative data set of tax reports from the canton of Bern in Switzerland containing detailed financial and socio-demographic information on every household. This unique data set allows us to estimate the effect the introduction of macroprudential policies had on credit constraints of households.

Macroprudential Policies in Switzerland

From the early 2000's on, a strong positive dynamic has prevailed in the Swiss domestic residential real estate market. While from 2000 to 2012, transaction prices of houses and

apartments grew by more than 50% and 70%, respectively, and mortgage growth showing a similar trend, nominal income only increased by about 20%.

In the light of the potential vulnerabilities in the Swiss mortgage sector, Switzerland implemented several macroprudential policies. The policies are threefold. First, in July 2012, the Swiss Bankers Association harmonized self-regulation across lending institutions. It tightened requirements for residential mortgage loans with respect to the borrowers' minimal amount of equity and the maximal duration for repayment. Second, in January 2013, the Financial Market Supervisory Authority increased the risk weighted capital requirements on residential mortgage loans with high loan-to-value (LTV) ratios. Third, in February 2013, the Federal Council activated the sectoral Countercyclical Capital Buffer (CCB) which requires banks to hold additional common equity Tier 1 capital on all residential mortgage loans. At its introduction, the CCB amounted to 1%. In June 2014, the Federal Council increased it to 2%.

While these policies aim to decrease the LTV, dampen the mortgage growth and increase the banks resilience, they may also have other effects. Due to higher borrowing constraints, households that were able to buy a house before the implementation of these policies might have to save for a longer period before transitioning into homeownership or might forgo homeownership entirely. When house prices continue to grow faster than other asset classes, these households might endure wealth disadvantages.

Literature and Contribution

Our paper connects three different strands of literature. First, our analysis fits into the literature about the effects of macroprudential regulation (Aastveit, Juelsrud, & Getz Wold, 2020; Basten, 2020; Behncke et al., 2018). We add to this literature the link of higher capital requirements and housing choices.

Second, our paper connects to the literature of household finance (Goodman & Mayer, 2018; Ioannides & Zabel, 2003; Lustig & Van Nieuwerburgh, 2005; Piazzesi, Schneider, & Tuzel, 2007; Sodini, Van Nieuwerburgh, Vestman, & von Lilienfeld-Toal, 2016). Considering housing as an alternative asset class, we complement the literature on how macroprudential regulation might affect the portfolio choices of households.

Third, our paper relates to literature analyzing borrowing constraints and its effects on housing choices (Acolin, Bricker, Calem, & Wachter, 2016; Blickle & Brown, 2016; Hurst & Stafford, 2002; La Cava, 2016). In particular, our results contribute the discussion about heterogeneous vulnerability to additional borrowing constraints.

Data and Method

We use a unique administrative panel data set comprising yearly individual information on all households in Bern, the second largest canton of Switzerland. We observe wealth and income variables as well as socio-demographic indicators from 2003 to 2016.

The most valuable feature of our data set is the separate information about predeath bequests and inheritances households receive. While predeath bequests are more targeted transfers, inheritances are arguably unpredictable. We gauge on these transfers to detect borrowing constraints of households.

Our main analysis features an event study to compare the effects of macroprudential regulation on the probability to transition into homeownership, i.e. the extensive margin. In more detail, we analyze how transfers affect the probability to transition into homeownership and compare whether they have become more important after the introduction of the macroprudential policies. We use a related set-up to investigate whether we observe similar affects regarding the purchase price of a home, i.e. the intensive margin.

Results & Conclusion

On average, we find a moderate decrease from 3.6% to 3% in the probability to transition into homeownership after 2012 which is likely due to the introduction of the macroprudential policies. This decrease is particularly pronounced for younger households and households with low wealth. Transfers are in general important to overcome borrowing constraints. They increase the probability to transition into homeownership from 2.5 up to 11 percentage points (p-values$<$0.01) for inheritances and predeath bequests, respectively. Moreover, after the introduction of macroprudential policies, predeath bequests have become more important and increase the probability to transition into homeownership by an additional 0.9 percentage points (p-value$<$0.01).

Regarding the intensive margin, we find some evidence that since 2012, predeath bequest and wealth also have had a higher effect on the purchase price of a home, reflecting the results we observe for the extensive margin. A household that receives a predeath bequest or who has above median wealth increases the purchase price of a home by 4% and 5% (p-value $<$0.1, and p-value $<$ 0.05), respectively.

Our robustness checks suggest that the stronger effect of predeath bequests after 2012 cannot solely be explained by rising house prices. Furthermore, evidence from homeowners who acquire an additional home shows that they are not confronted with higher borrowing constraints. Predeath bequests have no different effects before and after 2012 for homeowners acquiring an additional home.

Our results have the following implications. Macroprudential policies aim at reducing imbalances on the housing and mortgage market. Hence, a tightening of borrowing constraints has to be expected. However, our results show that younger households, who had less time to accumulate wealth, are particularly affected by tighter borrowing constraints. Via predeath bequests, they rely more heavily on their family wealth to transition into homeownership. As family wealth is heterogeneous, the introduction of macroprudential policies may entail distributional consequences and impact social mobility.

References

Aastveit, K. A., Juelsrud, R., & Getz Wold, E. (2020). Mortgage regulation and financial vulnerability at the household level.

Acolin, A., Bricker, J., Calem, P., & Wachter, S. (2016). Borrowing constraints and homeownership. *American Economic Review*, *106*(5), 625–29.

Basten, C. (2020). Higher bank capital requirements and mortgage pricing: Evidence from the counter-cyclical capital buffer. *Review of Finance*, *24*(2), 453–495.

Behncke, S., et al. (2018). Effects of macroprudential policies on bank lending and credit risks. *Swiss National Bank, Bern*.

Blickle, K., & Brown, M. (2016). *Borrowing constraints and home ownership* (Tech. Rep.). University of St. Gallen Working Paper.

Goodman, L. S., & Mayer, C. (2018). Homeownership and the american dream. *Journal of Economic Perspectives*, *32*(1), 31–58.

Hurst, E., & Stafford, F. (2002). Home is where the equity is: Liquidity constraints, refinancing and consumption. *Graduate School of Business, University of Chicago, Chicago IL*.

Ioannides, Y. M., & Zabel, J. E. (2003). Neighbourhood effects and housing demand. *Journal of applied Econometrics*, *18*(5), 563–584.

La Cava, G. D. (2016). Housing prices, mortgage interest rates and the rising share of capital income in the united states.

Lustig, H. N., & Van Nieuwerburgh, S. G. (2005). Housing collateral, consumption insurance, and risk premia: An empirical perspective. *The Journal of Finance*, *60*(3), 1167–1219.

Piazzesi, M., Schneider, M., & Tuzel, S. (2007). Housing, consumption and asset pricing. *Journal of Financial Economics*, *83*(3), 531–569.

Sodini, P., Van Nieuwerburgh, S., Vestman, R., & von Lilienfeld-Toal, U. (2016). *Identifying the benefits from home ownership: A swedish experiment* (Tech. Rep.). National Bureau of Economic Research.