Journal of Monetary Economics 76 (2015) 173–190

Contents lists available at ScienceDirect

Journal of Monetary Economics

journal homepage: www.elsevier.com/locate/jme

Mortgage defaults

Juan Carlos Hatchondo [a,*], Leonardo Martinez [b], Juan M. Sánchez [c]

[a] *Department of Economics, Indiana University, 100 South Indiana Ave. Bloomington, IN 47405, United States*
[b] *International Monetary Fund, 700 19th Street NW, Washington, DC 20431, United States*
[c] *Federal Reserve Bank of St. Louis, 1 Federal Reserve Bank Plaza, St. Louis, MO 63102, United States*

ARTICLE INFO

Article history:
Received 1 August 2014
Received in revised form
28 September 2015
Accepted 30 September 2015
Available online 22 October 2015

Keywords:
Mortgage
Default
Recourse
LTV
Housing risk

ABSTRACT

A life-cycle model is developed in which households face income and house-price risk and buy houses with mortgages. This model, which accounts for key features in U.S. data, is used as a laboratory for prudential policy. Recourse mortgages increase the cost of default but also lower equity and increase payments. The effect on default is nonmonotonic. Loan-to-value (LTV) limits increase equity and lower the default rate, with negligible effects on housing demand. Combining recourse mortgages and LTV limits reduces the default rate while boosting housing demand. Together, they also prevent spikes in default after large declines in aggregate house prices.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

The increase in U.S. mortgage defaults observed since 2006 moved the stability of mortgage markets to the center of policy debates (Campbell, 2012; FED, 2012; Treasury, 2009), invigorating academic and policy discussions about prudential policies that could prevent defaults. Two prudential policies have received widespread consideration: recourse mortgages, which allow lenders to collect from debtors after a default, and loan-to-value (LTV) limits on new mortgages.[1]

This paper evaluates recourse mortgages and LTV limits in the light of a life cycle model with housing and non-durable consumption, idiosyncratic shocks to labor earnings and the price of housing, and mortgages. Households can consume housing services by renting or owning the house they live in, and they can buy houses of different sizes. They can borrow to buy a house using a long-term collateralized defaultable mortgage. A defaulting household must move out of the house used as collateral. There is a deadweight cost of liquidating houses in foreclosure. Households can also refinance their mortgage loans and save using a risk-free asset. There is room for policy interventions because households have limited commitment and markets are incomplete.

The model generates plausible predictions for the households' demand for housing, demand for mortgages, and mortgage default decisions. Idiosyncratic income and housing-price stochastic processes are parameterized using previous estimations

---

* Corresponding author. Tel.: +1 812 856 1202.
E-mail address: juanc.hatchondo@gmail.com (J. Carlos Hatchondo).

[1] IMF (2011) discusses the widespread use of these policies across countries. It is often argued that recent housing-price declines had a much larger effect on mortgage defaults in the United States than in Europe in part because of soft U.S. recourse policies (Hatchondo et al., 2013; IMF, 2011; Feldstein, 2008). Wong et al. (2011) present empirical evidence that, for a given fall in house prices, the incidence of mortgage default is higher for countries without an LTV limit than for countries with an LTV limit. Several studies document the important effects of the origination LTV on the probability of mortgage defaults (Mayer et al., 2009; Schwartz and Torous, 2003).

http://dx.doi.org/10.1016/j.jmoneco.2015.09.011
0304-3932/© 2015 Elsevier B.V. All rights reserved.

obtained with U.S. data. The calibration targets the homeownership rate, the median house price, the median ratio of financial assets to income, and the median down payment. The model also generates plausible implications for other indicators of the demand for housing (the life cycle profiles of ownership and house prices), the use of mortgages (home equity, mortgage payments, and the distribution of mortgage down payments), and the mortgage default rate. The overall match between the model predictions and the data makes the model a good laboratory for the quantitative evaluation of policies.

Recourse mortgages are assumed to allow lenders to garnish some of the cash-in-hand wealth (income and financial assets) of a household that defaults. Results are presented for 15 different recourse policies that differ in three dimensions: the level of cash-in-hand wealth exempt from attachment, the maximum percentage of cash-in-hand wealth subject to attachment, and the (expected) duration of the attachment period.

These results indicate that it may be difficult to reduce the rate of mortgage defaults significantly with recourse mortgages. Furthermore, an implementable recourse policy (mild enough to be consistent with bankruptcy law) may fail to prevent a sharp increase in the mortgage default rate after a large aggregate decline in the price of housing and may even exacerbate the increase in the default rate.

The effect of recourse on the equilibrium default rate is nonmonotonic.[2] On the one hand, a harsher recourse policy makes defaults more costly, reducing the probability of a default in any mortgage. On the other hand, in our model with endogenous choice of down payment and equilibrium pricing of mortgage interest rates, a harsher recourse policy may increase the LTV chosen by households and, therefore may increase the default rate.

The effect of recourse on the demand for housing is also nonmonotonic. This effect follows the effect of recourse on LTVs, as higher (lower) LTVs allow for more (less) housing consumption. On the one hand, a harsher recourse policy lowers the cost of high-LTV mortgages and thus may lead households to choose higher LTVs. On the other hand, a harsher recourse policy may force households with adverse income shocks to reduce their consumption in order to stay current on their mortgages payments and avoid a default. This may lead households to choose mortgages with lower LTVs to prevent these costly adjustments. The latter effect dominates for very harsh recourse policies, dampening the demand for housing.

The relationship between recourse and welfare follows the one between recourse and the demand for housing. In our model, the households' ability to default implies endogenous borrowing constraints. Recourse mortgages may relax these constraints, producing welfare gains (default decisions need not be optimal from an ex-ante perspective).

The findings described above indicate that the implementation of recourse mortgages may present difficulties. A recourse policy that is not harsh enough would increase default and a recourse policy that is harsh enough to significantly lower the default rate may end up reducing the boost to housing consumption implied by recourse mortgages (as pointed out by Campbell, 2012, the main stated goal of much U.S. housing policy is to increase the homeownership rate). Furthermore, bankruptcy laws could prevent the implementation of very harsh recourse policies.

Since the difficulty of using recourse mortgages to reduce the default rate is the result of high origination LTVs, this problem could be mitigated by imposing LTV limits. It is first shown that LTV limits lower the default rate with negligible effects on the demand for housing. For instance, comparing simulations for the benchmark economy with those for a model economy with an 80 percent LTV limit shows negligible differences in housing consumption, while the LTV-limit economy features a default rate 70 percent lower than the one in the benchmark. Nevertheless, an 80 percent LTV limit may be insufficient to prevent a sharp increase in the mortgage default rate after large declines in the aggregate price of housing.

The mild effect of LTV limits on homeownership sheds light on important policy debates. For instance, in the U.S., qualified residential mortgage rules make higher down payments necessary for originators to fully securitize and sell the mortgage, which in turn would result in lower interest rates for borrowers. Critics argue that these rules could have significant negative effects on housing demand (see, for example, MBA, 2011). Since these rules can be viewed as a flexible LTV limit for new mortgages, our results cast doubt on these arguments.

There may also be important complementarities between recourse mortgages and LTV limits. Economies with both recourse mortgages and LTV limits feature a lower default rate and higher housing consumption than the benchmark, thus achieving the two most-cited goals of mortgage policies. Furthermore, combining recourse mortgages and LTV limits is necessary to greatly reduce the increase in the mortgage default rate that follows after large declines in the aggregate price of housing.

1.1. Related literature

Our model incorporates housing, idiosyncratic housing-price risk, and mortgages into the class of models used in quantitative studies of households' earnings risk (see Kaplan and Violante, 2010, and the references therein). Our model also extends the equilibrium default model used in quantitative studies of credit card debt (Athreya, 2005; Chatterjee et al., 2007) by studying collateralized long-term debt (mortgages) and shocks to the price of the collateral (housing). Some studies of credit card debt focus on the effects of changes in the severity of bankruptcy penalties or income garnishment, which is comparable to our discussion on the effects of recourse mortgages (Athreya, 2008; Athreya et al., 2011; Chatterjee and Gordon, 2012; Li and Sarte,

---

[2] This nonmonotonicity may account for the mixed evidence on the effect of recourse on mortgage defaults. See Clauretie (1987); Ghent and Kudlyak (2011), and the references therein.

Download English Version:

https://daneshyari.com/en/article/7368624

Download Persian Version:

https://daneshyari.com/article/7368624

Daneshyari.com