Mortgage Brokers and the Refinancing Transaction: Evidence from CRA Borrowers

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Jonathan S. Spader [1,3] & Roberto G. Quercia [2]

Abstract

This study adds to an emerging literature on the lending practices of mortgage brokers during the run-up in home prices prior to 2006. Following a sample of low — and moderate-income borrowers through the first years following home purchase, the analysis identifies differences in the refinancing transaction associated with the use of mortgage brokers vs. retail lenders. Specifically, the analysis includes measures of the refinancing process, including whether the lender initiated contact with the borrower, whether the terms of the mortgage changed at closing, and the level of borrower satisfaction in hindsight. Care must be taken in extrapolating from this sample to the broader mortgage market, as all borrowers refinanced out of 30-year fixed-rate purchase mortgages in the Community Advantage Program (CAP). Nevertheless, analysis of this sample offers unique insight into borrowers' interactions with mortgage brokers during the

refinancing transaction. Origination with a mortgage broker, compared with origination through a retail lender, is associated with both a less satisfactory refinancing process and a higher likelihood of refinancing into an adjustable-rate mortgage (ARM).

Notes

1. Mortgage brokers' effective exemption from regulatory oversight further heightens speculation over their role in originating risky mortgages. Where banks and thrifts undergo annual regulatory exams, mortgage brokers' activities are examined only indirectly through examination of the affiliate lender (Longhofer and Calem 1999). Legally, oversight of mortgage brokers is the responsibility of the Federal Trade Commission, which does not conduct regular examinations.

2. Stephen Labaton. "Obama Plans Fast Action to Tighten Financial Rules." *The New York Times,* 24 January 2009.

3. Kleiner and Todd's (2007) NBER working paper provides the most comprehensive evidence to date on the impact of state-level licensing and registration requirements. In that analysis, the authors report several interesting findings with respect to existing state-level regulations, but are hesitant to assign causality to these results.

4. The CAP dataset isolates a sample of LMI home buyers, limiting extrapolation to the broader mortgage market. However, the sampling process relates to the nature of the original purchase mortgage, and should be unrelated to selection of a mortgage broker to refinance. The CAP program and the characteristics of the analysis sample are discussed in greater detail in the data section.

5. The authors attribute this increased risk to principal-agent problems between the lender and broker, whereby brokers are not fully held accountable for the performance of loans after origination.

6. Mortgage brokers may be indirectly affected to the extent that lenders discontinue relationships with brokers that originate particularly risky loans.

7. Appendix 1 of Ernst et al. (2008) presents a lender's rate sheet, including the

yield spread premiums associated with different loan prices.

8. Over 80% of broker-originated loans contain yield spread premiums, which average 1.5% of the originated loan amount.

9. Both Woodward (2003) and Woodward (2008) also report higher costs for black and Latino households, as well as for households without a college degree.

10. National Association of Mortgage Brokers. “Frequently Asked Questions.” [http://www.namb.org/namb/FAQs1.asp?SnID=2054389889], accessed 22 June 2008.

11. Compliance with the rule change is not mandated until January 2010, so the actual impact of the rule change will not be known for some time.

12. This second type of purchasing activity raises the prospect of seasoning bias to the extent that loans in the lender’s portfolio that terminated prior to CAP purchase are censored from the analysis sample. For the purposes of this article, the observed seasoning is not anticipated to create non-random missingness with respect to the use of mortgage brokers. Among loans acquired through bulk purchases, the mean seasoning period is less than six months.

13. A complete discussion of CAP’s sampling strategy is performed by Riley and Ru (2009). They also compare the sample of CAP homeowners with the set of homeowners in the Current Population Survey (CPS) who meet the above purchasing criteria, finding that the CAP sample is largely representative of this population. The primary exceptions are that CAP homeowners tend to be marginally younger, better educated, and geographically concentrated in the South.

14. See Freddie Mac's Primary Mortgage Market Survey [http://www.freddiemac.com/dlink/html/PMMS/display/PMMSOutputYr.jsp?year=2008].

15. The credit enhancement increases the interest rate, but is offset by the lack of mortgage insurance on CAP loans.

16. Of 1,656 owners in the sampling frame, 1,283 are contacted and complete interviews for a response rate of 77 percent. 1,227 of these interviews resulted in complete information on all measures.

17. Fannie Mae estimated appreciated values for each home in the 4st quarter of 2005. Appreciated values in interim periods are interpolated using the home purchase price and the Fannie Mae appreciated value, assuming a constant rate of appreciation. Fannie Mae's proprietary automated valuation model (AVM) produces four different estimates of each home's appreciated value based on repeat sales information, public tax records, and property characteristics. When discrepancies arise between the estimates, a reconciliation model generates the final estimate. Because of its proprietary nature, we do not directly observe the estimation procedure used by the AVM. We base our trust in the model's reliability on OFHEO's consistent approval in regulatory audits.

18. The Federal Reserve Board's recent revisions to Regulation Z define first lien mortgages to be 'higher-cost' when the associated annual percentage rate exceeds 150 basis points above the average prime offer rate. This rule is approximated among CAP mortgages using the spread associated with the nominal interest rate.

19. For instance, Danis and Pennington-Cross apply these methods to loan performance, but structure the decision process related to delinquency. With

a larger sample, a similar model could be implemented for the refinancing and/or prepayment decision.

20. Specifically, the relatively small number of cash-out refinances limits the cell sizes for ARM and FRM choice, preventing convergence of a nested logit model. For the full CAP sample, a two-equation probit selection model can be implemented to account for borrowers' simultaneous decisions of whether to refinance. However, the results from such a specification add little to the substantive findings. The null hypothesis of random censoring can only be rejected (weakly) for the high-cost ARM outcome measures, and the estimated coefficients differ minimally in response to the presence/absence of this selection correction.

21. The complete survey module is included for reader reference in the working draft version of this paper at www.ccc.unc.edu/research.php.

22. This specification is determined in part by the presence of multicollinearity among the set of possible variables. For instance, the nominal amount of equity is also observed, but is highly correlated with the current LTV and the appreciation rate.

23. Beyond these financial factors, the previous literature also suggests that ARM use is driven by mobility expectations and other demographic characteristics. Building a theoretical model of ARM choice, Cocco and Campbell (2003) show that households with larger mortgages, variable income, and/or little expectation of future mobility should be less likely to prefer ARM mortgages. Using empirical data, Dhillon et al. (1987) confirm that households with dual incomes and/or expectations of future mobility are more likely to select ARM mortgages. Applied to the CAP dataset, mortgage size and household income are included as covariates, while mobility expectations cannot be directly observed.

24. This phenomenon also accounts for the near significance of the unpaid balance variable in Table 1, as the states with fewer brokers also contained relatively low home purchase prices.

25. Borrowers whose origination credit scores fell between 660 and 719 are significantly more likely to refinance than borrowers whose origination credit scores exceeded 720. However, this effect is not suggestive of a systematic credit quality effect.

26. The effect is also consistent with the analysis of Kleiner and Todd (2007). While the authors hesitate to apply a causal interpretation to their findings, they report that stronger bonding and net worth requirements are associated with the presence of fewer mortgage brokers.

27. Each analysis is also repeated using the second specification from Table 3 and using a specification that includes both the state indicator variables and the licensing index. All reported results are robust in sign and significance to this specification decision.

28. The prime rates for FRM and ARM mortgages reflect the mean rates reported for the primary market, which are recorded monthly by Freddie Mac's Primary Mortgage Market Survey.

29. Sensitivity analyses were performed in response to concerns about multicollinearity and the weak z-statistics on the covariate variables. None of these analyses suggest that multicollinearity drives the reported results. Instead, the weak effects appear to result from the relatively homogenous nature of the CAP sample (and the small sample size). All CAP households enter homeownership during roughly the same period, limiting the observed variation in the measures based on interest rate variation and equity growth.

30. If anything, the negative sign on the appreciation variable suggests that

borrowers in hot markets benefit from increased home equity (and a lower loan-to-value ratio) in qualifying for FRM refinancing products.

31. When equity extraction is present, the choice of an ARM product may reflect the borrower's tradeoff of loan terms against the monthly mortgage obligation and the ability to extract equity. Conversely, these factors should not be influential when equity extraction is not present, as rate refinancers seek only to lower the long-term costs of mortgage credit.

32. Each analysis is also repeated using a probit selection model to correct for differences in the propensity to refinance. The reported results are robust to model choice. Moreover, the null hypothesis of random selection into the set of refinancers cannot be rejected for any of the outcomes related to the refinancing transaction.

33. The analyses were also repeated using several alternative specifications of these measures, as the use of high-cost ARMs may not be the only relevant product distinction. For instance, one alternative model replaces the high-cost ARM measure with an indicator variable for ARM choice, an indicator variable for a higher-cost mortgage, and an interaction between these measures. The sign and significance of the reported broker effect are robust to the specification of these variables with respect to each of the outcome measures.

34. The omitted demographic estimates rarely show significant effects and offer little to the substantive interpretation.

35. Because the use of high-cost ARMs may not be the only relevant product distinction, the robustness of the broker effect is examined using multiple specifications of ARM choice, use of above-prime mortgages, etc… The use of a mortgage broker carries a significant negative effect on satisfaction across models.

References

Alexander, W. P., Grimshaw, S. D., McQueen, G. R., & Slade, B. A. (2002). Some Loans are More Equal than Others: Third-Party Originations and Defaults in the Subprime Mortgage Industry. *Real Estate Economics, 30*(4), 667–697. doi:10.1111/1540-6229.t01-1-00054.

Article Google Scholar

Brueckner, J. K., & Follain, J. R. (1989). ARMs and the Demand for Housing. *Regional Science and Urban Economics, 19*, 163–187. doi:10.1016/0166-0462(89)90002-1.

Article Google Scholar

Brueckner, J. K., & Follain, J. R. (1988). The Rise and Fall of the ARM: An Econometric Analysis. *Review of Economics and Statistics, 70*, 93–102. doi:10.2307/1928154.

Article Google Scholar

Chomsisengphet, S., & Pennington-Cross, A. (2006). The Evolution of the Subprime Mortgage Market. *Federal Reserve Bank of St. Louis Review, 88*(1), 31–56.

Google Scholar

Cocco, J. F., & Campbell, J. Y. (2003). Household Risk Management and Optimal Mortgage Choice. *Quarterly Journal of Economics, 118*(4), 1449–1494. doi:10.1162/003355303322552847.

Article Google Scholar

Courchane, M. J. (2007). The Pricing of Home Mortgage Loans to Minority Borrowers: How Much of the APR Differential Can We Explain? *J Real Estate Res, 29*(4), 399–439.

Google Scholar

Dhillon, U. S., Shilling, J. D., & Sirmans, C. F. (1987). Choosing Between Fixed and Adjustable Rate Mortgages. *Journal of Money, Credit, and Banking, 19*(1), 260–267. doi:10.2307/1992281.

Article Google Scholar

Anshasy E, Amany GE, Shimazaki Y “The Pricing of Subprime Mortgages by Mortgage Brokers and Lenders.” Georgetown University. Credit Research Center Working Paper #70, June 2006.

Ernst, Keith, Debbie Bocian, and Wei Li. “Steered Wrong: Brokers, Borrowers, and Subprime Loans.” Center for Responsible Lending, April 2008.

Essene RS, Apgar W “Understanding Mortgage Market Behavior: Creating Good Mortgage Outcomes for All Americans.” Harvard University. Joint Center for Housing Studies Working Paper M07-1, April 2007.

Gramlich, E. M. (2007). *Subprime Mortgages: America’s Latest Boom and Bust*. Washington DC: The Urban Institute.

Google Scholar

Guttentag J “Another View of Predatory Lending.” University of Pennsylvania, The Wharton School. Financial Institutions Center Working Paper 01-23-B, August 2000.

Hendershott, P.H., W.C. LaFayette, and D.R. Haurin. (1997). Debt Usage and Mortgage Choice: The FHA-Conventional Decision. *Journal of Urban Economics*, *41*(2), 202–217.

Article Google Scholar

Inside B&C Lending. (2007). Retail Share of Subprime Originations Jumps in 1Q07. *Inside B&C Lending 12 no., 12*, 4.

Google Scholar

Jackson, H., & Burlingame, L. (2007). Kickbacks or Compensation: The Case of Yield Spread Premiums. *Stanford Journal of Law, Business & Finance , 12*(2), 289–361.

Google Scholar

Kim-Sung, Kellie and Sharon Hermanson. “Experiences of Older Refinance Mortgage Loan Borrowers: Broker- and Lender-Originated Loans.” AARP Public Policy Institute Data Digest, January 2003.

Kleiner MM, Todd RM “Mortgage Broker Regulations that Matter: Analyzing Earnings, Employment, and Outcomes for Consumers.” NBER Working Paper 13684, December 2007.

LaCour-Little. (2007). The Home Purchase Mortgage Preferences of Low- and Moderate-Income Households. *Real Estate Economics, 35*(3), 265–290. doi:10.1111/j.1540-6229.2007.00190.x.

Article Google Scholar

LaCour-Little (2009) The Pricing of Mortgages by Brokers: An Agency Problem? J Real Estate Res (forthcoming).

LaCour-Little, M., & Chun, G. H. (1999). Third Party Originators and Mortgage Prepayment Risk: An Agency Problem? *J Real Estate Res, 17*(1/2), 55–70.

Google Scholar

Longhofer, SD. and Calem, PS. “Mortgage Brokers and Fair Lending.” Economic Commentary, Federal Reserve Bank of Cleveland, May 15th 1999.

Pahl C “A Compilation of State Mortgage Broker Laws and Regulations, 1996-2006.” Federal Reserve Bank of Minneapolis. Community Affairs Report No. 2007-2, October 2007.

Riley, S.F., & H.Ru. (2009). Community Advantage Panel Survey Technical Sampling Report: Owners, 2003-2007. Center for Community Capital Working Paper, February 2009 [www.ccc.unc.edu/research.php].

Rutherford, R. C., Springer, T. M., & Yavas, A. (2005). Conflicts Between Principals and Agents: Evidence from Residential Brokerage. *Journal of Financial Economics, 76*, 627–665. doi:10.1016/j.jfineco.2004.06.006.

Article Google Scholar

Rutherford, R. C., Springer, T. M., & Yavas, A. (2004). The Impact of Contract Type on Broker Performance: Submarket Effects. *J Real Estate Res, 26*(3), 277–298.

Google Scholar

White, A. (2004). Risk-Based Mortgage Pricing: Present and Future Research. *House Policy Debate, 15*(3), 503–531.

Google Scholar

Woodward S “Consumer Confusion in the Mortgage Market.” Sand Hill Econometrics Working Paper, July 2003.

Woodward, Susan. “A Study of the Closing Costs for FHA Mortgages.” U.S. Department of Housing and Urban Development. Office of Policy Development and Research, May 2008.

Yavas, A. (1992). Marketmakers versus Matchmakers. *Journal of Financial Intermediation, 2*(1), 33–58.

Article Google Scholar

Yavas, A. (1994). Middlemen in Bilateral Search Markets. *Journal of Labor Economics, 12*(3), 406–429.

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Author information

Authors and Affiliations

Research Associate at the Center for Community Capital, University of North Carolina, Chapel Hill, NC, USA
Jonathan S. Spader

Director of the Center for Community Capital and Professor of City and Regional Planning, University of North Carolina, Chapel Hill, NC, USA
Roberto G. Quercia

Center for Community Capital, UNC—Chapel Hill CB#3452, 1700 Martin Luther King Jr. Blvd., Suite 129, Chapel Hill, NC, 27599-3452, USA
Jonathan S. Spader

Corresponding author

Correspondence to Jonathan S. Spader.

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