Navigating Uncertain Waters:

Mortgage Lending in the Wake of the Great Recession

THE INSTITUTE FOR AFFORDABLE HOUSING POLICY

FURMAN CENTER FOR REAL ESTATE & URBAN POLICY
NEW YORK UNIVERSITY
SCHOOL OF LAW • WAGNER SCHOOL OF PUBLIC SERVICE

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I: Introduction and Acknowledgements

The dramatic collapse of the housing market was a critical part of the Great Recession, and mortgage lending has yet to fully recover in many parts of the country. Borrowers with both high and low credit scores defaulted on their mortgages at rates that lenders failed to anticipate. When lenders foreclosed and sold their collateral, they found appraisals to be unreliable estimates of property value. Since the recession, the private market has only haltingly returned to residential mortgage lending origination and capitalization, and remains dependent upon an extraordinarily high level of government involvement. The resulting uncertainty has brought investment in residential real estate to historic lows, slowing the economic recovery and thwarting efforts to stabilize neighborhoods hit particularly hard by the foreclosure crisis. Families who have historically had difficulty accessing mortgage lending because of their race, ethnicity, income, or geographical location may have been disproportionately affected by the recent recession, and the extraordinary changes to residential lending and borrowing that have resulted.

Given the importance of credit availability to ensuring an adequate supply of, and broad access to, affordable single-family and multi-family housing, the Furman Center's Institute for Affordable Housing Policy (IAHP) identified a need to question assumptions regarding the current state of the mortgage market and the housing finance system.

On February 4, 2011, the Institute convened a Roundtable of 75 policymakers and academics. We selected participants with varied viewpoints and experiences from across the nation with the goal of producing timely and useful policy insights. To inform the discussion, we reviewed the historical context and current state of residential mortgage lending. This background review, provided to each roundtable participant in advance, analyzed lending patterns to people and neighborhoods during and since the recent recession, with a particular focus on credit scores, collateral valuation and the federal role in housing finance, aspects of underwriting we believe are particularly crucial to the stability of the mortgage finance system.

This report makes Roundtable background documents available and shares highlights from the discussion to report the insights to a wider audience. Along with this report, we are also releasing our latest data brief, "Recent Trends in Mortgage Lending to Low- and Moderate-Income Communities and Neighborhoods Vulnerable to Destabilization: A Closer Look at HMDA 2009." Available here: http://furmancenter.org/files/publications/HMDA_2009_National_DataBrief.pdf. The new data brief provides an in-depth analysis of post-recession lending patterns to low-income households, low-income neighborhoods, different regions of the country, and areas hit disproportionately by foreclosures.

As a whole, this package provides a comprehensive overview of the nature of residential mortgage lending and borrowing today. Specifically, it explores:

- the need for and availability of mortgage capital in areas hard-hit by foreclosures;
- the effect current patterns in housing finance have on minority, low- and moderate-income families and neighborhoods;

- the current and potential role of government and of innovative private programs in addressing market shortcomings;
- the role of underwriting in balancing access to credit and default risk;
- the challenges of valuing collateral accurately in today's market; and
- the future of housing finance if and when the federal government substantially reduces its role in the secondary market.

Following this introduction, Section II provides materials given to the Roundtable participants: the agenda for the discussion, the list of participants, a background briefing paper that describes the current state of mortgage lending and borrowing within a broader historical context, and the presentation that Josiah Madar, a research fellow at the Furman Center, gave at the Roundtable, summarizing what we know about mortgage lending, underwriting, and housing finance today. Section II closes with the keynote address given to Roundtable participants by Professor Michael S. Barr of the University of Michigan Law School, Former Assistant Treasury Secretary for Financial Institutions.

Section III summarizes key insights and observations from the discussion that took place at the Roundtable. The summary does not attribute statements to particular individuals, nor does it attempt to verify assertions made by participants. However, we believe that these highlights capture thoughtful efforts by experts to grapple with some of the most challenging policy issues facing the nation today—providing new evidence, laying out areas where more research is needed and identifying areas where tensions among conflicting policy goals will require some type of compromise. Among the themes that emerged from the Roundtable were:

- the importance of accurate and complete data for both government regulators and researchers;
- appropriate measures of credit need and credit availability or supply;
- the consequences of employing measurements such as credit scores or loan-to-value ratios for purposes other than those for which they were designed;
- the inherent tension between assuring an adequate volume of lending to assist with rebuilding and recovery efforts, and ensuring the quality and sustainability of the loans that are made; and
- the difficulty of designing lending programs that minimize the risk of loss (especially if taxpayers bear the risk) and yet still provide access to credit for underserved, disadvantaged, or low-income borrowers.

Finally, Section IV closes with two resource documents: a selected bibliography and a guide to abbreviations and acronyms.

This work would not have been possible without the generous support and assistance of many people and organizations. The Open Society Foundations, Citi Community Development, the What Works Collaborative, Fannie Mae, and Enterprise Community Partners provided financial support for the research and the Roundtable. The New York University School of Law and the Robert F. Wagner Graduate School of Public Service also provided in-kind support for the project. The Advisory Board of the Furman Center's Institute for Affordable Housing Policy both informed our understanding of this complex topic and the ways that public and private sector initiatives interact, and also provided guidance about how best to structure the Roundtable. While we are indebted to the entire board for their passionate discussion and support, several board members generously gave of their time and creativity, including Ron Moelis, Sean Burton, Rafael Cestero, Martin Dunn, Jeff Hayward, Rick Holliday, Brian Lawlor, Pat McEnerney, Denise Scott, and Adam Weinstein. Particular thanks are due to the following individuals for making this project possible: Natalie Abatemarco, Naomi Bayer, Phillip Bush, Hala Farid, Solomon Greene, Lorraine Ramirez, Merilyn Rovira, Dean Richard Revesz, and Dean Ellen Schall.

The faculty, staff, fellows, and students associated with the Furman Center and the Institute for Affordable Housing Policy brought to the Roundtable and to this report an unwavering commitment to evidence-based policy analysis. Their willingness to challenge conventional wisdom in order to separate hard fact from assumption was matched by the energy they devoted to

every element of this project. The following staff and fellows led the project team: Caroline Bhalla, Caitlyn Brazill, Josiah Madar, Bethany O'Neill, and Mark Willis. Research assistance from our law and graduate students was invaluable, and we thank Jaclene Begley, Amy Brisson, Juan Bustamante, Sharon Carney, Christian González-Rivera, Alex Kohen, Frances Liu, Jon McGrath, Emily Osgood, and Evan Seiler for their careful work and clear thinking. Sam Dastrup, John Infranca, Vincent Reina, Claudia Sharygin, and Max Weselcouch provided valuable insights. Administrative support from our undergraduate students Eleanor Drake, Dan Hopp, and Nami Patel was unstinting and essential.

We hope *Navigating Uncertain Waters* will indeed serve as a navigational chart to those entrusted with the responsibility of steering the housing finance system out of the turbulence of the Great Recession and into a safe harbor. Financing for safe and affordable housing that anchors families and neighborhoods is critical to the recovery of our cities and our country.

Vicki Been
Faculty Director

Ingrid Gould Ellen
Faculty Co-Director

Sarah Gerecke
Executive Director

Roundtable participants discuss lending patterns

IIa: Roundtable Agenda

8:30–8:45 **WELCOME**

DEAN RICHARD REVESZ, *New York University School of Law*

8:45–10:00 **OPENING PRESENTATION**

Mortgage Lending in the Wake of the Great Recession

JOSIAH MADAR, *Research Fellow, Furman Center for Real Estate and Urban Policy*

This presentation will review recent research on how the mortgage market for both single-family and multi-family housing has evolved in the wake of the recession, and particularly how it is serving low- and moderate-income communities. The presentation will also address how the private sector is responding to the challenges of today's market and where government intervention is necessary or appropriate.

Discussant:

RAPHAEL BOSTIC, *Assistant Secretary, Policy Development and Research, U.S. Department of Housing and Urban Development*

10:00–10:15 **BREAK**

10:15–11:45 **DISCUSSION SESSION I**

Measuring Borrower Creditworthiness: Ability and Willingness to Pay

This session will examine how borrower income and creditworthiness were evaluated prior to the foreclosure crisis and how they are being assessed in the current environment, focusing on conventional credit scoring and alternative methods. We will consider the broader implications different approaches have for the availability of mortgage credit, especially to low- and moderate-income borrowers and communities most impacted by the crisis.

Discussants:

KENNETH P. BREVOORT, *Senior Economist, Federal Reserve Board*
JOANNE M. GASKIN, *Director, Global Scoring Solutions, FICO*
CHRIS KREHMEYER, *President and CEO, Beyond Housing*
GEORGE MCCARTHY, *Director, Metropolitan Opportunity, Ford Foundation*
MICHAEL A. SHAW, *Executive Vice President & Enterprise Risk Officer, Fannie Mae*

Moderator:

INGRID GOULD ELLEN, *Faculty Co-Director, Furman Center for Real Estate and Urban Policy*

11:45–12:00 **BREAK**

12:00–1:30 **LUNCH**

Keynote Presentation

MICHAEL S. BARR, *Professor of Law, University of Michigan Law School*

1:30–3:00 **DISCUSSION SESSION II**

The Collateral: Impacts on Risk

This session will examine lessons learned from the price bubble and its collapse, including how valuation methods for single-family and multi-family housing have changed to address the challenges of assessing values in a volatile market and in low- and moderate-income or particularly devastated neighborhoods. We will assess efforts to improve the independence and quality of appraisals. We also will review changes in underwriting to address the role collateral plays as a secondary source of repayment, the signals loan-to-value ratio sends about default risk, and the risks posed by other borrowing against the collateral.

Discussants:
DAVID BERENBAUM, *Chief Program Officer, National Community Reinvestment Coalition*
AUSTIN KELLY, *Associate Director, Housing Finance Research, Federal Housing Finance Agency*
JONATHAN J. MILLER, *President and CEO, Miller Samuel Inc.*
LEONARD NAKAMURA, *Vice President and Economist, Research Department, Federal Reserve Bank of Philadelphia*
JEFFERY POLKINGHORNE, *Director of Origination Risk, CitiMortgage*
Moderator:
VICKI BEEN, *Faculty Director, Furman Center for Real Estate and Urban Policy*

3:00–3:15 **BREAK**

3:15–4:45 **DISCUSSION SESSION III**

The Government Role as the Private Sector Returns: Assessing the Need for Intervention

This session will explore the roles private sector originators and secondary market investors are likely to play as the market returns, and what gaps may remain. We will then explore what other interventions by the government may be needed to ensure the availability of some level of mortgage financing throughout the business and credit cycles and to ensure that low- and moderate-income and minority borrowers and neighborhoods have access to safe and sustainable credit.

Discussants:
JUDD S. LEVY, *Chairman, New York State Housing Finance Agency, State of New York Mortgage Agency*
PATRICK MCENERNEY, *Managing Director, Deutsche Bank*
ELLEN SEIDMAN, *former director, Office of Thrift Supervision*
JOHN C. WEICHER, *Director, Hudson Institute's Center for Housing and Financial Markets*
Moderator:
MARK WILLIS, *Resident Research Fellow, Furman Center for Real Estate and Urban Policy*

4:45–5:00 **CONCLUDING REMARKS**

SARAH GERECKE, *Executive Director, Furman Center for Real Estate and Urban Policy and its Institute for Affordable Housing Policy*

5:00–6:00 **COCKTAIL RECEPTION**

The Furman Center and its Institute for Affordable Housing Policy wish to thank the Open Society Foundations for supporting this conference. We would also like to thank Citi Community Development, Enterprise Community Partners, Fannie Mae, and the What Works Collaborative for support of our work on mortgage lending, including this project.

IIb: List of Participants

(Affiliations current as of February 4, 2011 and listed for informational purposes only)

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Professor
University of Michigan Law School

Lesia Bates-Moss
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LBM & Associates

Naomi Bayer
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Enterprise Community Partners, Inc.

Vicki Been
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Albany Law School

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NYU Furman Center for Real Estate and Urban Policy & its Institute for Affordable Housing Policy

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IIc: Roundtable Participant Briefing Paper

The Historical Context and Current State of Mortgage Lending[1]

Introduction

Amid hopeful signs that the country is pulling out of the Great Recession, residential mortgage markets still seem to be struggling to recover. Mortgage credit availability today may be insufficient to address family housing stability, the revitalization of hard-hit communities, and the economic recovery as a whole. Without federal guarantees or insurance, private mortgage lenders are hesitant to lend either to individual homeowners or to multi-family developers, and demand from borrowers has shrunk as well. Although the federal government, through the executive branch and the government-sponsored entities (GSEs), is playing a dramatically increased role in the primary and secondary mortgage markets, this level of federal involvement is unlikely to continue permanently. Lending to low- and moderate-income (LMI) borrowers or to buyers of properties located in areas hit hard by foreclosures[2] may be particularly vulnerable.

As part of the mission of the Furman Center's Institute for Affordable Housing Policy, we are hosting a Roundtable called "Navigating Uncertain Waters: Mortgage Lending in the Wake of the Great Recession." The purpose of the Roundtable is to assist government, corporations, academics, and non-profits to address the challenge of mortgage credit need and availability by promoting informed discussion and providing evidence-based, objective research and analysis. This background paper for Roundtable participants begins by analyzing the mortgage market in recent years, followed by an in-depth focus on two underwriting criteria: the creditworthiness of the borrower and the value of the collateral. The final section examines the current role of government in the primary and secondary markets, and encourages readers to contemplate the appropriate role for government when the private market returns to lending.[3]

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1 An earlier version of this document was distributed to participants prior to the February 4, 2011 Roundtable hosted by the Furman Center's Institute for Affordable Housing Policy. Corrections and clarifications made after the Roundtable are footnoted.

2 These census tracts were identified as "areas of greatest need" by the U.S. Department of Housing and Urban Development (HUD) based on their levels of subprime lending, vacancy, and other factors for the purposes of eligibility for programs funded by Round 2 of the Neighborhood Stabilization Program (NSP). See U.S. Department of Housing and Urban Development (2010). Neighborhood Stabilization Mapping Tool. Retrieved from http://www.huduser.org/portal/nsp1/nsp.html.

3 This paper is intended to provide a brief introduction, not an exhaustive review, of topics that will be tackled in greater depth by a group of experts representing diverse roles and viewpoints at an Institute Roundtable convened on February 4, 2011. We have added questions throughout the paper for participants' consideration; many more questions remain, and few will have definitive answers. At the roundtable, we will review data and research and provide a forum for frank and candid dialogue in order to help participants reach new understanding and perhaps agreement about the current state and future direction of residential mortgage need and availability.

What We Know About the Residential Mortgage Market

During recessions, we typically see changes in underwriting standards, limited loan availability, and reduced borrower demand. A brief comparison of the Great Recession to the Great Depression in terms of home price depreciation, loan volume, loan performance, and the role of government may provide instructive perspective to the current mortgage landscape. During the Great Depression, housing prices in 1933 had dropped, on average, by 28 percent from their peak in 1925.[4] The dollar volume of mortgage originations plunged 78 percent from its peak in 1928 to the trough of the Great Depression in 1933, when approximately half of urban homes were in default on their mortgages.[5] In response to the crisis, the federal government created multiple agencies, including the Home Owners' Loan Corporation (HOLC) to buy and refinance loans in default, and the Federal Housing Administration (FHA) to insure new mortgages. HOLC bought approximately one million mortgages between 1933 and 1936 at 80 percent of their appraised value; however only about half of the applications they received were approved.[6]

By contrast, the Great Recession has been generally, but not entirely, milder in impact. Housing prices dropped more than 30 percent from their peak in July 2006 to their level at the end of November 2010.[7] Origination volume fell dramatically as well. The number of home purchase mortgages issued to owner-occupants in the U.S. peaked in 2005 at nearly 5 million originations before dropping to half that amount in 2009. The combined percentage of loans in foreclosure or at least one payment past due reached a high of 14.01 percent in May 2010 on a non-seasonally adjusted basis.[8] Government involvement in the housing finance system has been significant through the actions of the GSEs and the FHA, discussed further below.

In "Mortgage Lending During the Great Recession: HMDA 2009," released in November 2010, the Furman Center further parsed the contraction of the mortgage market immediately following the financial crisis. [9]After the national peak in lending in 2005, loan originations have declined each year, although the rate of decline slowed from 2008 to 2009. Disaggregated by race and ethnicity, lending to white owner-occupants declined 46 percent in the same period, while lending to blacks declined 63 percent, to Hispanics by 64 percent, and to Asians by 48 percent.[10] The number of home purchase mortgages issued to low- and moderate-income (LMI) owner-occupants (those earning less than 80 percent of the median income in their area) also declined by 40 percent from 2005 to 2008 (1,068,217 loans in 2005 to 637,587 in 2008, a decrease of 430,630 loans), but then *increased* by 165,030 loans (25.9 percent) in 2009 to 802,617 loans. In 2009, LMI owner-occupants accounted for about 37 percent of all home purchase mortgages by owner-occupants, compared to less than 30 percent in each of the previous five years.

Further, as the number of home purchase mortgage originations declined, the median reported income of owner-occupant home purchase borrowers actually dropped from $89,000 in 2005 to $63,000 in 2009 (in constant 2009 dollars).[11] Lending to communities

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4 Series Dc826–827. In Snowden, K. (n.d.). Historical Statistics of the United States Millennial Edition Online. Historical Statistics of the United States. Retrieved from http://hsus.cambridge.org/HSUSWeb/toc/showTable.do?id=Dc510-902

5 Bridewell, D.A. (1938). The Federal Home Loan Bank Board and its Agencies: A History of the Facts Surrounding the Passage of the Creating Legislation, The Establishment and Organization of the Federal Home Loan Bank Board and the Bank System, The Savings and Loan System, The Home Owners' Loan Corporation, and the Federal Savings and Loan Insurance Corporation. Washington, D.C.: Federal Home Loan Bank Board (as cited in Wheelock, D. C. (2008). The Federal Response to Home Mortgage Distress: Lessons from the Great Depression. *Federal Reserve Bank of St. Louis Review*, 90(3), 133–48. Retrieved from https://research.stlouisfed.org/publications/review/08/05/Wheelock.pdf.

6 HOLC held strict standards for their mortgage holders' ability to pay. Source: Harriss, C. L. (1951). History and Policies of the Home Owners' Loan Corporation. New York: National Bureau of Economic Research. Retrieved from http://www.nber.org/books/harr51-1

7 S&P Indices. (2011, January 15). U.S. Home Prices Keep Weakening as Nine Cities Reach New Lows According to the S&P Case-Shiller Home Price Indices [Press Release]. Retrieved from http://www.standardandpoors.com/indices/sp-case-shiller-home-price-indices/en/us/?indexId=spusa-cashpidff

8 Mortgage Bankers Association National Delinquency Survey (2010, May 19). Retrieved 1/31/11 from http://www.mortgagebankers.org/NewsandMedia/PressCenter/72906.htm

9 Furman Center for Real Estate and Urban Policy. (2010, November). Mortgage Lending During the Great Recession: HMDA 2009 Data Brief. Retrieved from http://furmancenter.org/files/publications/HMDA_2009_databrief_FINAL.pdf

10 All data cited are based on an analysis of Home Mortgage Disclosure Act data by the Furman Center. See supra note 9. Racial and ethnic data analysis added post-Roundtable.

11 Some of this decline in reported income may be the result of the disappearance of low- and no-documentation mortgage originations, for which many applications likely overstated actual income during the peak of the boom. However, even from 2008 to 2009 (after low- and no-documentation lending had ceased), median borrower income for new originations continued to decline.

most affected by foreclosures has declined since the start of the financial crisis. In census tracts that have suffered most as a result of foreclosures, the number of home purchase mortgages issued to owner-occupants dropped by 53 percent between 2005 and 2009.

Although interest rates have declined since the onset of the financial crisis and remain low,[12] underwriting[13] and pricing have changed in several ways to correct for looser standards in the first half of the decade and to compensate for declining or uncertain home values. Since 2008, both Fannie Mae and Freddie Mac tightened underwriting requirements for loans they purchase and insure even as their market share of mortgage originations has increased.[14] In 2010, the FHA instituted an absolute minimum FICO score of 500 and a minimum down payment of 10 percent for borrowers with a FICO score less than 580 and raised the insurance premium it charges borrowers.[15] Lenders have added additional credit score and Loan-to-Value (LTV) requirements on top of those of the GSEs and FHA, raising the question about the extent to which products insured by the FHA will reach the targeted borrowers.[16] Private mortgage insurance providers too have tightened underwriting requirements and restructured fees to better meet perceived risks.[17]

Finally, multi-family buildings (those with five or more units) constitute an important segment of the residential housing market and make up about 43 percent of all rental units in the United States.[18] In dollars, the annual volume of multi-family loan originations (purchase and refinancing together) peaked in 2006 and fell by between 25 percent and 40 percent by 2008 (depending on the methodology used in the analysis).[19] The total dollar value of outstanding multi-family mortgage debt steadily increased from the mid-1990s to 2008, but has held at roughly $850 billion from 2008 to 2010. The share of outstanding multi-family mortgage debt held by various issuers has changed, however. From 2000 to 2009, the GSE/Ginnie Mae share of multi-family originations increased from 23 percent to 36 percent. The rest of the market remains fragmented, with commercial banks, private issuers, life insurance companies, and state and local governments each having visible but not dominant positions.[20]

Questions for discussion and future research:

- *Given the depth of involvement of the federal government in the mortgage market already, are there lessons from prior recessions that can inform our way forward from the Great Recession?*
- *Does the increase in mortgage originations to LMI borrowers from 2008 to 2009 indicate that credit is more easily available for these borrowers than others?*
- *More generally, how do we judge whether underwriting is too tight or too loose given that loan defaults will lag behind underwriting changes?*

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12 For average interest rates over time, see the Freddie Mac Primary Mortgage Market Survey at http://www.freddiemac.com/pmms/pmms30.htm.

13 Board of Governors of the Federal Reserve System. (2010, November 8). The October 2010 Senior Loan Officer Opinion Survey on Bank Lending Practices. Washington, D.C.: Federal Reserve Board. Retrieved from http://www.federalreserve.gov/boarddocs/surveys

14 Fannie Mae. (2010, December 23). Loan-Level Price Adjustment (LLPA) Matrix and Adverse Market Delivery Charge (AMDC) Information. Retrieved from http://www.efanniemae.com/sf/refmaterials/llpa/pdf/llpamatrix.pdf; Freddie Mac. (2010, November 2). Post settlement Delivery Fees (Exhibit 19). Retrieved from http://www.freddiemac.com/singlefamily/pdf/ex19.pdf (This information has since been superseded by additional policy changes).

15 McFarlane, A. (2010). The Impacts of More Rigorous Underwriting Guidelines. *Cityscapes: A Journal of Policy Development and Research*, 12(3). Retrieved from http://www.huduser.org/portal/periodicals/cityscpe/vol12num3/ch8.pdf; U.S. Department of Housing and Urban Development. (2010, January 13). Administration completes implementation of initiative to support state and local housing finance agencies [Press Release]. Retrieved from http://portal.hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2010/HUDNo.10-010 (This information has since been superseded by additional policy changes).

16 For example, see National Community Reinvestment Coalition. (2010, December). Working-Class Families Arbitrarily Blocked from Accessing Credit. Retrieved from http://www.ncrc.org/images /stories/mediaCenter_reports/fha percent20white percent20paper-120810-final.pdf

17 For example, see PMI Mortgage Insurance Co. Mortgage Insurance Guideline Changes Effective March 1, 2008 [Letter to Customers}. Retrieved from http://www.pmi-s.com/media/pdf/resourcecenter/uwguides/Guidelines_at_a_Glance.pdf. (This information has since been superseded by additional policy changes).

18 U.S. Bureau of the Census. (2009). *American Community Survey*. Retrieved from http://www.census.gov/acs/www/

19 Federal Housing Finance Agency. (2009, July). Estimating the Size of the Conventional Conforming Market for Each Housing Goal in 2009: Final Rule. Retrieved from http://www.fhfa.gov/webfiles/14702/Mortgage_Market_2010.pdf

20 Furman Center analysis of Flow of Funds Accounts, Federal Reserve Board of Governors, 1995-2004, 2005-2009.

The Role of Underwriting in the Mortgage Market

Lending decisions for single-family mortgages are generally based on a series of facts about the borrower, the property that will secure the loan, and the loan itself.[21] Relevant borrower characteristics include credit score, credit history, employment history, income, relationship between income and all housing costs and other debt, liquid assets, and whether or not the borrower will reside in the mortgaged property. Relevant property characteristics include its value (in relation to the loan size and the amount of other liens), and the type of property (e.g., condominium, two-family house, etc.). Finally, the underwriter will consider the term and amortization schedule of the loan (e.g., 15 or 30 years), whether it is for a home purchase or refinance, and whether it has a fixed or adjustable rate. The underwriting of multi-family rental projects looks to the net cash flows generated from rental income minus expenses, and values the property by discounting projected revenue streams or using a capitalization rate.[22]

Borrowers' Creditworthiness

Lenders rely heavily on credit scoring and information contained in credit reports to evaluate the probability that an individual borrower will repay his or her loan. Research has consistently shown[23] that credit scores are effective at predicting the relative risk of borrowers, particularly when assessed in combination with other risk factors, like the LTV ratio. In a study presented to Congress in 2007, the Federal Reserve Board found that while different demographic groups have substantially different credit scores, the scores are predictive of risk across the population and for all major demographic groups.[24] However, broad changes to the economic environment, such as a recession and widespread house price declines, can alter the accuracy of credit scoring as a predictor of default risk across years.[25]

The Great Recession's impact on borrowers' credit scores is still inconclusive, with some borrowers' scores significantly lowered due to mortgage defaults and the secondary impacts of unemployment while other borrowers (perhaps with improved savings and debt habits) have seen scores increase. Data from Fair Isaac Corporation recently showed that 25.5 percent of consumers—almost 43.4 million Americans—now have credit scores below 599, a number that has increased from 23.6 percent of the population in 2005.[26] For those borrowers experiencing a serious mortgage default, a recent study by Brevoort et al. found that credit scores recover slowly, if at all. For prime borrowers who enter into foreclosure, only 10 percent recovered to pre-delinquency credit score levels after two years, and one-third did not recover after 10 years.[27]

Questions for discussion and future research:

- *Has the Great Recession changed the predictive power of credit scores?*
- *How will continued reliance on credit scores and credit reports affect disparities in access to credit (as well as jobs, rental housing, and insurance) for low- and moderate-income borrowers and communities going forward?*
- *Has the predictive power of debt-to-income (DTI) ratios changed in recent years?*
- *Should lenders use an underwriting tool similar to credit scoring to measure the creditworthiness of multi-family borrowers?*

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21 For example, see Fannie Mae. (2010, March 2). B3-2-02, Risk Factors Evaluated by DU. In *Selling Guide: Fannie Mae Single Family*, (p. 246). Retrieved from https://www.efanniemae.com/sf/guides/ssg/sg/pdf/sg030210.pdf. Colloquially, some lenders refer to the five C's of underwriting: credit (propensity to repay debt); cash (ability to repay debt); capital (down payment amount); collateral (appraised value of the secured property) and character (other borrower attributes).

22 Cummings, J.L. & DiPasquale, D. (1998). Developing a Secondary Market for Affordable Rental Housing: Lessons from the LIMAC/Freddie Mac and EMI/Fannie Mae Programs. *Cityscape: A Journal of Policy Development and Research*, 4(1), 28.

23 Chan, S., Gedal, M., Been V., & Haughwout, A. (2010). The Role of Neighborhood Characteristics in Mortgage Default Risk: Evidence from New York City, Working paper 2010. New York: Furman Center for Real Estate and Urban Policy. See also Avery, R.B., Bostic, R.W., Calem, P.S., & Canner, G.B. (1996). Credit Risk, Credit Scoring, and the Performance of Home Mortgages. *Federal Reserve Bulletin*, 1996 (July). Retrieved from http:// www.federalreserve.gov/pubs/Bulletin/1996/796lead.pdf; and Amromin, G., & Paulson, A. L. (2009). Comparing Patterns of Default among Prime and Subprime Mortgages. *Economic Perspectives*, 33(2).

24 Board of Governors of the Federal Reserve System. (2007, August). Report to the Congress on Credit Scoring and its Effects on the Availability and Affordability of Credit. Washington, DC: U.S. Federal Reserve. Retrieved from http://www.federalreserve.gov/boarddocs/rptcongress/creditscore/default.htm

25 Demyanyk, Yuliya. (2008, October). Did Credit Scores Predict the Subprime Crisis? *The Regional Economist*. Retrieved from http://www.stlouisfed.org/publications/re/articles/?id=963#figure1

26 Quinn, Tom. (2010, July 13). Fico Scores Drift Downward. Retrieved from http://bankinganalyticsblog.fico.com/2010/07/fico-scores-drift-downward.html. Additional information provided after the Roundtable to the Institute for Affordable Housing Policy from FICO.

27 Brevoort, K. P., & Cooper, C. R. (2010, October 12). Foreclosure's wake: the credit experiences of individuals following foreclosure. Retrieved from SSRN: http://ssrn.com/abstract=1696103

Valuing the Collateral

The loan-to-value ratio, or the value of the collateral at the time of the loan closing in comparison to the loan size, is important to mortgage lenders for two reasons.[28] First, it helps determine how much of the outstanding balance a foreclosing lender will recoup if the borrower defaults. Second, the LTV at origination reflects the size of the down payment and, after origination, helps determine the borrower's equity in the property, which may be important determinants of default.[29] However, this point is disputed by those who feel the nature of the loan product and other underwriting characteristics are more determinative of loan performance than the size of the down payment.[30]

The value of the property is most commonly measured by an appraisal conducted by a licensed appraiser, who usually has a duty under federal regulations and state licensing laws to act independently from lenders or borrowers. The mortgage originators and investors (for securitized mortgages) are not the only parties affected by the appraisal—the borrowers also may use the appraisal in order to determine the fairness of the purchase price, and may incur increased costs and risk if the appraisal inflates the value of the property and results in a larger than appropriate mortgage.[31]

The recent foreclosure crisis exposed several flaws in the valuation process. During the peak of the market, many appraisals were superficial, skipping important steps like interior inspections. Some were fraudulent.[32] Most appraisers reported feeling pressured by lenders, brokers, and borrowers to inflate appraisals.[33] That pressure is not surprising, because appraisers are paid a flat fee for services, but lenders and brokers are paid commissions based on the number and value of the closed loans and thus have an incentive to inflate the mortgage amount. Even independent of pressure, appraisals were difficult during the boom because the price change velocity that marked many housing markets may have reduced the efficacy of comparable sales as a measure of value. Similarly, the extraordinary number of foreclosures in the past few years revealed that underwriting during the boom failed to anticipate the possibility of sharp home price declines nationwide (which decreased homeowner equity), and the role that second liens would play both in increasing the default risk through higher combined loan-to-value ratios (CLTVs)[34] and the difficulty of working out solutions to the default short of foreclosure.[35]

28 Wording change from February 4 version for greater clarity.

29 Chan, S., Gedal, M., Been, V., and Haughwout, A. See *supra* note 23. See also Kelly, A. (2006, April). Appraisals, Automated Valuation Models, and Mortgage Default. *Preliminary draft for presentation at the American Real Estate Society Conference*. See also Center for Economics, U.S. Government Accountability Office, & Lacour-Little, M. (1998). Are Minorities or Minority Neighborhoods More Likely to Get Low Appraisals? *Journal of Real Estate Finance and Economics*, 16(3), 301-315.

30 "Moving from a 5 percent to a 10 percent down payment on loans that already meet strong underwriting and product standards … reduces the default experience by an average of only two- or three-tenths of one percent. … Increasing the minimum down payment even further to 20 percent, as proposed in the QRM [Qualified Residential Mortgage] rule, would amplify this disparity, knocking 17 to 28 percent of borrowers out of QRM eligibility, with only small improvement in default performance of about eight-tenths of one percent on average. (Vertical Capital Solutions of New York, an independent valuation and advisory firm, conducted this analysis using loan performance data maintained by First American CoreLogic, Inc. on over 30 million mortgages originated between 2002 and 2008, quoted in a white paper prepared in advance of April 14, 2011 House Subcommittee on Capital Markets and Government Sponsored Enterprise Hearing: National Association of Home Builders. (2011, April 14). NAHB: Proposed QRM Harms Creditworthy Borrowers and Housing Recovery. Retrieved April 14, 2011, from http://www.nahb.org/news_details.aspx?newsID=12469. Information update added after Roundtable at the request of participants.

31 Nakamura, L. (2010, Quarter 1). How Much Is That Home Really Worth? Appraisal Bias and House-Price Uncertainty. *Business Review*, Federal Reserve Bank of Philadelphia. Retrieved from http://www.philadelphiafed.org/research-and-data/publications/business-review/2010/q1/brq110_home-worth-appraisal-bias.pdf

32 See Ben-David, I. (2008, January). Manipulation of Collateral Values by Borrowers and Intermediaries [Job Market Paper]. Retrieved from http://server1.tepper.cmu.edu/Seminars/docs/Ben-David-20080107_writeup_mortgage_fraud.pdf; Mortgage Asset Research Institute. (2010, April). 12th Period Mortgage Fraud Case Report. Retrieved from http://www.lexisnexis.com/risk/downloads/literature/MortgageFraudReport-12thEdition.pdf

33 A 2006 survey conducted by October Research Corporation reported that appraisers were feeling increased pressure by lenders and brokers to mark up property values. Of the 500 appraisers surveyed nationwide, an alarming 90 percent, 55 percentage points more than 2003, said they felt pressure to overstate values of the properties they appraise. See October Research Corporation. (2006). 2007 National Appraisal Survey: Executive Overview, (Vol. 1). Retrieved from http://www.appraisalinstitute.org

34 Demyanyk, Y. (2009). Quick Exits of Subprime Mortgages. *Federal Reserve Bank of St. Louis Review*, 2, 79-93; Haughwout, A., Peach, R., & Tracy, J. (2008). Juvenile Delinquent Mortgages: Bad Credit or Bad Economy? *Journal of Urban Economics*, 64(2), 246-57; Chan, S., Gedal, M., Been, V., & Haughwout, A. See note 23.

35 Cordell, L., Dynan, K., Lehnert, A., Liang, N., & Mauskopf, E. (2008). The Incentives of Mortgage Servicers: Myths and Realities. *Working Paper No. 2008-46, Finance and Economics Discussion Series, Divisions of Research & Statistics*. Washington D.C.: Federal Reserve Board, Monetary Affairs; Agarwal, S., Amromin, G., Ben-David, I., Chomsisengphet, S., & Evanoff, D. D. (2010, October 11). Market-Based Loss Mitigation Practices for Troubled Mortgages Following the Financial Crisis. Charles A. Dice Center Working Paper No. 2010-19; Fisher College of Business Working Paper No. 2010-03-019. Retrieved from SSRN: http://ssrn.com/abstract=1690627

But the reaction to the crisis has brought new valuation challenges. Many sellers, developers, and buyers have been stymied by appraisals that they complain are too conservative, and by lenders' insistence on additional and up-to-the-minute appraisals.[36] Appraisers and lenders are debating the role that distressed sales should play in the valuation, a special challenge in communities hit hard by foreclosures. There is also debate about whether the LTV ratio in underwriting is an appropriate proxy for the use of valuation in underwriting, just as some argue that credit scores are an inappropriate shortcut for assessing borrower creditworthiness.[37]

Questions for discussion and future research:

- *What role can alternative tools such as automated valuation methods or broker price opinions play in improving the accuracy and efficiency of valuation?*
- *How should underwriting address second liens?*
- *Are there special valuation challenges for housing occupied primarily by LMI families or for housing located in areas affected disproportionately by foreclosures?*

The Role of Government as the Private Market Returns

As mentioned earlier, many of our major federal housing finance institutions were created in response to the Great Depression. Congress created the Federal Housing Administration in 1934 to address the need for mortgage liquidity. The FHA's mortgage insurance protects lenders against losses if homeowners default on their mortgage loans.[38] Fannie Mae and Freddie Mac each evolved separately to buy, securitize, and invest in single-family and multi-family mortgages, but have both been under conservatorship since September 2008.[39]

During the housing boom of the last decade, the FHA played only a small role in the mortgage market. Since the disappearance of the subprime lending industry in 2007 and 2008, however, the number of loans backed by the FHA and other government agencies (primarily the Veterans Administration) has increased rapidly. As a result, the share of all single-family home purchase loans issued to owner-occupants that were backed by the FHA and other government insurance programs increased from about eight percent in 2005 to 55 percent in 2009.[40] When those loans are considered in combination with the mortgages held or guaranteed by the GSEs, as of the end of 2009, the government essentially accounted for 95 percent of new mortgage originations.[41]

Mortgages with government insurance have performed better than mortgages without it, but are still defaulting at record rates.[42] The single-family delinquency rate for loans owned or backed by Fannie Mae was 5.38 percent. This was its highest single-family delinquency rate since this information became available in 1974.[43] Freddie Mac's single-family delinquency rate in 2009 was 3.87 percent.[44] In December 2010, the FHA reported a seasonally adjusted 8.8 percent delinquency rates on its single-family insured loans (including all bankruptcies, all foreclosures, and loans 90+ days delinquent).[45] In contrast, state housing finance agencies (HFAs) reported a lower delinquency rate.

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36 Stern, L. (2010, December 17). Special Report: What's a home worth? Pick a number, any number. Reuters. Retrieved from http://www.reuters.com/article/2010/12/14/us-usa-housing-appraisals-idUSTRE6BD3V020101214

37 Ding, Lei, Quercia, Roberto G., Li, Wei, Ratcliffe, Janneke, and Lei, Wei. (2010, May 17). Risky Borrowers or Risky Mortgages: Disaggregating Effects Using Propensity Scoring Models, *Working Paper*. University of North Carolina at Chapel Hill Center for Community Capital. Retrieved from http://www.ccc.unc.edu/documents/Risky.Disaggreg.5.17.10.pdf. Information added after the Roundtable.

38 Pennington-Cross, A. and Nichols, J. (2000). Credit History and the FHA–Conventional Choice. *Real Estate Economics*, 28: 307–336. doi: 10.1111/1540-6229.00803

39 Ellen, I. G., Tye, J. N., & Willis, M. A. (2010, May 1). Improving U.S. Housing Finance through Reform of Fannie Mae and Freddie Mac: Assessing the options. The Urban Institute, 8. Retrieved from http://www.urban.org/publications/1001382.html. GNMA continues this role by insuring the securities backed by FHA, VA, and RHA mortgages.

40 Analysis by the Furman Center based on Home Mortgage Disclosure Act data.

41 Krainer, J. (2009, October 26). Recent Developments in Mortgage Finance. *Federal Reserve Bank of San Francisco Economic Letter*, 33.

42 Lockhart, J.B. (2009, June 3). The Present Condition and Future Status of Fannie Mae and Freddie Mac [Testimony before the House Financial Services Committee], 22. Retrieved from http://www.house.gov/apps/list/hearing/financialsvcs_dem/hrcm060309.shtml

43 Federal Housing Finance Agency. (2010, May 25). Report to Congress 2009. Washington, D.C. Retrieved from http://www.fhfa.gov/webfiles/15784/FHFA2009ReportToCongress52510.pdf

44 Federal Housing Finance Agency. (2010, August 26). FHFA First Conservator's Report on the Enterprises' Financial Condition. Washington: Federal Housing Finance Agency, 7. Retrieved from http://www.fhfa.gov/webfiles/16591/ConservatorsRpt82610.pdf

45 U.S. Department of Housing and Urban Development. (2010, December). FHA Single-Family Outlook. Retrieved from http://www.hud.gov/offices/hsg/rmra/oe/rpts/ooe/olcurr.pdf

Moody's Investors Service reported that the State Housing Finance Agency single-family whole loan portfolios at the end of 2009 were 90+ days delinquent or in foreclosure at a rate of 4.79 percent.[46]

Meanwhile, the share of all outstanding multi-family mortgage debt held by GSEs increased from 30 percent in 2007 to 36 percent in 2009, making the GSEs the single largest source of multi-family loans.[47] Fannie Mae and Freddie Mac today have low multi-family delinquency rates (0.63 percent and 0.15 percent respectively) for loans and securities 60+ days past due.[48]

Questions for discussion and future research:

- *As we recover from the Great Recession, what type of lending will the private sector do on its own, without any government credit enhancement?*
- *What housing policy objectives cannot, will not, or should not be satisfied by the private sector? How much risk should the FHA take, and is its current structure the best approach to carrying out its role?*
- *What gaps might be left without Fannie/Freddie or their successors?*

46 Moody's Investor Service. (2010, April). Foreclosures Rising Across Many U.S. State Housing Finance Agency Loan Portfolios. Retrieved from http://www.ncsha.org/resource/moodys-investors-service-special-comment-hfa-loan-portfolio-delinquency

47 Flow of Funds Accounts, Federal Reserve Board of Governors, 1995-2004, 2005-2009

48 Federal Housing Finance Agency. (2010, May 25). *Report to Congress 2009*. Washington, D.C.: Federal Housing Finance Agency, 157. Retrieved from http://www.fhfa.gov/webfiles/15784/FHFA2009ReportToCongress52510.pdf

Conclusion

The extraordinary level of government involvement in the mortgage market that has developed since the financial crisis is likely to change dramatically again pending executive and congressional review and further developments in the private market. As the private market returns, we would expect underwriting to affect the availability of mortgage credit significantly, and to redefine an appropriate role for government intervention. Lenders, public officials, academics and community-based organizations have an opportunity to learn from the past and each other in order to inform the future direction of residential mortgage lending.

Acknowledgements

The Furman Center and its Institute for Affordable Housing Policy wish to thank Citi Community Development, Enterprise Community Partners, Fannie Mae, the Open Society Foundations, and the What Works Collaborative for support of our research on mortgage lending, including this project. We are particularly grateful for the commitment to independent and informative policy analysis provided by board members of the Institute for Affordable Housing Policy, collectively, and individually.

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IId: Overview Presentation

FURMAN CENTER
FOR REAL ESTATE & URBAN POLICY
NEW YORK UNIVERSITY
SCHOOL OF LAW • WAGNER SCHOOL OF PUBLIC SERVICE

THE INSTITUTE
FOR AFFORDABLE
HOUSING POLICY

Mortgage Lending in the Wake of the Great Recession

February 4, 2011

Josiah Madar

Navigating Uncertain Waters: Mortgage Lending in the Wake of the Great Recession

- Session I: Measuring Borrower Creditworthiness: Ability and Willingness to Pay
- Keynote: A Framework for a Reformed Housing Finance System
- Session II: The Collateral: Impacts on Risk
- Session III: The Government Role as the Private Sector Returns: Assessing the Need for Intervention

Presentation Outline

- How residential mortgage lending has changed in recent years
- Underwriting and pricing residential mortgage risk
- Multi-family lending
- Government's role in the mortgage market

Presentation Outline

- **How residential mortgage lending has changed in recent years**
- Underwriting and pricing residential mortgage risk
- Multi-family lending
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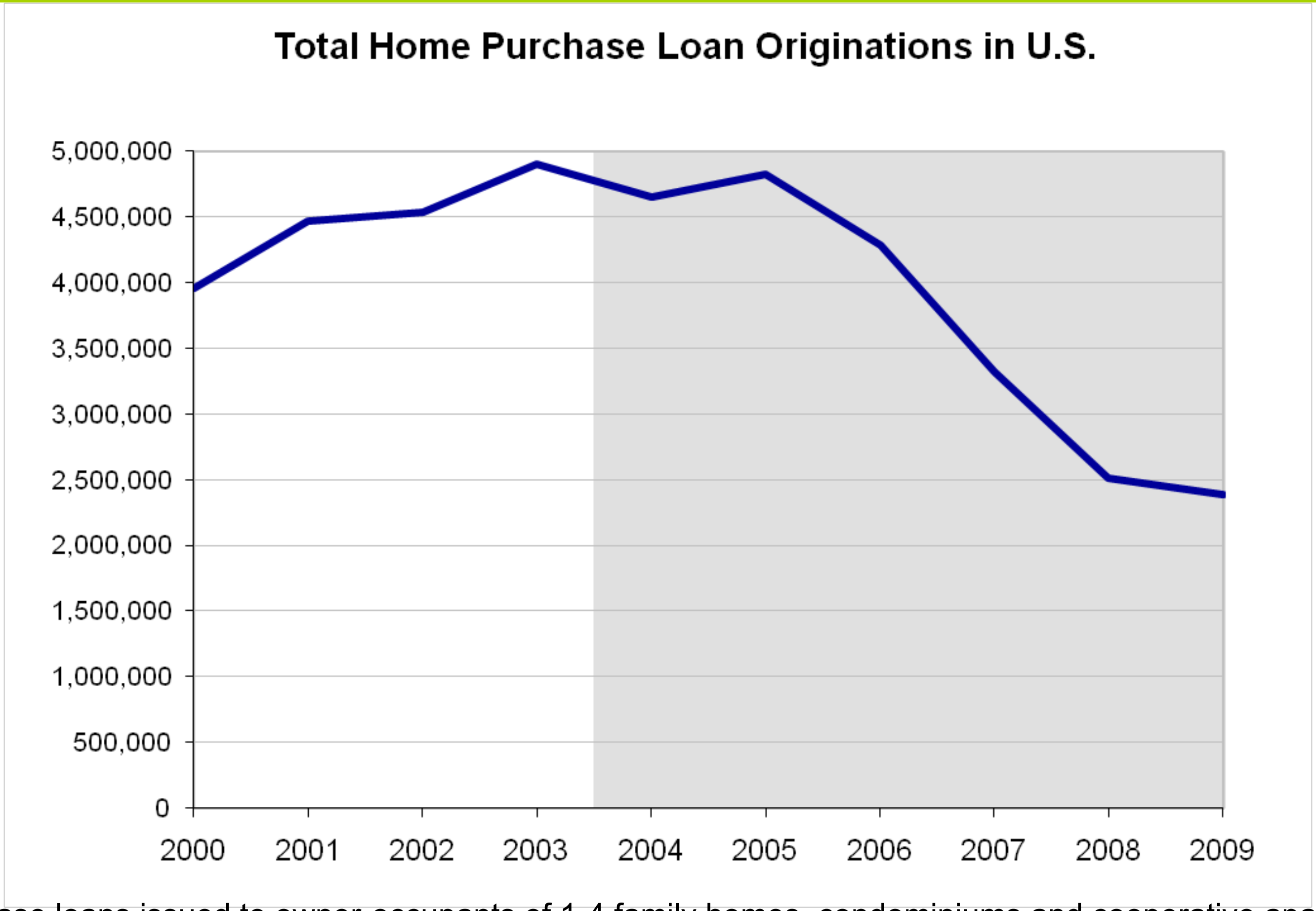
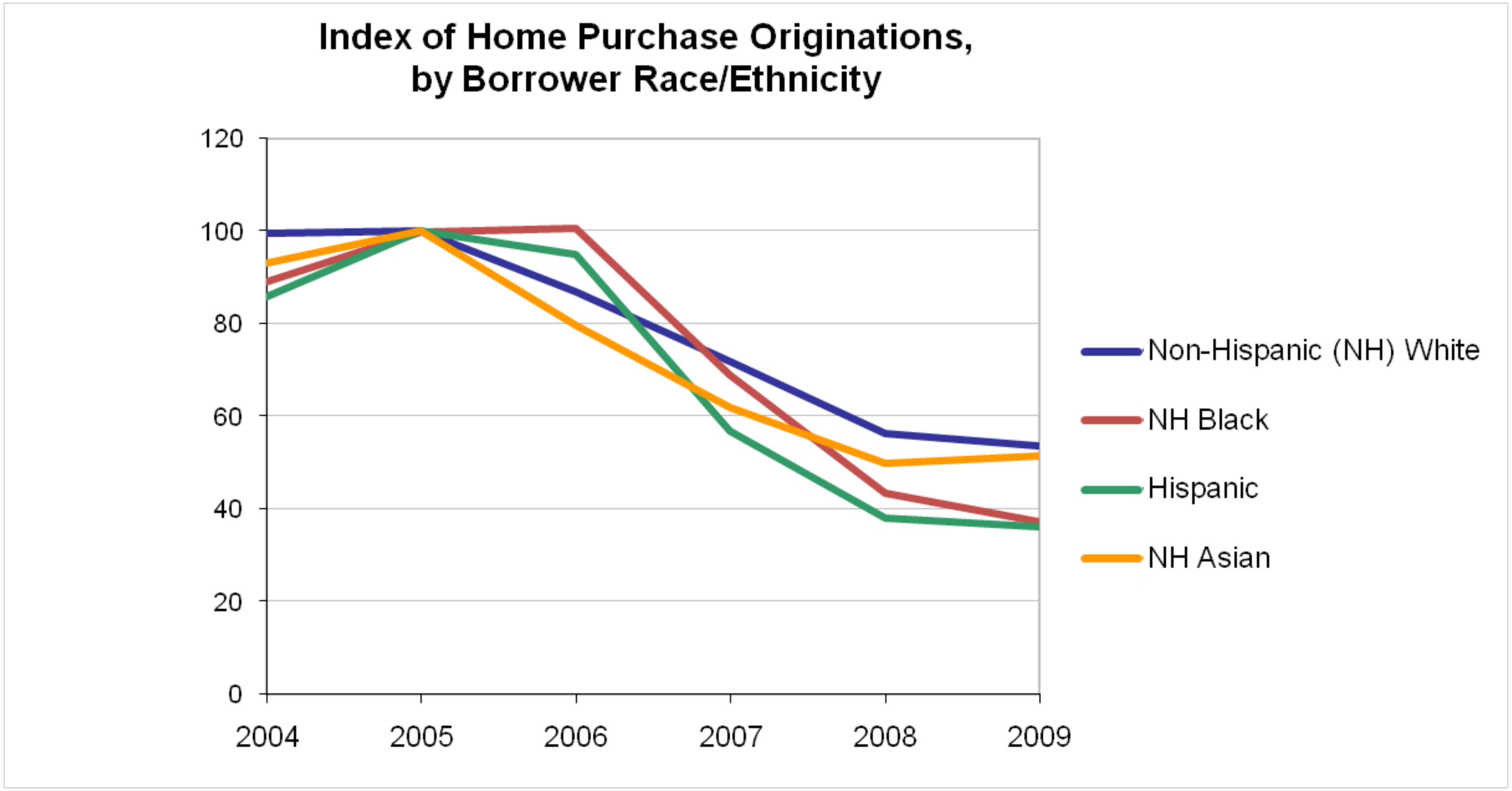
Very steep decline in home purchase loan originations



Home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments (first-lien only for 2004-2009). ***Source: HMDA and Furman Center***

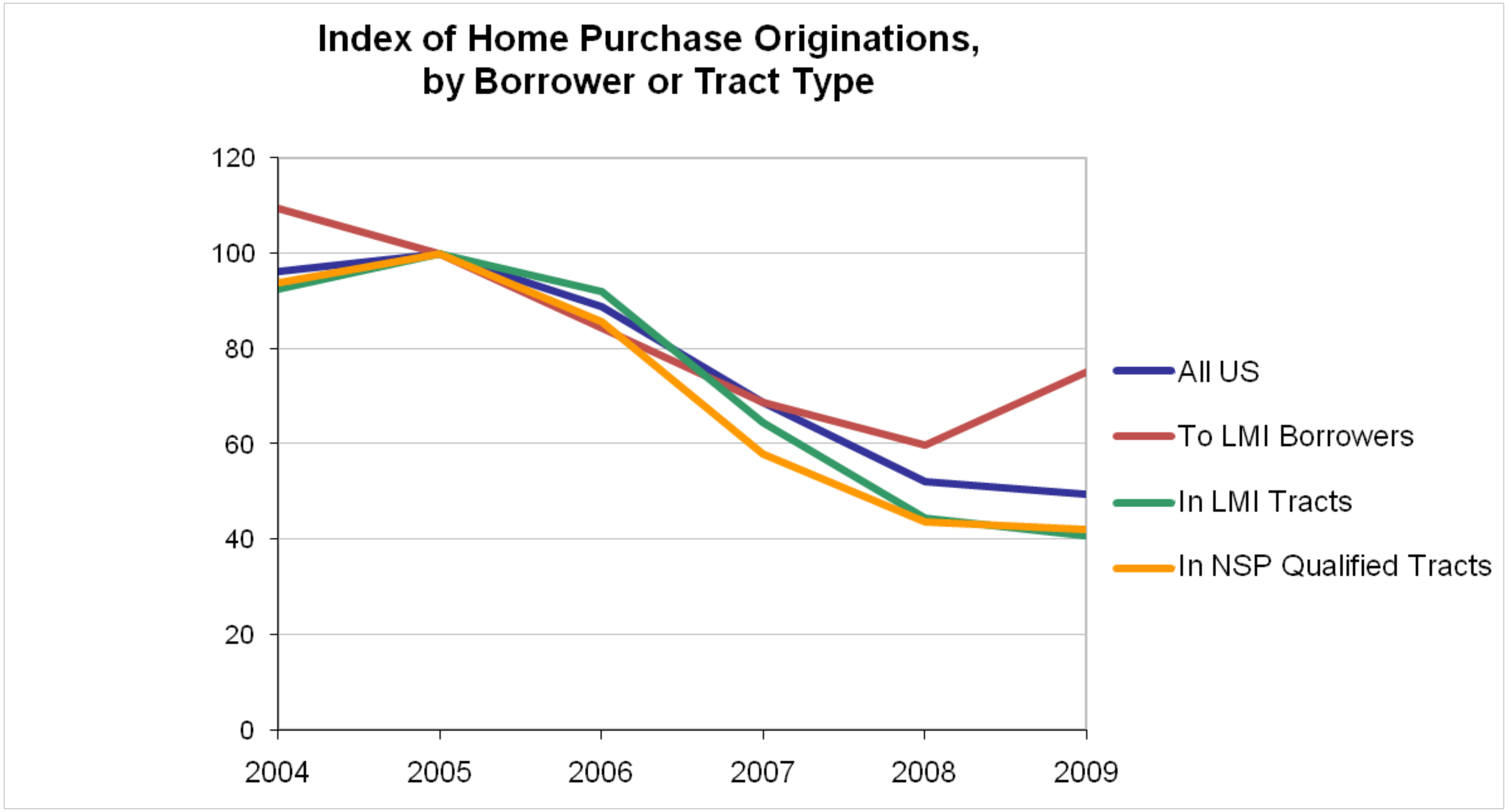
Decline steepest for loans to Black and Hispanic homebuyers



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments.

Source: HMDA and Furman Center

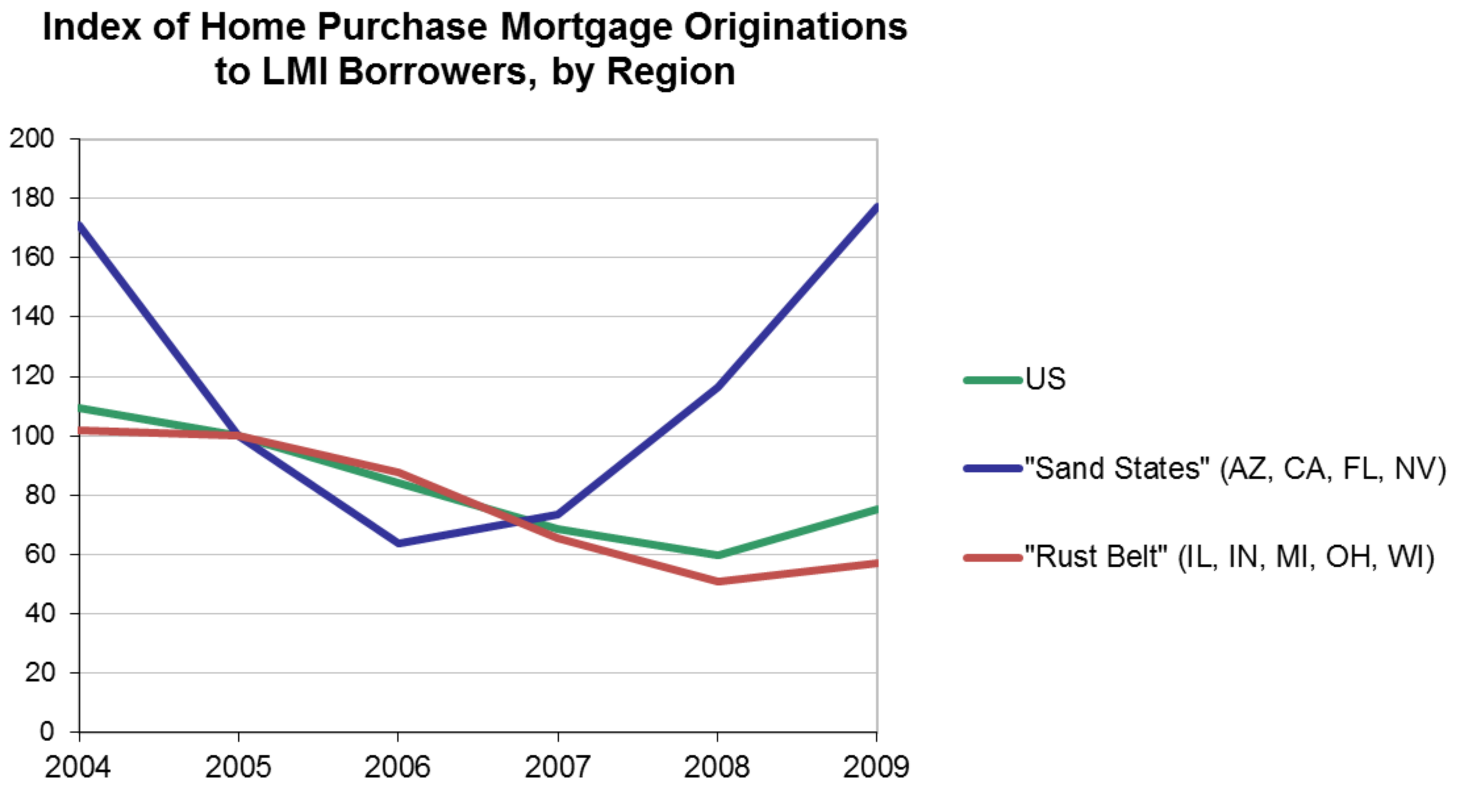
Low and moderate income homebuyers only group to see rebound in 2009



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments in metropolitan areas.

Source: HMDA and Furman Center

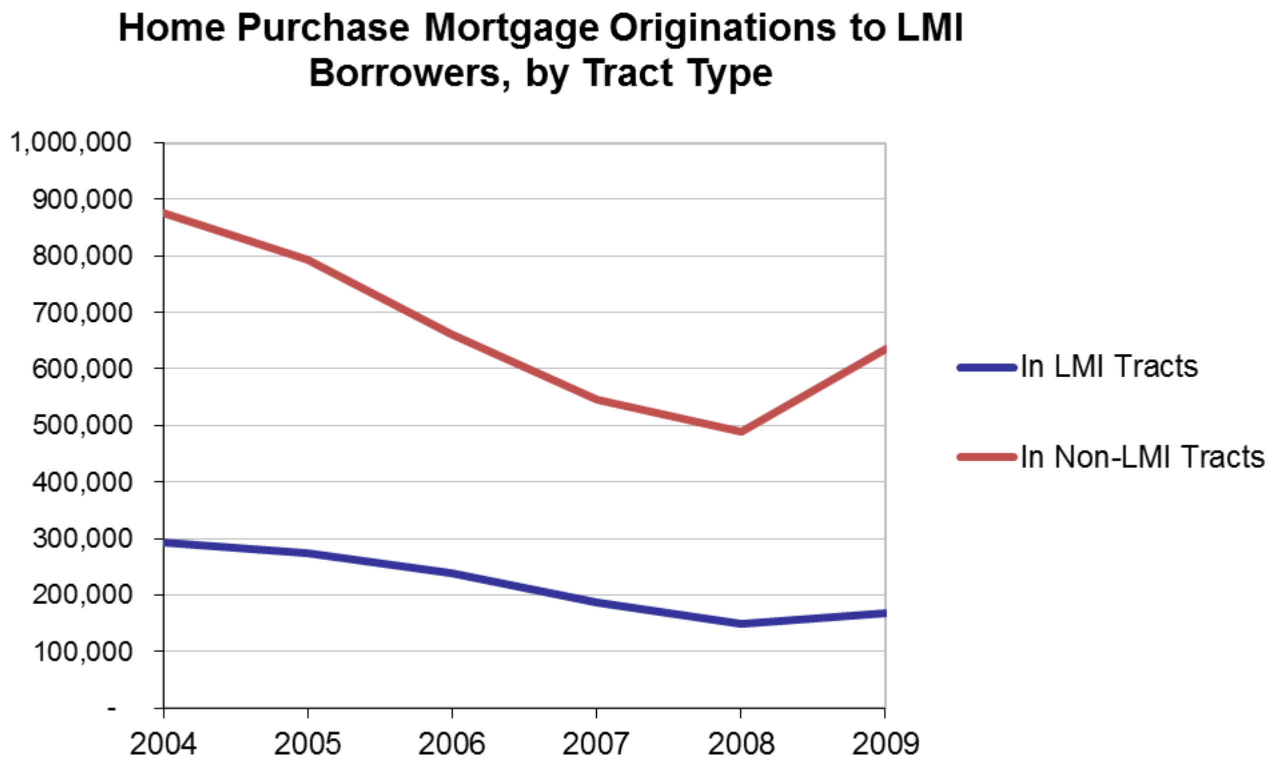
Rebound to low and moderate income buyers particularly strong in "sand states"



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments in metropolitan areas.

Source: HMDA and Furman Center

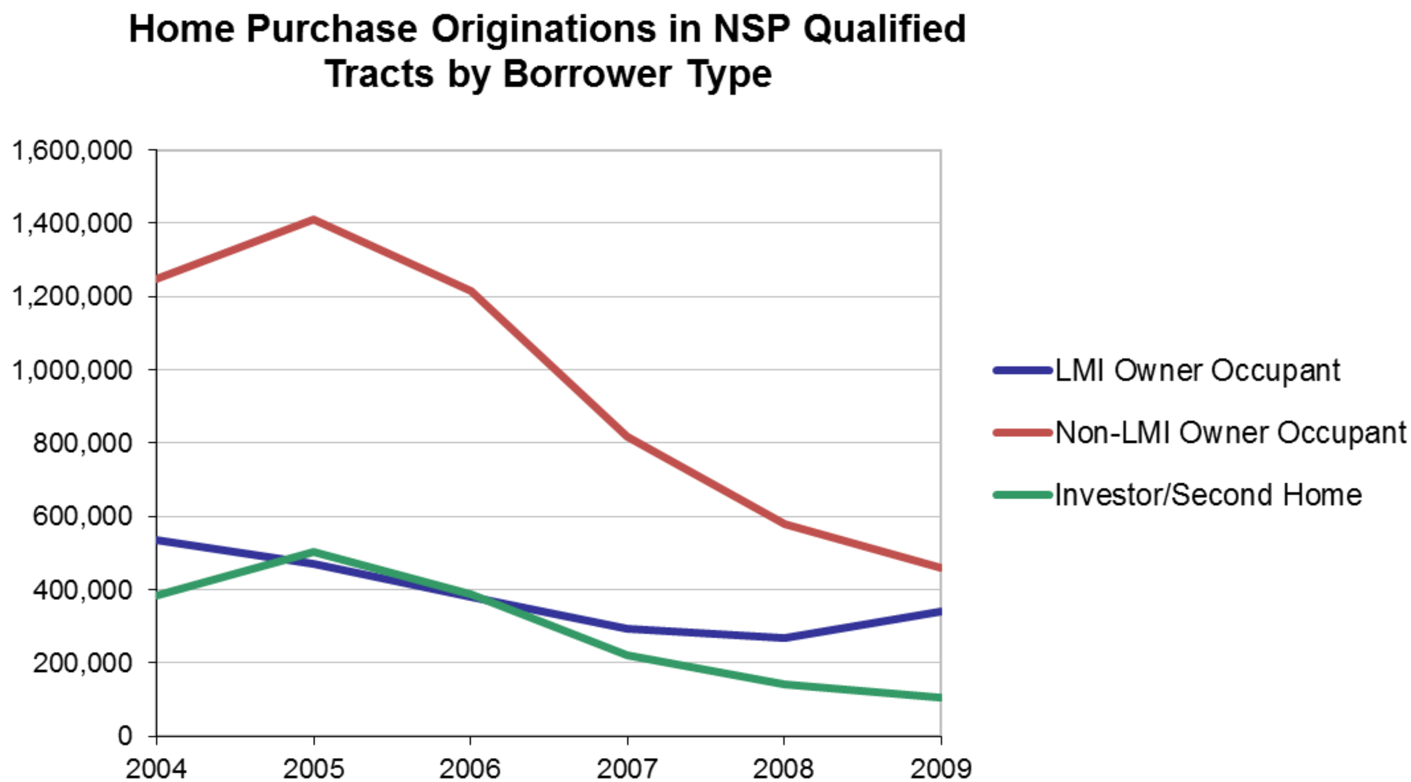
Increased lending to low and moderate income buyers was in higher income neighborhoods



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments in metropolitan areas.

Source: HMDA and Furman Center

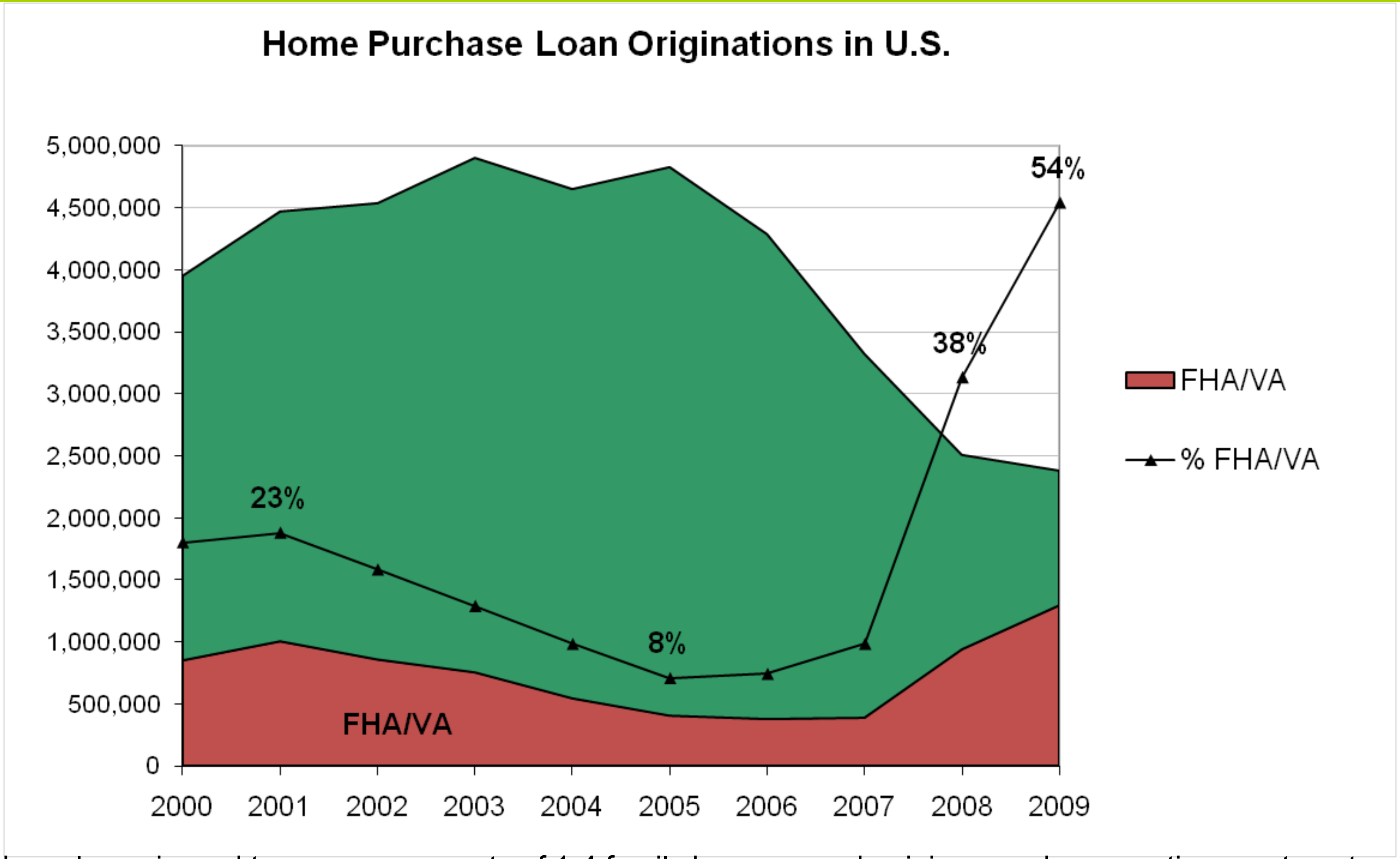
Substantial change in borrower composition in hardest hit neighborhoods



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments in metropolitan areas.

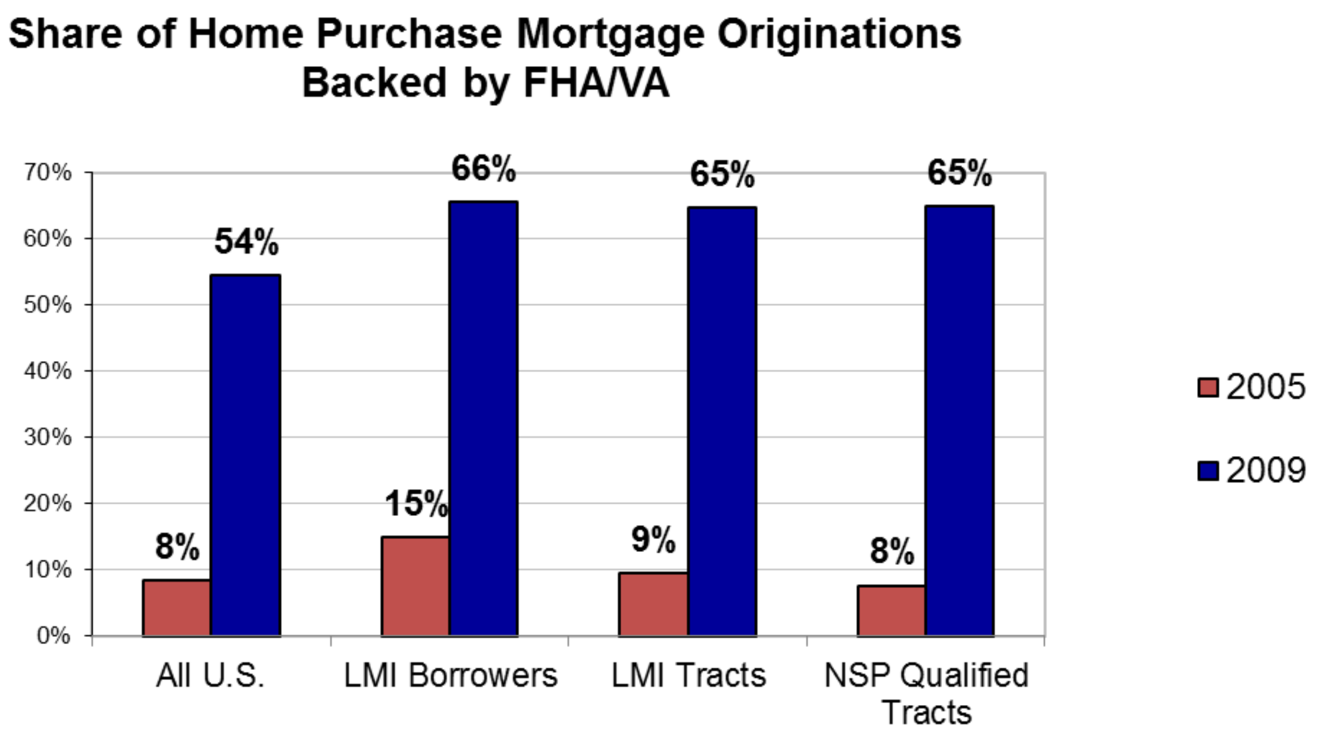
Source: HMDA and Furman Center

Amid overall decline, very large increase in FHA and VA lending



Home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments (first-lien only for 2004-2009). ***Source: HMDA and Furman Center***

FHA /VA lending crucial for each group



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments in metropolitan areas.

Source: HMDA and Furman Center

FHA insuring larger loans, serving higher income homebuyers

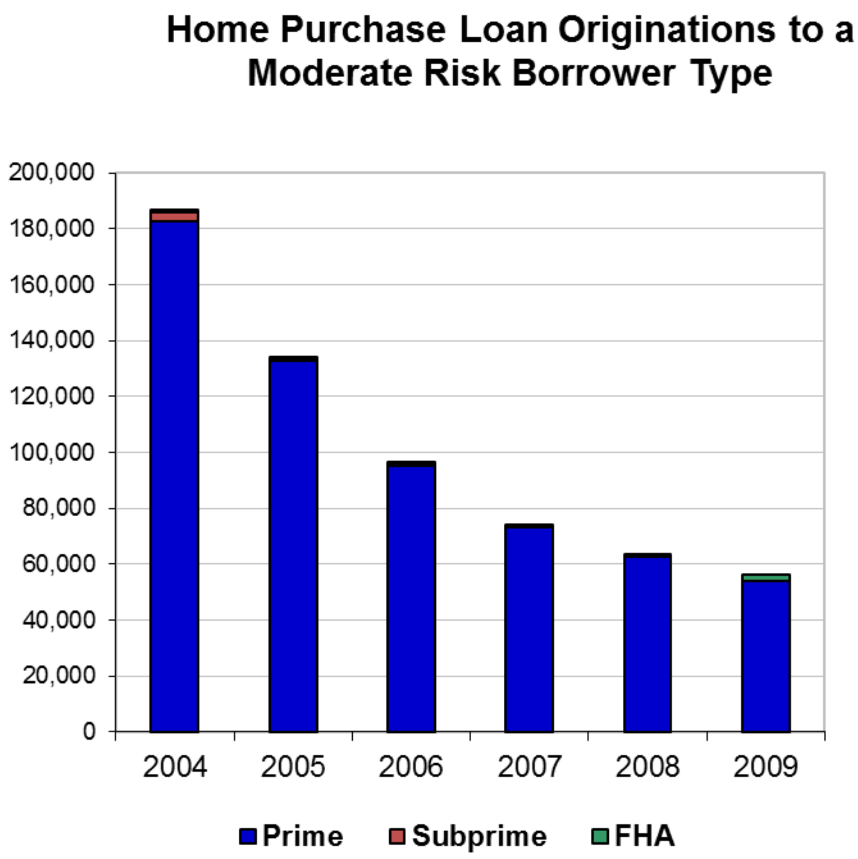
Home Purchase Loans	**2005**	**2009**
Borrower income > $100K*	14,743	122,747
Share of all FHA	*6%*	*13%*
Loan size > $200K	19,210	278,634
Share of all FHA	*8%*	*30%*

*2009 Dollars

First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments.

Source: HMDA and Furman Center

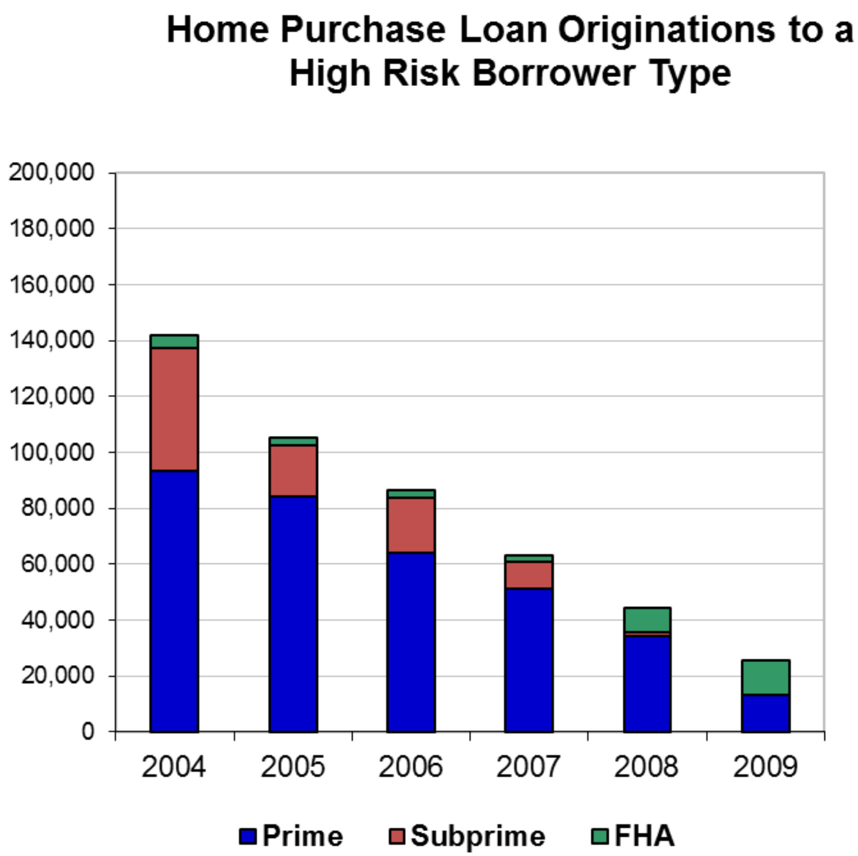
Changes to the mortgage market for a sample moderate risk homebuyer



- FICO: 700 - 760
- CLTV: < 90%
- DTI (total): 20% - 40%
- In tract with 80-120% area median income

Source: Analyses provided by Marsha Courchane, Charles River Associates and Peter Zorn, Freddie Mac, using proprietary data.

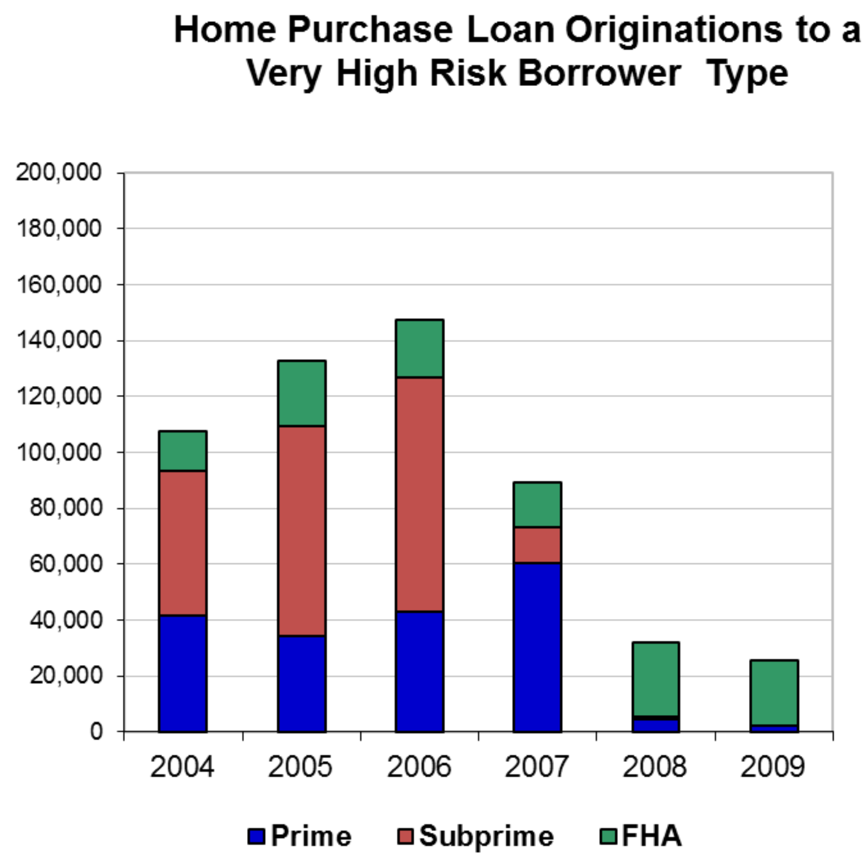
Changes to the mortgage market for a sample high risk homebuyer



- FICO: 620 - 699
- CLTV: 80.01 – 95%
- DTI (total): 30% - 50%
- In tract with 60-100% area median income

Source: Analyses provided by Marsha Courchane, Charles River Associates and Peter Zorn, Freddie Mac, using proprietary data.

Changes to the mortgage market for a sample very high risk homebuyer



- FICO: < 620
- CLTV: > 80%
- DTI (total): 40% - 65%
- In tract with 60-100% area median income

Source: Analyses provided by Marsha Courchane, Charles River Associates and Peter Zorn, Freddie Mac, using proprietary data.

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Determinants of default and delinquency risk

Low current
homeowner equity

+

Triggering event/liquidity constraint

or

"strategic" behavior

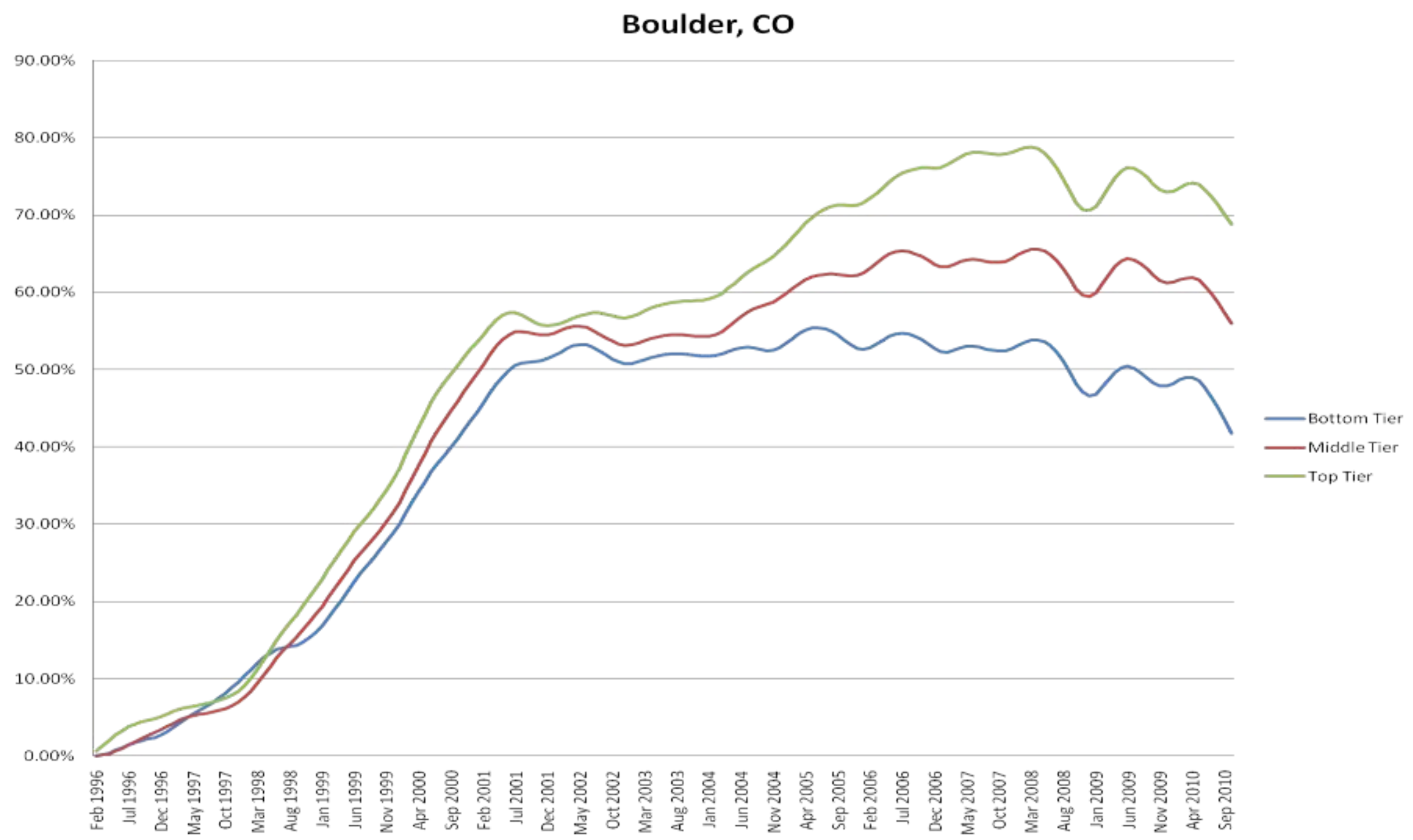
Underwriter relies on information available at time of origination

- Initial credit score and history
- Initial income and debt-to-income ratio (front end/back end)
- Initial liquid assets
- Initial LTV/CLTV
- Recent price trend
- Property type
- Loan terms/rate
- Loan purpose
- Owner occupant?

Discussion Session 1

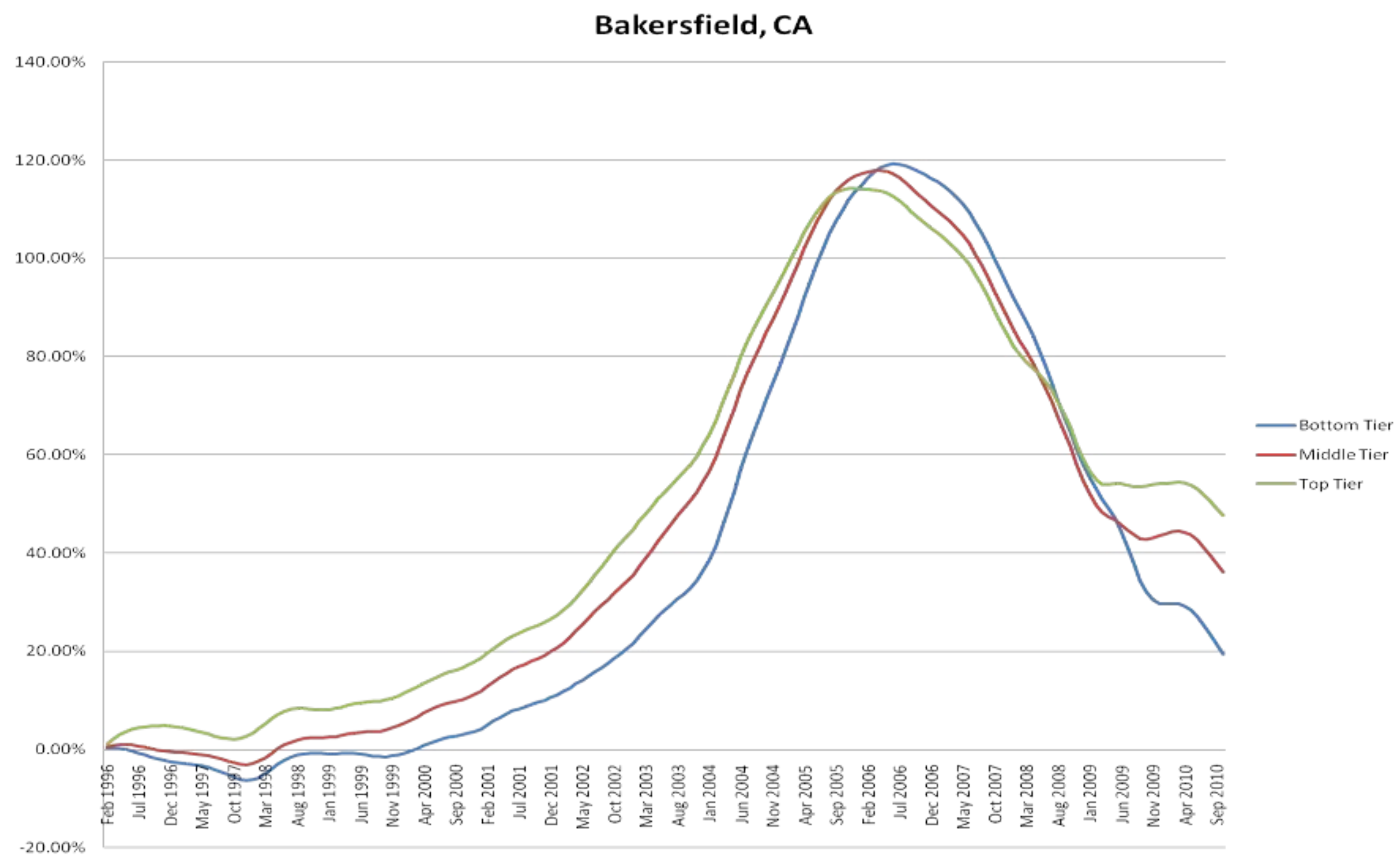
Discussion Session 2

Difficult to predict how conditions will change



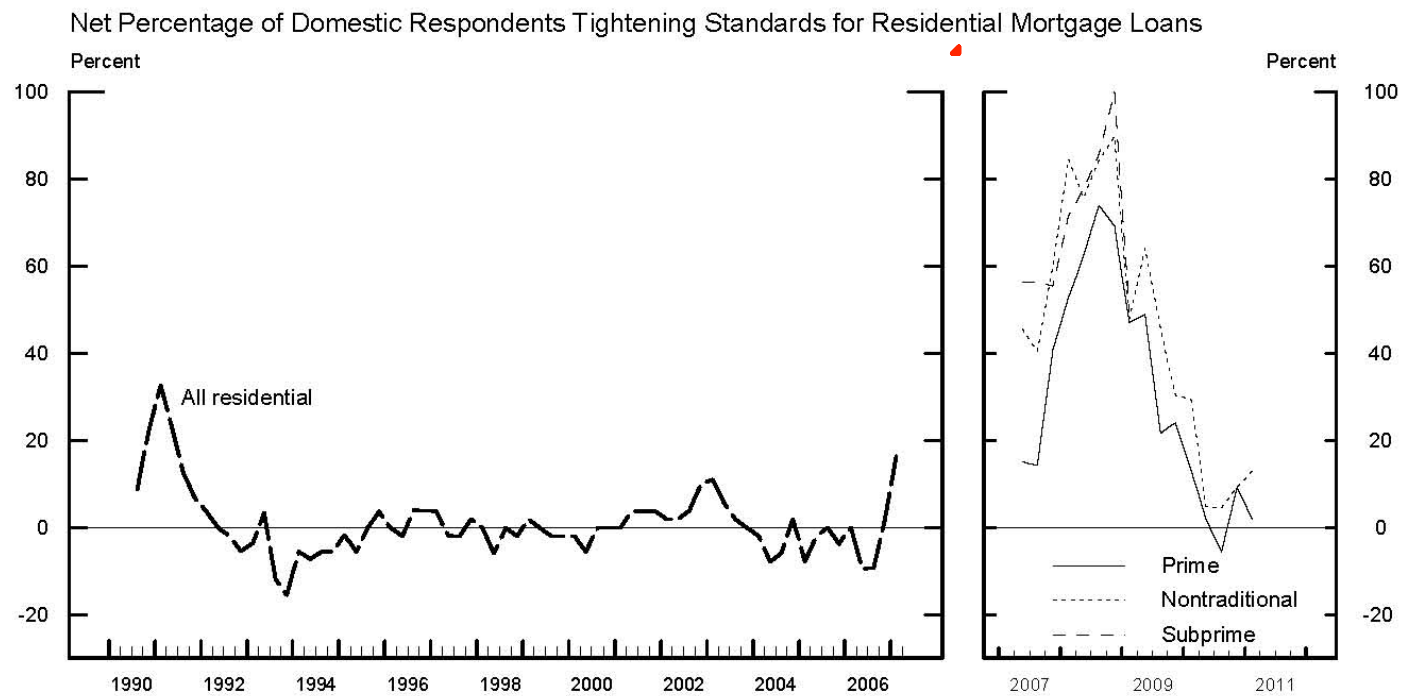
Source: Furman Center analysis of Zillow data

Difficult to predict how conditions will change



Source: Furman Center analysis of Zillow data

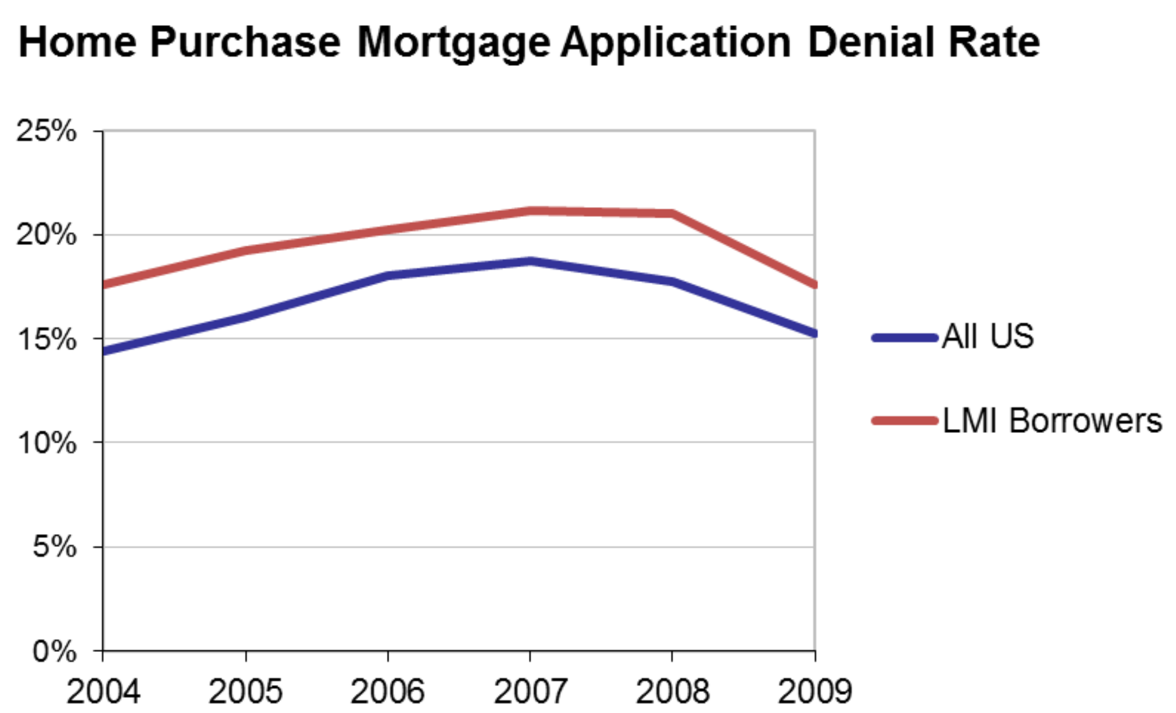
Underwriting has tightened in recent years



Note: For data starting in 2007:Q2, changes in standards for prime, nontraditional, and subprime mortgage loans are reported separately. Series are not reported when the number of respondents is three or fewer.

Source: Reproduced from The October 2010 Senior Loan Officer Opinion Survey on Bank Lending Practices, Board of Governors of the Federal Reserve System

Tighter underwriting understood by applicant pool



First-lien home purchase loans issued to owner-occupants of 1-4 family homes, condominiums and cooperative apartments in metropolitan areas.

Source: HMDA and Furman Center

Tightening by GSEs and FHA

- GSE eligibility changes
  - Lower CLTV cap for mainstream home purchase products (2008)
  - Fannie increase in minimum credit score to 620 (2009)
  - Stricter appraisal guidelines (2010)
- FHA eligibility changes (2010)
  - Minimum credit score of 500
  - 580 minimum credit score for LTV over 90%
  - More restrictions on seller concessions

Even tighter underwriting by the private sector

- Lender overlays
  - Stricter CLTV requirements in certain markets
  - Stricter credit score requirements
    - NCRC study: most top FHA lenders have effective minimum credit score requirement of 620 or 640
- Private mortgage insurance
  - Minimum credit scores and DTI and LTV limits
  - Additional restrictions in distressed markets

Increased price for riskier originations

- Revised mortgage insurance premiums for FHA (2010)
- New/higher fees by GSEs (2008):

Table 2: All Eligible Mortgages (Excluding MCM): LLPA by Credit Score/LTV

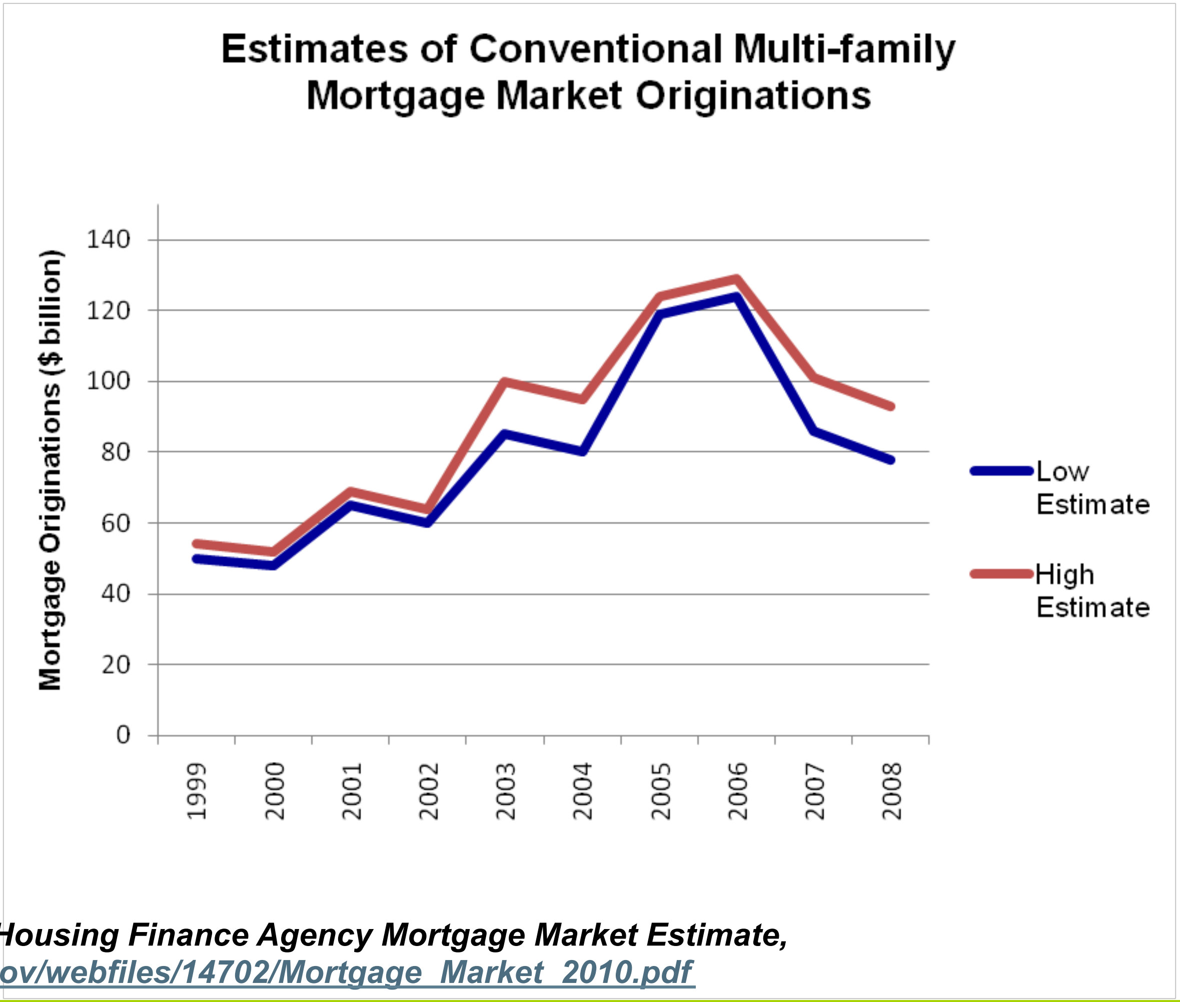
PRODUCT FEATURE	LLPAs by LTV Range							
	≤ 60.00%	60.01 – 70.00%	70.01 – 75.00%	75.01 – 80.00%	80.01 – 85.00%	85.01 – 90.00%	90.01 – 95.00%	95.01 – 97.00%
Representative Credit Score	Applicable for all mortgages with greater than 15 year terms For whole loans purchased on or before March 31, 2011, or loans delivered into MBS pools with issue dates of M[illegible] 1, 2011 or earlier							
≥ 740	-0.250%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
720 – 739	-0.250%	0.000%	0.000%	0.250%	0.000%	0.000%	0.000%	0.000%
700 – 719	-0.250%	0.500%	0.500%	0.750%	0.500%	0.500%	0.500%	0.500%
680 – 699	0.000%	0.500%	1.000%	1.500%	1.000%	0.750%	0.750%	0.500%
660 – 679	0.000%	1.000%	2.000%	2.500%	2.250%	1.750%	1.750%	1.250%
640 – 659	0.500%	1.250%	2.500%	3.000%	2.750%	2.250%	2.250%	1.750%
620 – 639	0.500%	1.500%	3.000%	3.000%	3.000%	2.750%	2.750%	2.500%
[illegible] (1)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Fannie Mae Loan-Level Price Adjustment (LLPA) Matrix and Adverse Market Delivery Charge (AMDC) Information, efannie.com

Presentation Outline

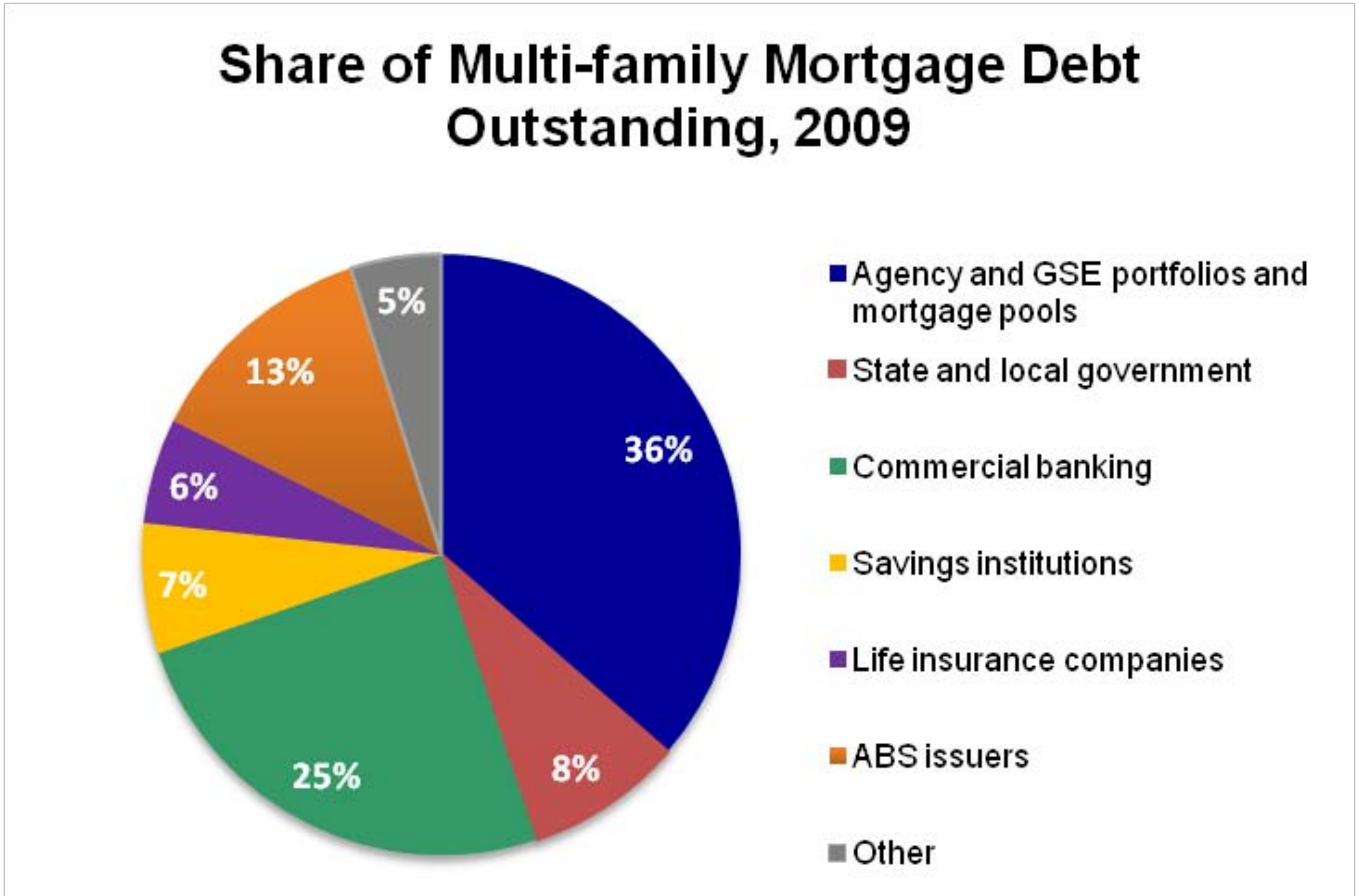
- How residential mortgage lending has changed in recent years
- Underwriting and pricing residential mortgage risk
- **Multi-family lending**
- Government's role in the mortgage market

Multi-family originations have dropped sharply



Source: Federal Housing Finance Agency Mortgage Market Estimate,
http://www.fhfa.gov/webfiles/14702/Mortgage_Market_2010.pdf

GSEs hold the biggest slice of multi-family debt



Source: FRB Flow of Funds Accounts 1995-2004 and 2005-2009

Presentation Outline

- How residential mortgage lending has changed in recent years
- Underwriting and pricing residential mortgage risk
- Multi-family lending
- **Government's role in the mortgage market**

An expanded government role

- FHA/VA
  - Increased loan limits
  - Increased origination volumes
- Fannie Mae/Freddie Mac
  - Increased conforming loan limits
  - Increased market share of non-FHA/VA
  - Increased share of multi-family debt
- GSEs and FHA/VA involved in 95% of 1-4 family mortgage originations as of late 2009

Government exposure to credit risk through Fannie and Freddie

- Hold or insure >50% of all outstanding single-family debt
- $226B losses from end of 2007 to 2Q 2010
  - 73% from the single-family loan guarantee business
- Historically high delinquency rates for 1-4 family (maybe dropping)
- Improving credit profile of purchased loans since conservatorship

Government exposure to credit risk through Fannie and Freddie

Figure 2.2. Single-Family Serious Delinquency Rates

	Fannie Mae				Freddie Mac			
	4Q07	4Q08	4Q09	2Q10	4Q07	4Q08	4Q09	2Q10
Product Type[1]								
Alt-A	2.2%	7.0%	15.6%	15.2%	1.9%	5.6%	12.3%	12.4%
Interest-Only	2.0%	8.4%	20.2%	19.4%	2.0%	7.6%	17.6%	18.4%
Credit Score								
<620	4.7%	9.0%	18.2%	16.1%	3.4%	7.8%	14.9%	14.4%
Loan-to-Value Ratio								
>90 Percent	3.0%	6.3%	13.1%	11.6%	1.9%	4.8%	9.1%	8.5%
Risk-Layering								
Credit score <620 & LTV >90 Percent	8.6%	16.0%	28.0%	24.3%	5.4%	11.5%	19.0%	17.9%
Total Single-Family	1.0%	2.4%	5.4%	5.0%	0.7%	1.8%	4.0%	4.0%

Notes

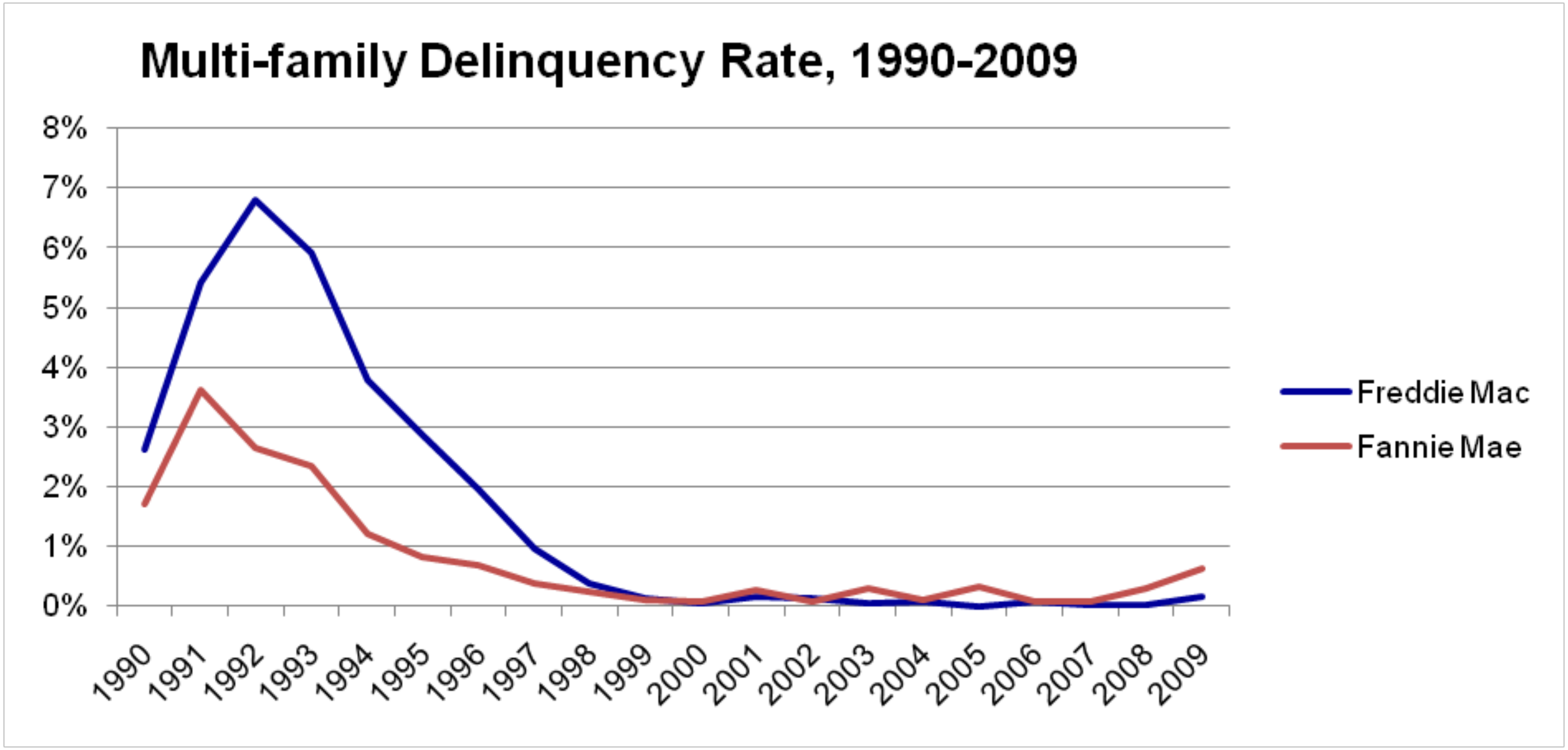
[1] Loans with multiple product features may be in more than one category. Refer to sources for Alt-A definition.

Sources:

Enterprises' Form 10-Ks, Credit supplements to SEC disclosures, and management reports.

Source: Conservator's Report on the Enterprises' Financial Performance, Second Quarter 2010

Government exposure to credit risk through Fannie and Freddie



Source: Federal Housing Finance Agency Report to Congress 2009,
http://www.fhfa.gov/webfiles/15784/FHFAReportToCongress52510.pdf

Government exposure to credit risk through FHA insurance

- Delinquency rate high, but may be falling now
- Increased annual insurance premiums will raise funds
- Higher average FICO scores for new loans
- Because of recent boom, performance of recent vintages is key
  - 35% of insurance-in-force is from 2009 alone (as of May, 2010)

Conclusions

- Big decline in home purchase lending since 2005, but partial rebound for LMI borrowers in 2009
- Underwriting tightened at every level
- Difficult to predict how conditions will change overall
- Nearly all recent mortgage lending has been government-backed
- FHA/VA lending now a very large presence
- Possible tension between credit access and exposure to risk

IIe: Keynote Address by Michael S. Barr

Thank you for inviting me here today. This is my first public speech since my return to life as a private citizen and I can't think of a better audience for it. I want to talk today about a framework for housing finance reform. Before I do, I thought I'd sketch out briefly where we've been.

Two years ago, our housing markets and financial system were on the verge of collapse. In the decade leading up to the financial crisis, there was a global boom in asset prices, particularly in housing. Loose monetary policy played a role in the boom, and the flow of global capital from nations building foreign currency reserves undoubtedly helped to set the stage. But the financial crisis was not a perfect storm, a tidal wave, or an Act of God. The financial crisis stemmed from basic failings in our domestic and the global system of financial regulation, and the way firms globally exploited those failings.

Our financial system had inadequate capital, inadequate transparency, too many conflicts of interest, and not enough risk management. The shadow banking system grew up outside the system of bank regulation even though shadow banking is, simply, banking. Highly levered institutions engaged in significant maturity transformation without adequate transparency, capital, regulation, and oversight. The risk in funding markets through overnight repo was poorly understood and the basic infrastructure in our payments, clearance, and settlement systems was more fragile than participants knew. Derivatives were traded in the dark, backed by insufficient capital and no one to police the markets for abuse.

Major financial institutions could not be wound down without either taxpayer bailouts or risks to our whole economy. And consumer protection was sorely lacking, with divided responsibilities at the federal level and no real supervision of large swaths of the nonbank participants in the mortgage markets, among other problems.

In that regard, the events that led the last Administration to need to put the GSEs into conservatorship was symptomatic of a range of regulatory, management, and oversight failures throughout our financial system. As the private, unregulated mortgage market grew, and market players began to loosen credit standards to pursue ever-riskier business in a booming market, the GSEs, which initially stuck to their core business of guaranteeing well-underwritten loans, saw their market shares fall precipitously. Driven by management's desires to regain market share, the GSEs sought, and were permitted, to guarantee and to purchase riskier mortgages without holding adequate capital or employing appropriate risk management techniques. These moves left Fannie Mae and Freddie Mac dangerously exposed when the housing bubble began to burst.

The GSEs were allowed to operate under an unacceptable "heads I win, tails you lose" system. They enjoyed the benefits of the perception of government support. They had inadequate oversight and inadequate capital, and the market did not instill appropriate discipline because the market assumed that they had a government backstop.

As a result of the substantial deterioration in the housing market and Fannie Mae and Freddie Mac's growing inability to raise new capital, FHFA placed the GSEs into conservatorship on September 6, 2008 under the authority granted to them by Congress under the bi-partisan Housing Economic Recovery Act of 2008 (HERA). Under HERA authority, Treasury agreed to provide financial support to the GSEs through the establishment of Preferred Stock Purchase Agreements (PSPAs). The goal of the PSPAs and subsequent amendments was to preserve overall stability in financial markets and to allow the GSEs to continue to provide liquidity in the secondary market. The PSPAs ensured that the GSEs would be able to meet their obligations and continue to support the housing finance system, which was then on the verge of collapse.

Since September 2008, FHFA, in its role as conservator, has acted carefully to help ensure that Fannie Mae and Freddie Mac's assets are conserved while continuing to play a critical role in making mortgage credit available. By facilitating the flow of credit for responsibly underwritten mortgages, the GSEs have served as a source of stability for the housing market and enabled millions of Americans to continue to have the ability to take out a new mortgage or refinance.

Important progress has been made towards stabilizing the housing market, but it remains fragile. Private capital has not yet returned to the market, and the GSEs and Ginnie Mae continue to play an outsized role in ensuring the availability of mortgage credit. Roughly 95% of the mortgages originated in this country are currently financed through either the GSEs or Ginnie Mae. Put simply, without the GSEs and Ginnie Mae, there would be no functioning mortgage market today.

The new loans being guaranteed by the GSEs are not contributing in any material way to the losses the GSEs face. It is the GSEs' old book of loans, those acquired before conservatorship, which are the overwhelming source of losses. Under the conservatorship, the credit quality and risk profile of the post-conservatorship book of business has dramatically improved compared to pre-conservatorship. While it is still early to make definitive judgments, to date less than one percent of losses have come from loans originated in 2009 and 2010. In that regard, the process of reform has already begun, in that the conservatorship is working in keeping GSE activities within prudent bounds.

Guarantee fees have been increased and the GSEs have adjusted their pricing to account more accurately for the risks that they face. Alt-A loans now account for zero percent of the new book of business since conservatorship; this compares to 22 percent for Fannie Mae in 2006 and 18 percent for Freddie Mac in 2006. Low credit (<620 FICO scores) purchases are now only one percent as compared to five percent for both Fannie Mae and Freddie Mac from 2001-2008. Average FICO scores of new business improved from roughly 715 in 2006 to 750 or more for both Fannie Mae and Freddie Mac in 2010. While new mortgages with loan-to-value ratios greater than 90 percent are slightly up in 2010 from 2009, much of this is related to the Home Affordability Refinance Program (HARP), which is a refinance loss mitigation mechanism for loans already guaranteed by the GSEs, and which reduces the risk of default and any potential losses at the GSEs.

The new, higher credit quality book of business from 2009 has seen dramatically lower cumulative default rates when adjusted for loan age. For example, 2009 cumulative defaults for Freddie Mac and Fannie Mae were 1.1 percent and 1.2 percent, respectively, in the loans' first 18 months, as compared to cumulative default rates for the first 18 months for loans originated in 2007, which were 22.3 percent and 28.7 percent for Freddie Mac and Fannie Mae, respectively.

The country is unfortunately stuck with the consequences of the poor credit choices the GSEs made prior to conservatorship. No one can undo those decisions. Some suggest that taking time to get reform right will expose taxpayers to even greater losses at Fannie Mae and Freddie Mac. That is simply not true. The losses that Fannie Mae and Freddie Mac face are the result of mistakes made in the years leading up to the crisis, not the consequences of actions by the GSEs since 2008. There is nothing the government can do to decrease the obligations Fannie Mae and Freddie Mac incurred ahead of this crisis. Given this unfortunate truth, the most responsible course is to minimize the risk that those losses get worse.

Now, while the country is appropriately focused on stability in the mortgage market, we also need to stay focused on the hard work of reform. Congress began the process of reform with the passage of HERA in 2008. The prior Administration continued the path of reform when it placed Fannie Mae and Freddie Mac into conservatorship in September 2008. That action arrested the sharp deterioration of market confidence in these two institutions that was intensifying the broader financial crisis. And it finally put an end to the harmful practices that had contributed to the firms' failures.

The next phase of reform came with the passage of the Dodd-Frank Act, which improves the regulation of lending standards so that the mistakes of the past are not repeated in the housing market in the future. The Dodd-Frank Act includes fundamental reform of mortgage market rules, including ability-to-pay requirements and risk retention standards for mortgages. This new Act will help to ensure that homeowners are not sold products that they cannot afford. It ensures that originators retain skin in the game when they originate risky mortgages. Capital rules are being reformed so that the shadow banking system cannot arbitrage banking capital, and that capital levels throughout the system are higher. Transparency will now be required deep into securitization structures. And regulators have the powers to establish national servicing standards so that borrowers can work out problems with their loans rather than go through costly foreclosures. These necessary reforms are critical steps. Regulators will take the next steps with issuance of regulations for qualified residential mortgages (QRMs) soon. And there will soon be a Consumer Financial Protection Bureau with market-wide coverage.

As we consider the next phase of reform, we should keep in mind a set of objectives for a well-functioning, stable housing finance system. As I've said while serving in government, and echoing what Secretary Geithner has said as well, these include:

Widely available mortgage credit. Mortgage credit should be available and distributed on an efficient basis to a wide range of borrowers, including those with low and moderate incomes, to support the purchase of homes they can afford. Given the centrality of housing to households, we need to ensure that housing finance is available even when markets may be under severe stress, and at rates that are not excessively volatile.

Housing affordability. A well-functioning housing market should provide affordable housing options, both ownership and rental, for low- and moderate-income households. The government has a role in promoting the development and occupancy of affordable single and multifamily residences for these families. We need to be sure that the future housing finance system does not relegate minority home buyers to a separate market. Both affirmative obligation (duty to serve), and negative prohibition (anti-discrimination) measures are warranted and the new system might appropriately be taxed to support affordable housing initiatives. At the same time, there is little rationale for generalized, untargeted support for subsidies to housing and guarantee fees should not be subsidized.

Consumer protection market-wide. Consumers should have access to mortgage products that are easily understood, such as the 30-year fixed rate mortgage and conventional variable rate mortgages with straightforward terms and pricing. Effective consumer financial protection should keep unfair, abusive or deceptive practices out of the marketplace and help to ensure that consumers have the information they need about the costs, terms, and conditions of their mortgages. We cannot allow a bifurcated market to re-develop, in which some market participants are only subject to weak supervision or enforcement. Market-wide regulation should (i) ensure capital adequacy, (ii) enforce strict underwriting standards and (iii) protect borrowers from unfair, abusive or deceptive practices. Regulators should have the ability and incentive to identify and respond to problems that may develop in the mortgage finance system. We cannot afford a housing finance system that permits regulatory arbitrage.

Financial stability. The housing finance system should distribute the credit and interest rate risk that results from mortgage lending in an efficient and transparent manner that minimizes risk to the broader financial and economic system and does not generate excess volatility. The mortgage finance system should not contribute to systemic risk or overly increase interconnectedness from the failure of any one institution. At the same time, history suggests that the government will intervene in the event of a crisis in the housing market of sufficient magnitude. That is because real estate markets are prone to booms and busts; housing is a very large component of the financial sector; and housing assets are a large component of assets held by households. Any housing finance system must acknowledge that fact, and provide a realistic mechanism for responding, while protecting taxpayers.

Alignment of incentives. A well functioning mortgage finance system should better align incentives for all actors—issuers, originators, brokers, ratings agencies, insurers, borrowers—so that mortgages are originated and held or securitized with the goal of long-term viability rather than short term gains. That means avoidance of privatized gains funded by public losses.

If there is a government guarantee provided, it should earn an appropriate return for taxpayers and ensure that private sector gains do not come at the expense of public losses. Moreover, if government support is provided, the role and risks assumed must be clear and transparent to all market participants and the American people. If government guarantees are provided, they should be priced accurately and transparently. Private sector, share-holder owned entities should not issue government guarantees because the inherent conflict between shareholder interests and the public interest is too strong.

Standardization. Standardization of mortgage products improves transparency and efficiency and should provide a sound basis in a reformed system that increases liquidity, helps to keep rates competitive, and promotes financial stability. The market should also have ample room for innovation to develop new products which can bring benefits for both lenders and borrowers.

Diversified sources of funding and reduced concentration. Through securitization and other forms of intermediation, a well functioning mortgage finance system should be able to draw efficiently upon a wide variety of sources of capital and investment both to lower costs and to diversify risk. Concentration in mortgage origination and servicing should be reduced, both to enhance price competition and to reduce concentration of risk. A bank-focused housing system does not necessarily meaningfully reduce government exposure as compared to a government-guaranteed securitization system.

Secondary market liquidity. Today, the U.S. housing finance market is one of the most liquid markets in the world, and benefits from certain innovations like the "to be announced" (or TBA) market. This liquidity has provided benefits to both borrowers and lenders, including lower borrowing costs, the ability to "lock in" a mortgage rate prior to completing the purchase of a home, flexibility in refinancing, the ability to pre-pay a mortgage at the borrowers' discretion, and diversified sources of mortgage funding.

Private capital. Our housing finance system, like our financial system generally, was woefully undercapitalized. Any new housing finance system must draw in private capital, and credit insurers or other system participants must be clearly regulated.

Stable mortgage products for households. Coming out of the Great Depression, our nation saw the strong need to provide a housing finance mechanism with greater stability than existed in the 1920s; the 5 year balloon payment mortgage created enormous hardship and contributed mightily to massive foreclosures in the 1930s. The creation of the 30-year fixed rate, prepayable, self-amortizing mortgage was a singular achievement. While many borrowers appropriately can and should use standard adjustable rate mortgages with straightforward terms, households and the market are benefited by the existence of the 30-year fixed rate mortgage. A fixed rate mortgage does not require households to self-insure against interest rate risk, or against the risk of a change in their financial circumstances that would prevent refinancing. A housing finance system without such a product would be a radical departure from our current system.

These objectives suggest that there is a fundamental choice that the Congress and the Administration will need to confront. A central question is whether, beyond FHA-insured mortgages, there will be a role for a government guarantee. Those who are opposed to such a guarantee focus on moral hazard, on the risk of government mis-pricing the guarantee and putting taxpayers at risk, on the dangers of over-subsidization of housing, and on the political economy of loan limits and the GSE credit box which may increase over time.

Those who favor a role for a government guarantee in the future suggest that the major problem in the past was with the inherent conflict between an implicit guarantee and shareholder ownership, and argue that a government guarantee is required to maintain the availability of the 30-year fixed rate mortgage for most homeowners. Moreover, in the event of a housing crisis, the presence of paid-for guarantees permits the government to be in place as a lender of last resort and to insure against catastrophic loss. Without a government guarantee, the housing finance system will also tend to be concentrated in the banking sector, and given economies of scale, in the top handful of financial institutions.

Regardless of the shape of the housing finance system in the future, we will need an orderly transition while Congress debates reform.

The GSEs and the government are currently playing an outsized role in the housing finance market. This situation is neither sustainable nor desirable, but if the GSEs were suddenly to exit the market the stability of the housing market would be undermined. Mortgage rates would skyrocket and most homeowners would be unable to obtain mortgage credit. The transition to a new system must occur in an orderly fashion that is minimally disruptive to the market. Enabling households to maintain access to credit at reasonable rates throughout the transition is essential to our housing and broader economic recovery.

Financial markets and the public depend on the ability of the GSEs to perform on their obligations. That is why the government has made clear that it is committed to ensuring that the GSEs have sufficient capital to perform under any guarantees issued now or in the future and the ability to meet any debt obligations.

Michael S. Barr, Professor, University of Michigan Law School, Former Assistant Treasury Secretary for Financial Institutions

I think that we can agree on some clear steps that should occur regardless of the outcome of the reform debate:

- Loan limits should be allowed gradually to come down;
- Guarantee fees should be priced to cover risk.
- Treasury should make clear that the GSEs will not emerge from conservatorship as shareholder-owned entities;
- FHFA should require the GSEs to reduce their retained portfolios gradually;
- FHFA should ensure high capital standards
- Regulators should put in place QRM rules that make clear that risk retention will be the norm but provide for a wide latitude in types of risk retention so that we can bring a diversity of capital sources into the housing finance system;
- FHFA should set a credit box for the GSEs that would be sustainable going forward;
- FHFA and Treasury should plan to wind down the GSEs gradually while retaining human capital and infrastructure that are necessary in the future; and
- CFPB should put in place strong consumer protection rules market wide.

Conclusion

Fixing our nation's housing finance system is critically important to our economy and to our country's future. The housing market supports millions of jobs for Americans in construction, manufacturing, real estate, finance, and other industries. Moreover, for the majority of Americans homeowners, their house is their largest financial asset and the single largest purchase that they will make in their lifetimes. Housing is equally important to the tens of millions of families who choose to rent; their quality of life is directly affected by access to affordable, quality rental housing in good neighborhoods.

A new system must be designed to ensure that our housing finance system is more stable, consumers are protected, and sustainable credit is widely accessible.

III: Highlights from the Roundtable Discussions

"Navigating Uncertain Waters: Mortgage Lending in the Wake of the Great Recession" brought together more than 75 bankers, banking regulators, academics, financial and banking professionals, government officials, for- and non-profit developers, researchers, and affordable housing leaders to review the state of the residential mortgage market and to discuss how the market should be reshaped in the future.[2] Roundtable participants discussed the level of credit the marketplace currently provides, debated whether that level appropriately reflects risk while meeting credit needs, and considered the role government should play in mortgage lending. The discussion covered both single- and multi-family lending, with a focus on lending to low- and moderate-income households, lending patterns in low- and moderate-income communities, and lending activity in neighborhoods hit hardest by the foreclosure crisis.

In order to share the insights the discussion generated, this document summarizes key observations made during the course of the Roundtable. It does not attribute statements to individual participants, nor does it endorse or attempt to verify assertions made by participants. It is not an exhaustive transcript. Even limited by those constraints, however, the summary can contribute to current policy debates in three ways: by providing new evidence, laying out areas where more research is needed, and identifying areas where conflicting policy objectives will require some type of compromise.

2A list of attendees and the agenda are available in Sections IIa and IIb.

Presentation: "Mortgage Lending in the Wake of the Great Recession"

Josiah Madar, Research Fellow, NYU Furman Center for Real Estate and Urban Policy[3]

Recent Changes in Residential Mortgage Lending[4]

- The Furman Center's analysis of 2009 Home Mortgage Disclosure Act (HMDA) data suggests that although home purchase mortgage originations for both single-family and multi-family properties fell sharply from 2006 through 2009, home purchase originations to low- and moderate-income (LMI) borrowers actually increased between 2008 and 2009. These loans were primarily secured by homes located outside of both low- and moderate- income (LMI) communities and communities disproportionately affected by foreclosures.
- The percentage of new home purchase loans insured by the Federal Housing Administration (FHA) across the nation skyrocketed, from a low of eight percent in 2005 to 54 percent in 2009. The increase in FHA lending appears to be particularly pronounced for borrowers with higher risk characteristics, based on a sample developed for the Roundtable by Marsha Courchane and Peter Zorn using proprietary data.

3 The PowerPoint slides from the presentation are available in Section IId of this document and at Madar, J. (2011) Mortgage Lending After the Great Recession

4 Based on a Furman Center analysis of Home Mortgage Disclosure Act data published, "Mortgage Lending During the Great Recession: Analysis of HMDA 2009." NYU Furman Center for Real Estate and Urban Policy (November 2010).

Underwriting and Pricing of Mortgage Risk in the Aftermath of the Great Recession

- In 2009, for the first time since 1990, the Federal Reserve Board survey of Senior Loan Officers found virtually universal agreement that underwriting standards had tightened for residential mortgage loans.
- Fannie Mae, Freddie Mac, FHA and private mortgage insurers have tightened eligibility requirements for loans they will acquire or insure.
- Fannie Mae and Freddie Mac also imposed new upfront fees, or loan-level pricing adjustments (LLPAs) for originations they perceive as being riskier.

Multi-family Lending Patterns

- Like single-family originations, multi-family loan originations fell dramatically after 2006. In another parallel with the single-family mortgage market, the federal government played an outsized role in multifamily mortgage debt since the Great Recession.
- However, the delinquency rate of the GSE multifamily debt remained extremely low when compared to the single-family delinquency rates, even in 2009.

The Role of Government Has Expanded Dramatically

- The GSEs and FHA/VA were involved, whether through insurance, guarantees, purchases or securitization of residential mortgages, in 95 percent of the single-family mortgage originations in late 2009.
- Policymakers will need to reevaluate the government's role given the much higher exposure to risk inherent in its dominant share of the entire residential mortgage market, although there is some evidence that government losses appear to be related to loans made during the boom and not more recent vintages.

Discussion of the presentation

Dr. Raphael Bostic

Dr. Bostic, Assistant Secretary of Policy Development and Research at the U.S. Department of Housing and Urban Development, and other Roundtable participants offered the following observations or arguments (although this list is not exhaustive):

- Some participants argued that there was too much credit during the boom, and the sudden drop-off in credit in 2008 and 2009 was, to some extent, a necessary market correction.
- There is still considerable uncertainty about how the market will recover, in part because there is still a major overhang of distressed homes. Further, the size of the "shadow inventory" of homes that have not yet entered default or completed foreclosure remains unknown.
- Some participants asserted that the government's role in mortgage finance is too large now, but a hasty retreat from its current role could hurt families and neighborhoods already battered by the recession, especially if, as it appears, the FHA is a major source of lending in minority communities.
- Participants repeatedly confronted overarching question related to credit availability: How much debt are we willing to assume—as individuals, institutions or as a country—when we have not resolved the legacy debt that remains outstanding for households, financial institutions, and state and federal governments?
- We may need to rethink loan-level pricing adjustments and risk-based pricing and try to find other ways to address risk without increasing monthly payments and fees. There was debate whether GSEs should do more to encourage refinancing of performing, existing high-cost loans despite current valuations that may equal or exceed the amount of the outstanding principal balance of the loan, or whether the GSEs obligation to minimize taxpayer cost and risk of loss should take precedence.
- More recent vintages of FHA loans may perform better than vintages originated during the boom because of improvements in underwriting.
- Participants expressed concern that financing for multi-family rental and two-to-four family homes is especially important to the recovery, but the government seems to be the sole lender playing a major role in this market.
- Many participants saw stricter underwriting as a necessary correction to the market, but some warned that the tightening that has occurred may be overly simplistic (i.e., relying on LTV ratios and credit scores without critically analyzing the underlying data or taking into account characteristics of the loan product or other attributes of the borrower). Such reactive underwriting could restrict the credit available to people who might in fact have the capacity to repay the loan and whose use of the funds could provide stability for the household, improve its financial condition, and anchor the

neighborhood. Simplistic tightening of credit standards, they warned, might also affect minorities and low-income borrowers disproportionately at a time when they are most vulnerable to the effects of the recession.

- The impact of the recession may be multigenerational as damaged credit histories and declining housing values wipe out a primary source of intergenerational wealth transfers. This housing wealth, especially for lower income and minority homeowners, has historically financed education and retirement and provided a cushion for emergencies like divorce or illness.

Discussion Session I: Measuring Borrower Creditworthiness: Ability and Willingness to Pay

Discussants: Kenneth P. Brevoort, Senior Economist, Federal Reserve Board; Joanne M. Gaskin, Director, Global Scoring Solutions, FICO; Chris Krehmeyer, President and CEO, Beyond Housing, St. Louis, MO; George McCarthy, Director, Metropolitan Opportunity Program, The Ford Foundation; Michael A. Shaw, Executive Vice President and Risk Officer and Enterprise Risk Officer, Fannie Mae

Moderator: Ingrid Gould Ellen, Faculty Co-Director, Furman Center for Real Estate and Urban Policy

This session examined how borrower income and creditworthiness were measured for loan underwriting prior to the foreclosure crisis, how they are being assessed in the current environment, and what the implications of these changes are for the availability of mortgage credit for low- and moderate-income households, LMI neighborhoods, and the communities most impacted by the crisis. The points that discussants or other Roundtable participants made included the following (but the list is not exhaustive):

Credit Scoring as an Underwriting Tool

- Several participants argued that credit scores should be used to sort portfolios or products, but should not be used by themselves for predicting individual borrower performance, which is more appropriately accomplished by a thorough review of the applicant's credit history and other characteristics. Moreover, credit scores do not take into account income, unemployment, or macroeconomic conditions.
- Some participants argued that credit scores are generally predictive of borrower risk, but that use of credit scores may disadvantage particular groups of borrowers who tend to have lower credit scores on average, such as minorities, the self-employed, immigrants, and recently divorced individuals. Moreover, credit reports can contain inaccurate information, yet borrowers do not always review and correct these errors.
- There was considerable discussion regarding whether defaults on loans originated during the boom may be more closely related to the nature of the loan product than to the characteristics of the borrower. Credit scores do not take into account characteristics of particular loan products such as negatively amortizing or teaser-rate mortgages.
- There is evidence that foreclosures substantially affect credit scores, regardless of the borrower's pre-delinquency score. In addition, credit scores tend to decline significantly immediately before mortgage delinquency, indicating that the borrower is having trouble paying other debts as well.
- Participants noted the relationship between credit scoring and the availability of investment capital in residential lending, both before and after the recession. Some participants noted the positive reasons why originators relied on credit scores, asserting that the use of credit scores has led to greater investor interest in the housing market, better informed borrowers, and greater credit availability. However, the sheer volume of mortgage originations experienced during the housing boom may have led to simplistic use of credit scores or DTI ratios in order to respond to increased investor and borrower demand.

Alternatives or Complements to Credit Scores for Predicting Borrowers' Propensity and Ability to Repay Debt

- Debt-to-income ratios are a measure of borrowers' ability to repay loans, while the credit score is a proprietary algorithm that attempts to measure the borrowers' propensity to repay debts relative to other borrowers at a point in time. Participants noted that the credit score is not designed to measure a borrower's ability to repay debt. In addition, credit scores are not intended to substitute for a review of the borrower's entire credit history, which is contained in reports provided by credit bureaus, as well as evidence that is not reported to credit bureaus, such as payment history of all bills or payment of unreported debt.

- Some participants argued that the total, or combined, debt-to-income ratio, which measures total gross income against total debt obligations, generally would be a more useful and accurate measure for ability to pay than credit scoring alone or credit scores used with a simple debt-to-income ratio that measured only housing debt against total gross income.
- Some also emphasized that for borrowers with little or no credit history, there are other means to predict ability to repay debt such as rent and utility bill payment histories. However, participants noted that each of these methods also has limitations, such as the accuracy of reporting or the consistency of the information.

The Impact and Role of Pre-purchase Homeownership Counseling and Financial Education

- Many participants agreed that financial education can improve the likelihood that a borrower will repay debts, pointing to various studies and anecdotal experience. Others noted, however, that pre-purchase housing counseling is still not widely accepted by borrowers or lenders as a routine part of the mortgage process that would mitigate risk for both parties.
- Some argued that new technologies to deliver lower-cost housing counseling could be very helpful to restoring both lender and borrower confidence in the mortgage process. Other participants predicted that more recent and detailed data on the performance of counseled mortgages would be helpful in designing programs and policies to increase the availability and effectiveness of housing counseling. Data from the GSEs, for example, on the performance of counseled loans would be very helpful to the design of future mortgage products and processes.
- Participants debated the value of risk-based pricing (increasing the cost of the mortgage to compensate the lender for the higher risk of borrower default) at length. On one hand, it is legitimate for lenders to charge a higher price to compensate for the added risk of lending to higher-risk borrowers. On the other hand, costly products necessarily increase the risk of default if a borrower's risk is related to his/her resources for repayment of the debt. Some participants suggested that financial education would be a better tool to mitigate the risk of mortgage default than risk-based pricing strategies.

Innovations, Ideas and Questions for the Future

- High unemployment during the recession has underscored the need for innovative programs that might allow borrowers to weather temporary shocks to earnings through insurance, loan modifications or some form of temporary safety net. Some participants noted that credit reporting agencies may be developing new algorithms that provide more nuanced scores, taking temporary unemployment, for example, into account in a late payment, or providing supplementary information for "thin file" borrowers.
- Participants highlighted the importance of identifying and affirmatively addressing the underlying causes of racial disparities in credit histories and credit scoring.
- Some participants suggested that households should not have to incur debt in order to establish that they can repay a mortgage. The current mortgage underwriting process rewards families who borrow and penalizes households who use savings to pay for large purchases.
- Participants emphasized the value of studying the underwriting practices used in programs that have made successful loans to LMI borrowers, including Community Reinvestment Act-driven loan products, to determine whether these products can increase credit availability to riskier borrowers without sacrificing the safety and soundness of the lending institution.
- Participants pointed out that specialized lending may be necessary in order to reach LMI and non-traditional borrower groups, and that such lending is likely to be more expensive and may require an ongoing government subsidy.
- Some participants warned that individualized, less automated underwriting may increase the risk of discrimination.
- Some participants noted that the attempts to define Qualified Mortgages (QM) and Qualified Residential Mortgages (QRM) under the Dodd-Frank Act will bring to the forefront the tension between the broad liquidity encouraged by standardization and the flexibility that may be required to reach underserved borrowers. The debate over whether the QM or QRM definitions should include a minimum credit score, for example, reflects the advantages of the simple, bright lines that scores provide versus the dangers of using credit scores that were designed to measure relative rather than absolute risk.

Keynote Speech: A Framework for a Reformed Housing Finance System and Subsequent Discussion[5]

Michael S. Barr, Professor, University of Michigan Law School

Professor Barr provided a review of the reasons for the mortgage market collapse, including inadequate capital, inadequate transparency, too many conflicts of interest, and not enough risk management. In addition to shortcomings of individual market participants, he also noted that the GSEs were allowed to operate under an unacceptable "heads I win, tails you lose" system. They enjoyed the benefits of the perception of government support. They had inadequate oversight and inadequate capital, and the market did not instill appropriate discipline because the market assumed that the government would step in to address losses incurred by the GSEs.

Professor Barr then argued that the housing market today is "fragile." On the positive side, recent vintage originations appear to be underwritten more prudently and performing better than loans made during the boom. The new loans guaranteed by the GSEs now are not contributing in any material way to the losses the GSEs face. It is the GSEs' old book of loans, those acquired before conservatorship, that are the overwhelming source of losses. However, despite this progress, private capital has not yet returned to the market, and the GSEs and Ginnie Mae continue to play an outsized role in ensuring the availability of mortgage credit.

Professor Barr then reviewed the various legislative, regulatory, and programmatic initiatives that are part of current reform efforts. Finally, Professor Barr suggested a number of objectives for a well-functioning mortgage market, including widely available mortgage credit, housing affordability, market-wide consumer protection, financial stability, alignment of incentives, standardization, diversified sources of funding and reduced concentration, secondary market liquidity, private capital, and stable mortgage products for households. In order to achieve these objectives, Professor Barr noted the importance of deciding whether a government guarantee was going to be available for mortgages in the future. Regardless of the outcome of the GSE reform debate, he highlighted several important steps that should occur, including (among others): reduced government loan limits; appropriate pricing of fees for any government guarantees; a careful transition; and strong system-wide consumer protection rules. As Professor Barr said in his conclusion, "A new system must be designed to ensure that our housing finance system is more stable, consumers are protected, and sustainable credit is widely accessible."

Following Professor Barr's speech, the discussion focused on a number of issues raised by his remarks (issues that came up as well in other discussion panels are highlighted in those summaries rather than included here):

- The impact on banks of Basel III and Dodd-Frank contingent capital requirements;
- Whether mortgage insurance, covered bonds or 100-year bonds would be a useful supplement or substitute for the GSE's role;
- The importance of, and difficulty of, resolving second lienholders' interests on defaulting single-family mortgage loans ; and
- The past and future role of the Federal Home Loan Bank system.

Discussion Session II
The Collateral: Impacts on Risk

Discussants: David Berenbaum, Chief Program Officer, National Community Reinvestment Coalition; Austin Kelly, Associate Director, Housing Finance Research, Federal Housing Finance Agency; Jonathan J. Miller, President and CEO, Miller Samuel Inc.; Leonard Nakamura, Vice President and Economist, Research Department, Federal Reserve Bank of Philadelphia; Jeffery Polkinghorne, Director of Origination Risk, CitiMortgage.

Moderator: Vicki Been, Faculty Director, Furman Center for Real Estate and Urban Policy

This session examined the challenges of assessing property values in a volatile market and debated initiatives to ensure the independence and quality of appraisals. The session also reviewed changes in underwriting to address the role collateral plays as a secondary source of repayment, and the use of loan-to-value ratios to measure default risk. The points the discussants and other participants made included the following (but the list is not exhaustive):

5 The keynote speech in its entirety is available in Section IIe of this document.

The Role of the Collateral's Value in Underwriting

- Several participants described the relationship between the value of the home as collateral and underwriting as follows: Appraisals can confirm that current property values are within a certain range, but they do not guarantee future value. Liquidation of collateral is not the primary means of repaying the loan, so valuation should only be a secondary source of underwriting information behind the ability and willingness of the borrower to repay the loan.
- Just as credit scores became an inferior substitute for fully underwriting the borrowers' ability to repay the loan during the boom, some participants argued that the valuation methods used during the boom became an inferior substitute for a careful analysis of the value of the collateral in terms of market, neighborhood, condition and use.
- Automated valuation technology facilitated the increased volume of mortgage originations during the boom, but perhaps at the cost of accuracy. Some participants related complaints from appraisers that they had insufficient turnaround times to conduct thorough cellar-to-roof inspections and review physical and market variations in comparable sales.

Appraisal Independence and Accuracy

- Studies reach conflicting conclusions regarding the accuracy of appraisals as a measure of current value.
- The use of Automated Valuation Models (AVM) increased during the boom and remains important. These proprietary algorithms rely heavily on sales data, and may be useful for large volume lenders to study value trends and to identify bias or fraud. However, they can also magnify the impact of both overvaluations and distressed sales, creating pro-cyclical pressure on house prices.
- During the boom, it was reported, appraisers' dependence on originators for business referrals and other incentive structures sometimes led to inappropriate pressure on the appraiser to confirm a value that would support the loan amount. The new Housing Valuation Code of Conduct (HVCC) attempted to address this problem by requiring separation between the originator and the appraiser and by establishing internal risk management procedures.
- Some attendees argued that an unintended consequence of the HVCC was to reduce the compensation of appraisers by inserting third-party appraisal management companies (AMCs) into the process. Some participants maintained that the AMCs are not necessarily independent third parties but can be owned by lenders or other interested parties.
- Some participants asserted that the quality of appraisals has declined substantially and that the best appraisers have left the business due to the loss of income associated with HVCC implementation, pressure for higher volume of appraisals, and automation.

Multi-family Property Valuations

- Multi-family valuations were problematic during the boom for a different reason, according to some participants. Lenders relied on aggressive assumptions about increasing the projected income stream of the property, and made assumptions about turnover rates of tenants and rent levels that proved incorrect.
- Attendees also noted commonalities between single-family and multi-family price appreciation during the boom. Like single-family purchases during the 2004–2007 time period, multi-family purchases also were highly leveraged, and the multi-family borrower's lack of investment may have led to more risk-taking and more defaults.
- Both the single-family and the multi-family booms may have resulted from too much capital chasing too little product, and bidding up prices in an environment of constrained supply.
- Another lesson common to both the single-family and multi-family valuation experience is the importance of local knowledge of markets, comparable sales and the local legal and regulatory environment.

The Loan-To-Value (LTV) Ratio

- Lenders traditionally use the relationship between the loan amount and the property value (Loan-to-Value ratio) as an additional measure of the risk that the lender will be unable to recover its investment in the event of default.
- LTV also signals the amount of equity the borrower has in the property, usually represented by a down payment. But some participants suggested that perhaps a measure of the borrower's savings or an equity escrow would be more useful than the LTV level, because the borrower needs a financial cushion to cover the ongoing costs of homeownership beyond the paper equity in the home.
- During the boom, high levels of subordinate and undisclosed debt were common. As a result, the

Combined Loan-to-Value (CLTV) ratio, measuring the amount of total debt against the value of the property, should arguably become a more standard underwriting tool than a simple LTV ratio at origination.

- The high default rates associated with high LTV loans or second liens have led to considerable debate whether down payment assistance programs commonly used in community development lending should be encouraged.

Challenges in Valuation after the Great Recession

- Participants noted that valuations are particularly difficult in some markets today for two reasons: a very low volume of sales, and a high share of post-foreclosure sales.
- Those difficulties may make lending in low- and moderate-income and minority communities particularly challenging.
- Because appraisals rely on comparable sales, they tend to be pro-cyclical, magnifying booms and busts. Lenders and appraisers currently are very conservative with appraisals, according to some participants, discounting values for declining markets, which magnifies downward pressure on prices.

Innovations, Ideas and Questions for the Future

- One participant asked provocatively whether the mortgage origination process should eliminate appraisals altogether and especially questioned the justification for their use in any refinancing that lowers the borrower's monthly payment through a lower interest rate.
- Some argued that it is both in the borrowers and the lender's interests to receive an independent assessment of the value of the home through an on-site inspection addressing the quality of the building, the value of a particular neighborhood, the legal context, and the macroeconomic conditions affecting the property's highest and best use, but lamented that independent appraisals seem to be undervalued by both borrowers and lenders.
- Participants noted the difficulty of balancing the importance of local, in-depth knowledge of the market and the property against the need for scale and the need to avoid inappropriate conflicts of interest in local relationships.
- Some participants gave several examples of local networks of appraisers, community lenders and non-profits that worked to restore confidence in hard-hit neighborhoods in the 1970s, and suggested that those models be revisited in the current environment.
- Participants brainstormed creative programs to provide insurance to the homeowner against price depreciation, as well as alternative methods of valuation for areas hard-hit by foreclosures, such as appraising single-family properties at their comparable rental value.
- One participant noted the challenges posed by speculators who may value property very differently than owner-occupants or long-term investors.

Discussion Session III
The Government Role as the Private Sector Returns: Assessing the Need for Intervention

Discussants: Judd S. Levy, Chairman, New York State Housing Finance Agency, State of New York Mortgage Agency; Patrick McEnerney, Managing Director, Deutsche Bank; Ellen Seidman, former director, Office of Thrift Supervision; John C. Weicher, Director, Hudson Institute's Center for Housing and Financial Markets

Moderator: Mark A. Willis, Resident Research Fellow, Furman Center for Real Estate and Urban Policy

This session explored the roles that private sector originators and secondary market investors are likely to play when the government withdraws from, and the private market returns to, mortgage lending, and what gaps may remain. The discussants also explored what other government interventions may be needed to ensure the availability of mortgage financing throughout the business and credit cycles and to ensure that low- and moderate-income and minority borrowers and neighborhoods have access to safe and sustainable credit. The points the discussants and other participants made included the following (but the list is not exhaustive):

Government's Role in the Market Today

- Many participants expressed concern that while there is little lending without some form of government credit enhancement and insurance, the federal government's involvement in nearly every single family loan is unsustainable, because it exposes taxpayers to large risk and expense.

- State Housing Finance Agencies (HFAs) and Federal Home Loan Banks are also playing a critical role in single-family and multi-family markets.
- Taxpayers own outstanding credit risk for the share of the mortgage market backstopped by government. The total exposure of taxpayers to losses sustained Fannie Mae and Freddie Mac through 2010 could be in the range of $150 billion.
- Is a government guarantee necessary in order to have 30-year, fixed rate, self-amortizing mortgages? Some argued yes, unequivocally; others believed that pension funds, life insurance companies, and other investors would still be interested in these investments. Still others maintained that Americans could adapt to alternative mortgage models if the 30-year, fixed rate mortgage disappeared.

The Role of the Federal Housing Administration

- Since 1934, FHA has had to balance the dual mission of extending credit to those not served by the private market, while also minimizing taxpayer cost.
- FHA underwriting has tightened post-recession because it has an obligation to reduce risk to the taxpayer. At the same time, it has a history of providing countercyclical credit that may result in short-term losses to the taxpayer.
- During the discussion, some participants suggested that loan limits and the availability of FHA lending should depend on analysis of local and national market needs. For example, high rental vacancies in some markets might indicate less need for the FHA to play a role in insuring new multi-family construction.

Barriers to Private Capital Re-entering the Mortgage Market

- There were strong differences of opinion on the role government should play in the secondary market. Some participants maintained that until Congress and regulatory agencies determine the future of the GSEs and risk retention requirements, the private sector is not likely to re-enter the mortgage market. A financial institution originating a loan to hold in its portfolio is required to retain substantially more capital in reserve than a loan it originates that is insured by FHA.
- Consumer protection rules are needed to produce a level playing field so that private label mortgage securities don't pull the market in a direction that creates instability.
- Can private mortgage insurance play the same role as government insurance or guarantees? In the opinion of some participants, neither government nor private companies had a good track record in pricing the risk associated with mortgage lending: they underpriced credit risk during the boom and now they may be overpricing it post-recession.

Ideas, Innovations and Questions for the Future:

- Participants again emphasized the importance of clarifying the goals of housing policy before designing the government's role in a new housing finance system. Goals could include liquidity and stability, standardization and transparency, access and consumer protection.
- One attendee asked whether the group could envision a country without a 30-year, fixed rate, self-amortizing mortgage. In other countries, only adjustable rate mortgages (ARMs) are available. Taxpayers in the United States may no longer be able or willing to subsidize the credit or interest rate risk that should be priced into these products. Some participants suggested that more research is needed about models that appeared to work (in terms of loan performance, liquidity, risk, and cost/benefit) throughout the crisis. State HFA loan programs, it was asserted, are examples of government intervention successfully blending together tools such as mortgage insurance, private capital, government credit enhancement, and pension investments. Federal support of HFAs through the New Issue Bond Program successfully provided liquidity during the worst days of the financial crisis. HUD co-insurance programs may also be examples of successful government intervention.
- Government plays an important role in enforcing fair housing and fair lending laws. The role of state and local governments in anti-discrimination efforts should not be overlooked.
- Some argued that CDFIs and community banks may be useful models. Manual underwriting and highly specialized loan products limit the possible scale of the lending and carry high costs, but many asserted that manually-underwritten loans have fewer defaults than comparable private loans to similar borrowers due to the lender's high familiarity with the borrower and the local market.
- Some participants suggested that successors to the GSEs should have a mandate similar to that of the

Community Reinvestment Act (CRA), which imposes on banks a duty to serve low- and moderate-income borrowers and communities. The CRA duty to serve brought public, private and non-profit sectors together to revive neighborhoods with creative solutions.

Conclusion: How Do We Navigate Uncertainty and Bring the Housing Finance System Safely to Shore?

Sarah Gerecke, Executive Director, Furman Center's Institute for Affordable Housing Policy

Conflicting Policy Goals Are Prevalent in Mortgage Lending

- The market is still assessing the tension between too much credit during the boom and too little credit available to meet demand today. Should policies today favor making credit more available at a time when households and the country still have enormous amounts of debt outstanding?
- How should we resolve the tension between assuring an adequate volume of lending to assist with rebuilding and recovery, versus ensuring the quality and sustainability of the loans that are made? How much risk do we want the government or our financial institutions to take on in order to promote recovery?
- What programs can minimize the risk of loss (especially if taxpayers bear the risk) and yet still provide access to credit for those who are underserved or disadvantaged?
- Is it possible to home in on local, granular borrower and property characteristics and still have the standardized, independent assessments necessary both to avoid fraud and to create the scale required for securitization and liquidity?

How Can We Resolve Conflicting Goals?

- An appreciation of the inherent policy tensions mentioned above should lead the various policymakers in mortgage finance to seek out and acknowledge widely different points of view. In order to develop successful policies, it can be very helpful to study past successes in addition to focusing on past failures.
- Stakeholders have more in common than one might think: multi-family and single-family systems can learn from each other, for example.
- A close look at underwriting presents an opportunity to balance these tensions. Measuring borrower creditworthiness and the value of collateral are examples of how the underwriting process can experiment with different models to balance competing interests and assess results.
- Debate over the government role in mortgage finance is healthy, and is another way to negotiate among these conflicting policy objectives.

Good policy is a collective challenge. Can we all pull together to steer the ship?

- Housing finance reforms of the past do have a history of incorrect predictions and unintended consequences: a shadow in the water ahead could be a gust of wind or an iceberg.
- Reducing the government's role in mortgage finance and increasing the role of the private sector will be a difficult transition, a challenge similar to changing positions on a canoe without tipping it over.
- Knowing where you are going is critical—ideally, policymakers will agree on clear objectives for housing policy first, and only then navigate the waters by designing a housing finance system to get there.
- Stakeholders in the mortgage finance system will have to work together to craft solutions in order to create sound mortgage policy and programs.
- Objective data analysis and thoughtful debate among experts can help policymakers address the challenges they face.

IVa: Additional Resources

The following list of publications provides additional background on the current state of residential mortgage lending and borrowing. This is not an exhaustive literature review, but rather a set of resources to inform further reading and understanding of lending patterns.

Avery, R. B., Bostic, R. W., Calem, P. S., & Canner, G. B. (1996). Credit risk, credit scoring, and the performance of home mortgages. [PDF]

This article examines the ways institutions involved in mortgage lending assess credit risk and how credit risk relates to loan performance. Although the market for home purchase loans is characterized by some pricing of credit risk (acceptance of borrowers with below-standard risk quality in exchange for a higher interest rate or higher fees), mortgage applicants in general are either accepted or rejected on the basis of whether they meet a lender's underwriting standards --the criteria against which lenders determine borrower creditworthiness. An increasingly prominent tool used to facilitate the assessment of credit risk in mortgage lending is credit scoring based on credit history and other pertinent data, and the article presents new information about the distribution of credit scores across population groups and the way credit scores relate to the performance of loans. In addition, the article takes a special look at the performance of loans that were made through nontraditional underwriting practices and through "affordable" home lending programs.

Avery, R. B., Brevoort, K. P., & Canner, G. B. (2010). Does credit scoring produce a disparate impact? Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington, D.C. [PDF]

The widespread use of credit scoring in determining whether and at what price borrowers should receive loans (i.e., the underwriting process) has raised concerns that the use of these scores may unfairly disadvantage minority populations. Previous research has not looked at the fairness of credit scores themselves. This study examines the extent to which credit history scores may have a disparate impact on minority groups (meaning that credit scores might not predict future performance but rather serve as a surrogate for group membership). The study yields no evidence of disparate impact by race (or ethnicity) or gender. However, the authors do find evidence of limited disparate impact by age, in which the use of variables related to an individual's credit history appear to lower the credit scores of older individuals and increase them for the young.

Ben-David, I. (2008, January). Manipulation of Collateral Values by Borrowers and Intermediaries [Job Market Paper]. [PDF]

The paper examines an agency problem in which borrowers and intermediaries in the housing market inflate appraisals and overstate transaction prices. The purpose of these manipulations is to mislead lenders about the value of the collateral and thus improve borrowers' financing terms. The first part of this paper examines whether appraisers distort property valuations in the interest of the financial firm that hires them. The second part explores whether home buyers collude with sellers to inflate sales prices. The foreclosure rate of properties with manipulated prices is higher, although lenders do not use this information for pricing. Evidence of manipulation is stronger for low-income borrowers, for a small set of real estate agents, when information about valuations is poor, and when monitoring by loan buyers is weak. Overall, the results are consistent with the hypothesis that manipulation of collateral values arises when its returns are highest and when it is difficult to detect.

Bostic, R. W., Calem, P. S., & Wachter, S. M. (2005). Hitting the Wall: Credit as an Impediment to Homeownership. *Building Assets, Building Credit: A Symposium on Improving Financial Services in Low-Income Communities*, 155–172. [PDF]

There is a broad consensus regarding the benefits of homeownership, which include wealth accumulation and improvements along social and personal dimensions. Given the important role that homeownership plays for households and communities, overcoming barriers to homeownership is an important social and public policy goal. This paper focuses on one such barrier—poor credit quality—and analyzes trends in credit quality for the overall population and demographic subgroups in the United States, focusing on estimated credit quality among renters in comparison to owners. The authors find that minority and lower-income populations have worse credit quality than other population subgroups and that their credit quality has deteriorated over time. Further, they find that such deterioration in credit quality has occurred almost exclusively among renters, a finding that has important implications for programs and policies aimed at increasing the national homeownership rate.

Brevoort, K. P., & Cooper, C. R. (2010). Foreclosure's wake: the credit experiences of individuals following foreclosure. Social Science Research Network. [PDF]

While a substantial literature has examined the causes of mortgage foreclosure, there has been relatively little work on the consequences of foreclosure for the borrowers themselves. Using a database of anonymous credit bureau records, observed quarterly from 1999 through 2010, the authors examine the credit experiences of almost 350,000 borrowers before and after their mortgage foreclosure. Their analysis documents the substantial declines in credit scores that accompany foreclosure and examines the length of time it takes individuals to return their credit scores to pre-delinquency levels. The results suggest that, particularly for prime borrowers, credit score recovery comes slowly, if at all. This appears to be driven by persistently higher levels of delinquency on consumer credit (such as auto and credit card loans) in the years that follow foreclosure. Our results also indicate that the experiences of individuals whose mortgages entered foreclosure from 2007 to 2009 have followed a similar path to borrowers foreclosed earlier in the decade, though post-foreclosure delinquency rates for the recently foreclosed have been higher and, consequently, credit score recovery appears to be taking longer.

Chan, S., Gedal, M., Been, V., & Haughwout, A. (2010, June). The Role of Neighborhood Characteristics in Mortgage Default Risk: Evidence from New York City. Social Science Research Network. [PDF]

In this paper, the authors use a newly assembled dataset from New York City to examine the role of borrower, loan and neighborhood characteristics on default rates of non-prime mortgages. In particular they examine the effects of census tract level neighborhood characteristics while controlling for detailed individual borrower and loan characteristics. Their analysis of neighborhood effects casts light on whether public policies to address the foreclosure crisis and to regulate lending practices should be tailored for different types of neighborhoods. They find that these neighborhood characteristics are important for default behavior, even after an extensive set of controls. First, default rates increase with the rate of foreclosure notices and the number of lender-owned properties (REOs) in the tract. Second, default rates for home purchase mortgages are higher in predominantly black tracts, regardless of the borrower's own race.

Cordell, L. R., Dynan, K., Lehnert, A., Liang, N., & Mauskopf, E. (2008). *The incentives of mortgage servicers: Myths and realities* (No. 2008-46). Finance and Economics Discussion Series. Washington D.C.: Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board. [PDF]

This paper explores factors that appear to be dampening workouts of nonprime loans, the group that has seen the largest increase in delinquencies over the past couple of years. As foreclosure initiations have soared, many have questioned whether mortgage servicers have the right incentives to work out troubled subprime mortgages so that borrowers can avoid foreclosure and remain in their homes. The analysis in this paper suggests that although servicers have substantially improved their efforts, loss mitigation is costly; this is in large part because servicers currently lack adequate staff and technology. Unfortunately, servicers have few financial incentives to expand capacity.

Two additional factors appear to be involved with the slow working out of nonprime loans. First, affordable solutions are more difficult to achieve for borrowers with these loans than for those with prime mortgages. Second, these loans are generally funded by private-label mortgage backed securities, for which investors provide little or no guidance to servicers about what modifications are appropriate. The authors discuss supporting further industry efforts to expand borrower outreach and establish servicing guidelines, educating investors, paying fees to servicers for appropriate loan workouts, and improving measures of servicer performance.

Demyanyk, Y. S. (2009). Quick exits of subprime mortgages. *Federal Reserve Bank of St. Louis Review*, 2, 79–93. [PDF]

The negative consequences of the subprime market's collapse are well-documented and publicized. But did subprime lending have any benefits, even if they were much less obvious than the problems? Anecdotal evidence suggests that the subprime market, with its easier mortgage financing, may have promoted U.S. homeownership. This paper attempts to analyze whether borrowers intended to keep their subprime mortgages long enough to substantiate an increase in homeownership or planned a quick exit strategy at origination, using subprime loans as "bridge" financing to speculate on house prices (i.e., quickly sell the house for a profit after its value increases). The author analyzes termination rates of subprime mortgages that originated each year from 2001 through 2006. The similarity of the loan termination rates for all vintages in the sample suggests that subprime mortgage loans were intended to be "bridge" (temporary) loans, and thus the effect of the subprime lending on the increase of homeownership in the United States most likely has been overstated.

Ellen, I. G., Tye, J. N., & Willis, M. A. (2010). *Improving U.S. Housing Finance through Reform of Fannie Mae and Freddie Mac: Assessing the Options*. New York, NY: Furman Center for Real Estate and Urban Policy. [PDF]

For several decades, the government-sponsored enterprises, Fannie Mae and Freddie Mac, were the largest players in a housing finance system that provided effective mortgage financing for many millions of Americans. Since early 2008, the firms' near-insolvency has called their future into question. This paper lays out criteria for evaluating proposals for reform of the two firms. The authors make no recommendations among the proposals, but they do attempt to assess the major advantages and disadvantages of their respective approaches.

In Part I, they provide an overview of the U.S. housing finance system, review the basic operations of Fannie Mae and Freddie Mac before conservatorship, and summarize the key arguments made about the strengths and weaknesses of their structures. In Part II, they introduce the basic goals of a healthy secondary market for both the single- and multi-family market, and they offer a framework to describe and understand the different proposals for reform and how variants of Fannie and Freddie might fit into that picture. In Part III, they look in detail at some of the specific proposals now emerging for reform of the housing finance system.

Green, R., & Schnare, A. B. (2009). *The Rise and Fall of Fannie Mae and Freddie Mac: Lessons Learned and Options for Reform*. Empiris LLC. [PDF]

Not so long ago, the U.S. housing finance system was arguably the best in the world. Consumers had access to products that were not available elsewhere, and the market was able to sustain major economic disruptions with relatively little impact on either the cost or availability of mortgage credit. Fannie Mae and Freddie Mac, the government sponsored enterprises (GSEs), provided the cornerstone of that system and deserve much of the credit for its success. But despite their many accomplishments, Fannie Mae and Freddie Mac are now essentially wards of the state and most policymakers have concluded that the GSE model is effectively dead. This paper attempts to establish a case for GSE reform that retains a market-driven approach but addresses acknowledged problems through charter revisions and better regulation.

Haurin, D. R., Herbert, C. E., & Rosenthal, S. S. (2007). Homeownership Gaps Among Low-Income and Minority Households. *Cityscape, 9*(2). [PDF]

Although homeownership rates currently stand at historically high levels for all segments of the U.S. population, large gaps in homeownership rates remain when comparing various groups of the popula-

tion. The primary goal of this study is to synthesize what is known about the determinants of gaps in homeownership rates by income status and racial and ethnic status. The authors first present a conceptual framework for analyzing the determinants of homeownership. They then review the literature on factors contributing to homeownership gaps, separating the factors into those that are observed and those that are unmeasured, such as discrimination, lack of information about the homebuying and mortgage financing processes, and omitted socioeconomic variables.

Kelly, A. (2006). Appraisals, Automated Valuation Models, and Mortgage Default. [PDF]

Previous research has suggested the possibility that professional appraisals or econometric estimates of collateral value may be indicative of credit risk. This paper examines the issue by estimating the probability of a mortgage default based on the discrepancy between a home's appraised value and its sale price. The difference between the sale price and the appraisal is found to significantly increase the probability of delinquency, and increase the probability of foreclosure. Also, transactions that are valued with higher precision have lower propensities for default.

Kumhof, M., & Rancière, R. (2010). Leveraging Inequality. *Finance & Development*, 47(4), 28-31. [PDF]

The authors examine the roles of income inequality and the ratio of household debt to income in the period leading up to the Great Recession of 2007. Similar to the run-up to the Great Depression of the 1929, income inequality and debt-to-income ratios in the U.S. were very high before the recent crisis hit. The authors find that poor and middle-class households were borrowing heavily to sustain high levels of consumption, gaining debt while the rich accumulated wealth.

LaCour-Little, M., & Green, R. K. (1998). Are Minorities or Minority Neighborhoods More Likely to Get Low Appraisals? *The Journal of Real Estate Finance and Economics*, 16(3), 301–315. [PDF]

This paper empirically examines the role of appraisals in the residential mortgage lending process; in particular the incidence, consequences, and determinants of appraisal below contract purchase price. Using the Boston Federal Reserve Study data set, the authors find that, as expected, low appraised value significantly increases the probability of mortgage loan application rejection. They find no evidence that low appraised value is related to census tract racial composition, an important finding given the history of the appraisal industry; however, low appraised value is related to proxies for neighborhood quality. Moreover, properties securing adjustable rate mortgages, condominiums, and properties purchased by African American buyers show an increased probability of low appraisal, though the race effect result is highly sensitive to model specification.

LaCour-Little, M., & Malpezzi, S. (2003). Appraisal quality and residential mortgage default: Evidence from Alaska. *The Journal of Real Estate Finance and Economics*, 27(2), 211–233. [PDF]

The authors empirically examine the effect of appraisal quality on subsequent mortgage loan performance using data from the highly volatile housing market of Alaska in the 1980s. They develop measures of appraisal quality by computing the residual between a hedonic estimate of house value using available information from other appraisals compared to actual ex ante appraised value. They then estimate proportional hazard models of mortgage default and find that several measures of appraisal quality, particularly appraised value in excess of hedonic estimates, are significantly related to default risk. Using valuations subsequent to loan default, the authors are also able to evaluate how well house price indices perform in terms of estimating current loan-to-value and offer some additional evidence on the controversy over the role of net equity versus trigger events as determinants of mortgage default. This paper also shows that defaults are related to ex ante measures of housing market conditions, with additional implications for underwriting policies and the current industry trend away from traditional appraisal and toward automated valuation.

Levitin, Adam J. and Wachter, Susan M., Explaining the Housing Bubble (August 31, 2010). University of Pennsylvania Institute for Law & Economics Research Paper No. 10-15; Georgetown Public Law Research Paper No. 10-60; Georgetown Law and Economics Research Paper No. 10-16. [PDF]

The Federal Housing Administration's (FHA's) authorizing statute for insurance authorities, the National Housing Act, clearly states that the U.S. Department of Housing and Urban Development (HUD) will

adjust program standards and practices to operate the Mutual Mortgage Insurance Fund (MMIF) on a self-sustaining basis. In the Notice "Federal Housing Administration Risk Management Initiatives: Reduction of Seller Concessions and New Loan-to-Value and Credit Score Requirements," FHA proposes to tighten portions of its underwriting guidelines that present an excessive level of risk to both homeowners and FHA. The benefit of the set of actions outlined in the Notice will reduce the net losses resulting from high rates of insurance claims on affected loans, and the cost of the action will be the value of the loan opportunity denied to the exclude borrowers. The total transfer to FHA would be $96 million, and the net cost of excluding borrowers could be as high as $85 million.

Nakamura, L. (2010). How much is that home really worth? Appraisal Bias and House-Price Uncertainty. *Business Review, Philadelphia Fed,* 2010(Q1), 11-22. [PDF]
With house prices often below the face value of mortgages these days, the expected return on many mortgages has tumbled, since one of the major forces supporting mortgages, the collateral, has weakened. One source of these mortgage problems has been the validity of the home appraisal, which is supposed to be an objective and expert dollar valuation of the house that should help make a mortgage less risky. Unfortunately, the appraisal process can go awry and often has. As Leonard Nakamura shows in this article, appraisals have been biased upward, making mortgages riskier. Now a reverse risk is at work: The bias is going the other way, causing home valuations to be underestimated, possibly making new mortgages harder to obtain. In addition to problems of bias, Nakamura discusses the appraisal process, how it is supposed to work, and how it can go awry.

National Community Reinvestment Coalition. (2010). *Working-Class Families Arbitrarily Blocked from Accessing Credit.* [PDF]
For this investigation, NCRC sought to determine if the nation's largest FHA lenders have instituted arbitrary and restrictive policies and practices, and whether these policies have an adverse and disparate impact on African-American and Latino consumers. Lenders were chosen according to their market share and volume of FHA loans, as well as through discussions with community leaders. NCRC utilized the technique of fair lending "testing," or "mystery shopping," to investigate the mortgage lenders practices. Of all the lenders tested, 44 did not lend at a 580 credit score. Thirty-two lenders, or 65 percent, refused to lend to consumers with credit scores below 620. An additional 11 lenders, or 22 percent, refused to extend credit to consumers with credit scores below 640.

Pennington-Cross, A., & Nichols, J. (2000). Credit History and the FHA. *Real Estate Economics*, 28(2), 307-336. [PDF]
Models explaining whether households choose conventional or FHA mortgage financing typically use differential insurance premiums, loan-to-value (LTV) and payment-to-income underwriting standards, and local economic conditions to explain household behavior. Using a large and geographically diverse sample, we expand the standard choice model by including measures of borrower credit history. We find that the ability of a homebuyer to avoid credit problems is an important part of the FHA–conventional choice. In addition, credit scores of FHA borrowers are worse on average than those of conventional borrowers, but as LTV increases credit scores of conventional borrowers deteriorate.

Pennington-Cross, A., & Yezer, A. (2000). The Federal Housing Administration in the New Millennium. *Journal of Housing Research*, 11(2), 357-372. [PDF]
Choosing a mortgage is one of the biggest financial decisions an American consumer will make. Yet it can be a complicated one, especially in today's environment where mortgages vary in dimensions and unique features. This complexity has raised regulatory issues. Should some features be regulated? Should product disclosure be regulated? And most basic of all, is there a rationale for regulation or will the market solve the problem? Current regulation of home mortgages is largely stuck in two competing models of regulation—disclosure and usury or product restrictions. This paper seeks to use insights from both psychology and economics to provide a framework for understanding both models as well as to suggest fundamentally new models.

Seidman, E., & Jakabovics, A. (2009). Learning from the Past. *Community Development Investment Review*, 43-52. [PDF]

While there is little to celebrate in the current foreclosure disaster, one potential silver lining in the large number of bank-owned properties is the opportunity to turn those properties into community assets. A May 2008 conference hosted by the Furman Center for Real Estate and Urban Policy at New York University and sponsored by the Ford Foundation brought together policy experts and practitioners to share best practices for "Transforming Foreclosed Properties into Community Assets." Most of the discussion focused on what can be done by partners working together at the local level. The current situation is not, however, the first time that the federal government has faced the challenge of turning foreclosed residential property into affordable housing. In this essay, prepared for the NYU conference, the authors consider three earlier experiences with asset disposition by the federal government—the New Deal–era Home Owners' Loan Corporation (HOLC), the Resolution Trust Corporation (RTC), and HUD's Asset Control Area (ACA) program. In each case, the federal government was forced to deal with large-scale disposition of private-sector assets that passed into public hands as a function of federal funds put into an earlier, related transaction.

In the case of the HOLC and ACA, default on federally guaranteed home loans triggered foreclosure and transfer of the property to the respective entities. Both programs were entirely focused on residential properties. In the case of the RTC, the properties in question were already owned by failed banks insured by the FSLIC or the FDIC or were collateral on RTC-owned loans that proceeded to foreclosure. The vast bulk of the RTC's loans and properties were commercial, although there was enough residential property to make the case worth studying. All three programs were challenged to maximize revenues from the disposition of the assets acquired while also not overburdening local markets already in a weakened state. In the case of the RTC and ACA, the mandate included a third element: preservation and expansion of affordable housing. The authors provide an overview of the three programs with a focus on their residential property disposition experiences.

Wallison, P., Pollock, A., & Pinto, E. J. (2011). Taking the Government Out of Housing Finance: Principles for Reforming the Housing Finance Market (White Paper Preliminary Draft). *American Enterprise Institute for Public Policy Research*. [PDF]

Implicit in most of the proposals for reforming the housing finance system is the idea that institutional investors will not buy U.S. mortgage-backed securities (MBS) unless they are issued by a government sponsored enterprise (GSE), a U.S. government agency, or are otherwise guaranteed by the U.S. government. The authors posit a robust alternative to government support of the housing finance system—a system which in the past has led to large scale taxpayer bailouts and losses. Their alternative approach is to ensure that only prime quality mortgages, which comprise the vast majority of U.S. mortgages, are allowed into the securitization system. The very low delinquency and default rates on prime mortgages will be attractive investments for institutional investors and will enable the housing finance system to function effectively without government support. This will eliminate the potential for additional taxpayer losses in the future, and allow the eventual elimination of Fannie Mae and Freddie Mac.

Wegman, J.Regulatory Reform of the Credit Market: A Sarbanes-Oxley Approach. *Journal of Legal, Ethical, and Regulatory Issues*. [PDF]

The United States is in the midst of the worst credit crisis in the last 25 years. On July 31, 2008, President Bush signed into law the Housing and Economic Recovery Act (HERA), a new law aimed at dealing with this crisis. The Act created a new regulatory agency, the Federal Housing Finance Agency (FHFA), and it authorized spending billions of dollars to back up our credit market.

Business students and managers need to understand the legal environment of credit regulation. The purpose of this paper is first, to describe the current state of credit regulation and to explain how we arrived at the current crisis; and second, to propose regulatory solutions patterned after the Sarbanes-Oxley Act (SOX), which dealt with similar problems. The paper begins by reviewing the history of mortgage lending in the United States. It then examines predatory lending practices that have contributed to the crisis. Next, it reviews the current state of federal regulation, including the new FHFA. Finally the paper shows how the regulatory approach taken by the Sarbanes-Oxley Act can be used as a pattern to ease the current credit crisis and to improve mortgage lending practices.

Wheelock, D. C. (2008). The Federal response to home mortgage distress: Lessons from the Great Depression. *Federal Reserve Bank of St. Louis Review*, 90(3), 133–48. [PDF]

This article examines the federal response to mortgage distress during the Great Depression: It documents features of the housing cycle of the 1920s and early 1930s, focusing on the growth of mortgage debt and the subsequent sharp increase in mortgage defaults and foreclosures during the Depression. It summarizes the major federal initiatives to reduce foreclosures and reform mortgage market practices, focusing especially on the activities of the Home Owners' Loan Corporation (HOLC), which acquired and refinanced one million delinquent mortgages between 1933 and 1936. Because the conditions under which the HOLC operated were unusual, the author cautions against drawing strong policy lessons from the HOLC's activities. Nonetheless, similarities between the Great Depression and the recent episode suggest that a review of the historical experience can provide insights about alternative policies to relieve mortgage distress.

Wray, L. R. (2008). Lessons from the subprime meltdown. *Challenge*, 51(2), 40–68. [PDF]

A student of Hyman Minsky uses the late economist's analysis to document the history of the current credit crisis. He offers an explanation of how certain financial instruments caused instability in the securities markets, and of the complicity of various stakeholders in the financial industry in creating the crisis. The paper also presents policy recommendations based on Minsky's writings.

Vb: Guide to Abbreviations and Acronyms

ABS	Asset-Backed Securities
ACA	Asset Control Area
AIREA	American Institute of Real Estate Appraisers
AMC	Appraisal Management Company
AMDC	Average Market Delivery Charge
APR	Annual Percentage Rate
ARM	Adjustable Rate Mortgage
AVM	Automated Valuation Model
BPO	Broker's Price Opinion
CAP	Center for American Progress
CDFI	Community Development Financial Institution
CFPB	Consumer Financial Protection Bureau
CLTV	Combined Loan-to-Value
CMBS	Commercial Mortgage-Backed Securities
CMI	Charter Mortgage Institution/Issuer
CRA	Community Reinvestment Act
DSR	Debt Service Ratios
DTI	Debt-to-Income
DU	Desktop Underwriter (Fannie Mae system)
ECOA	Equal Credit Opportunity Act
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration
FHFA	Federal Housing Finance Agency
FHLB	Federal Home Loan Bank
FHLMC	Federal Home Loan Mortgage Corporation (Freddie Mac)
FICO	Fair Isaac Corporation
FIRREA	Financial Institutions Reform, Recovery, and Enforcement Act
FNMA	Federal National Mortgage Association (Fannie Mae)
FRB	U.S. Federal Reserve Board
FRBSF	Federal Reserve Board of San Francisco
FSLIC	Federal Savings and Loan Insurance Corporation
GAO	Government Accountability Office
GNMA	Government National Mortgage Association (Ginnie Mae)
GSE	Government-Sponsored Enterprise (Fannie Mae or Freddie Mac, for example)
HAMP	Home Affordable Modification Program
HARP	Home Affordable Refinance Program
HERA	Housing and Economic Recovery Act
HFA	Housing Finance Agency (state-level)
HMDA	Home Mortgage Disclosure Act
HOEPA	Home Ownership and Equity Protection Act
HOLC	Home Owners' Loan Corporation
HUD	U.S. Department of Housing and Urban Development
HVCC	Home Valuation Code of Conduct
IR	Interest Rate
LIHTC	Low-Income Housing Tax Credit
LLP	Limited Liability Partnership
LLPA	Loan-Level Price Adjustment

LMI	Low- and Moderate-Income
LTI	Loan-to-Income Ratio
LTV	Loan-to-Value Ratio
MBA	Mortgage Bankers Association
MBS	Mortgage-Backed Security
MCGE	Mortgage Credit-Guarantor Entity
MCM	MyCommunityMortgage® (FannieMae product)
MF	Multi-family
MI	Mortgage Insurance
MIP	Mortgage Insurance Premium
ML	Merrill Lynch (now Bank of America Merrill Lynch)
MMIF	Mutual Mortgage Insurance Fund
MSA	Metropolitan Statistical Area
MSIC	Mortgage-Backed Security Insurance Company
NAR	National Association of Realtors
NCRC	National Community Reinvestment Coalition
NCUA	National Credit Union Administration
NFHA	National Fair Housing Alliance
NIBP	New Issue Bond Program
NSP	Neighborhood Stabilization Program
OCC	Office of the Comptroller of the Currency
OFHEO	Office of Federal Housing Enterprise Oversight (now FHFA)
PITI	Principle Interest Taxes Insurance
PLS	Private-Label Securities
PMI	Private Mortgage Insurance
PTF	Private Transfer Fee
PSPA	Preferred Stock Purchase Agreements
QC	Quality Control
QM	Qualified Mortgage
QRM	Qualifying Residential Mortgage
REO	Real Estate Owned
RESPA	Real Estate Settle Procedures Act
RHS	Rural Housing Service
RTC	Resolution Trust Corporation
SEC	Securities and Exchange Commission
SF	Single-family
SONYMA	State of New York Mortgage Agency
TBA	"To Be Announced" Market
TILA	Truth in Lending Act
UMDP	Uniform Mortgage Data Program
USDA	U.S. Department of Agriculture
VA	Veterans Administration

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