INTRODUCTION

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The central role of housing in the "Great Recession" of 2007 raises a series of questions that need to be addressed in historical perspective. Were the underlying causes of housing crises similar in earlier episodes? Has the propagation and transmission of housing and mortgage crises changed over time? Have previous policy interventions mitigated or increased the damage from crises? Have earlier regulatory responses to crises improved the long-run performance and stability of housing and mortgage markets? This volume begins to offer answers to these questions by treating past housing and mortgage crises as multifaceted, complex episodes that represented watersheds in the long-run development of these markets, their institutional structure and the broader economy.

Economic historians are not alone in taking broad views of the origins and impacts of severe disruptions in housing and mortgage markets. Early in the onset of the recent crisis, for example, Martin Feldstein (2007) laid out a concise, but prescient, description of three forces that by then were buffeting the economy: a sharp decline in housing prices and home production, disruptions in the arrangements used to finance mortgage credit, and spillovers from both to consumer spending. Feldstein pointed out at that time that each development taken alone was substantial enough to trigger an economic downturn, and that the confluence of the three was likely to cause a particularly serious recession. His framework has continued to be useful for understanding the course of the crisis since 2007 and the policy choices and tradeoffs that we have faced during that time. In this volume Alexander Field (2013), Steven Gjerstad and Vernon Smith (2013) and Eugene White (2013) employ similar broad frameworks to examine the

interactions between the interwar business cycle and the housing and mortgage crisis of the1930s. Like Feldstein, these chapters integrate into their analyses decreases in housing prices, disruptions in credit markets, household consumption behavior and monetary policy before and during the crisis. The goal of all three papers is to identify common and dissimilar elements through which housing markets influenced the economy during the Great Depression and our own Great Recession.

John Campbell (2012) provided additional insights into the recent crisis, drawing on the scholarship that has boomed since 2007. This new research indicates that the U.S. mortgage system generated significant inefficiencies during the crisis, resulting from the negative externalities associated with foreclosures, the instability of the financial system, and the high mortgage lending costs that were borne by unsophisticated borrowers. Against this backdrop, Campbell promotes the Danish system as a promising model of reform because its structural elements mitigate weaknesses within the U.S. system that he argues are responsible for the inefficiencies.¹

The historical analysis in this volume offers additional insights from the U.S. and other counties for a deeper understanding of the weaknesses in the current U.S. mortgage system. Michael Brocker and Christopher Hanes (2013) and Price Fishback and Trevor Kollman (2013), for example, provide the first detailed and systematic examinations of the decreases in housing prices and home construction that occurred during the early 1930s. Their work represents an important first step in determining whether the housing market was as fragile eight decades ago, and susceptible to spillovers from foreclosures, as the current system. Campbell cites recent

¹ The Danish system relies heavily on fixed-rate, long-term mortgages but, unlike the U.S., imposes restrictions on prepayment and recourse on borrowers. Mortgages are funded, in addition, with callable covered mortgage bonds.

research that identifies the risk-sharing incentives, which are built into mortgage contracts and are designed to encourage homeownership, as an important source of fragility in the current U.S. market. The papers here by Daniel Fetter (2013) and Mathew Chambers, Carlos Garriga, and Don Schlagenhauf (2013) provide measures of how the introduction of federally-insured and guaranteed mortgages contributed to the rapid rise in homeownership in the U.S. between 1940 and 1960.

In his overview, Campbell also discusses how our understanding of the sources of instability in the mortgage and financial markets influenced the course of events beginning in 2007. Jonathan Rose (2013) offers a similar but very detailed exercise for the 1930s focusing on the severe disruption arising from the collapse of the New Jersey Building & Loan industry. His analysis is important because at that time B&Ls were the most important source of institutional residential mortgage credit in New Jersey and the U.S. as a whole. The weaknesses Campbell points to as specific to the pre-2007 American system lead him to view the Danish covered bond system as more stable and less prone to disruption. Yet, securitization has a long history of failure and success in Europe. Rik Frehen, K. Geert Rouwenhorst, and William Goetzmann (2013) and Kirsten Wandschneider's (2013) studies of eighteenth and nineteenth century Dutch and German markets provide important historical background for evaluating these claims, by examining the structure, performance and failure of earlier innovations in securitization.

The historical analysis in this volume, therefore, speaks to a broad range of issues that are central to our understanding of the current U.S. mortgage system's problems and many of the proposed reforms. However, the current explosion of research is actually a second wave of work on housing markets and institutions. A large amount of research on housing was begun in the wake of the 1930s and provided the statistics and stylized facts that helped to shape both the post-

depression institutions and markets and the views of economists and policy makers. To set the stage for this volume, Kenneth Snowden (2013) gives a brief account of the development of the housing and mortgage markets in the U.S. during the first half of the twentieth century and a historiography of the extraordinary burst of scholarship that was conducted under the auspices of the NBER between 1935 and 1960. It is particularly important that we acknowledge this body of NBER scholarship early in the volume because it provides the foundation for most historical research.

The rest of this volume is divided into four sections of related essays. In the first section, "Housing and the Interwar Business Cycle," three essays examine the sources, magnitude and impact of the real estate boom and bust of the 1920s and 1930s with an eye towards comparing that experience to events in 2001-2011. In the section offering A Closer Look at the Interwar Housing Crisis, the second group of papers refine our understanding of the boom and bust in housing production, the changes in home prices, and the failures of the Building & Loan Associations during the 1930s. The focus shifts away from the interwar period in the final two sections of the book. Part of the European experience is examined in the section, "Securitization in Earlier Times" where two essays provide perspective for the ongoing debate concerning alternative systems of funding mortgage credit, while the essays in the section "Postwar Housing Policies" address the role that public policy played in promoting homeownership between 1940 and 1960.

Housing and the Interwar Business Cycle

Alexander Field examines how the housing crisis of the interwar period compares to events in the 2000s. He shows that the decrease in residential building that began in 1926 was more severe and protracted than the one that began in 2007. On the basis of this observation, he argues that the collapse in home construction, once transmitted to consumption spending through the multiplier, was likely contributed more to the decrease in aggregate output in the early 1930s than the existing scholarship recognizes. Field notes that this impact was reinforced by the unplanned character of residential construction during the 1920s building boom that left significant legal and financial barriers to recovery in the 1930s.

Although the decline in housing production was greater during the 1930s crisis, Field argues that the financial shocks associated with it had smaller impacts than those felt between 2007 and 2011. Home price movements are central to his analysis. Nominal home prices fell modestly between the 1926 peak and 1929, and more rapidly over the next four years. These decreases were much smaller in magnitude than those that occurred during and after 2007. In addition, the relatively sharper decline in nominal prices between 1929 and 1933 was accompanied by similar decreases in the general price level so that real home prices fell only modestly between 1926 and 1929 and then actually increased slightly over the next four years. Field also observes that the stability in real housing prices during the interwar crisis was connected to relatively low leverage among homeowners—fewer households owned homes in 1930 than 2007, fewer financed their homes with mortgages, and those that did were subject to more conservative underwriting requirements.

Field acknowledges that the fall in housing prices had negative impacts on the balance sheets of households and lenders in the early 1930s, but concludes that their influence on output and employment was not as strong as after 2007. According to Field, this explains why New Deal regulation focused heavily on reforming the securities markets and the commercial banking system—these, and not residential mortgages, were considered to be the important source of financial distress that helped to start and prolong the Depression.

Steven Gjerstad and Vernon Smith see things differently. They argue that the role of housing was "remarkably similar" during the financial crises of the interwar period and 1997-2011, although the parallels in the origins and transmission of the two crises have been largely neglected in the literature. One reason for the neglect is that Friedman and Schwartz's authoritative emphasis on monetary collapse as the source of the Great Depression leaves little room for the possibility that expansionary monetary policy by itself could not have eliminated or reversed the impacts of a "debt-fueled real estate bubble." To make the case that such a bubble occurred during the interwar period, Gjerstad and Smith assemble a broad range of evidence for the 1920s and 1930s that includes housing production, household spending, total output, mortgage indebtedness, housing prices, housing sales, rents, unemployment and foreclosures. Using this information, they argue that the interwar crisis was transmitted to the broader economy through five channels that were also at work between 2000 and 2011.

The first is the direct impact of reduced residential construction. Gjerstad and Smith, like Field, find that the decrease in homebuilding was relatively larger in the late 1920s and early 1930s than after 2007. They also point out that the share of construction spending in aggregate output was higher in the earlier period which made its impact on total output even larger. A second channel that Field also mentions was the deterioration in the balance sheet of households as

home values fell in the face of fixed nominal debt burdens. Gjerstad and Smith argue that this influence was more powerful and important and show evidence that the fall in nominal house prices was substantial in several markets relative to fixed mortgage debt burdens. Moreover, the deterioration in household balance sheets was closely connected to three other channels of influence. Deteriorating balance sheets led households to cut back spending, especially on durables, leading businesses to reduce production and their demand for inventories and fixed investments. In turn, this created a feedback effect on households' employment and incomes that created further uncertainty and distress. As distress turned into mortgage delinquency and foreclosure, the balance sheet of banks and mortgage lending specialists also deteriorated and the supply of credit to housing and other forms of investment was curtailed. According to Gjerstad and Smith, this fifth and last channel completed the powerful transmission mechanism that operated after the real estate booms of both the 1920s and the 2000s.

Eugene White also sees similar forces at work during the "Great Real Estate Boom and Bust of the 1920s" and the events leading up to the crisis of 2007. He argues that bubble-like behavior was evident during both episodes and supports that characterization for the earlier period by examining patterns in homebuilding, home prices and foreclosure rates. His primary objective, however, is to better understand why the banking system was not threatened by the real estate bust in the late 1920s, in contrast to the 2000s. To this end, White enumerates twelve factors that have frequently been identified as important forces behind the recent real estate bubble. His project is then to assess which of these were also operating in the 1920s.

Not surprisingly given the role of banks in the recent crisis, six of White's factors relate to monetary policy and bank regulation. To assess the potential role of easy money during the 1920s White uses interwar data to examine how a Taylor Rule would have influenced the

economy and finds that the short-term time rate fell below its predicted Taylor rule level for two years in the mid-1920s when the building boom was at its height. He identifies and estimates the impact of the 1920s version of the "Greenspan put" which he argues was driven by the Fed's commitment to reduce the uncertainty associated with seasonality in interest rates. White finds that these two forces combined contributed to the production of about 200,000 additional housing units. This increase represented a large share of the starts that he classifies as having been overproduced relative to the number of units needed to catch-up for low wartime production. However, he notes that catch-up production in the 1920s to offset the general absence of housing construction during World War I was so great (in excess of 1 million units) that there would have been a large boom in construction during the 1920s even had monetary policy been more restrictive. White's analysis of bank regulation focuses on elements that influenced the willingness and ability to engage in risky real estate lending. He argues that the double liability rule faced by bank shareholders and the restrictions on mortgage lending meant that both national and state-chartered banks were well-capitalized relative to the modest risks that they carried on real estate loans.

White argues that although there were some common factors that affected the banks during the building booms of the 1920s and the 2000s—including easy money, a "Greenspan put," and the development of new securitization products —the banking system was not undermined by the real estate boom of the mid-1920s. The important difference between the two episodes is that banks were induced in the modern period to participate in risky real estate finance by a set of policies that were missing in the 1920s—deposit insurance, the "Too Big to Fail" doctrine, and federal subsidization of risky mortgage lending and securitization.

A Closer Look at the Interwar Housing Crisis

Michael Brocker and Christopher Hanes begin their examination of the 1920s real estate boom by noting that it was national in scope even though some popular accounts give the misleading impression that it was confined to Florida. To investigate the broad geographic character of the episode in their paper, they examine differences in the timing and volume of home building activity across many of the nation's largest cities during the 1920s. Their analysis is designed to assess whether high levels of construction during the boom were associated with higher rates of foreclosure, larger declines in home values, and greater reductions in homeownership after 1930. Brocker and Hanes argue that finding a pattern like this provides evidence that the 1920s boom actually contributed to the depth and severity of the Depression and was not, primarily, simply one more consequence of it. They employ an empirical cross-city approach that has been exploited in examinations of postwar building booms and real estate bubbles.

To conduct the historical analysis, Brocker and Hanes use city-level data drawn from the annual BLS surveys of building permits that lie beneath its annual housing start series; home ownership and housing values from the 1920, 1930 and 1940 Censuses; and foreclosure data from Federal Home Loan Bank Board and the *Financial Survey of Urban Housing* (1937). In combining these, the authors touch many of the primary sources that lie behind earlier NBER work, but use them in a new way and for a different purpose. In their analysis, contemporaneous and future home values, homeownership rates, and the numbers of households and foreclosures are regressed on the number of new units that were permitted to be built for residential use. Brocker and Hanes measure the number of permitted units within multi-year windows in order to capture cross-city variation in building activity for the early, middle and end of the 1920s. They also use separate measures for single- and multi-family housing permits to investigate the impact of variations in the composition, as well as the timing, of residential building activity.

Brocker and Hanes argue that their results are consistent with a "bubbles" interpretation of the 1920s building boom. More specifically, they conclude that the Depression of 1929 hit just after many local urban real estate markets had seen increases in the number of housing units, in home values, in homeownership and in mortgage indebtedness that had been driven by bubble-like expectations. As a result, housing markets were already in disequilibrium in the late 1920s, and were fragile in ways that made the subsequent depression even worse.

Price Fishback and Trevor Kollman provide new measures of the changes in home values over the course of the interwar boom and bust. We have seen above that changes in home values, home prices and housing wealth represent important evidence regarding the fragility of the interwar housing markets and its role in transmitting or amplifying macroeconomic shocks. Fishback and Kollman make clear that there are important flaws in all of the available evidence for the period on home prices and values, and that care must be taken when using and interpreting these series. They focus most attention on a price series reported in the 1956 NBER monograph by Grebler, Blank and Winnick (GBW) that Robert Shiller (2006) used to extend the widely-cited Case-Shiller/S&P repeat sales home price index back to 1890.² The original GBW series was constructed from data reported in the Financial Survey of Urban Housing for 22 cities. During the mid-1930s homeowners in each of these cities were asked to retrospectively report the value of their home in 1934, 1933, 1930 and in the year they had acquired the home. From these data GBW constructed a housing price index for the period 1890 to 1934, which Shiller linked to a five-city index of advertised housing prices for the period 1934 to 1953 in order to derive a continuous annual series extending from 1890 to the present.

² The potential problems in linking these two different series are discussed in White essay in this volume.

Fishback and Kollman provide an alternative to the GBW-Shiller index by combining additional data drawn from the *Financial Survey of Housing* with information on housing values and rents drawn from the 1920, 1930 and 1940 Censuses and information on the value of building permits reported annually for the period by the BLS. The authors construct a variety of multi-city indexes of home values from these sources for the years 1920, 1930, 1933, 1934 and 1940. The exercise reveals that all nominal measures of home values, including GBW-Shiller, show declines in home values of between 20 and 30 percent between the late 1920s and 1934. Outside this interval, however, the indexes tell different stories. Only the GBW-Shiller index, for example, shows a mild decrease in home values during the 1920s—all the other indexes show a stronger upward trend in values for the same period. The GBW-Shiller index is also unique in showing that housing prices had almost recovered to 1930 levels by 1940. All of Fishback and Kollman's alternatives show housing values remaining well below 1930 levels a decade later. Fishback and Kollman conclude that GBW-Shiller understates the increase in housing prices during the 1920s.

To compare changes in housing prices during the 2000s and the 1920s and 1930s, Fishback and Kollman construct comparable modern housing value indices using reports on home values in the 2000 and 2010 Census and the American Community Surveys. The housing value indexes rose more rapidly between 2000 and 2006/2007 than in the 1920s boom, while nominal housing prices fell rapidly during both the post 2006 bust and the bust from 1930-1933. However, the rapid deflation from 1929-1933 meant that inflation-adjusted housing prices rose to a new peak in 1933, in contrast to the sharp drop in inflation-adjusted housing prices between 2007 and 2010. After 1933, the Fishback and Kollmann estimates adjusted for inflation fall sharply.

Drawing on a new and highly detailed data set, Jonathan Rose ends the discussion of the interwar housing crisis with an analysis of the resolution of the severe problems faced by Building & Loan Associations in Newark, New Jersey during the 1930s. Rose is one of the first to illuminate the specific institutional channels through which financial shocks associated with the housing crisis were transmitted to the larger economy. He provides a detailed analysis of the lending operations and performance of the major mortgage lending groups during the interwar period. Building & Loan Associations represented the largest institutional source of residential mortgage credit in 1930 and were the only lending group at that time active in all regions of the country and in cities of all sizes. As residential mortgage lending specialists, moreover, B&Ls were more adversely affected by the housing crisis than other mortgage lenders. So even though Rose focuses his analysis on B&Ls that were active in Newark, New Jersey, he is providing insight into an industry that would have played a major role in transmitting financial shocks from the housing crisis.

Rose explains that B&Ls are particularly interesting because they did not operate under contractual requirements that forced them to speed up resolution if they became troubled. In 1930 B&Ls were member-owned corporations that could indefinitely delay paying out equity and dividends to their members. As a result, thousands of B&Ls in the U.S. became "frozen" when their mortgage portfolios generated losses and foreclosed real estate became a major asset on their balance sheets. It took years for many of these organizations to liquidate their assets and resolve their liabilities to owners.

Most importantly, Rose shows that an endogenous, market-based resolution mechanism emerged during the 1930s to facilitate the resolution of B&Ls that were contractually frozen. This mechanism took the form of secondary markets in B&L shares that opened up in dozens of major

urban markets throughout the nation. Rose also explains how these secondary markets facilitated two elements of the resolution process. First, by selling their shares at discounts in this market, B&L members could liquidate their investments in the association, although at deep discounts. Second, investors who purchased these shares could then use them to buy the foreclosed real estate held by the B&L at similar deep discounts. The secondary market in B&L shares during the 1930s represents an unusual and intriguing example of financial innovation under market distress.

Securitization in Earlier Times

Starting in 1970, securitization transformed the U.S. mortgage market as portfolio lenders who funded and held whole loans were displaced by marketable securities that were issued against the collateral of underlying mortgage loan pools. These securities came to dominate all segments of the market, including sub-prime loans. Since the crisis of 2007, there has been a virtual shut-down of the securitization in the U.S. mortgage market, raising policy concerns about its viability moving forward. When the distinctively American form of securitization was developed in the 1970s, there was little attention given to earlier successful forms of securitization that had been implemented in the U.S., and especially in European markets, for more than two centuries. The two papers in this section provide new evidence on alternative forms of securitization that may help inform current debates on how to reform the U.S. system.

Rik Frehen, K. Geert Rouwenhorst and Will Goetzmann (FRG) investigate two forms of mortgage-backed securities that were issued in Dutch securities markets in the 1790s to finance property development in western New York state and Washington, D.C. The emergence of these "negotiates" were part of a larger process of experimentation and innovation in eighteenth century Dutch capital markets. FRG explain that these *negotiates* were similarly structured to plantation loans that had been issued, starting in the 1750s, to finance Dutch sugar plantations in South America and the Caribbean. These were fixed-income securities that collateralized not only revenue from sugar production, but also all of the plantation owner's property, including slaves. Plantation loans were themselves variations on earlier asset-based securities in the Dutch market that were secured only by the revenue generated by trade in commodities. The *negotiates* examined in this paper represent an innovation because the Holland Land Company and the consortium in Washington, D.C. issued bonds that were securitized only by mortgages on land and the income from future development of that land—the collateral for these asset-based securities did not include any revenue from commodity trade.

FRG find it puzzling, for example, that these securities did not offer investors any part of the returns associated with income from future land development; the payoff, instead, was restricted to fixed interest. They argue that this feature of the security was curious because earlier Dutch capital markets had used equity contracts to fund projects of similar durations that involved similar levels of risk. In this light, the fixed yield offered to investors was also curiously modest—only 5 percent on the securities of the Holland Land Company. Despite this feature, both issues of that company's *negotiates* were fully subscribed when issued in 1793. By 1804 cash flows from property sales turned out to be insufficient to support both the Company's investment activities and its interest expense. Under these pressures, the company's debt obligations to investors were reduced in exchange for their participation on the returns from land sales. FRG conclude that this transaction reflected the complexity and sophistication of capital

markets at the time and the need to replace the mortgage-backed, fixed income *negotiate* with some form of equity.

This historical episode points to the conditions under which fixed-income, mortgage-backed securities may not be a viable financing vehicle. This became even more apparent when another *negotiate* failed to be fully subscribed, after being issued in 1794 to finance land development in Washington, D.C. FRG conclude that the two experiments "pushed the debt-based financial infrastructure of the Netherlands to the limit," because these real estate ventures would have been more efficiently funded with equity-like instruments rather than asset-backed, fixed income securities.

Kirsten Wanschneider tells a very different story about eighteenth-century mortgage securitization. Her focus is on Prussia and on a mortgage-backed security that met with great success for more than a century after being introduced in 1770. The history of the *Pfandbriefe* that were issued by the Prussian *Landschaften* is particularly important because this security was ultimately transformed into the covered mortgage bond that became a major source of real estate finance in European markets and is currently being considered as a replacement for U.S.-style securitization in the wake of our mortgage crisis.

Wandschneider explains that the *Landschaften* were publicly-sponsored, cooperative credit associations that had some unusual and important institutional features. The original institutions were established in five provinces and noble landowners within each province were required to join. Membership meant that a landowner was eligible to apply for a mortgage from the organization, and the mortgage was then used as collateral for the *Landschaft*'s bonds. Even if members had not borrowed, they were still jointly liable for the outstanding bonds and

participated in appraising and approving all mortgage applications and monitoring indebted fellow members. Wandschneider shows how these, and other institutional features of the *Landschaften*, ameliorated the effects of adverse selection and moral hazards that are inherent in mortgage lending. The success of these organizations is documented by the fact that their bonds sold at some of the lowest yields in the German market until well into the twentieth century. The performance of the bonds was particularly impressive since the *Landschaften* expanded their operations in the 1800s to accommodate smaller landowners and offer mortgages with longer maturities and amortization.

Postwar Housing Policies

The nonfarm homeownership rate in the U.S. increased from 37 to 46 percent between 1890 and 1930, and fell back to 41 percent during the Depression and the housing crisis of the 1930s. After this half-century of modest change, nonfarm homeownership increased by nearly 20 percentage points between 1940 and 1960 and has stayed above 60 percent ever since. During the 2000s, in fact, home ownership rates in the U.S. approached 70 percent and public policies that support homeownership have been implicated as important source fragility in the crisis that began in 2007. As we debate modifying these policies, we will be well-served by understanding the market forces and policies that broadened homeownership in the U.S. during the mid-20th century. The two papers in this section are devoted to this theme.

Dan Fetter examines the facts lying behind this rise in homeownership between 1940 and 1960 and identifies important questions that remain unanswered about the sources and impacts of the change. He analyzes previously under-utilized data from the 1940s to show that much of the increase was a wartime, rather than a postwar, phenomenon. By 1945, in fact, the home ownership rate had recovered enough to exceed its 1930 level. Fetter also identifies several potential explanations that could account for this poorly-appreciated, but important phenomenon, including rising incomes and savings, the growing importance of tax incentives for homeownership, and unusual conditions in war-time housing markets. Fetter also stresses the importance of studying home ownership at the individual level, which helps to illuminate striking changes in individuals' path to homeownership between the 1920s and the postwar era. During the earlier decade, the dominant path was for an individual to first live with relatives, then to rent, and finally to move to an owned home. After the war, as both the period of living with relatives and that of renting were sharply reduced, rental rates rose at the youngest ages while ownership displaced both renting and living with relatives at slightly older ages. He argues that we need to explore the forces that drove this change, as well as its impact on agespecific rates of homeownership and the rental-owned mix of residential construction and the housing stock.

Fetter provides an extended survey of factors that have been shown or hypothesized to have driven the broad upward movement in homeownership between 1940 and 1960. The existing literature provides compelling evidence that changes in demographic composition, income, tax incentives, and access to affordable mortgage finance all played major roles in the upsurge in homeownership, and that suburbanization and old-age assistance were also supportive. Fetter emphasizes that the discussion must move beyond investigation of the individual sources of the increase and move to assessing the interactions between the factors responsible for the increase in homeownership.

Matthew Chambers, Carlos Garriga and Don Schlagenhauf (CGS) take up the challenge, and close our volume, by asking "Did Housing Policies Cause the Post-War Boom in Homeownership?" They explore the issue within a dynamic, general equilibrium model of tenure choice that incorporates many of the forces that Fetter enumerates—age, income, taxes and mortgage credit. In their model, a household that is renting chooses between continuing to rent or buying a home; a homeowner, on the other hand, must choose whether to stay put, to trade up to a bigger house, or to rent. Households use mortgages to finance the purchase of homes, and these contracts are structured to allow for different downpayment requirements, amortization structures, terms to maturity, and interest rates. By modeling mortgages in this way CGS provide a flexible theoretical structure within which to assess the net impact on homeownership of two housing policies: improvements in mortgage terms and the tax deductions for mortgage interest payments.

To identify how actual changes in the terms of residential mortgages changed over the period, CGS rely on the results of surveys of mortgage lenders that were conducted in the late 1940s under the NBER's Urban Real Estate Program. Generally, these indicate that post-World War II mortgages had lower interest rates, longer maturities, higher loan-to-value ratios, and more amortization than mortgages in the 1920s and 1930s. Most of these changes, of course, were due to the incentives created by the Veterans' Administration guarantees and FHA insurance programs for home mortgage loans. Increasing marginal income tax rates at all levels helped to increase the benefits associated with mortgage interest deductibility. In their simulations, they assess how much of the change in homeownership during the postwar period was due to these two policies. The effects turn out to be substantial; the lengthening of mortgage maturity from

20 to 30 years by itself explains one-quarter of the rise in homeownership, while the change income tax deductibility contributes about half that amount.

Conclusion

The central role played by housing in the "Great Recession" of 2007 leads us to pose the question: "What was different this time?" This volume is designed to bring historical perspective to the answers to this question. Until the recent crisis, this area of economic history received little attention in the past half century after the burst of scholarship into residential housing and finance sponsored by the NBER before 1960. It is fitting, therefore, that the NBER once again takes the lead by sponsoring a project to show how historical analysis provides a unique perspective on contemporary housing and mortgage markets. The reforms engineered in the aftermath of the 1930s were a direct response to the immediate perceived problems of the housing and mortgage markets. Generally, they were designed and implemented without a broader investigation of potential alternative institutions; and in part because of this lack of perspective, these New Deal innovations set the stage for the crisis of 2007. By offering a broader historical and international appreciation of housing and mortgage markets, this volume provides new information that should help to inform future policy debates.

REFERENCES

Campbell, John Y. (2012). Mortgage Market Design. NBER Working Paper 18339.

Feldstein, Martin (2007). Housing, Credit Markets and the Business Cycle. NBER Working Paper 13471.