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## CHAPTER 3

# THE MORTGAGE CRISIS

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By 1933 a national mortgage crisis was at full boil and showed little sign of cooling off, even as recovery began to take hold in many other parts of the economy. With unemployment at record levels, borrowers struggled to keep current on their debts. House prices had declined by roughly a third on a national basis, and it seemed unlikely that they would rise in the near term. As a result, borrowers had trouble clearing their debts by selling their properties. These were the fundamental factors driving the wave of foreclosures. On top of this, the system of home mortgage finance had largely collapsed, and lending activity in 1933 had nearly halted. Borrowers widely reviled the common loan contracts of the 1920s, but alternatives were not yet widely available. Under great pressure from investors and depositors, increasing numbers of lenders pushed borrowers to pay up or move out.

C. Lowell Harriss, a firsthand witness of the mortgage crisis of the 1930s, wrote the seminal study of the HOLC in 1951. He offers a superb condensation of the factors underlying the crisis:

In the twenties, as in every period of favorable economic conditions, mortgage debt was entered into by individuals with confidence that the burden could be supported without undue difficulty, and mortgage loans were made by financing agencies with satisfaction over the quality of the investment. . . .

What had generally been regarded as a reasonably sound arrangement by all parties concerned proved to be very weak when a set of interrelated

forces combined to bring on a severe depression after 1929 and to disrupt seriously the structure of home-ownership finance. . . .

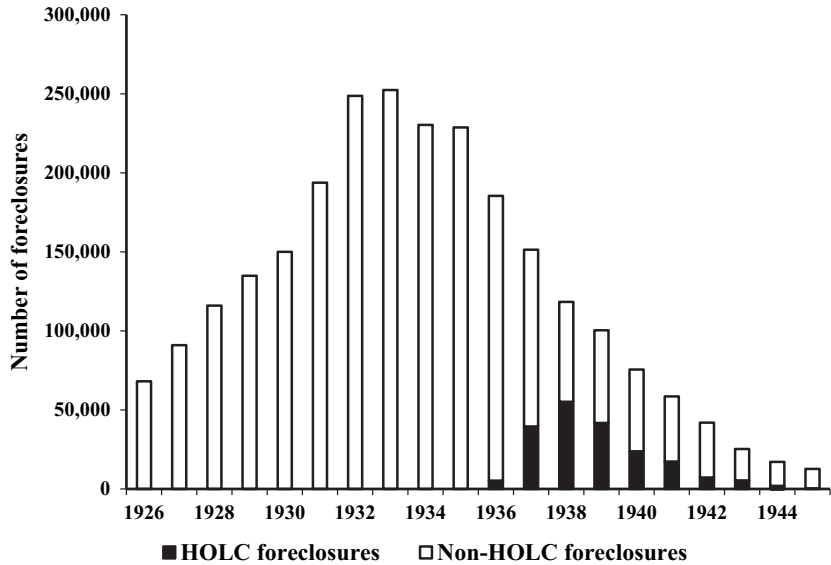
The ability of individual borrowers to meet mortgage payments was reduced by large-scale unemployment and by income reductions generally, and also by the necessity of meeting payments on installment sales contract obligations, which had increased sharply in the twenties. . . . These and other factors and conditions were, as is well known, mutually unsettling and self-aggravating.<sup>1</sup>

The mortgage crisis of the 1930s exposed serious fragilities within the US mortgage market. Processes designed to limit risks on individual mortgages had worked well when credit risk was tied to the specific mortgage but not when foreclosures were widespread and interconnected. When the shock of the Great Depression led to large numbers of lenders failing and borrowers facing trouble meeting their payments, the processes for offsetting risks broke down.

The HOLC, created in June 1933, was not the first attempt by legislators to mitigate the 1930s foreclosure crisis. Under President Hoover, the federal government set up a set of regional Federal Home Loan Banks to provide more liquidity and funding to lenders, starting in 1932. In 1933, state governments across the country began passing foreclosure moratoria, pausing the system in hopes that delays would provide time to develop a solution. Neither the moratoria nor the new regional home loan banks were very effective. The continuing foreclosure crisis likely endangered more than a million of the roughly ten million nonfarm home owners in 1933 and promised to generate additional disruption throughout the housing market and the general economy. The HOLC was designed to meet an immediate need for help. More fundamental market reforms were to wait for other New Deal programs.

### **The 1930s Foreclosure Crisis**

There is no more visible manifestation of the dislocation associated with a mortgage crisis than foreclosure. Figure 3.1 shows the mountain of foreclosures that built up during the early 1930s. It provides an unmistakable picture of the duration and severity of foreclosure problems in the 1930s. Nonfarm foreclosures began to accelerate as construction activity fell off in the late 1920s, but the number jumped to new levels exceeding 200,000 per year for



**Figure 3.1.** Number of foreclosures on nonfarm residential and commercial mortgages in the United States, 1926–1945. (Data from Carter et al. 2006, series DC1255–1270.)

four full years from 1932 to 1935, before gradually receding over the remainder of the decade.

Ideally, these numbers would allow us to calculate a foreclosure rate, but doing so requires us to make two heroic guesses. First, we need to know the total number of outstanding residential mortgages that were at risk. The 1930 census reported 10.5 million owned nonfarm homes, but unfortunately did not ask about mortgages. A good guess would be about 5.2 million, or 50 percent of owned homes. This guess is a bit higher than the 40 and 46 percent figures reported in the 1920 and 1940 censuses because in 1930 the housing boom had not been undone by very much. A second problem is that the foreclosure data include both residential and commercial properties, making it difficult to calculate a residential mortgage foreclosure rate. We can proceed by inferring from data from a few sources that indicate at least 60 percent of foreclosures in this period were likely on residential properties.<sup>2</sup> With these two bits of information, the foreclosure rate on nonfarm residential mort-

gages might have been about 2.5–3.0 percent per year at its peak. Over the decade from 1926 to 1936, these data could imply that foreclosure affected 10 to 20 percent of residential mortgages.

In general, the pattern of foreclosures over time has been similar in the 2000s, as the number of residential nonfarm mortgage foreclosures reached a peak in 2009 and has stayed at that high level with the potential for the problems to persist long enough to mirror the 1930s experience. Modern data are much better because they separate out residential properties and the number of mortgaged properties is known. Even with modern data, however, most statistics tabulate the number of foreclosures started or in process, not the number completed. Typically about one-half of foreclosures started end in actual dispossession.<sup>3</sup> During 2010 and 2011, the percentage of loans in the foreclosure process hovered around 4 percent.

In lieu of better foreclosure data, mortgage distress during the 1930s is more accurately measured by a 1934 study of mortgage loan status in twenty-two urban areas. Nearly 45 percent of mortgaged, owner-occupied homes in those areas were delinquent on their payments but had not yet been subject to foreclosure. This rate of delinquency is nearly double the delinquency rates experienced in the most severely affected cities in 2010.<sup>4</sup> However, the delinquency rates in 1934 were likely elevated (and the foreclosure rates depressed) by the presence of mortgage foreclosure moratoria in many states. The mortgage crisis in the 1930s was severe enough that no fewer than twenty-seven of forty-eight states had enacted mortgage foreclosure moratoria, which allowed many home owners to stay in their homes by delaying or suspending foreclosure actions. Additional acts at the state level limited the amounts that borrowers owed to lenders in deficiency judgments, which could be demanded by lenders when foreclosed properties sold for less than the value of the mortgage debts owed.<sup>5</sup>

The foreclosure statistics of 1934, 1935, and 1936 likely would have been much worse in the absence of the HOLC. Between 1933 and 1936, the HOLC refinanced the mortgages of roughly one million home owners who, on average, were more than two years behind on their loan and local property tax payments. Had all of those homes been foreclosed, the number of foreclosures in figure 3.1 for 1934, 1935, and 1936 would have doubled. Even with the HOLC's help, roughly 200,000 borrowers fell behind on the refinanced loan payments hopelessly enough that the HOLC foreclosed. Those HOLC

foreclosures are represented by the dark shaded areas at the bottom of each bar after 1935 in figure 3.1.

The ultimate outcome of foreclosure was loss of home ownership, and the vast majority of the households who lost their homes to foreclosure during the 1930s were unable to become home owners again until after 1940, if they ever did. The only decade in which home ownership declined during the twentieth century was the 1930s. The decline from 45.2 percent in 1930 to 41.1 percent in 1940 wiped out most of the 5.2 percentage point rise during the boom of the 1920s. In comparison, home-ownership rates rose from 64.2 percent in 1994 to 69.2 percent in 2004, roughly the same rise as in the 1920s. Since then the rate has fallen by 3.3 percentage points with the potential for further drops to come.<sup>6</sup>

### **The Double Trigger**

In the modern economics literature, a popular way to understand foreclosures is that they are typically caused by a “double trigger”: falling house prices combined with reductions in borrowers’ incomes, most often due to unemployment.<sup>7</sup> The double trigger theory suggests that house-price declines by themselves are not generally sufficient to cause foreclosures. This may sound overly optimistic, but the economic reasoning is sound. Suppose a family purchases a \$100,000 house, with a down payment of \$20,000 and a loan of \$80,000. Then the property’s value falls to \$70,000, leaving them “underwater” because the family owes more on the loan than the value of the house. The family likely would not default on the loan if their breadwinner(s) kept working, since they could still afford the monthly mortgage payment. After all, paying a month’s loan payment does not take away the option of defaulting in the future, and the family still needs a place to live. In effect, the family would, each month, compare whether the cost of paying the mortgage is worth the value of living in the house and being able to default at any time in the future. In addition, the act of default itself can be financially and psychologically costly. A default would force the family to find new housing and harm the family’s credit rating, making it difficult to purchase a cheaper home, obtain credit cards, and purchase automobiles or other durable goods with credit. Finally, the value of the home might rise again in the future.

The double trigger framework also suggests that foreclosure is unlikely to be caused solely by reductions in a borrower’s income. Consider a scenario in which a home owner experiences a reduction in income but the value of

the property remains stable. The reduction in income could have happened because of unemployment or adverse life events, such as health crises, death, or divorce. The home owner would not have to default because she could sell the property and repay the debt in full. Moreover, she recovers more of her down payment, avoids a reduction in her credit rating, and avoids the other disruptions and costs associated with foreclosure.

The double trigger framework recognizes the difficulties confronting home owners when either their incomes or property values fall, but emphasizes that, when affected by only one of these shocks, home owners have the option to avoid foreclosure and the incentive to do so. The situation is much worse when a serious reduction of household income coincides with a substantial decline in property value. The home owner not only faces immediate difficulty in making required mortgage payments, but she will also incur significant losses from a sale of the property, making default and foreclosure more likely. Waves of foreclosure are therefore more likely when both incomes and housing prices are falling throughout the economy.

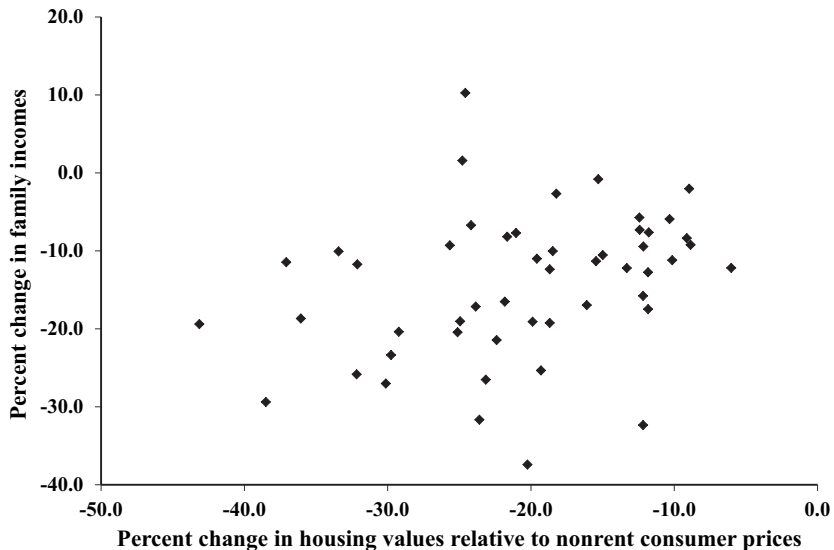
The double trigger was activated during the 1930s because housing prices declined throughout the nation, millions of people lost jobs, and many who kept their jobs worked less and experienced declines in income. The situation has been similar during the recent housing crisis, although the income drops and unemployment shares are much smaller while the drops in housing prices in some of the major cities have been more spectacular. The 1930s and the first decade of the 2000s are the only decades in the past century to contain sustained nationwide drops in housing values. We will review each of these two triggers in turn.

#### INCOME

In terms of the income of mortgage borrowers, the Great Depression led to the greatest job loss and largest loss in per-person production of goods and services in American history. The timing of the increase in the unemployment rate matched the timing of the foreclosure crisis in figure 3.1. Unemployment spiked from 2.9 percent in 1929 to nearly 10 percent in 1930, and then kept rising to over 20 percent by 1932 and remained higher than 20 percent through 1935. By 1933 the number unemployed exceeded ten million people; nearly eight million of these people were not in the farm sector. Many who remained employed suffered income losses as average weekly hours worked fell from forty-eight to thirty-six, even though the purchasing power of hourly

earnings held relatively steady between 1929 and 1933. Manufacturing workers saw their weekly earnings fall by 38 percent between 1929 and 1933. After accounting for the 20 percent decline in the general price level, their real purchasing power with weekly earnings had fallen 18 percent.<sup>8</sup>

Among nonfarm home owners in particular, the fall in income was likely as bad as these general figures, or possibly worse. In a survey of a large number of households across fifty cities in 1934, home owners saw an average decline in their family incomes of 36 percent between 1929 and 1933. After adjusting for deflation, a fall in the price level that made each dollar more valuable, their purchasing power fell 14 percent on average. Figure 3.2 shows the decline in real income after adjusting for deflation along the vertical axis. In forty-eight of the cities, real income declined at rates ranging from 1 percent in Columbia, South Carolina, to 37 percent in Racine, Wisconsin. Meanwhile, home



**Figure 3.2.** Changes in family incomes and housing values in fifty cities, 1929–1933. (Data from Wickens 1941, tables A10, C4.) Before calculating percentage changes, the family incomes were deflated using the national CPI series E-135 from US Bureau of the Census (1975, 211). The price index for nonrent consumer prices was calculated using the overall CPI (series E-135) and the rent CPI (series E-150) and assuming that rent accounted for 18 percent of the consumer budget.



owners in Binghamton, New York, and Jacksonville, Florida, experienced increases in real income.<sup>9</sup>

#### HOUSING PRICES

In terms of house prices, the same home owners from the fifty-city survey sample described sharp drops in their perceived resale values of their homes. Their housing values fell an average of 33 percent between 1930 and 1934. Other consumer prices were falling as well, but housing prices fell 20.5 percent more than nonhousing consumer prices over the four years. The declines from the peak prices in the late 1920s were probably greater still.<sup>10</sup>

Housing prices and incomes changed in different ways across different parts of the country. In figure 3.2, the changes in housing value (along the horizontal axis) varied across cities as much as the changes in income (along the vertical axis). For example, housing values dropped only 6 percent relative to other consumer prices in Portland, Maine, but fell by a much larger 43 percent in Wichita Falls, Texas. Borrowers living in the cities in the lower left part of figure 3.2, where income and house prices both dropped by the most, would most likely have trouble with foreclosure according to the double trigger framework.

Housing values may have fallen as much between 1930 and 1934 as they did between 2006 and 2010. As yet, only rough comparisons are possible because the earlier data are based on surveys of home owners about their housing values while most modern price indexes are based on actual market prices for homes. Three national price indexes for the modern period suggest average housing prices nationwide declined by as little as 16 percent or as much as 32 percent from their peak before the crisis to the end of 2010.<sup>11</sup> Housing prices relative to nonshelter consumer prices fell even more, because nonshelter consumer prices rose about 9 percent from 2006 to 2010. As a result, housing prices fell 25 to 41 percent more than nonshelter consumer prices over this period.

Mortgage borrowers during the early 1930s were not typically as indebted as their modern peers. Most first mortgage loans were limited to 50 or 60 percent of house value, and second mortgage loans likely brought indebtedness to about 80 percent at most for some borrowers. As a result, even with property tax debts that also often went unpaid in significant amounts during the 1930s, there were fewer borrowers during the early 1930s that were “underwater” in

the modern vernacular, which means that they owed more than their houses were worth. We will present some more data along these lines in chapter 8 when we characterize the debt situation of HOLC borrowers. This point should not be overstated, as a number of home owners were indeed underwater, but compared to the crisis of the early 2000s, their numbers were relatively fewer.

When we talk about “market prices” in 1933, they should be interpreted as prices of transactions that actually occurred. This is an important caveat, as there was a broad credit crunch from 1932 to 1934. In most cases borrowers were able to sell their homes only if buyers could get credit. In some cases, buyers did get credit, and those transactions are the basis of market price estimates in those years. But the 1933 market was unpredictable, and some borrowers found buyers who were willing to pay “market price” in 1933 but then were not able to secure loans. Without credit the deal simply fell apart. As a result, there was a problem with the usual economic logic that suggests that prices would have fallen during the early 1930s until the market cleared. For the market to have cleared, prices would have needed to fall so substantially that most transactions could be accomplished on a cash basis without any new loans. Though the fall in prices was large during the 1930s, it was never large enough to allow all properties to transact, and borrowers would have had little interest in lowering their prices to a cash-only level. This helps explain why so many foreclosures occurred during the 1930s, despite the stricter loan-to-value ratios common during the 1920s. Borrowers could have escaped from their debts, avoiding the second part of the double trigger, only if credit was available either to them or to potential buyers.

The credit crunch jumps out of the data easily. In the late 1920s, lenders provided nearly \$5 billion in new residential mortgage credit each year. By 1932, such lending fell to around \$1 billion. Lending did not recover to even \$2.5 billion until 1937.<sup>12</sup> This fall in loan volume reflected a lack of funds as well as a basic loss of creditworthiness on behalf of the nation’s mortgage borrowers, given low incomes and housing prices that were in flux. This was a world without Fannie Mae and Freddie Mac buying up existing mortgages and freeing lenders to provide more mortgages. This is a key difference from the recent mortgage crisis.

### **Borrowers’ Trouble with Deflation**

Home owners with mortgages in the early 1930s faced a severe problem with deflation in nonhousing prices that modern home owners have not faced.

Housing prices dropped from 2006 to 2010, but the overall price level rose 9 percent in the same period. In contrast, the consumer price index fell sharply between 1929 and 1933. This deflation meant that each dollar repaid by home borrowers to their lenders in 1933 contained 32.2 cents more in purchasing power than it had in 1929.

Prior to the 1930s, general deflations, with declines in both prices and wages, were considered to be part of the economy's normal adjustment process that would contribute to a return to economic expansions. The decline in prices was so rapid in the 1930s, however, that Irving Fisher, one of the leading economists of the day, pointed out an important flaw in the expectation that deflation would lead to a recovery. He argued that such a large fall in the general level of prices and wages during a time of extensive unemployment was actually destabilizing the economy because the value of the household debts rose. A few decades later Frederic Mishkin, who later served as a member of the Federal Reserve Board of Governors, showed how deflation sharply reduced the net wealth of households in the 1930s.<sup>13</sup>

For many people who kept their jobs, the general fall in prices and hourly wage rates did not reduce the purchasing power of hourly wages because consumer prices and hourly wages fell by roughly the same percentage between 1929 and 1933. However, a full-time worker with a home mortgage loan discovered that he was repaying the loan in dollars that were each worth 24 cents more than the dollars he had borrowed four years before. Thus, even though his flow of income in real terms was the same, the real cost of the payments on his debt had risen sharply. The situation was far worse for the mortgaged home owners who lost their jobs or found themselves working 20 to 25 percent fewer hours per week.

In sum, the double trigger model emphasizes that foreclosure becomes much more likely for an individual home owner when income loss is accompanied by a decrease in home values. In the 1930s both incomes and housing values fell for large shares of the population, causing a general foreclosure crisis. The problems were amplified further when deflation in nonhousing prices raised the real cost of repaying mortgage debts.

### **The Downward Spiral**

The wave of foreclosures contributed to a multifaceted downward spiral in the housing and real estate finance sectors. As the number of foreclosures rose above 200,000 per year (figure 3.1), they increasingly had negative effects

on housing prices. Lower housing prices ate away at the equity of borrowers, making it difficult for them to settle their debts by selling their homes. Housing starts, shown in figure 2.1, declined to a low not otherwise seen after 1900, putting more construction workers out of work.

The basic business of real estate lenders fell apart. On one hand, lenders' real estate assets declined in value, and the fragility of balloon loans and share-accumulation loans became obvious. On the other hand, lenders' funds dried up. Partly, investors needed access to their savings, as the time from 1929 to 1933 was as rainy a day as they could have planned for. In addition, fears over losing money led many investors to pull funds. The net income of the life insurance industry was cut by more than half between 1929 and 1932 as nearly four times as many policies were cashed in for their surrender value and payments on disability claims rose. Commercial banks lost about one-third of their deposits. By 1933 nearly two thousand of the nation's roughly thirteen thousand B&Ls had failed, while members' savings in share accounts decreased by 25 percent.<sup>14</sup>

The credit crunch cemented the dysfunction in the housing market. Unless buyers could get credit, delinquent borrowers could not sell their homes without lowering prices so much that the housing market could operate on an all-cash basis. While prices did fall to some extent, and talk of a vast national "fire sale" of the nation's housing wealth increased, neither borrowers nor lenders had interest in selling properties at whatever price they could get. Credit rationing created large amounts of uncertainty as to what price could actually be obtained for any given property, depending on whether the potential buyer could get a loan. In this way, even borrowers with equity could not be assured of receiving the same price at which other similar houses had sold. As a result, lenders began stockpiling foreclosed assets on their books if they could avoid dumping them on the market, states passed foreclosure moratoria, and the housing market ceased to function in an orderly manner.

As the situation worsened, borrowers, lenders, and real estate professionals increasingly put pressure on government at all levels to do something about the crisis.