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THE INCIDENCE OF HOME MORTGAGE FORECLOSURE: A REVIEW OF THE LITERATURE

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THE INCIDENCE OF HOME MORTGAGE FORECLOSURE:
A REVIEW OF THE LITERATURE

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Mortgage Foreclosure Study
(Directors: Michael B. Teitz and Daniel Pearlman)
National Housing Law Project

and

Institute of Urban and Regional Development
University of California, Berkeley

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TABLE OF CONTENTS

	Page
List of Figures	v
List of Tables	vii
Preface	ix
I. INTRODUCTION	1
II. FORECLOSURE DATA	3
III. THE INCIDENCE OF FORECLOSURE	21
Introduction	21
The Borrower	25
The Property and Urban Location	38
The Analysis of Mortgage Characteristics	41
IV. CONCLUSION	55
Bibliography	57

LIST OF FIGURES

	Page
Figure 1: Sheriffs' Sales in Philadelphia from 1800 to 1940 (per thousand population)	4
Figure 2: Foreclosure Rates for Manhattan, Philadelphia, and St. Louis per 100,000 Families (annual data)	5
Figure 3: Nonfarm Real Estate Foreclosure Rates, 1926-1974	9
Figure 4: Number of Foreclosures on FHA, VA, and Conventional Home Mortgages, 1950-1974	14
Figure 5: Foreclosure Rates for One- to Four-Family Dwellings with FHA-Insured and VA-Guaranteed Mortgages, 1950-1974.	15
Figure 6: Mortgage Foreclosures as Reported by FSLIC-Insured Savings and Loan Associations, 1963-1974	18
Figure 7: Foreclosure Rates as Reported by FSLIC-Insured Savings and Loan Associations, 1963-1974	19

LIST OF TABLES

	Page
Table 1: Nonfarm Real Estate Foreclosures, 1926-1974	7
Table 2: Estimated Number and Index of Nonfarm Real Estate Foreclosures, Exclusive and Inclusive of HOLC Activity (Index: 1939=100)	8
Table 3: Foreclosures and Foreclosure Rates of Government-Insured and Conventional Mortgages on One- to Four-Family Dwellings, 1950-1974	13
Table 4: Mortgage Foreclosures Reported by FSLIC-Insured Savings and Loan Associations, 1963-1974	17
Table 5: Percentage Distribution of Borrower Family Income of Foreclosed Properties by Type of Loan	32
Table 6: Percentage Distribution of Foreclosure Cases of Borrowers in Individual SMSAs by Occupation at Time of Loan Origination	34
Table 7: Major Factors Determining the Incidence of Foreclosure	55

PREFACE

The Mortgage Foreclosure Study of the National Housing Law Project is an attempt to analyze alternative forms of mortgage foreclosure statute in the U.S. and to design a model statute that is both equitable and effective. This has been a cooperative effort between lawyers and social science researchers. The research strategy comprises a detailed legal analysis of mortgage foreclosure statutes, together with an attempt to estimate quantitatively the impacts of alternative forms of statute on the outcomes of foreclosure in practice. For the latter purpose, a sample of over five hundred single-family conventional mortgage foreclosure cases was collected from savings and loan institutions in five states that represent the spectrum of statutory approaches to foreclosure in the U.S.--from very rapid, power-of-sale in Texas, to lengthy, judicial procedures in Illinois. Although a literature on causes of foreclosure exists, there has been little analysis of its results. This series of working papers reports on the results of the analysis of the sample of cases. Our findings have been incorporated into several draft model statutes that have been discussed with lawyers and industry representations at workshops during the past year in several parts of the country. The final version of the statute will be published by the National Housing Law Project.

This paper gives an overview of the literature about the *incidence* of foreclosure in the U.S. over the past forty years. The focus of the foreclosure study is not incidence or causes of foreclosure,

but rather the impacts of alternative institutional arrangements for dealing with it. Nevertheless, it seems appropriate to preface that effort with a careful look at incidence, both because waves of foreclosures have historically been associated with changes in the legal structure of response and because an appropriate response cannot be designed in the absence of a solid understanding of the causes and level of the problem. Most of what has been written about foreclosure incidence in recent years has responded to specific problems such as the financial failure of subsidized housing. The intent here is to summarize what is known in a form that may be helpful to understanding our subsequent work and of interest to students of housing generally.

Michael B. Teitz
Project Director

I. INTRODUCTION

This review of the literature on home mortgage foreclosure examines studies and research findings about the incidence of foreclosure. Our focus is the single-family, owner-occupied sector of the residential real estate market. The literature itself is thin and not very cohesive. Most of the following draws upon a dozen full-length research studies, with relevant articles and documents cited *in passim*. The contents of these primary works, however, are described in some detail in order to give the reader a "feel" for the literature, the methodologies employed, and the range of available evidence on incidence.

This paper is divided into three chapters after the introduction: Chapter II surveys extant data sources and time series on foreclosure rates in the United States; the third chapter examines studies of incidence, and looks at borrowers and property characteristics; and Chapter IV presents conclusions. A detailed bibliography follows.

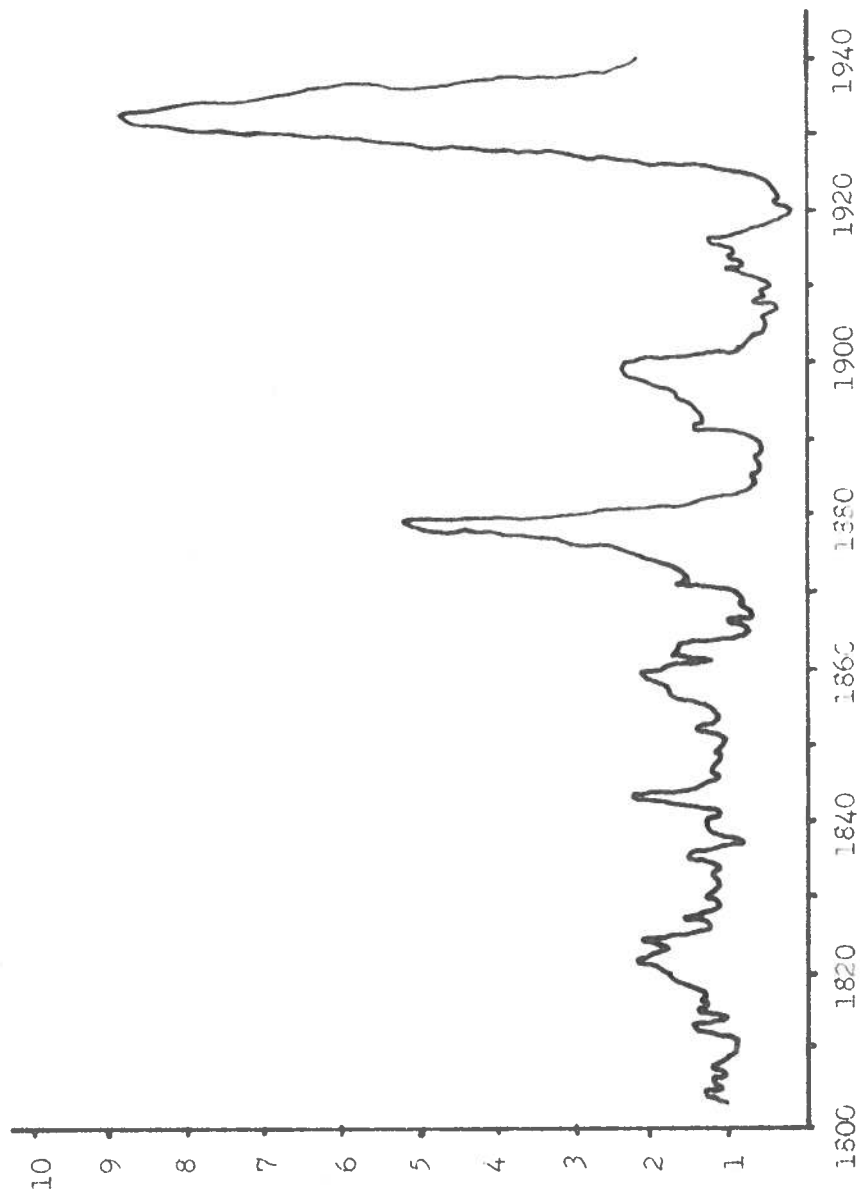
II. FORECLOSURE DATA

With the exception of Federal Housing Administration and the Veterans Administration publications, no sources of data on foreclosure rates distinguish between residential and nonresidential real estate. The two are usually lumped together. Nor are single-family foreclosures counted separately from multifamily foreclosures.¹ The sources cited below--with the exception of FHA and VA data--measure foreclosure trends for the real estate sector as a whole unless otherwise indicated.

The only available series on real foreclosure rates in the United States before the twentieth century are derived from public records in Manhattan, New York, Philadelphia, St. Louis, and other cities (Figures 1 and 2). While these series may be subject to much error and use quite different computational methods, they nevertheless provide a sweeping picture of trends in foreclosure rates over the past 160 years. The two series in Figures 1 and 2 illustrate the cyclical waves of foreclosure in real estate markets that have accompanied the rhythmic expansion and contraction of the U.S. economy since the early nineteenth century. Generally speaking, foreclosure rates seem to have risen during the financial crises and depressions that occurred every 10 to 14 years throughout the period from the end of the Napoleonic Wars (1815) up to World War II (Schumpeter, 1939; Flamant and Singer-Kerel, 1970).

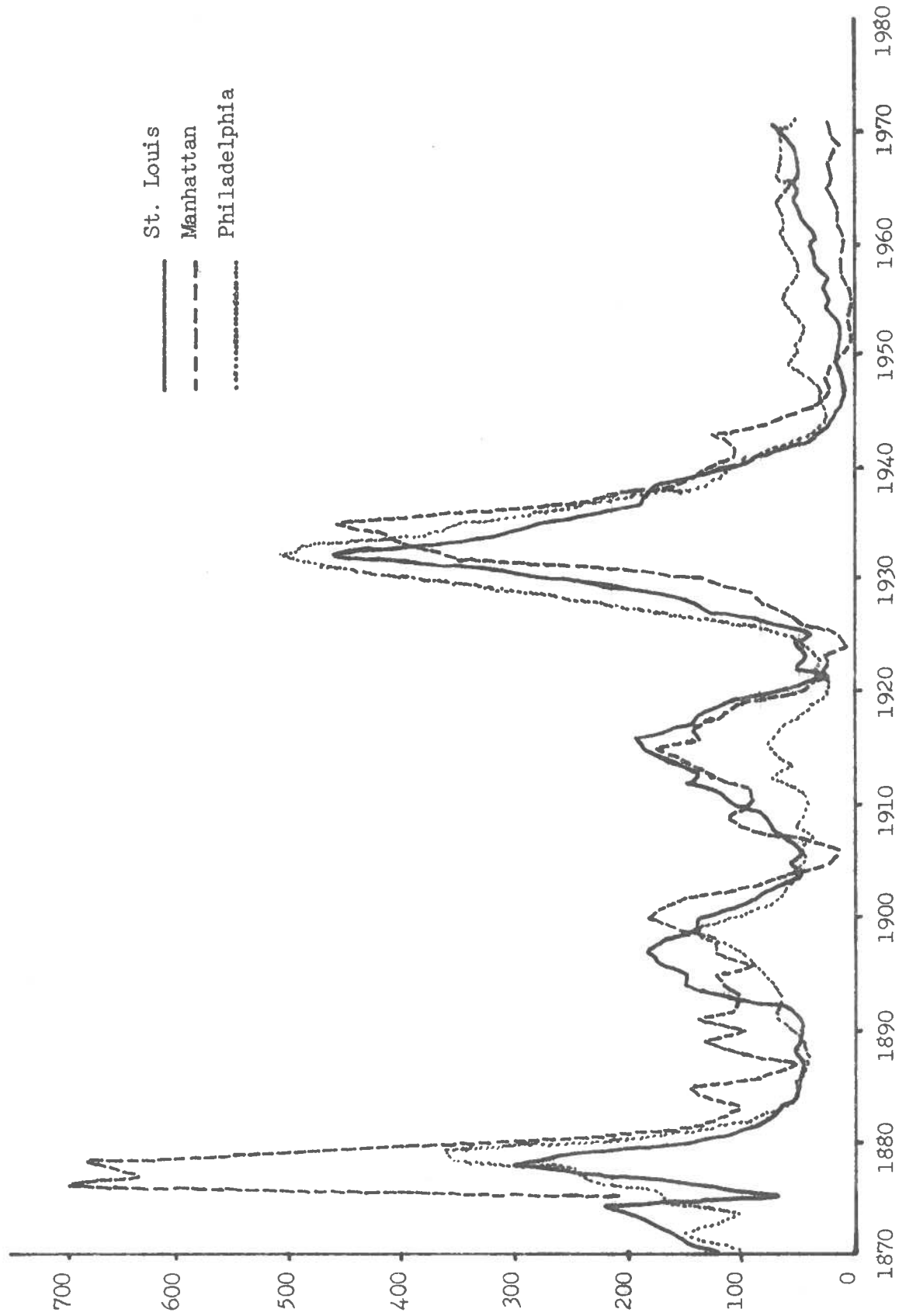
¹In this paper we shall use the following definitions. *Single-family properties*, *owner-occupied properties*, or simply *homes* refers to one- to four-unit owner-occupied dwellings. All properties with more than four units, whether owner-occupied or not, will be considered *multifamily* or *multiunit* properties.

FIGURE 1: SHERIFFS' SALES IN PHILADELPHIA FROM 1800 TO 1940
(per thousand population)



Source: Skilton, 1944.

FIGURE 2: FORECLOSURE RATES FOR MANHATTAN, PHILADELPHIA, AND ST. LOUIS PER 100,000 FAMILIES (ANNUAL DATA)



Source: Wenzlick, 1964.

Prior to the Great Depression of the 1930s, the Depression of the 1807s produced the most severe collapse in real estate markets in U.S. history. From 1860 to 1873, the nation experienced a period of war-induced inflation coupled with widespread speculation. The gold standard was suspended during this period and the U.S. government "printed" greenbacks in order to finance the War Between the States. When the U.S. went back on the gold standard in the mid-1870s, a massive quantity of greenbacks was removed from circulation. This undermined millions of dollars of assets that had been financed and were actively being traded with greenbacks. Almost every sector of the economy experienced major financial disaster as a result--especially agriculture, the railroads, and urban real estate. During and after the Civil War, cities were the scene of much speculation as both Northeastern and mid-Western cities grew under the impact of rapid industrialization (Sokolaki, 1935).

The largest wave of real estate foreclosures in United States history came during the Great Depression of 1929-1934. Tables 1 and 2 and Figure 3 present a picture of the foreclosure experience of the 1930s on a national scale. Published by Federal Home Loan Bank Board (FHLBB), this series represents estimates of all nonfarm real estate foreclosures in the United States based on monthly reports filed by sheriffs, county and court clerks, recorders, and other government officials from between 1,400 to 1,800 counties. The FHLBB claims that these counties contain

TABLE 1: NONFARM REAL ESTATE FORECLOSURES, 1926-1974

<u>Year</u>	<u>Number</u>	<u>Rate (per 1,000 non- nonfarm dwellings)</u>	<u>Year</u>	<u>Number</u>	<u>Rate (per 1,000 nonfarm dwellings)</u>
1926	68,100	3.6	1951	18,141	1.7
1927	91,000	4.8	1952	18,135	1.6
1928	116,000	6.1	1953	21,472	1.7
1929	134,900	7.1	1954	26,211	1.9
1930	150,100	7.9	1955	28,529	1.9
1931	193,800	10.2	1956	30,963	2.0
1932	248,700	13.1	1957	34,204	2.1
1933	252,400	13.3	1958	42,367	2.5
1934	230,776	12.2	1959	44,075	2.4
1935	229,428	12.1	1960	51,353	2.7
1936	187,069	9.8	1961	73,074	3.7
1937	152,758	8.0	1962	86,444	4.2
1938	119,579	6.3	1963	98,195	4.5
1939	100,410	5.3	1964	108,620	4.8
1940	75,310	4.0	1965	116,664	4.9
1941	58,559	3.1	1966	117,473	4.8
1942	42,331	1.9	1967	110,154	4.4
1943	25,281	1.2	1968	90,941	4.5
1944	17,153	0.8	-----NEW SERIES-----		
1945	12,706	0.6	1969	95,856	4.0
1946	12,025	0.7	1970	101,070	4.1
1947	10,559	0.5	1971	116,704	4.6
1948	13,052	NA	1972	132,335	5.1
1949	17,635	1.9	1973	135,820	5.1
1950	21,537	2.2	1974	140,496	5.2

Source: U.S. Federal Home Loan Bank Board, 1975.

TABLE 2: ESTIMATED NUMBER AND INDEX OF NONFARM REAL ESTATE FORECLOSURES, EXCLUSIVE AND INCLUSIVE OF HOLC ACTIVITY (INDEX: 1939=100)

Year	Exclusive of HOLC ^a		Inclusive of HOLC ^b	
	Number	Index	Number	Index
1926	68,100	67.8	68,100	103.2
1927	91,000	90.6	91,000	137.9
1928	116,000	115.5	116,000	175.7
1929	134,900	134.3	134,900	204.4
1930	150,100	149.5	150,100	227.4
1931	193,800	193.0	193,800	293.6
1932	248,700	247.7	248,700	376.8
1933	252,400	251.4	289,649	438.8
1934	230,350	229.4	919,342	1392.7
1935	228,713	227.8	474,262	718.5
1936	185,439	184.7	211,413	320.3
1937	151,366	150.7	101,043	153.1
1938	118,357	117.9	67,160	101.7
1939	100,410	100.0	66,010	100.0
1940	75,556	75.2	56,296	85.3
1941	58,559	58.3	47,019	71.2
1942	41,997	41.8	36,427	55.2
1943	25,281	25.2	25,281	38.3
1944	17,153	17.1	17,153	26.0
1945	12,706	12.7	12,706	19.2
1946	10,453	10.4	10,453	15.8
1947	10,559	10.5	10,559	16.0
1948	13,052	13.0	13,052	19.8
1949	17,635	17.6	17,635	26.7
1950	21,537	21.4	21,537	32.6
1951	18,141	18.1	18,141	27.5
1952	18,135	18.1	18,135	27.5
1953	21,473	21.4	21,473	32.5
1954	26,211	26.1	26,211	39.7

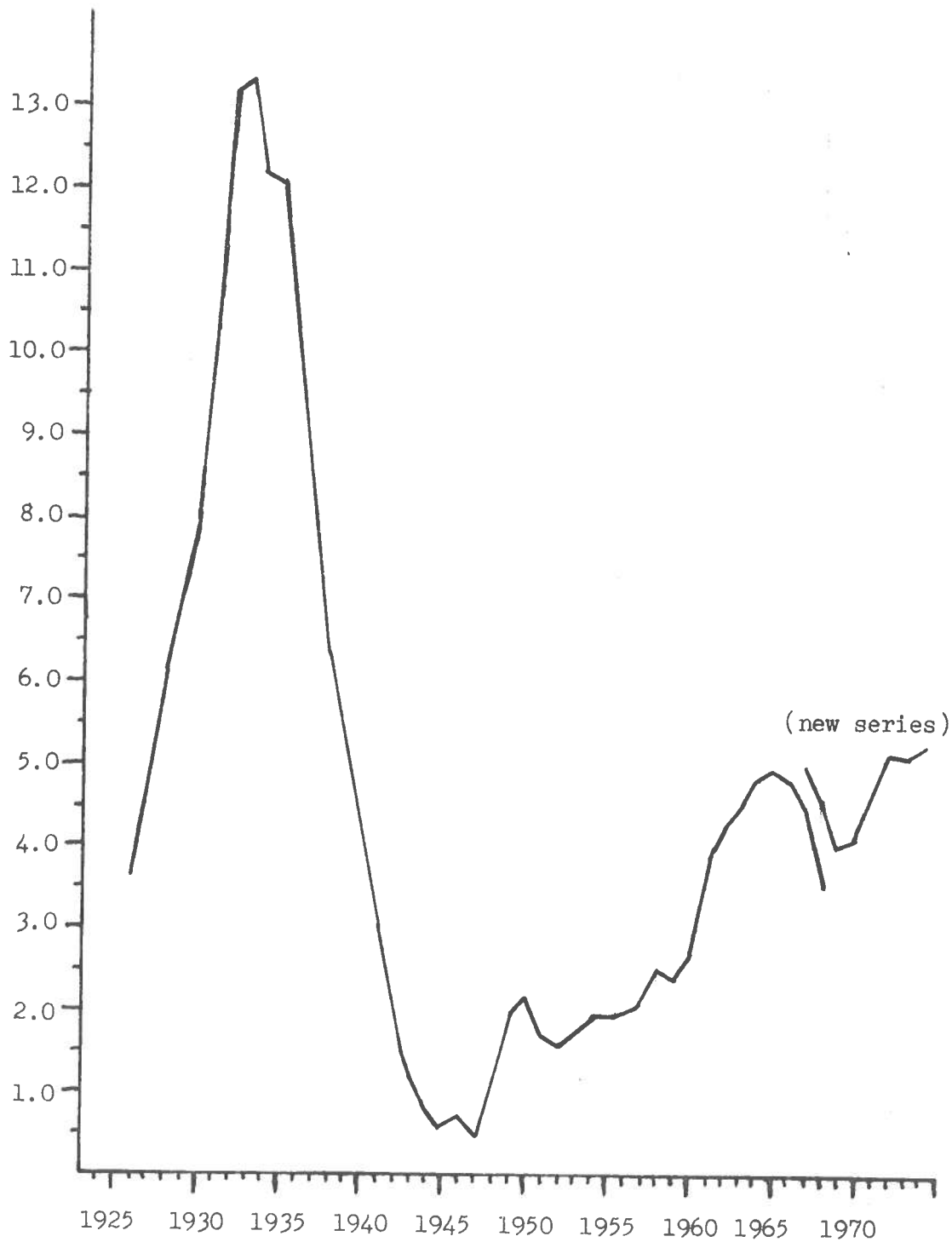
^aHome Loan Bank Board (Operating Analysis Division, Federal Savings and Insurance Corporation).

^b*This series adds the number of original home loans closed by HOLC in 1933-1936 to the number of foreclosures as reported, on the (somewhat extreme) assumption that all loans made by HOLC would have gone into foreclosure had it not been for HOLC. For the sake of consistency, the series deducts from foreclosures as reported the number of foreclosures by HOLC itself, from 1936 to 1942, when HOLC foreclosures were fairly significant.*

Source: Morton, 1956.

FIGURE 3: NONFARM REAL ESTATE FORECLOSURE RATES, 1926-1974

Number of
foreclosures
per 1,000
nonfarm dwellings



Source: U.S. Federal Home Loan Bank Board, 1975.

between 60-70 percent of all nonfarm residential structures in the United States.²

The figures from 1933-1937 do not include properties taken over by the Home Owners Loan Corporation (HOLC) that were on the verge of being foreclosed. The HOLC refinanced over one million properties between 1933-1936 and foreclosed on approximately 100,000 between 1935-1940 (Harriss, 1951). Table 2 gives a somewhat more accurate picture of the foreclosure wave since it combines conventional foreclosures with HOLC-refinanced mortgages and HOLC foreclosures.

John P. Dean estimated that foreclosures on single-family homes between 1926-1940 equalled "more than one-sixth of the single-family owner-occupied residences in the urban areas of the United States in 1930" (1945, p. 98). The city of Philadelphia experienced foreclosure rates of between 10,000-20,000 annually between 1928-1935. During the middle of 1933, foreclosures on single-family homes were occurring at the

²The FHLBB foreclosure rates are computed by dividing the number of reported foreclosures by the total number of mortgaged nonfarm dwellings as reported by the most recent census. For example, the rates for 1961-1968 are based on estimates of total number of mortgaged nonfarm dwellings in the U.S. from the Residential Survey of the 1960 census. The "new series"--in use since 1967--contains data from Alaska and Hawaii and includes farm foreclosures. Both series also contain an "indeterminant amount of foreclosures on land, nonresidential mortgages, and land installment contracts" (FHLBB, 1968). It is thus unclear exactly what proportion of this annual estimate of total foreclosures are *residential owner-occupied properties*. During the 1930s, the FHLBB claimed that 20 percent were commercial properties. In the 1940s the figure fell to 15 percent. Dean (1945) estimates that, conservatively speaking, 50 to 60 percent of all foreclosures reported during the late 1930s were owner-occupied dwellings. As to other peculiarities of the data, in 1967 the U.S. Savings and Loan League cited a FHLBB survey conducted during the 1960s, which showed that 20 percent of the homes against which legal action had been taken "were still under construction and had never been occupied" (U.S. Savings and Loan League, 1967). The data is also somewhat unreliable because of sampling variability, for the number of counties filing reports has fluctuated by several thousand within a decade. The FHLBB thus believes that its estimation technique "could well contain considerable error" (FHLBB, 1975). Finally, because deeds-in-lieu are not included, the data may underestimate the true level of foreclosures.

rate of 1,000 per day (Abrams, 1939; Dean, 1945). The Financial Survey of Urban Housing conducted by the National Bureau of Research in 52 "representative" cities during 1933-1935 found that 46.9 percent of mortgages held by owner-occupants were in default. Along with foreclosures went a large-scale deflation of residential property values which declined by 35 percent between 1929-1936 (Wickens, 1938).

By contrast, the years from 1942 to 1958 represent a period of relatively low foreclosure rates in comparison not only to the 1930s but also to earlier epochs (Figure 1). Despite the low number of foreclosures in the post-World War II era, the rates nevertheless appear to fluctuate in conjunction with business cycles with the overall trend line moving upwards. During the Recession of 1949, the FHLBB foreclosure rate rose from just under 1 per 1,000 nonfarm dwellings to 2.17 per 1,000 nonfarm dwellings. While foreclosures declined during the Korean War boom, the FHLBB foreclosure rate began climbing again with the onset of the postwar recession. The foreclosure rate accelerated slightly during the 1957-1958 recession, moving from 2.08 to 2.46. The most dramatic jump came with the slump of 1960-1961 when the foreclosure rate surged upwards from 2.71 to 4.18 and continued rising until it reached 4.93 per 1,000 nonfarm dwellings in 1965. There was a brief decline during the War in Vietnam, but the 1970 recession reversed this downward trend. Between 1969 and 1974, the foreclosure rate climbed from 3.97 to 5.21.

Table 3 and Figures 4 and 5 represent the foreclosure experience of different categories of mortgages since 1950.³ Foreclosures in the FHA single-family home sector reached depression-style rates during the 1960s. VA foreclosure rates have moved in tandem with FHA foreclosures; however, after the period 1961-1964, VA foreclosures shrank to a considerably smaller proportion of total foreclosures on one- to four-family dwellings. Although the estimates of conventional single-family foreclosures in Table 3 are interesting, it is unclear how HUD derived them. Comparing the sum of FHA, VA, and conventional foreclosures to the FHLBB series (Table 1), it seems that HUD merely added the annual FHA and VA foreclosures together, subtracted this total from the FHLBB annual estimate, and assumed the remainder to be the total number of conventional single-family foreclosures. For the years 1961 to 1974, the total of FHA, VA, and conventional foreclosure in Table 3 equals almost exactly the annual FHLBB estimate of all nonfarm real estate foreclosures. For this reason, the HUD estimates of conventional home mortgage foreclosures should be viewed with some skepticism.

The only other source of data that provides a picture of the difference between foreclosure rates on conventional and FHA-VA mortgages is a series published by the FHLBB on mortgage foreclosures reported by FSLIC-insured savings and loan associations throughout the

³The data in these graphs and tables comes from the *Housing Statistics Handbook* published monthly by the Department of Housing and Urban Development and prior to 1964 by the Housing and Home Financing Agency. The series begins in 1950. Figures for conventional mortgages were not reported until 1961. The *Housing Statistics Handbook* does not explain how estimates for conventionals are derived. The VA and FHA figures represent numbers of foreclosed properties acquired by these agencies pursuant to their obligations as underwriters. The FHA series goes back beyond 1950; however, prior to that year "serious defaults" and "pending foreclosures" were lumped together.

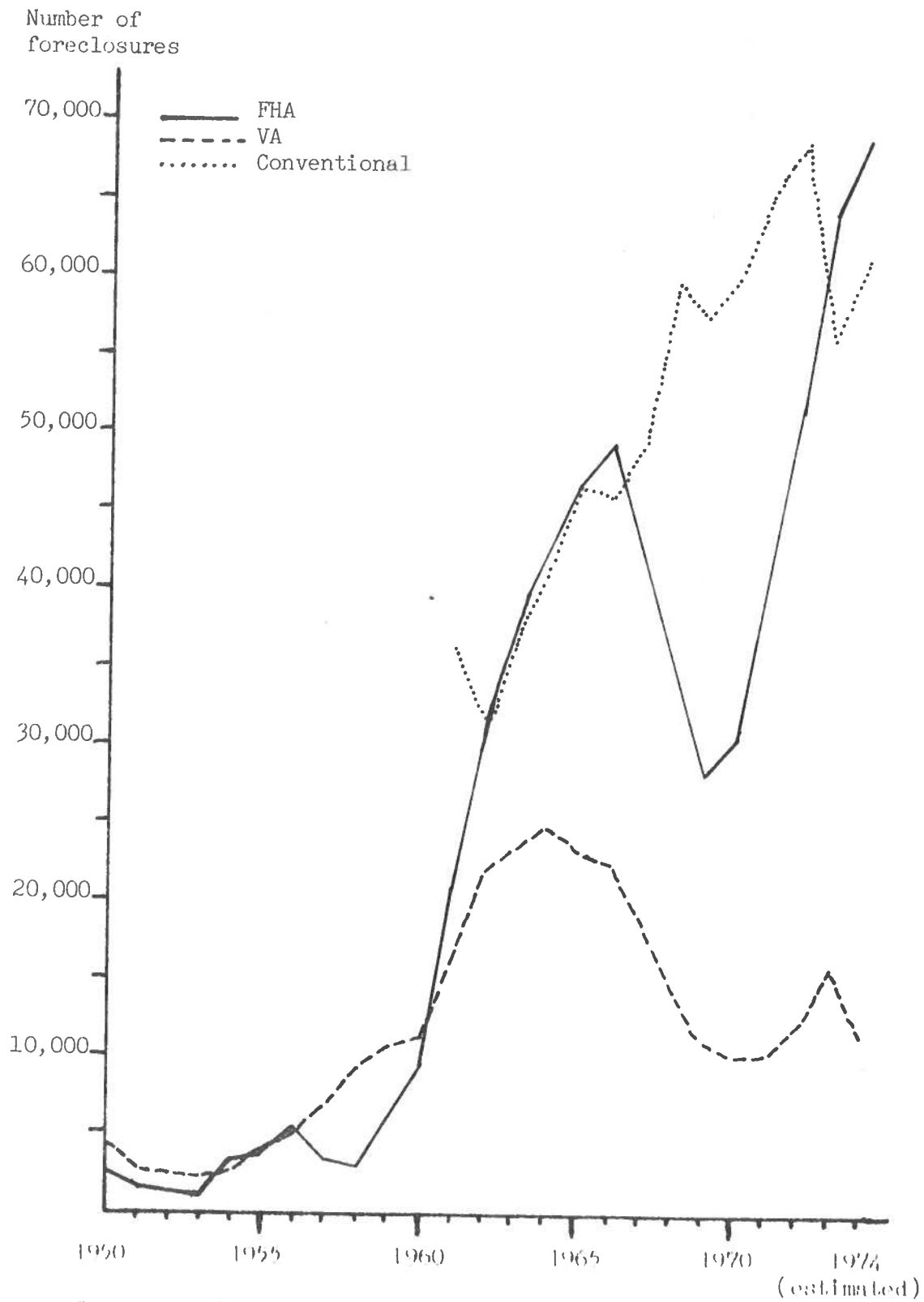
TABLE 3: FORECLOSURES AND FORECLOSURE RATES OF GOVERNMENT-INSURED AND CONVENTIONAL MORTGAGES ON ONE- TO FOUR-FAMILY DWELLINGS, 1950-1974

Year	Number of Foreclosures			Year	Rate Per 1,000 Insured Units	
	FHA	VA	Conven- tional		FHA	VA
1950	2,610	4,455	----	1950	2.00	2.92
1951	1,523	2,603	----	1951	1.01	1.33
1952	1,478	2,571	----	1952	0.89	1.11
1953	1,132	2,458	----	1953	0.63	0.98
1954	3,415	2,834	----	1954	1.77	1.04
1955	4,021	3,719	----	1955	2.00	1.24
1956	5,268	5,274	----	1956	2.46	1.53
1957	3,405	6,706	----	1957	1.53	1.78
1958	3,087	9,037	----	1958	1.34	2.31
1959	5,223	10,643	----	1959	2.03	2.75
1960	9,332	11,052	----	1960	3.25	2.86
1961	20,718	16,060	36,296	1961	6.70	4.19
1962	31,825	21,860	32,759	1962	9.65	5.75
1963	37,863	23,185	37,147	1963	10.89	6.24
1964	42,982	24,595	41,043	1964	11.80	6.72
1965	46,624	23,155	46,885	1965	12.08	6.46
1966	49,205	22,685	45,665	1966	12.03	6.46
1967	42,198	18,670	49,673	1967	9.93	5.44
1968	34,495	14,739	59,670	1968	7.84	4.27
1969	28,041	11,084	57,276	1969	6.14	3.18
1970	30,446	10,444	60,223	1970	6.35	2.93
1971	41,062	10,493	65,223	1971	8.70	2.85
1972	51,299	12,239	68,797	1972	10.20	3.22
1973	63,929	15,733	56,164	1973	11.70	4.26
1974	69,900 ^a	11,594 ^a	61,000 ^a	1974	NA	NA

^aEstimate

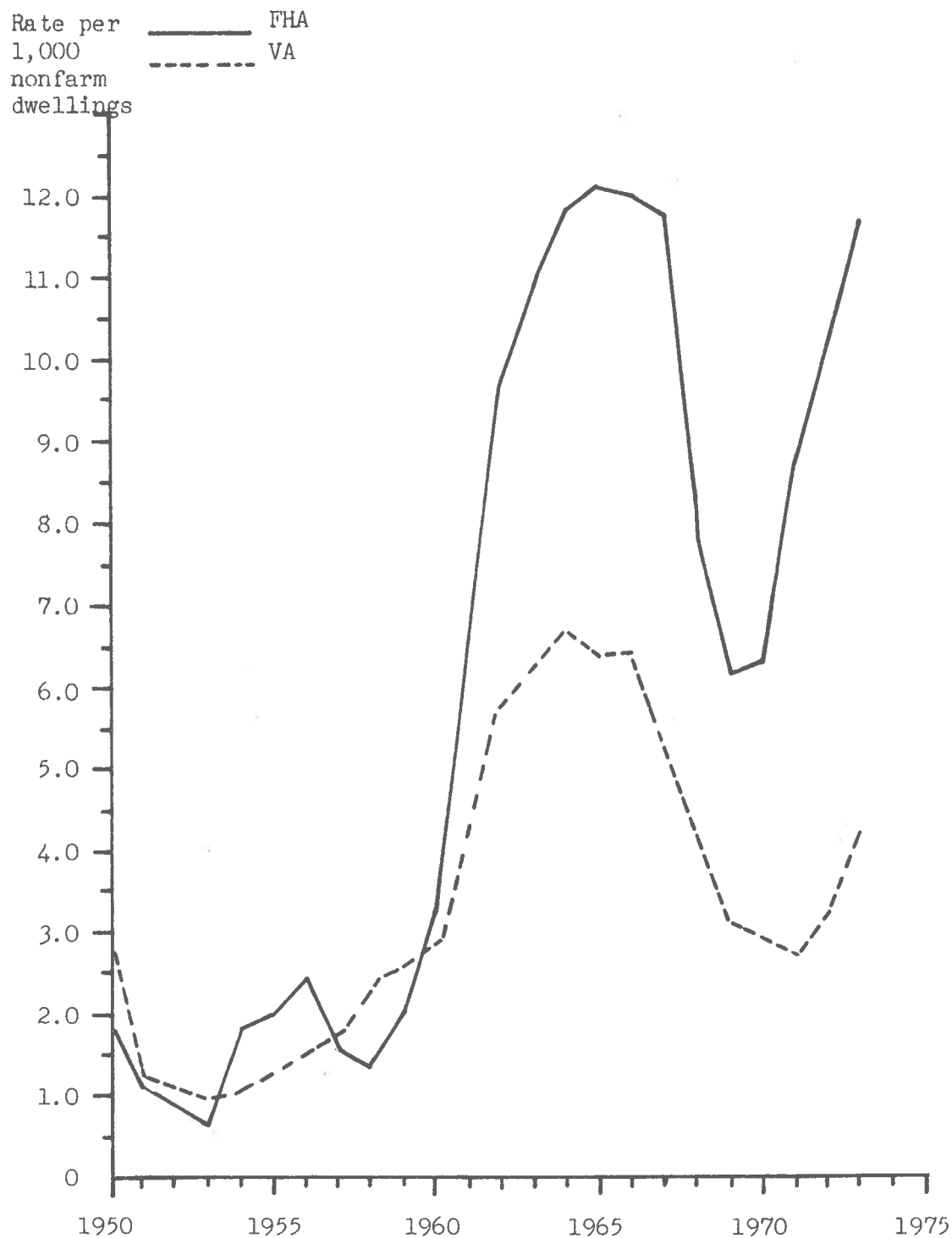
Source: U.S. Department of Housing and Urban Development and U.S. Housing and Home Financing Agency. *Housing Statistics Handbook*: various years 1960 through 1974.

FIGURE 4: NUMBER OF FORECLOSURES ON FHA, VA, AND CONVENTIONAL HOME MORTGAGES, 1950-1974



Source: U.S. Department of Housing and Urban Development and U.S. Housing and Home Financing Agency. *Housing Statistics Handbook*: various years 1960 through 1974.

FIGURE 5: FORECLOSURE RATES FOR ONE- TO FOUR-FAMILY DWELLINGS WITH FHA-INSURED AND VA-GUARANTEED MORTGAGES, 1950-1974



Note: FHA and VA rates are based on the total number of insured or guaranteed mortgages in each respective category.

Source: U.S. Federal Home Loan Bank Board, 1975.

country (Table 4 and Figures 6 and 7). These are not estimates based on samples but actual totals. Because savings associations have tended to shy away from FHA-VA insured mortgages in recent years, this series does not give an accurate reflection of the actual foreclosure rates on FHA-VA loans. Yet the series reveals a significant spread between foreclosure rates on conventional and government-underwritten mortgages which appears to have widened over time. In 1963, the FHA-VA foreclosure rate was just about *twice* the conventional rate; by 1974, it was over *five times* greater than the conventional rate.

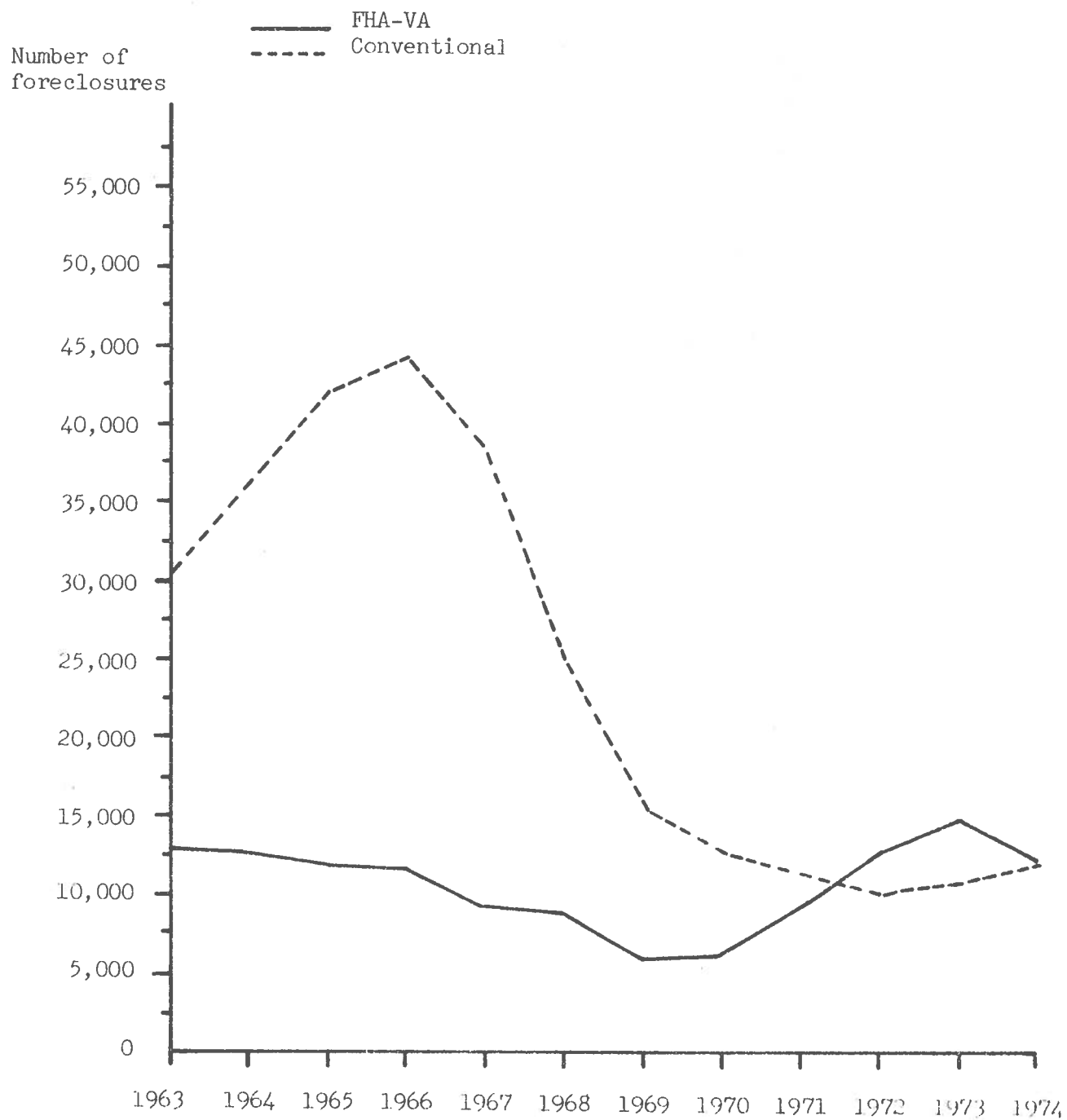
The only available source of foreclosure rate data for individual states is the Mortgage Bankers Association monthly *National Delinquency Survey*. This publication contains estimates of delinquencies, defaults, and foreclosures in process for each state. However, because of irregular sampling procedures and the variability of the duration of the foreclosure process between states as well as within states, this source can provide no accurate point estimates of foreclosure rates by state. Rather, the *National Delinquency Survey* statistics are rough indicators of delinquency and foreclosure activity.

TABLE 4: MORTGAGE FORECLOSURES REPORTED BY FSLIC-INSURED SAVINGS AND
LOAN ASSOCIATIONS, 1963-1974

Year	All Mortgage Types		Conventional		FHA-VA	
	Number	Rate (per 1,000 loans held)	Number	Rate (per 1,000 loans held)	Number	Rate (per 1,000 loans held)
1963	42,953	5.05	30,161	4.18	12,792	9.95
1964	49,076	5.44	36,483	4.71	12,593	9.89
1965	53,788	5.70	41,817	5.12	11,971	9.47
1966	55,729	5.76	44,184	5.23	11,545	9.29
1967	47,435	4.83	38,310	4.47	9,125	7.39
NEW SERIES						
1968	32,512	3.24	25,436	2.89	7,076	5.55
1969	21,535	2.09	15,572	1.74	5,963	4.35
1970	19,493	1.86	12,777	1.41	6,176	4.61
1971	20,464	1.89	11,278	1.21	9,186	5.49
1972	22,958	1.99	10,045	1.04	12,913	6.87
1973	25,275	2.08	10,639	1.03	14,636	7.70
1974	24,230	1.92	11,945	1.12	12,285	6.23

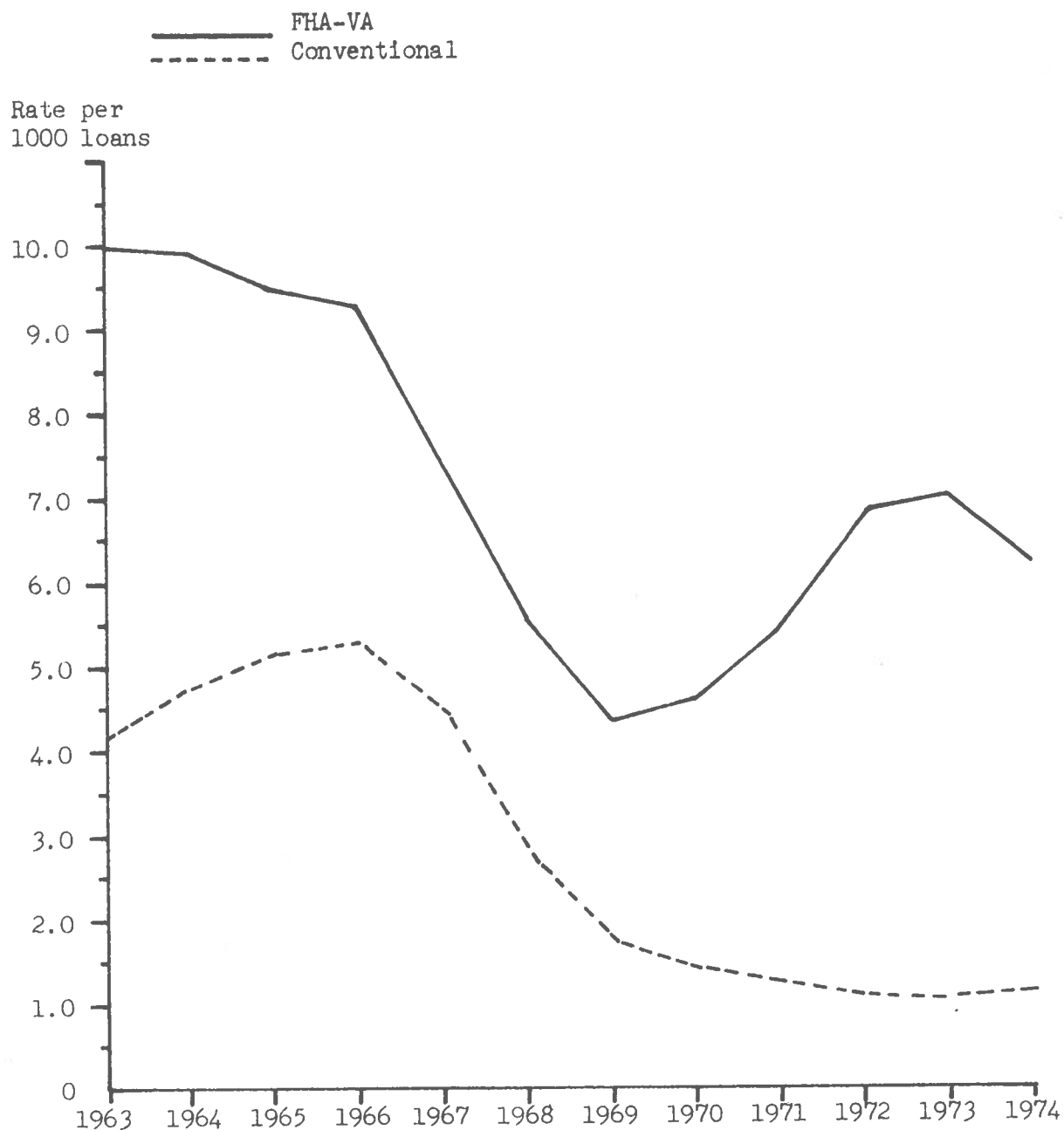
Source: U.S. Federal Home Loan Bank Board, 1975.

FIGURE 6: MORTGAGE FORECLOSURES AS REPORTED BY FSLIC-INSURED SAVINGS AND LOAN ASSOCIATIONS, 1963-1974



Source: U.S. Federal Home Loan Bank Board, 1975.

FIGURE 7: FORECLOSURE RATES AS REPORTED BY FSLIC-INSURED SAVINGS AND LOAN ASSOCIATIONS, 1963-1974



Note: Conventional and FHA-VA foreclosure rates are based on the total number of insured or guaranteed mortgages in each respective category.

Source: U.S. Federal Home Loan Bank Board, 1975.

III. THE INCIDENCE OF FORECLOSURE

INTRODUCTION

Overview of Foreclosure Research

The literature on foreclosure is both meagre and limited in scope. Its thinness is unusual considering the scale on which foreclosures occurred during the first half of the century. One might expect that the voluminous literature on business cycles would contain some substantive discussion of foreclosure, which is the most widespread form of financial failure during economic slumps. However, the major works on business cycles contain little mention of the subject (Mitchell, 1927; Hayek, 1933; Schumpeter, 1939; Mitchell, 1941, 1951; Harberler, 1958; Rothbard, 1963).

By and large, the bulk of the literature on foreclosure reflects the viewpoints, concerns, and interests of lenders and underwriters. The various studies on incidence which we will cite below have been researched and written from one side of the foreclosure process, as it were. They were conducted with the explicit objective of defining for lending and underwriting practice the "lessons" that could be learned from the mass foreclosure experiences since World War I. As a result, the data source for these studies is also limited mainly to the records of lending and underwriting institutions--commercial banks, insurance companies, savings and loan associations, and the federal government.

Very little, by contrast, has been written from the mortgagor's point of view. Part of the difficulty is that lending and underwriting

institutions document their own behavior with regard to foreclosure. So do the courts. The mortgagor does not, however. And, if the mortgagor does, such documentation is rarely located in one single place. The data are thus extremely difficult and costly to obtain. The few studies which have attempted to survey mortgagors and use mortgagors as a source of data have not been very successful, on the whole. At the same time, the viewpoint and the issues established even in these latter studies still reflect the orientations of lending institutions to the foreclosure process (HHFA, 1963; Lefcoe, 1975). As a result, some very important questions are brushed over. For example, the issue of the losses (both financial and non-economic) which the mortgagor suffers under the current form of the foreclosure process as well as the failure of the federal government to underwrite those losses in the federal mortgage insurance programs devised since the 1930s are dealt with only by authors who write from an "independent" viewpoint (Abrams, 1939; Dean, 1945; Abrams, 1946).

The literature itself can be divided into four main categories. The first consists of a number of studies which came out of the 1930s and the experience of the Home Owners Loan Corporation. The HOLC used its own records to study foreclosure costs and the financial determinants of foreclosure (Russell, 1937). In addition, HOLC surveys conducted during the 1930s contain the only available data on the socio-economic characteristics of the mortgagors who experienced foreclosure during that era. Other studies from this period include a definitive legal treatise on mortgage foreclosure (Wiltsie, 1936), a general study of the mortgage as a financial instrument (Lodge, 1935), and an examination of forms of debtor relief instituted during the period (Skilton, 1944).

The second sub-body of the foreclosure literature consists of a series of National Bureau of Economic Research studies of mortgage finance conducted between 1948 and 1958. None of these dealt comprehensively with foreclosure, but in the process of investigating various aspects of the mortgage system, the foreclosure experience of mortgage lending institutions in the 1930s was also reviewed in some depth.

The NBER studies of most relevance to us are the case studies of mortgage lending by commercial banks (Behrens, 1952), life insurance companies (Saulnier, 1950), and mutual savings banks (Lintner, 1948). Morton's *Urban Mortgage Lending* (1956) summarizes the findings of all these investigations. The NBER volumes also include an analysis and description of the policies of the HOLC (Harriss, 1951).

The third category consists of studies conducted in the 1960s which draw on foreclosure data from the late 1950s and early 1960s. Much of this research was sponsored by federal agencies such as the Federal Housing Administration (*FHA Experience with Mortgage Foreclosures and Property Acquisitions*, 1963), The Veterans Administration (*Veterans Administration Report of Loan Service and Claims Study*, 1962), and the Housing and Home Finance Agency (*Mortgage Foreclosures in Six Metropolitan Areas*, 1963). The other studies from this group are primarily statistical analyses of default and foreclosure risk, the best of which is Von Furstenberg's *Technical Studies of Mortgage Default Risk* (1971).

The fourth and final group consists of Congressional Hearings on FHA foreclosures since 1968. Three Congressional committees investigated the FHA between 1969 and 1974: the House Committee on Government Operations, the House Banking and Currency Committee (now

called the House Committee on Banking, Currency and Housing), and the Senate Judiciary Committee. The gist of these hearings was summarized in journalist Brian Boyer's *Cities Destroyed for Cash* (1974).

There are a number of valuable journal articles in each group; however, most of these are either derived from the larger works cited above, or seek to clarify issues originally elaborated in these longer studies. Some of the more scholarly pieces were published during the 1930s in *Land Economics*. The more recent articles have appeared in real estate and finance trade journals (*Savings and Loan News*; *The Mortgage Banker*; *The Appraisal Journal*; *Real Property, Probate Law and Trust Journal*; and *Law and Contemporary Problems*). Citations for all of these studies and journal articles can be found in the bibliography at the end of this paper.

The Key Issues

What are the socio-economic characteristics of foreclosed mortgagors? Are foreclosures concentrated in any specific economic, social, or occupational group? What kind of mortgage loans and properties tend to fall into foreclosure?

A good deal of the literature on foreclosure has focused on these questions in terms of the default risk borne by mortgage lenders. By *risk* we mean the degree of probability of loss of expected income or capital from a mortgage loan (Grebler, 1965). Much of this literature seeks to define for lending practice those characteristics of the mortgaged property, the borrower, and the mortgage contract which determine the foreclosure risks associated with any particular mortgage loan (Fisher and Rapkin, 1954; Morton, 1956; U.S. FHA, 1963; Kendall, 1965; Herzog and Earley, 1970; Von Furstenberg, 1971). The objective of these studies

is to determine the probability of foreclosure and attendant losses associated with these characteristics.

THE BORROWER

Studies on the Depression Era

Until the 1960s very little foreclosure research dealt with the socio-economic characteristics of borrowers. More investigations concentrated on terms of financing associated with foreclosed mortgages. Most data on borrower characteristics from the 1930s is fragmentary. In terms of economic class, the collapse of real estate markets during the Great Depression seems to have affected both rich and poor alike. John Dean (1945) cites several studies of foreclosures in midwestern cities which found the largest number of foreclosed structures in the "new... and better residential districts."

These were also the areas most heavily encumbered and, therefore, the ones in which more were buying homes and thus in a position to lose them. This situation probably reflects in part the delirium of the 1920s, which affected the middle classes more markedly than the workers (Dean, 1945, p. 86).

One history of the 1920s attributes the rise of foreclosures between 1926 and 1929 to the collapse of the suburban construction boom.

But the suburban boom itself did not begin to languish in most localities until 1927 or 1928. By that time many suburbs were plainly overbuilt: as one drove out along the highways, one began to notice houses that must have stood long untenanted, shops with staring vacant windows, districts blighted with half-finished and abandoned "improvements"; one heard of suburban apartment houses which had changed hands again and again as mortgages were foreclosed, or of householders in uncompleted subdivisions who were groaning under a naively unexpected burden of taxes and assessments (Allen, 1964, p. 239).

However, Dean also cites some personal observations to the effect that homes valued at less than \$6,000 suffered a much greater

rate of foreclosure than those above that price. Homes in the price range below \$6,000 in those days tended to be owned by wage earners (p. 87).

The only empirical study of the socio-economic characteristics of borrowers who were foreclosed during the Great Depression era is based on the HOLC experience with home mortgage refinancing and foreclosures. The HOLC was set up by the federal government in 1933 with the primary aim of bailing out the savings and loan industry and millions of homeowners. The agency exchanged its bonds with savings associations for defaulted and foreclosed mortgages. The HOLC then refinanced those mortgages which could be saved. It even refinanced home mortgages involving borrowers who had lost their homes as far back as 1930--thus relieving the savings and loan associations of some of their "real estate-owned" holdings (Tough, 1951). Within two years, one out of every ten outstanding home mortgages in the country had received some type of HOLC financing (Harriss, 1951).

Two classes of homeowner survey data are available in HOLC records. The first consists of the recipients of HOLC refinancing and loans. These homeowners were in default, on the verge of being foreclosed or already had been foreclosed before their mortgages were taken over by the HOLC. Of the 1,018,000 mortgages refinanced by HOLC, 120,175 were in foreclosure when they were taken over; 150,000 were in serious default; 270,144 were in default with mortgage payments being over three months past due; and 247,552 were in arrears one to three months (U.S. HOLC, 1937). The other class of homeowners consists of those who held HOLC-refinanced mortgages which the HOLC itself foreclosed during the 1930s and 1940s. During its existence, the HOLC foreclosed on over 200,000 mortgages--half of which were completed by 1940. *Both* recipients of HOLC financial aid *and*

mortgagors foreclosed by the HOLC after receiving aid may be viewed as representative of the homeowners who lost their properties during the Depression era.

A sample of HOLC loan recipients in the New York area in 1934 showed that two-thirds of those who received HOLC aid had monthly family incomes of \$150 or less--or \$1,800 on an annual basis. This corresponds roughly to the income class of wage earners during that time.⁴ The HOLC sample was biased, however, by the fact that unemployed applicants were rarely given refinancing (Harriss, 1951).

The HOLC sample from New York also included data on the age of applicants given aid. Approximately 65 percent were owner-occupants between the ages of 35 and 55. By comparison, 55 percent of the nonfarm owner-occupied dwellings in the New York region were held by people in this age cohort. At the same time, only 10 percent of those receiving HOLC aid were under 35 years of age, and only 23 percent were over 55 years. Harriss, in his study of the HOLC, concludes that a smaller percentage of owners in the highest age brackets (over 55 years) had a mortgaged home than did younger owners; and where there was a mortgage, the older homeowner had presumably reduced it by repayment (p. 51).

As for race or ethnic background, data from HOLC appraisal forms on neighborhood characteristics show that 44 percent of the properties

⁴A Brookings Institution study of income distribution in the U.S. entitled *America's Capacity to Consume* by Maurice Leven and Harold G. Moulton (1934) described nonfarm families in 1929 with incomes under \$2,700 as "predominantly the families of wage earners who numbered 16 million in 1929 or 59 percent of the total number of families in the nation." If one adjusts this figure by 30 percent to account for the depression-induced decline in the incomes of owner-occupant families between 1929-1933 (Wickens, 1938), then this income class of families with incomes of \$1,800 or less identified by the HOLC sample corresponds to that of wage earners as defined by the Brookings Institution's study and the HOLC sample.

owned by aid recipients were located in "native white" neighborhoods and 42 percent in neighborhoods described as "native white and foreign." Only 1 percent of the appraisals covered neighborhoods described as "negro"; the remainder of the structures were located in mixed areas. This may reflect the peculiarities of residential segregation in the New York area prior to World War II. However, the national rate of home ownership among urban blacks was extremely low at this time.

The HOLC experience with foreclosures of the mortgages the agency itself held tells a somewhat different story. Harriss took a sample of 3,883 loans from HOLC files in the New York metropolitan area. Of these, 38.6 percent were still active, 25.7 percent had been paid off, and 35.7 percent had been foreclosed. Harriss then tried to determine if borrower or mortgage characteristics correlated with foreclosure experience. He found that borrower's income was not a significant determinant of foreclosure probability. Only on large loans (\$4,000 or more) did borrower's income show a significant influence on foreclosure rates. Thus, according to HOLC foreclosure data, foreclosure rates during the 1930s were higher for both low-income and upper-income borrowers on the one hand, and lower for middle-income borrowers.

In addition, both very young borrowers (under 30 years of age at the time a loan was financed) and older borrowers (over 50 years of age) had higher foreclosure rates than did those 30 to 49 years old. Close to one-half of the borrowers under 30 years of age in the sample suffered foreclosure. We do not know whether HOLC foreclosures were representative of the population of foreclosed mortgagors generally. If they were, this finding as to age is important, for the studies of the 1960s, which we will turn to next, found similarly a high incidence of foreclosure among mortgagors below the age of 35.

Post-War Research

Other investigations of borrower characteristics were made in the 1960s. In response to sharply rising default and foreclosure rates at that time, agencies of the federal government, the United States Savings and Loan League (USSLL), and the National Bureau for Economic Research conducted studies of mortgage default, delinquency, and foreclosure (VA, 1962; FHA, 1963; HHFA, 1963; Kendall, 1964; NBER, 1970).⁵

The United States Savings and Loan League study of home mortgage defaults used a sample of 3,800 conventional loans (100 each from 38 large associations located in major metropolitan centers across the country). None of the loans had been foreclosed--all were delinquent or officially in default. Leon T. Kendall, the principal investigator, found that the income distribution for delinquent borrowers did not differ significantly from that for nondelinquent borrowers. The median family income of both delinquent and nondelinquent borrowers was very close to the national median family income figure in 1965--\$7,000.

In terms of occupation, the USSLL sample showed that delinquencies were highest for self-employed persons, unskilled laborers, and salesmen. These groups had delinquency rates which exceeded their frequency of representation among borrowers as a whole. Also,

⁵ These are the most thorough empirical studies of home mortgage foreclosure available. With the exception of multiple regression analyses by George Von Furstenberg (1971) and an unpublished investigation of default and foreclosures in FHA-insured home mortgages by George Lefcoe (1975), nothing comparable to the studies of the 1960s has been undertaken. The subject of investigation in these former works was the wave of foreclosures of the 1960s. Lefcoe's study focuses on the foreclosure wave which started in 1970. Future investigators of home mortgage foreclosure might do well to use some of the findings of the studies of the 1960s as working hypotheses to determine whether these findings can be replicated using foreclosure data from the early 1970s.

delinquency rates were greatest for borrowers who had held their main job five years or less. In terms of age and other family characteristics it was found that borrowers under forty years of age had higher delinquency risk than borrowers above forty. Widowed and divorced borrowers also tended to have higher delinquency rates as did borrowers with three or more dependents.

Agnew, in a study of foreclosures in Fresno County, California during the 1960s, found a similar pattern of incidence with respect to occupational categories. Over 30 percent of the 220 cases in his sample involved mortgagors who were self-employed, professionals, salesmen, and managers or owners of very small businesses. Another 30 percent were in service occupations and retail trade (Agnew, 1966).

The FHA study of foreclosures on FHA-insured mortgages also included information on the characteristics of borrowers.⁶ The only borrower characteristic examined was income. The findings, however, were not significant. While there was some correlation between income bracket and foreclosure, it was rather weak.

⁶The FHA study took a sample of 20 percent of the properties acquired through foreclosure by the agency between July 1, 1961 and March 31, 1962. Each case was subject to an intensive and complete "underwriting reprocessing"--that is, the same process of risk evaluation and analysis usually undertaken before a commitment to insure is issued. New credit reports on borrowers at the time of foreclosure were also obtained and used in tabulating frequency distributions of characteristics of all insured home mortgages and of the characteristics of the sample of foreclosed mortgages. Distributions were divided into from five to ten cohorts. Foreclosure rates were computed by dividing the percent score of foreclosed mortgages for a particular cohort by the percentage score of all FHA mortgages for that same cohort.

The VA study⁷ focused on VA loans and examined only the age of borrowers. It found that default rates were highest for borrowers under 30 years of age. This age cohort represented Korean War veterans, whose average age in 1961 was approximately 29.9 years. Borrowers of 50 years and up also had higher default rates.

Mortgage Foreclosures in Six Metropolitan Agencies, by far the most thorough of the federal government studies, was published by the Housing and Home Finance Agency in June, 1963.⁸ The study examined family income, occupation, age, and race of borrowers for FHA, VA, and

⁷ The VA study used a sample of 33,376 GI loans in default--32.9 percent of all loan defaults processed for the period of fiscal years 1955-1961. Only 13.7 percent were ultimately foreclosed. In 7,964 cases, borrowers were directly surveyed as to reasons for default. The study also analyzed factors affecting duration of default period and cure rates.

⁸ The HHFA study samples covered the period of April 1961-March 1962 and were drawn from Chicago, Dallas, Detroit, Los Angeles, New York, and Philadelphia SMSAs. The samples included FHA, VA, and conventional mortgages which had been foreclosed on a total of 2,700 nonfarm, owner-occupied, one- to four-family dwellings. Approximately 2,442 of these were single-family homes. Borrower schedules were obtained for 957 families, or nearly two-fifths of the foreclosures. The sample also included a small number of deeds-in-lieu.

The sample of borrower schedules was small compared to the main sample and for that reason may be unreliable. However, there was a good deal of conformity on various family and loan characteristics between the large sample and the borrower sample, which may indicate that the borrower sample is reliable after all. The HHFA drew its samples from FHA (511 cases) and VA (853 cases) files. The Bureau of the Census drew the conventional sample (1,170 cases) from private lenders, including savings and loan associations, mortgage companies, commercial banks, mutual savings banks, and life insurance companies.

All citations from the FHA, VA, and HHFA studies refer to complete texts published in the House Banking and Currency Committee's *Hearings on FHA Mortgage Foreclosures* (88th Cong. 2d Sess., 1964).

conventional loans. With respect to *annual family income*,⁹ Table 5 shows that in the HHFA studies foreclosed borrowers tended to be in the lower- and lower-middle income ranges.

TABLE 5: PERCENTAGE DISTRIBUTION OF BORROWER FAMILY INCOME OF FORECLOSED PROPERTIES BY TYPE OF LOAN

<u>Annual Family Income</u>	<u>Percentage</u>	
	<u>FHA</u>	<u>VA</u>
Under \$4,000	6.0	17.0
\$4,000 - \$4,999	19.0	27.0
\$5,000 - \$6,999	47.0	36.0
\$7,000 - \$8,999	20.0	14.0
\$9,000 or more	8.0	6.0
TOTAL	100.0	100.0

Source: U.S. HHFA, 1963.

According to the 1960 census, median family income in the United States was \$5,620. In terms of 1960 prices, one could classify all families in the United States in 1960 as low-income (under \$4,000), middle-income (\$4,000-\$8,999), and high-income (\$9,000 and above). Using these definitions, FHA foreclosures are concentrated in the middle- to lower-middle income ranges. VA foreclosures have higher frequencies among the lower-income bracket (17 percent) and the lower-middle range (27 percent). For the six metropolitan areas studied, the frequency distributions varied to some degree. In the Northeast and the Midwest, the proportions of cases in the low-income category were higher. About

⁹Family income was defined as annual after-tax earnings, including overtime pay and earnings of other family members.

two-fifths of the foreclosed borrowers in the Philadelphia SMSA sample, for example, had annual incomes of less than \$4,000. In the West and the South, the middle-income ranges had higher percentages.

As for conventionals, about one-third of the foreclosures for each SMSA involved borrowers with family incomes of \$5,000-\$6,900. The rest of the conventional foreclosure cases were widely scattered among all income classes in all the SMSAs except New York, where about four-fifths of the foreclosure borrowers had incomes of \$9,000 and above. In the Philadelphia SMSA, on the other hand, about 30 percent of the foreclosed conventional mortgages were held by homeowners with incomes of less than \$4,000.

In terms of *occupation*, the highest concentrations of foreclosures occurred among blue-collar workers in both FHA, VA, and conventionals (Table 6). Frequencies for the professional, technical, and managerial category were somewhat higher on the average for conventional mortgages. The HHFA study underscored the rather high frequencies of foreclosure among blue-collar workers by pointing out that, according to the Department of Labor, during the period from January 1961 to January 1962--when the foreclosures in the study samples occurred--nonfarm laborers, operatives, craftsmen, and foremen suffered the "highest unemployment rates" of all occupations (HHFA, 1963, p. 329).

As for the age of the foreclosed borrowers, about 46 percent of FHA and 59 percent of VA borrowers were in the 25-34 age category. Generally speaking, high proportions of FHA and VA borrowers tend to fall into this age cohort. Thus the concentration of foreclosures in this cohort reflects only the concentration of all FHA-VA borrowers in this age group. Some of the other studies we have cited in this paper also show

TABLE 6: PERCENTAGE DISTRIBUTION OF FORECLOSURE CASES OF BORROWERS IN INDIVIDUAL SMSAs BY OCCUPATION AT TIME OF LOAN ORIGINATION

	<u>Conventional</u>					
	Chicago	Dallas	Detroit	Los Angeles	New York	Philadelphia
<u>Total number reporting</u>	116	36	56	109	14	75
Professional, technical, or managerial	19.8	22.2	25.0	17.4	21.4	14.7
Clerical, sales, or service workers	23.3	19.4	23.3	22.9	28.5	25.4
Craftsmen or foremen operative	50.0	55.6	51.8	47.7	42.8	48.0
Nonfarm laborer	6.9	2.8	---	10.1	7.1	6.7
Unemployed	---	---	---	1.8	---	4.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

	<u>FHA</u>					
	Chicago	Dallas	Detroit	Los Angeles	New York	Philadelphia
<u>Total number reporting</u>	14	36	53	20	17	39
Professional, technical, or managerial	---	22.2	18.9	10.0	23.5	7.7
Clerical, sales, or service workers	35.7	19.5	20.8	10.0	17.7	38.5
Craftsmen or foremen operative	50.0	55.6	52.9	60.0	52.9	48.7
Nonfarm laborers	14.3	2.8	7.5	15.0	5.9	5.1
Unemployed	---	---	---	5.0	---	---
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 6: continued

	<u>VA</u>					
	Chicago	Dallas	Detroit	Los Angeles	New York	Philadelphia
<u>Total number reporting</u>	68	22	88	102	16	62
Professional, technical, or managerial	7.3	13.7	8.0	19.6	6.3	14.3
Clerical, sales, or service workers	16.2	18.1	14.8	.5	43.7	17.8
Craftsmen or foremen operative	72.0	63.6	72.7	53.9	43.7	54.9
Nonfarm laborer	4.4	4.6	4.6	4.9	---	16.1
Unemployed	---	---	---	---	6.3	---
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: U.S. Housing and Home Finance Agency, 1963.

that mortgagors between the ages of 25-34 are particularly prone to mortgage failure. Thus, when government mortgage underwriting programs have large concentrations of mortgagor-participants who are either in the lower age cohorts or who are first entering the single-family market (and therefore have little equity), these programs will experience abnormally high foreclosure rates.

In terms of *racial characteristics*, the HHFA study found that non-whites accounted for 16 percent of foreclosed FHA borrowers and 12 percent of VA foreclosed borrowers. Conventional foreclosures in three SMSAs--Detroit, Los Angeles, and Philadelphia--involved non-white borrowers in 21 to 27 percent of the cases. In the New York SMSA, 35 percent of FHA and 31 percent of VA foreclosures involved non-whites; in the Philadelphia SMSA sample, 25.6 percent of FHA and 42.4 percent of VA foreclosures involved non-whites. In all categories, non-white foreclosed borrowers did not appear in the Dallas SMSA sample except for 2.8 percent in the case of FHA loans. The HHFA study commented on these findings by pointing out that in Detroit, New York, and Philadelphia the "percentages of foreclosed homes in non-white home ownership were well above the percentage of non-white mortgaged home ownership that had been indicated in the 1960 Census of Housing" (HHFA, 1963, p. 331).

Most of the other studies which have examined borrower characteristics represent highly sophisticated empirical investigations of delinquency and foreclosure risk using multiple regression analysis (Von Furstenberg, 1971; Herzog and Earley, 1970; Lefcoe, 1975; Teitz et al., 1975). None found age or occupation to be significant, although the NBER study by Herzog and Earley showed that borrowers who were self-employed or salesmen displayed a higher delinquency risk than other

occupations. Von Furstenberg has published the findings of a recent investigation on the effects of age of property and race on mortgage delinquency (1975).¹⁰ The paper concludes that while neighborhoods with high concentrations of black residents tend to have a higher than normal delinquency rate, neighborhoods with a rapidly increasing percentage of blacks tend to have a lower than normal delinquency rate. The reason for the difference is that the blacks who first move into white central city neighborhoods tend to have higher and more stable incomes.

On the subject of the borrower's income as a determinant of foreclosure, Von Furstenberg's regressions using FHA data on defaults from 1957-1966¹¹ showed a significant relationship between low incomes and high risk of default. Elasticity of default rates with respect to mortgagor income was $-.7$ with a standard error of $.1$. Thus reducing mortgagor income from \$8,000 to \$4,000 (in 1957-1959 dollars) almost doubles default risk if the loan-value ratio of the mortgage is held constant.

Lefcoe's (1975) study of FHA-insured home mortgage defaults and foreclosures found significant relationships between income and probability of default. In the case of Section 235 mortgages, decreasing weekly pay from \$200 to \$150 increases probability of default from 25 to 33 percent. Lefcoe also found that a major determinant of default and foreclosure was the type of tenure which characterized the borrower's previous residence. Borrowers who had not owned their

¹⁰The study was based on a sample of 6,675 mortgages for several lending institutions in the Pittsburgh-Allegheny County area.

¹¹The samples used in the Von Furstenberg studies were supplied by the FHA Division of Research and Statistics. The sampling ratio varied from 80 percent in 1957 to 25 percent in 1965.

previous residence had a higher probability of default, the only exception being in cases from 221(d)(2) program. The relationship between job tenure and probability of default was also significant. The longer the number of weeks worked at one place of employment, the lower the probability of default. Job tenure in this case is a proxy for income stability; however, low income itself is obviously not the problem. It is low income in relation to the financial burden of monthly mortgage payments which is the crucial variable. Williams, Beranek, and Kenkel did a multiple regression analysis of 1,500 mortgages originated in the Pittsburgh area by savings and loans between 1962-1972. Only 125 had been foreclosed; a significant proportion of the rest had experienced one or more defaults. Among other things, their regression analysis showed that the ratio of monthly mortgage payment to monthly income was a significant predictor of the probability of default. Moreover, they found that the relationship was curvilinear, indicating that the default risk increases more than proportionately as the ratio rises (1974).

THE PROPERTY AND URBAN LOCATION

Locational physical characteristics of mortgaged property are considered an important predictor of foreclosure. However, these characteristics have been viewed throughout most of the literature as less reliable in assigning risk classifications to particular mortgages than borrower and mortgage characteristics.

The HOLC foreclosure data analyzed by the National Bureau of Economic Research revealed that during the 1930s low-value structures with one to five rooms had lower foreclosure rates than homes with higher values and nine to eleven rooms or more (Harriss, 1951). Properties with the "most up-to-date and adequate heating and bathroom facilities" also

had higher foreclosure rates. Harriss explains this somewhat unexpected correlation by concluding either "that the HOLC was less lenient in delaying foreclosures on the higher-priced properties, that their sale to escape foreclosure was more difficult than the sale of more modest properties, or the economic recovery was slower and less complete for this group of borrowers than for those with less expensive properties" (p. 92). About 55 percent of the foreclosed properties in the New York HOLC sample were relatively new--most had been built during the 1920s. In the national HOLC surveys, on the other hand, age of the house seems to have had no consistent relation to foreclosure experience (Harriss, p. 94). This was true regardless of the size of the population of the city in which the property was located and the neighborhood characteristics. Nor were foreclosure rates significantly related to degree of depreciation.

The findings on property and urban location characteristics in the foreclosure and default studies of the 1960s reflect in part the phenomenal expansion of housing markets and suburbanization of the postwar era. Kendall's investigation of default rates on home mortgages from savings and loan associations showed that "mass market" properties had the highest rates--that is, new suburban homes which were financed by builder-loans or carried junior mortgages and were located in the \$10,000-\$15,000 price range. As an explanation for the higher default rates on these mortgages, Kendall alleged that "these are the loans on which loan officers are subjected to the greatest pressure to 'bend' on terms and loan quality standards."

The FHA study on foreclosures revealed similar findings. Frequency of defaults was greater for newly constructed homes with a size of 1,000 square feet or less and a price between \$10,000-\$12,000.

This is the same type of "mass market" home which Kendall found experienced the highest default rates.

The HHFA study produced similar findings. On the average, close to 63 percent of the foreclosures in the FHA and VA samples were "mass-market" homes--small, newly-built houses in the \$10,000-\$15,000 range. However, there was some significant variance. While 73 percent of the homes in the VA sample were built after 1954, only 44 percent of the FHA foreclosures were built after that year. Another 24 percent of the FHA homes in the sample were constructed between 1950 to 1954. In the conventional mortgage sample, close to half of all foreclosures in the Los Angeles and Dallas SMSAs involved homes built between 1955-1958. By contrast, in the Detroit and Philadelphia SMSAs over one-half of all conventional mortgage foreclosures in the sample were built prior to 1949. These regional differences reflect the large concentration of new construction in the South and Pacific West areas.

The foreclosures on older properties deserve special mention. In the Philadelphia SMSA, the HHFA study observed that one-half of the FHA and two-thirds of the VA and conventional foreclosures involved older homes (built in 1949 or earlier). Both lenders and the FHA considered these properties to be "unusually risky" investments. The down payments as a percentage of the original sales price of these older homes were often two to three times larger than on newer homes.

The higher down payments reflect lenders' requirements for higher down payments on older homes. The pattern which emerges among the foreclosed homes tends to confirm the higher risk of declining value in older homes.... Older homes that went to foreclosure evidently had declined in market value so that the selling price would not exceed the outstanding loan balance plus selling expenses, despite a significant down payment a number of years ago (HHFA, 1963: p. 37a).

Apparently, the 1960s foreclosure experience involved on a much smaller scale the same process of disorganization of housing markets that now so desperately afflicts the central cities of Chicago, Newark, New York, Cleveland, Detroit, Philadelphia, and St. Louis.

Conducted in the late 1960s, Von Furstenberg's investigation of FHA defaults and foreclosures (1971) generated similar findings. Using multiple regression analysis, he showed that default levels on existing homes with FHA twenty year mortgages were four times as high as comparable ones on "new" homes financed on the similar terms.

"Existing" homes financed for less than thirty years... generally will already have depreciated with time and use at the time of endorsement, and hence their economic life expectancy is abridged. They will also more frequently be located in deteriorating neighborhoods, although "redlining," barring insurance in decaying areas of the center cities, was still practiced during the time here covered. The difference between the remaining economic life on "new" and "existing" homes is thus expected to be greater, the shorter the financing (p. 22).

THE ANALYSIS OF MORTGAGE CHARACTERISTICS

The incidence of foreclosure with respect to terms of financing has been explored more intensively than any other aspect of foreclosure. Financing terms are presumably the most significant predictors of the riskiness of a mortgage (Lodge, 1935; Beach, 1938; Saulnier, 1950; Morton, 1956; Moore, 1956; Grebler, 1963; Fisher, 1966). Terms of financing determine risk classifications--high interest, highly leveraged, long-term investments having a greater default risk than low-interest, high equity, short-term investments.

The Loan-Value Ratio

The real estate investment contains two interests--the major interest (the mortgage) and the minor interest (the equity). Only the lender's interest in a property is secured and is accompanied by a fixed return. When the borrower enters a mortgage contract, he gives up a secured interest in the property and limits himself to the speculative possibilities of the equity arising from fluctuations in the value over the life of the investment. It is the relative size of the equity and mortgage interests which is used as a risk predictor (Page, 1964; Maisel, 1965).

The NBER studies of urban mortgage lending found that only the loan-value ratio was clearly associated with high foreclosure rates--the higher the loan-value ratio, the higher the foreclosure rate. This was true for all loan sizes except the very large. The HOLC experience revealed a similar pattern with foreclosure rates running frequently above 30 percent on HOLC loans with a loan-value ratio above 70 percent (Harris, p. 98). This was true for almost all sizes of loans except the very largest.

Since the contraction of 1929, 1933, loan-value ratios have risen generally. On the average, loan-value ratios of single-family mortgages in the post-war period have been much higher than those before World War II (Klaman, 1961), but the same relative risk pattern still holds. The foreclosure studies of the 1960s showed that loans with comparatively higher loan-value ratios had higher probabilities of default and foreclosure. For example, the FHA investigation found a "disproportionate frequency" of foreclosures with loan-value ratios of 95 percent and above. The foreclosure rate for these mortgage loans was approximately 2-1/2

times the average for all FHA home mortgage foreclosures. The same pattern was described by the VA report--the highest foreclosure rates were on those loans with loan-value ratios above 95 percent. The HHFA study also confirmed this. Approximately 63 percent of FHA foreclosures and 93 percent of VA foreclosures in the HHFA samples had loan-value ratios of 95 percent and above. For the HHFA sample of conventional mortgages, half of the foreclosures had a loan-value ratio at origination generally between 70-80 percent in four of the six SMSAs (Chicago, Detroit, New York, and Philadelphia). In Dallas and Los Angeles, where junior mortgages were common, loan-value ratios for foreclosures ranged between 90 and 99 percent. Kendall's study for the USSLL found that default rates were greatest for high loan-value ratio loans (1964). Herzog and Earley's investigations reveal exactly the same findings (1970). For the home owner as an investor, the loan-value ratio is a measure of financial leverage. Thus, the financial returns of investment in residential capital are magnified if the investor-home owner can use borrowed funds (Abrams, 1939; Marcuse, 1972).

On the other hand the loan-value ratio for the lender is a measure of risk. It indicates how much loss the home owner can absorb before the lender's capital is threatened. If the loan-value ratio is low, equity is large and the lender's risk small. If the loan-value ratio is high, equity is small and lender's risk high (Page, 1962; Maisel, 1965).

In the 1930s Guthmann argued that the main reason for limiting loan-value ratios was to create a "margin of safety between the amount of mortgage loan and the fair market value." From the lender's viewpoint, that margin would cover: (1) the costs of selling a piece of real

estate; (2) the margin of error in predicting the resale value; and (3) the expenses incident to foreclosure. Since the risk of foreclosure is greatest during the early years of a mortgage, the loan-value ratio at the time of origination must provide enough equity to offset these possible sources of loss. Guthmann calculated that equity-value ratios for different categories of loans should correspond to the probable foreclosure loan-loss rates on such loans. If the expected loss rate was 20 percent, then equity-value ratios should be no higher than 20 percent (Guthmann, 1938).

The Junior Mortgage

Junior mortgages appear to be frequently involved in foreclosures. Since the presence of a junior mortgage increases the debt which a home owner must bear, a temporary reversal in the mortgagor's financial position can easily lead to default and foreclosure. The HOLC found many cases in which mortgagors carried second mortgages. Quite often these were refinanced, though not always. Yet Harriss' study of the HOLC (1951) provides little in the way of evidence as to the incidence of junior mortgages among recipients of HOLC aid or by mortgagors foreclosed by the HOLC.

Grebler, Blank, and Winnick (1956) cite the results of a 1928 survey¹² on the financing arrangements for both new and existing single-family homes in which 39 percent of all respondents reported a second mortgage carrying at least one junior mortgage (the remaining difference being accounted for by all-cash purchases and sales contracts). The survey covered larger communities throughout the United States but did not include a representative sample of cities with less than 30,000 population.

¹²Bemis, Albert, *The Evolving House*, Cambridge: MIT Press, 1934.

Dean also points to the widespread use of junior mortgage financing and attributes to it much of the riskiness of the home loans originated during the middle and late 1920s. Junior financing developed largely because most states had laws limiting first home mortgage loans to between 60 to 66 percent of the value of a house. Thus in order to extend the home ownership market to those who could not afford to take a 30 to 40 percent equity position (the down payment), the junior mortgage emerged as a way to finance it. Citing some studies of lending practices in the 1920s,¹³ Dean argues that quite often the second mortgage represented little more than a cover for "the inflationary gap between what the home was really worth and what it was selling for."

In some areas this represented a 20-30 percent bonus for the builder, who customarily wrote up the price of the house to what the market would stand and then took the mortgage himself. He would then discount the second mortgage for whatever it would bring, usually only 80 or 90 percent because of the heavy risk attached. If the discount was too high for the builder to make the profit he wanted, he would raise his selling prices, which in turn raised the discount rate and so forced his prices even higher. Thus a race between the discount rate and the selling prices of homes was current in many areas where speculative builders were operating (Dean, 1945, pp. 69-70).

Dean claims that foreclosure rates were higher for home owners with such junior mortgages than home owners without them.

Kendall (1964) found that home owners carrying junior mortgages had a delinquency rate twice as high as those who did not carry them, especially in the case of builder loans. Also, junior mortgages existed on 39 percent and 42 percent, respectively, of delinquent senior

¹³Testimony of J.H. Fahey, Chairman of the Federal Home Loan Bank Board at the Hearings before the Temporary National Economic Committee, Part Eleven, *The Construction Industry*, p. 5393; also TNEC Monograph No. 8, *Toward More Housing*, Washington: 1940.

mortgages in the South and the Pacific Coast. Only 15 percent of the delinquent mortgages in the East involved junior liens.

The HHFA investigation found that 6 percent of the FHA foreclosures and 5 percent of the VA foreclosures had junior mortgages at the time the first mortgage was originated or assumed. Most of these junior mortgages were carried by transferees. In addition, roughly three-quarters of the foreclosed conventional mortgages in the Los Angeles SMSA involved junior mortgages and about 8 percent third mortgages. One-third of the conventionals in the Dallas and New York SMSAs and one-sixth of the conventionals in the other SMSAs (Chicago, Detroit, and Philadelphia) also involved junior mortgages.

The NBER study on mortgage delinquency and foreclosure (Herzog and Earley, 1970) also revealed a significant relationship between the incidence of junior financing and high-risk probability of both default and foreclosure. This was one of the few definitive findings of this highly technical but inconclusive investigation.

Method of Repayment

It is generally believed that most institutional mortgages originated in the 1920s were short-term non-amortizing mortgages with balloon payments. Most of the NBER studies on mortgage financing, however, dispute the thesis that the nonamortized loan was the rule before the 1930s and that the inflexibility of the unamortized mortgage accounted for the debacle in the home mortgage market during the financial collapse of 1929-1934. Grebler (1956) cites the NBER studies showing that only about 20-25 percent of loans made from 1920-1934 provided for no amortization. The bulk of one- to four-family mortgage loans included provisions for partial amortization. These loans required annual,

semi-annual, and often quarterly principal payments. Balloon payments were common when the three or four years of the terms expired, but they were smaller than we have customarily assumed them to be (Fisher, 1951; Ewalt, 1965). Only commercial banks (which held 10 percent of total mortgage debt) carried a high proportion of unamortized mortgages in their portfolios. By contrast, more than 90 percent of the home mortgages held by savings and loans were fully amortized. However, the savings and loan associations held only 20 percent of total mortgage debt during the 1920s.

Lintner's study of mutual savings bonds (1958) argues that full amortization made foreclosure losses smaller than they might have been for the mutuals during the Depression. Morton (1956) concedes that to some degree this was true. Foreclosure rates and foreclosure losses tended to be lower on fully amortized mortgages. However, data from commercial banks and life insurance companies which held the highest proportions of nonamortized and partially-amortized mortgages reveals a different picture. The method of repayment made a difference only on "seasoned loans"--that is, on older loans. As a protective device, full amortization made no difference where loans encountered difficulties early in their contract life. This was found to be true in the case of both one- to four-family dwellings and commercial properties (Morton, 1956, pp. 102-103).

The Term to Maturity

The other factor which affects both equity-build, and at the same time foreclosure risk, is the contract term. The NBER studies failed to find any correlation between contract term and probability of foreclosure for the period 1920-1942. Only commercial banks had

extremely high foreclosure and loss rates on short-term mortgages (0-4 years). Foreclosure experience on long-term mortgages--those with contract terms of 15 years or longer--was worse than average for life insurance companies and especially bad for savings and loans. Life insurance companies had equally bad experiences with both short- and long-term loans. Thus the available evidence from NBER studies is inconclusive with respect to assigning a predictive value to the contract term of a mortgage.

Greater risk is attached to mortgages with longer contract lengths because while monthly cash outlays for a mortgage can be significantly reduced by extending the term, this also slows the process of equity-build. Thus low down payment, long-term, FHA-insured mortgages involve a period during the early years of the mortgage when the borrower's equity can actually be negative due to transaction costs and the rate of price change. In such a situation a high-risk period is created and--barring other considerations--mortgagors may have a "rational incentive" to default and go to foreclosure when income declines or when the mortgagor moves, *regardless of the financial reserves the mortgagor may command* (Guthman, 1938; Beach, 1938; Von Furstenberg, 1971). Von Furstenberg has underscored this inherent tendency of long-term, high loan-value ratio mortgages in his analysis of the mortgage- and income-related characteristics of foreclosures and defaults on FHA- and VA-home loans.

When sales commissions of 6 percent are added to the expenditures required to ready a house for sale, frequently subject to the existing FHA mortgage, default may be preferable to selling if owner's equity in the home is not at least 6 percent and perhaps as much as 10 percent. With 100 percent initial mortgage financing over 30 years at 6 percent interest, home equities are built up to 10 percent only in the seventh year after

endorsement if real estate prices rise by approximately 2 percent per year so that the hypothetical rate of depreciation of the property is offset and its market value remains constant (Von Furstenberg, 1971, p. 13).

Since low-income home ownership is so highly leveraged, the risk of default and foreclosure for the lender is much greater during the early years of a mortgage than in the case of middle-income home ownership. The risk of foreclosure for low-income home owners is also higher because of their lack of financial reserves. Low-income mortgagors thus have less protection from foreclosure than mortgagors in higher income brackets in general but especially during the early life of government-guaranteed mortgages when equity can be negative and the rate of amortization is low. However, as the HHFA study shows, middle-income home owners also experience high rates of foreclosure when they carry mortgages with high loan-value ratios and suddenly suffer temporary income loss (HHFA, 1963, pp. 347-350).

Von Furstenberg's analysis of the regional variation in FHA default rates placed heavy emphasis on the correlation of risk with highly leveraged long-term mortgage financing. During the 1960s, the Southern states--especially Florida and Texas--had higher default rates than the states in the Midwest and the Northeast. Von Furstenberg employed multiple regression to show that the regional rate of economic growth had little to do with the state level of default rates:

Rather it is principally the greater concentration of recent and high loan-value ratio mortgages as well as the above-average vacancy rates demanded by young and mobile populations which cause default rates to be higher in most expanding regions. Given the characteristics of the mortgage and normal vacancy rates, risk appears to be just as high on the average home in New England as on properties near the Gulf or west of the lower Mississippi (p. 7).

Thus he argues that the correlation between rates of home mortgage default and rates of economic growth is accidental; risky financing terms is the genuine cause. Hence, states with a high incidence of high loan-value ratio mortgages tend to have higher default rates than average. In fact, Von Furstenberg claims that default rates in Florida and Texas would have been considerably higher during the early 1960s if property values in those states had not risen as fast as they did. Rising property values frequently allowed defaulting mortgagors to sell their homes when they could not support the mortgage payments (p. 59).

Although terms of financing have changed over the years, the *risk potential* of the current mortgage system may be no greater than that of the older system. The average loan-value ratio has increased since the 1920s, when it ranged between 50-60 percent. Today it stands at about 80 percent for conventional mortgages and 90 percent for FHA-VA mortgages (Grebler, Blank, and Winnick, 1956; Earley and Herzog, 1970). This would seem to indicate that the equity factor has shrunk and that home mortgages today carry a greater likelihood of default and foreclosure than they did before the Depression. This is partly an optical illusion. The trend toward high loan-value ratios has tended to displace the large junior mortgages which in the 1920s supplemented more conservative first mortgage loans. The use of the junior mortgage was merely a high-rise substitute for a down payment. Thus initial equity in those days was just as small as it frequently is today. The likelihood of foreclosure, therefore, is structured into the mortgage system by low-equity positions today just as it was then. Mortgage insurance and government stabilization policies prevent this potential from being realized within the residential real estate sector as in the 1930s.

The Unseasoned Mortgage

Finally, the one key characteristic of foreclosed mortgage loans in the 1930s which correlated strongly with foreclosure rates was the age of the mortgage. In all cases, loans made in the years 1925-1929 had the highest foreclosure rates; so did loans originated between 1930-1932. This was true of all the lending institutions investigated (Lintner, 1948; Saulnier, 1950; Behrens, 1952; Morton, 1956). In general, the incidence of foreclosure was five to ten times greater for recently originated loans than for older loans. In all the studies, mortgages between one and five years old experienced the highest foreclosure rates.

Studies of the 1960s tend to concur on the high incidence of foreclosure and default in the early life of a mortgage repayment cycle. Kendall's data revealed the highest probability of default between the second and fifth year of loan life (1965). He also found that the delinquency problem between the second and fifth year of the mortgage contract tends to be *most* pronounced for refinanced mortgages and "builder loans," and *least* pronounced for "walk-in" home loans.

Loans come to associations in a variety of ways. Real estate brokers bring in the majority, home builders send many borrowers to associations and individual borrowers contact associations directly. In comparing current and delinquent loans, the principal patterns that appear are these: Builder loans tend to run into difficulty most frequently, and this difficulty is concentrated between the second and fifth year of loan life. Broker loans produce the greatest problems in the fourth and fifth year of loan life. Walk-in loans tend to be relatively the least troublesome, but when trouble does occur, it tends to be concentrated between years two and five. Walk-in loans remain on the books relatively longer than those generated by brokers or builders (Kendall, 1964, p. 17).

The FHA foreclosure study (1963) found that 70-80 percent of all foreclosed FHA mortgages had survived for a lifetime of only 0-3 years. For VA guaranteed mortgages, 46 percent of total defaults occurred within approximately 5-7 years after origination, while the highest foreclosure rates were suffered by loans 0-3 years old as the FHA study also indicated.

The HHFA study supports the FHA and VA findings. *Sixty-nine percent* of the FHA loans in the HHFA study sample were foreclosed 2 years after origination and another 22 percent within 3-4 years. Close to 39 percent of the HHFA sample of VA mortgages were foreclosed within 2 years, 24 percent in 3-4 years, and 33 percent within 5-7 years. Both samples indicate that the probability of foreclosure is highest during the first 7 years of the life of a mortgage. The very high percentage of foreclosures on FHA mortgages of 2 years of age or less reflects the higher rate at which FHA-insured loans were made during 1959-1961 as compared to the origination rate of VA-guaranteed loans during the period. FHA-insured loan originations were 109 percent greater during 1959-1962 than during the period 1955-1958, while VA issuance of guaranteed loans increased by only 31 percent.

The same pattern prevails for the conventional mortgage sample analyzed in the HHFA study. In 4 of the 6 SMSAs--Chicago, Dallas, Detroit, and New York--roughly one-half of the conventional loan foreclosures occurred within the first 2 years following loan origination, as compared with 35 percent in the Philadelphia SMSA and just under 70 percent in the Los Angeles SMSA.

Von Furstenberg's multiple regression analysis of default experience on FHA-VA mortgages during the 1960s told the same story. Von Furstenberg found that annual defaults rise sharply and peak during

the third and fourth years of the mortgages' life. Default rates decline by one-half after 6-8 years but still remain high (roughly .453-.312 percent). Only when the mortgage reaches its fifteenth year does the risk of default become negligible (.027 percent or less).

CONCLUSION

Most studies of the incidence of foreclosure have concluded that borrower and financing characteristics are more reliable predictors of foreclosure than property characteristics. Table 7 summarizes the factors associated with a high incidence of foreclosure. Our discussion of the literature on foreclosure has shown that borrower and financing characteristics exhibit a considerable degree of interaction.

TABLE 7: MAJOR FACTORS DETERMINING THE INCIDENCE OF FORECLOSURE

<u>Borrower</u>	<u>Property</u>	<u>Financing</u>
1. Age: below 34 years	1. New, mass-market tract style properties in low-moderate price range	1. High loan-value ratio
2. Income: low to moderate	2. Older homes in "declining area"	2. High monthly payment to income ratio
3. Occupation: blue-collar, salesmen, self-employed, small business proprietor	3. Physical failure of property	3. Lack of financial reserves (life insurance, savings, etc.)
		4. Presence of junior mortgage
		5. FHA or VA underwriting
		6. Unseasoned mortgage

Those who suffer the highest rates of foreclosure are often young, low- or moderate-income mortgagors who can generally enter the home ownership market only under risky terms--that is, small equity, high monthly payments, low reserves, and little experience in managing investments. Only during the Great Depression, when personal income throughout the

nation declined, was this not generally the case. Future research on the incidence of foreclosure--especially studies based on samples drawn from the foreclosure wave of the early 1970s--might lend further support to this hypothesis.

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