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# SOME CHARACTERISTICS OF FOURTH DISTRICT FCA BANKS: A COMPARISON WITH THE OTHER MEMBER BANKS

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The Federal Reserve Bank of Cleveland has offered a Functional Cost Analysis (FCA) program to member banks in the Fourth Federal Reserve District since 1965.<sup>1</sup> FCA is a uniform cost accounting system that enables a participating bank to measure the expense and revenue of each of its principal activities and to compare these measurements with figures from similar banks that also participate in FCA. The program is now available to all member banks in all Federal Reserve Districts.

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<sup>1</sup>This program was developed by the Federal Reserve Banks of Boston and New York and gradually adopted by other Federal Reserve Banks. For a more detailed explanation of FCA see "Average Functional Cost and Revenue for Banks in Three Size Categories, 1966-1969," *Economic Review*, Federal Reserve Bank of Cleveland, April 1971.

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In the past five years of operation, the FCA program has included an annual average of 975 Federal Reserve member banks, 74 in the Fourth District. A very large body of data, therefore, has been accumulated on the operations of commercial banks in the United States.<sup>2</sup> These data have been subjected to systematic analysis in several studies,<sup>3</sup> but relatively little attention has been paid to the differences in performance of FCA and non-FCA banks.

The FCA program was designed to improve decision-making by participating bank management and, hence, the performance of these banks. This article reports on a comparison of some characteristics of Fourth District FCA banks with those of the other Fourth District member banks before and after the FCA program was initiated.

Three operating ratios were compared for FCA and all non-FCA member bank averages over the 1964-1970 period: net income<sup>4</sup> to total capital<sup>5</sup>

(a measure of return on invested capital), net income to total assets<sup>6</sup> (a measure of return on total funds), and total operating revenue to total assets (a measure of gross yield on total funds); for 1969 and 1970, total operating expenses to total assets (a measure of the cost of acquiring and maintaining a stock of income-producing assets) were compared.

Generally, it was found that all four ratios tended to be higher for FCA banks than for non-FCA banks. Although the pattern of differences does not permit the drawing of firm conclusions, it was observed that the difference between net income as a percent of capital for the all-FCA average and the non-FCA member bank average increased from 0.5 in 1964 (a year before the program started) to 0.8 in 1965 and 1.4 in 1968—all in favor of the FCA banks. Similarly, the difference between net income as a percent of total assets for the all-FCA average and the non-FCA member bank average increased from -0.02 (the FCA banks were lower) in 1964 to 0.0 (FCA and non-FCA member averages were equal) in 1965, to 0.01 in 1966 and 0.05 in 1968. The differences, although small, are important because of the direction of change.<sup>7</sup> Other differences noted in this comparative study were the tendency for the average FCA bank to be larger and to grow at a faster rate than the average non-FCA member bank.

In summary, the findings of this paper indicate that FCA banks do exhibit differences compared

<sup>2</sup>See, for example, *Functional Cost Analysis, 1970 Average Banks*, available from the Bank Relations and Public Information Department, Federal Reserve Bank of Cleveland.

<sup>3</sup>Examples of studies using these data are: Frederick W. Bell and Neil B. Murphy, *Costs in Commercial Banking: A Quantitative Analysis of Bank Behavior and Its Relation to Bank Regulation*, Federal Reserve Bank of Boston, 1968; Michael A. Klein and Neil B. Murphy, "The Pricing of Bank Deposits: A Theoretical and Empirical Analysis," *Journal of Financial and Quantitative Analysis*, VI, 2 (March 1971) pp. 747-761; and Stephen M. Hagins, "A Preliminary Investigation into the Supply of and Demand for Demand Deposits Produced by an 'Average' Bank," unpublished M.A. thesis (University of Wisconsin—Milwaukee, 1969).

<sup>4</sup>Net income is total operating revenue less total operating cost and taxes plus or minus the effect of securities gains and losses and extraordinary items.

<sup>5</sup>Total capital is the sum of equity accounts, including surplus and undivided profits; total reserves on loans and securities were included after 1968.

<sup>6</sup>After 1968, total assets are net of hypothecated deposits.

<sup>7</sup>Nevertheless, the differences in FCA and non-FCA ratios may not be significant in a statistical sense. Because of technical difficulties, it has not yet been feasible to conduct such a test for significance; however, research in this area is continuing.

with the non-FCA banks, but the influence of the FCA program in explaining these differences has not been identified.

## AVERAGE OPERATING RATIOS

An attempt to compare FCA and other member bank average operating ratios over a period of time immediately presents a problem: which banks should be considered FCA banks in a particular year? Difficulties arise because member banks are free to opt into and out of the program each year and because the major benefits of FCA participation are thought to occur in the years following the year of initial membership. The turnover in FCA participation may impart a pattern to the year-to-year changes in the operating ratios of the FCA averages that is independent of the effect of the FCA program.<sup>8</sup> The effect of FCA participation is not likely to be reflected in the initial year's ratios because participants do not receive their cost and revenue analysis reports until the year following the year of initial membership in the program.

**The Composition of the Bank Groups.** To allow for the lagged impact, the FCA ratios that were used in this analysis for a given year were limited to those banks that participated in FCA the previous year. Thus, 1965 FCA participants' ratios for 1966 were compared with the non-FCA member average ratios for 1966; 1966 participants' ratios for 1967 were compared with non-

FCA member ratios for 1967, and so on. The 1964 and 1965 all-FCA averages that were used are for 1965 participants. Additionally, to eliminate the effect of fluctuations in the FCA average ratios caused by changing FCA membership, ratios were calculated for a constant group consisting of 47 banks that have participated in FCA for at least five of the six years that the program has been offered in the Fourth District.

The non-FCA member bank average ratios used in this study are based on *Member Bank Operating Ratios, Fourth Federal Reserve District*.<sup>9</sup>

## AVERAGE EARNINGS RATIOS

Table I contains figures depicting average net income as a percent of total capital for the 47 FCA, all-FCA, and all non-FCA member banks in the Fourth District from 1964 through 1970. For each year, the average ratio for all FCA banks exceeds the average ratio for all non-FCA member banks.<sup>10</sup> Similarly, the average ratio for the 47

<sup>9</sup>This report is published annually by the Examination Department, Federal Reserve Bank of Cleveland. The average ratios are "normalized" by the exclusion of ratios that are considered outside reasonable norms. To assure comparability between FCA and the non-FCA member averages, the same norms have been applied to the FCA banks and all "abnormal" ratios excluded. It may be observed that the published member bank operating ratios are averages for all (FCA and non-FCA) member banks. However, since the following are known: the mean ratios for all member banks, the number of member banks, the mean ratios for all FCA banks, and the number of FCA banks, it is possible to calculate mean ratios for non-FCA member banks.

<sup>10</sup>During 1964-1970, the number of Fourth District member banks has ranged from 506 to 470, while the number of FCA participants since the program began has ranged from 71 to 79. Fourth District banks that have had at least one year in FCA number 127.

<sup>8</sup>Similarly, the "non-FCA" average will be affected by FCA turnover. One possibility is that the "non-FCA" averages will be raised as FCA banks drop out of the program. This impact is assumed to be negligible, however, since the present number of former FCA banks is small (about 50) relative to the number of Fourth District member banks that have never participated in FCA (about 340).

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TABLE I

Net Income as a Percent of Total Capital  
Fourth District (4D) FCA and Non-FCA Member Banks  
1964–1970  
(Averages of Individual Bank Ratios)

	1964	1965	1966	1967	1968	1969	1970
47 4D FCA banks	9.2%	9.3%	10.8%	11.0%	11.4%	10.7%	11.5%
All 4D FCA banks	9.1	9.1	10.0	10.5	11.0	10.4	11.1
All 4D non-FCA member banks	8.6	8.3	8.8	9.3	9.6	9.9	11.0

NOTE: Although year-to-year comparisons involving 1969 and 1970 are not strictly valid, bank group averages for these years are comparable. The principal difference in 1969 is that the individual bank operating ratios were calculated from the average of the June 1969 and December 1969 call reports. In other years, the call report from the previous year's December was averaged with that for the current year's June. In addition, for both 1969 and 1970, hypothecated deposits are subtracted from loans and deposits and, hence, from total assets. Also, after 1968 reserves on loans and securities were included in total capital. However, the same procedures have been used in calculating the FCA and non-FCA ratios within a given year.

Source: Federal Reserve Bank of Cleveland

TABLE II

Net Income as a Percent of Total Capital  
Fourth District (4D) FCA and Non-FCA Member Banks  
Selected Size Groups  
1964–1970  
(Averages of Individual Bank Ratios)

Bank Size Group		1964	1965	1966	1967	1968	1969	1970
\$5 to \$10 million	47 4D FCA banks	9.6%	8.9%	9.0%	10.8%	9.0%	8.7%	*
	All 4D FCA banks	7.6	8.2	8.2	8.7	9.5	9.1	*
	All 4D non-FCA member banks	8.7	7.8	8.8	9.5	9.7	9.6	*
\$10 to \$25 million	47 4D FCA banks	9.4	9.6	12.4	12.0	10.0	9.0	11.2%
	All 4D FCA banks	9.7	9.1	10.9	11.4	10.1	10.3	10.5
	All 4D non-FCA member banks	9.2	9.1	9.4	10.0	9.8	10.2	11.5
\$25 to \$50 million	47 4D FCA banks	8.7	9.3	10.1	10.9	11.7	10.6	11.5
	All 4D FCA banks	9.2	9.2	10.5	10.6	11.8	10.3	11.2
	All 4D non-FCA member banks	8.3	8.5	9.0	9.6	9.7	10.3	11.6
\$50 to \$100 million	47 4D FCA banks	8.9	8.4	8.6	9.7	14.5	11.4	12.2
	All 4D FCA banks	9.1	8.9	9.0	10.2	13.7	11.3	11.7
	All 4D non-FCA member banks	8.5	8.4	9.4	9.8	9.1	10.2	11.1

\* Not shown to avoid disclosure of individual bank ratios.

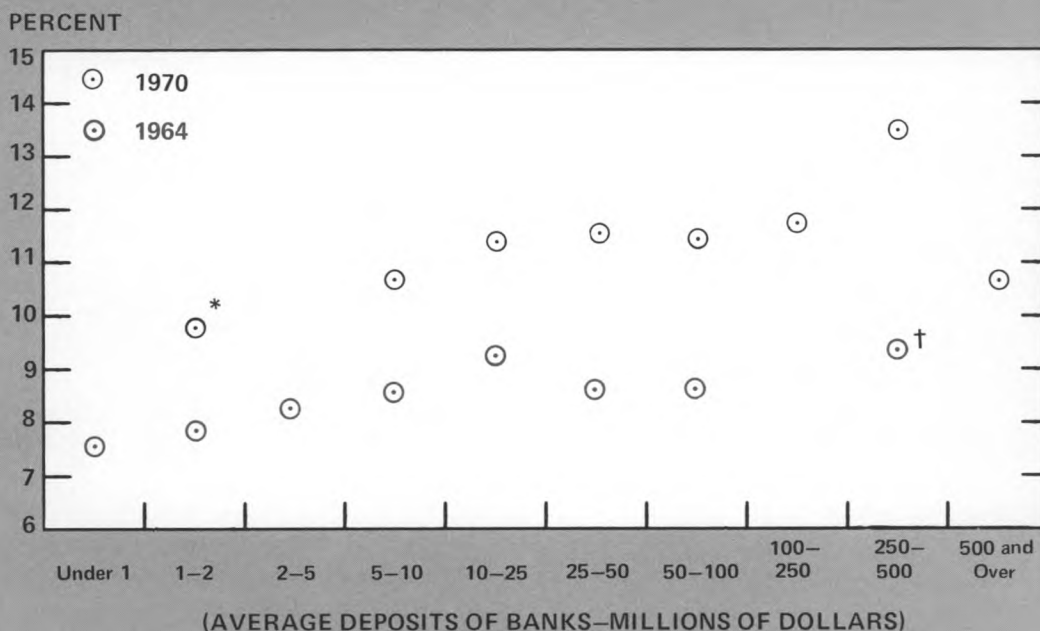
NOTE: 1969 and 1970 not comparable with other years, see note on Table I.  
Shaded cells are those in which both FCA groups exceed the non-FCA average of similar size banks by a minimum of 0.3 percent.

Source: Federal Reserve Bank of Cleveland

Chart 1.

NET INCOME AS A PERCENT OF TOTAL CAPITAL, FOURTH  
DISTRICT MEMBER BANKS, BY SELECTED SIZE GROUPS,  
1964 AND 1970

(AVERAGES OF INDIVIDUAL BANK RATIOS)



\*For 1970, the smallest size group is up to \$5 million.

†For 1964, the largest size group is \$100 million and over.

Source: Federal Reserve Bank of Cleveland

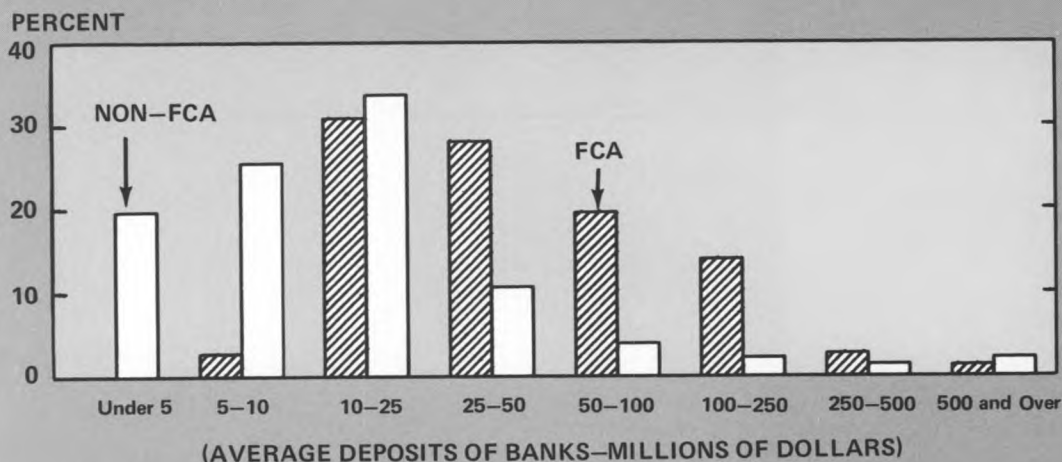
FCA banks consistently exceeds the all-FCA average. Moreover, the gaps between the average ratios for the two FCA bank groups and the non-FCA banks widened after the beginning of the FCA program, at least through 1968. After 1968 and the change in the method of ratio calculation (see note on Table I), the FCA bank group averages exceeded the non-FCA average by about the same amount as in 1964.

A difficulty of interpretation, however, is raised by the tendency for net income as a percent of capital to increase with bank size. One reason for this tendency is that the ratio of capital to total assets varies inversely with bank size. Chart 1 illustrates the resulting positive relationship between net income as a percent of capital and bank size. Note that in 1964, before the FCA program began, and in 1970, larger banks achieved



Chart 2.

### SIZE DISTRIBUTION OF FCA AND NON-FCA MEMBER BANKS IN THE FOURTH DISTRICT, 1970



Source: Federal Reserve Bank of Cleveland

higher net income to capital ratios than smaller banks. Chart 2 shows that the FCA bank group, when compared with non-FCA member banks, is heavily weighted with medium and large size banks. Thus, the higher average values for the net income to capital ratios at FCA banks were due in part to the larger size of FCA participants.

One direct way of dealing with this size-induced bias is to group both FCA and all non-FCA banks by size so that each group of banks is compared with banks in a similar size class. This has been done in Table II where, owing to the small number of FCA banks above \$100 million in deposits (until recently) and below \$5 million, size groups from \$5 to \$10, \$10 to \$25, \$25 to \$50, and \$50 to \$100 million are considered. The comparison, covering a span of seven years, reveals that the FCA banks in each size group surpassed the

performance of the average of all similar size non-FCA member banks in at least one year. Most of the high performance ratios were recorded by FCA banks in the two largest size groups. However, Table II does show that the higher net income to capital ratios presented in Table I were not due solely to the larger average size of the FCA banks.

**Ratio of Income to Total Assets.** It is possible, of course, that a comparison of the ratio of net income to capital favors the FCA banks because of biases introduced by factors other than size. It was, therefore, desirable to compare the earnings of FCA banks and non-FCA member banks in terms of some other ratio. Table III shows the ratios of net income to total assets for FCA and non-FCA member banks. As shown in Chart 3, the ratio is less consistently related to bank size than



TABLE III

Net Income as a Percent of Total Assets  
Fourth District (4D) FCA and Non-FCA Member Banks  
1964–1970  
(Averages of Individual Bank Ratios)

	1964	1965	1966	1967	1968	1969	1970
47 4D FCA banks	0.80%	0.77%	0.85%	0.86%	0.88%	0.9%	1.1%
All 4D FCA banks	0.77	0.64	0.76	0.81	0.85	0.9	1.0
All 4D non-FCA member banks	0.79	0.74	0.77	0.80	0.80	0.9	1.0

NOTE: 1969 and 1970 not comparable with other years, see note on Table I.

Source: Federal Reserve Bank of Cleveland

TABLE IV

Net Income as a Percent of Total Assets  
Fourth District (4D) FCA and Non-FCA Member Banks  
Selected Size Groups  
1964–1970  
(Averages of Individual Bank Ratios)

Bank Size Group		1964	1965	1966	1967	1968	1969	1970
\$5 to \$10 million	47 4D FCA banks	0.90%	0.83%	0.72%	0.83%	0.68%	0.8%	*
	All 4D FCA banks	0.67	0.72	0.66	0.69	0.77	0.8	*
	All 4D non-FCA member banks	0.77	0.66	0.73	0.80	0.80	0.9	*
\$10 to \$25 million	47 4D FCA banks	0.80	0.77	0.96	0.92	0.78	0.8	1.0%
	All 4D FCA banks	0.79	0.73	0.83	0.87	0.77	0.9	1.0
	All 4D non-FCA member banks	0.78	0.76	0.75	0.81	0.77	0.9	1.0
\$25 to \$50 million	47 4D FCA banks	0.74	0.71	0.81	0.85	0.87	1.1	1.1
	All 4D FCA banks	0.74	0.67	0.75	0.79	0.88	1.0	1.1
	All 4D non-FCA member banks	0.72	0.68	0.73	0.77	0.75	0.8	1.1
\$50 to \$100 million	47 4D FCA banks	0.75	0.74	0.67	0.79	1.14	1.0	1.2
	All 4D FCA banks	0.74	0.78	0.72	0.83	1.09	1.0	1.1
	All 4D non-FCA member banks	0.68	0.64	0.71	0.73	0.63	0.8	0.9

\* Not shown to avoid disclosure of individual bank ratios.

NOTE: 1969 and 1970 not comparable with other years, see note on Table I.

Shaded cells are those in which both FCA groups exceed the non-FCA average for similar size banks by a minimum of 0.05 percent.

Source: Federal Reserve Bank of Cleveland

the ratio of net income to capital. The breakdown of this ratio by bank size group is shown in Table IV.

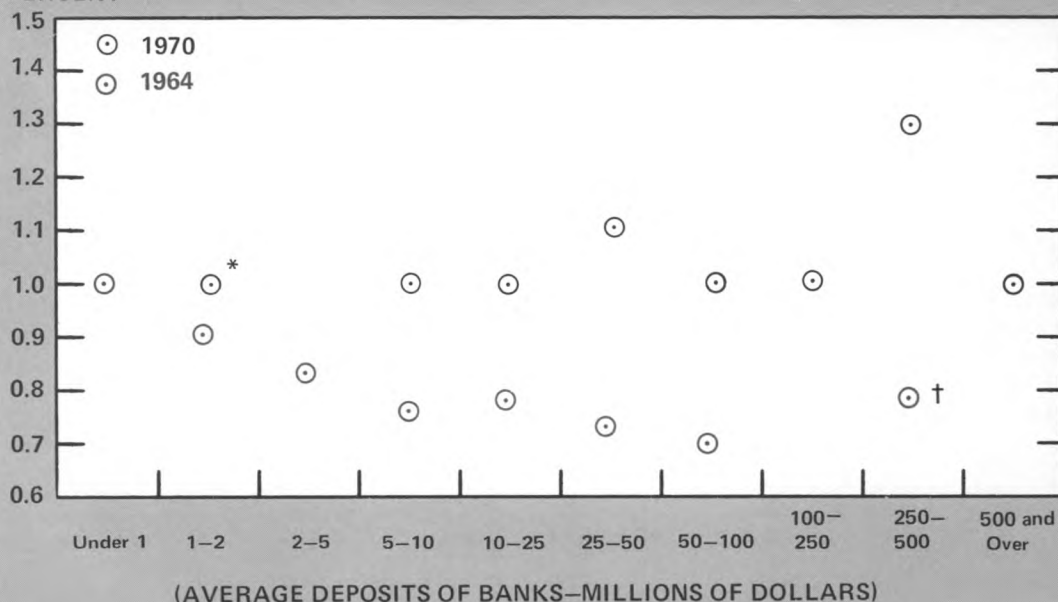
A change in the rounding method from two decimal places to one when these ratios were

calculated for *Member Bank Operating Ratios* may obscure some differences between the FCA and the non-FCA averages after 1968. Nevertheless, it is clear that the net income to total assets ratio of both FCA bank groups rose more rapidly than that

Chart 3.

### NET INCOME AS A PERCENT OF TOTAL ASSETS, FOURTH DISTRICT MEMBER BANKS, 1964 AND 1970

PERCENT



\* For 1970, the smallest size group is up to \$5 million.

† For 1964, the largest size group is \$100 million and over.

Source: Federal Reserve Bank of Cleveland

of the non-FCA average after 1964, at least through 1968. Again, based on the similar size comparisons shown in Table IV, the appropriate conclusion seems to be that the higher FCA ratios were not due solely to differences in bank size. It is also of interest to note that eight of the eleven shaded (high performance) cells in Table IV are common to the shaded cells in Table II. Thus, the patterns exhibited by the two income ratios are very similar.

### OPERATING REVENUE RATIOS

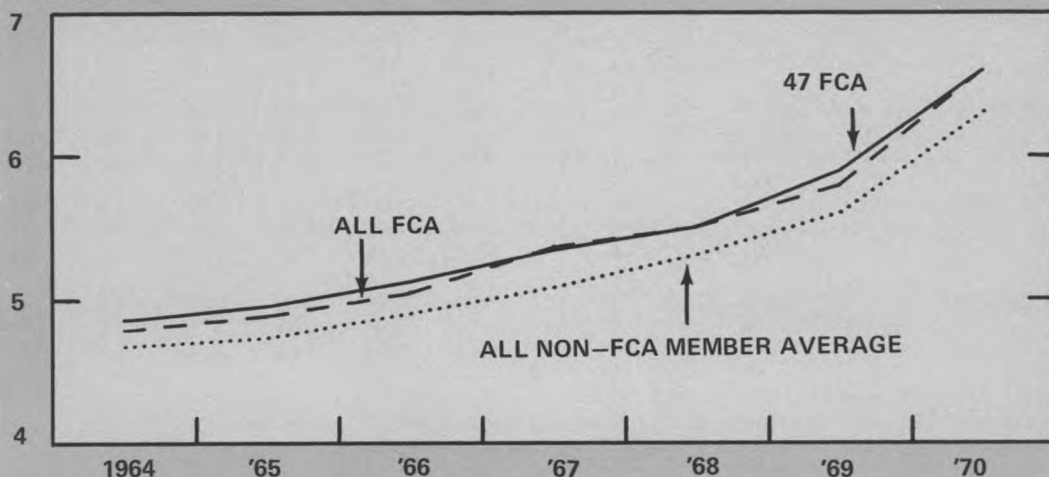
Given that the FCA banks have tended to have higher average earnings ratios than non-FCA banks, it seems logical to attempt to determine if this was due to higher revenues, lower costs, or both.

Chart 4 depicts total operating revenue as a percent of total assets for Fourth District FCA and non-FCA banks for the 1964-1970 period. It is immediately apparent that the FCA banks are

Chart 4.

# TOTAL OPERATING REVENUE AS A PERCENT OF TOTAL ASSETS, 47 FCA, ALL FCA, AND ALL NON-FCA FOURTH DISTRICT MEMBER BANKS

PERCENT



ANNUAL

Last entry: 1970

Source: Federal Reserve Bank of Cleveland

higher revenue-generating institutions. To avoid biases that may be introduced by differences in size of FCA and non-FCA banks, Table V permits equal size comparisons. Even though there seems to be little difference in revenues earned by FCA and non-FCA banks in the \$25 to \$50 million group, for the other size groups, the FCA banks have had markedly higher revenue to assets ratios than the same size non-FCA average. Thus, bank size is not the sole explanation for higher than average revenues at FCA banks.

## OPERATING EXPENSE RATIOS

The ratio of total operating expense to total assets was not calculated for *Member Bank Operating Ratios* until 1969 and, therefore, is not readily available prior to that date. In 1969 and 1970, however, total operating expense as a percent of total assets tended to be somewhat higher for FCA banks than the average of the non-FCA member banks (see Table VI). The total figures substantiate this, and it is also true for some of the individual size groups.

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TABLE V

Total Operating Revenue as a Percent of Total Assets  
Fourth District (4D) FCA and Non-FCA Member Banks  
Selected Size Groups  
1964–1970  
(Averages of Individual Bank Ratios)

Bank Size Group		1964	1965	1966	1967	1968	1969	1970
\$5 to \$10 million	47 4D FCA banks	5.04%	5.20%	5.09%	5.41%	5.54%	5.9%	*
	All 4D FCA banks	4.85	4.85	4.99	5.26	5.48	5.9	*
	All 4D non-FCA member banks	4.73	4.79	4.91	5.04	5.29	5.6	*
\$10 to \$25 million	47 4D FCA banks	4.94	4.98	5.23	5.34	5.34	5.7	6.4%
	All 4D FCA banks	4.84	4.95	5.13	5.42	5.42	5.7	6.4
	All 4D non-FCA member banks	4.69	4.75	4.93	5.12	5.32	5.6	6.2
\$25 to \$50 million	47 4D FCA banks	4.76	4.91	5.06	5.31	5.48	5.8	6.5
	All 4D FCA banks	4.64	4.78	4.83	5.36	5.51	5.8	6.5
	All 4D non-FCA member banks	4.81	4.84	5.15	5.25	5.48	5.8	6.5
\$50 to \$100 million	47 4D FCA banks	4.48	4.61	5.00	5.35	5.62	5.9	6.9
	All 4D FCA banks	4.63	4.66	5.04	5.36	5.70	6.0	6.7
	All 4D non-FCA member banks	4.72	4.63	4.88	5.18	5.30	5.6	6.3

\* Not shown to avoid disclosure of individual bank ratios.

NOTE: 1969 and 1960 not comparable with other years, see note on Table I.  
Shaded cells are those in which both FCA groups exceed the average for similar size banks by a minimum of 0.10 percent.

Source: Federal Reserve Bank of Cleveland

**FCA and Bank Growth.** The revenue and cost characteristics of the FCA banks suggest that these banks may also have experienced high growth in the period examined, inasmuch as an association between high revenue, costs, and growth has been observed in the past.<sup>11</sup> In fact, from 1964 to 1970, inclusive, deposits at the 47 FCA bank group increased at an annual average rate of 9.3

percent, while deposits at all Fourth District member banks rose at a rate of only 6.7 percent. During the same period, the combined deposits of Fourth District member and non-member banks increased at an annual average rate of 6.8 percent.

In summary, Fourth District FCA banks have tended to be more rapidly growing, to have had higher earnings, revenues, and costs than the non-FCA member bank average. However, a lack of uniform change in performance by FCA banks in all size groups, along with discontinuities in the data, prevents the analysis from reaching firm conclusions on the causal impact of FCA.

<sup>11</sup> Lyle Gramley, "Growth and Earnings at Individual Commercial Banks," *Essays on Commercial Banking*, Federal Reserve Bank of Kansas City, 1962, pp. 13-15.

TABLE VI

Total Operating Expense as a Percent of Total Assets  
 Fourth District (4D) FCA Banks and Non-FCA Member Banks  
 Selected Size Groups  
 1969–1970  
 (Averages of Individual Bank Ratios)

<u>Bank Size Group</u>		<u>1969</u>	<u>1970</u>
\$5 to \$10 million	47 4D FCA banks	4.8%	*
	All 4D FCA banks	4.5	*
	All 4D non-FCA member banks	4.3	*
\$10 to \$25 million	47 4D FCA banks	4.7	5.1%
	All 4D FCA banks	4.4	5.2
	All 4D non-FCA member banks	4.4	4.9
\$25 to \$50 million	47 4D FCA banks	4.4	4.8
	All 4D FCA banks	4.4	5.1
	All 4D non-FCA member banks	4.7	5.2
\$50 to \$100 million	47 4D FCA banks	4.5	5.2
	All 4D FCA banks	4.8	5.4
	All 4D non-FCA member banks	4.6	5.2
\$100 to \$250 million	47 4D FCA banks	4.7	5.4
	All 4D FCA banks	4.7	5.3
	All 4D non-FCA member banks	4.4	5.1
TOTAL	47 4D FCA banks	4.6	5.1
	All 4D FCA banks	4.5	5.2
	All 4D non-FCA member banks	4.4	5.0

\*Not shown to avoid disclosure of individual bank ratios.

NOTE: 1969 and 1970 not comparable, see note on Table I.

Source: Federal Reserve Bank of Cleveland



# THE SECONDARY MORTGAGE MARKET

## INTRODUCTION

As part of its stated policies to help provide adequate housing for all citizens, the Federal Government has long been interested in the nation's mortgage market. One of the Government's primary objectives has been the establishment of a viable and active secondary market for mortgages. A secondary market facilitates the transfer of a mortgage from its originator or any other subsequent holder to other investors. The existence of an active market provides needed liquidity to lenders and makes it possible to attract more diverse types of investors. Combined with Government-fostered standardization of some of the mortgage instruments, the secondary market has led to greater participation by national "long distance" lenders than would otherwise be the case. Because of the localized nature of housing and the heterogeneity of individual mortgage instruments, a mortgage holding, in the absence of a secondary market, becomes a long-term investment with little opportunity for liquidation.

The first section of this article discusses the history of Federal participation in the primary and secondary mortgage markets in the 1930's. The

second section discusses the post-World War II developments in the secondary mortgage market and the problems involved in establishing an efficient market; the third section analyzes the behavior of the mortgage markets since 1965. In the conclusion, some of the more widely discussed suggestions for improving the secondary mortgage market are presented.

## BACKGROUND OF THE MORTGAGE MARKET AND FEDERAL PARTICIPATION

Whenever a borrower gives a lender a lien on property as security for repayment of an obligation, a mortgage is created. Prior to 1934, amortized mortgage loans were very rare; instead, most loans were in the form of notes requiring payment of the entire principal and interest at maturity.<sup>1</sup> Arrangements for renewal of the

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<sup>1</sup>Amortization requires the mortgagee to repay the principal and interest of the mortgage in specified instalments over the term of the loan. There are numerous types of amortization, with the most popular providing for equal monthly payments.

unamortized mortgage, however, could be made at the discretion of the participants. Loans made prior to 1934 also differed from the modern mortgage in that they required much larger down-payments.

As banks failed and credit markets virtually collapsed in the early 1930's, there were many foreclosures, unrenewed loans, and very few new mortgages were made. With the scarcity of funds, financing home ownership became more difficult, and virtual stagnation existed in the home construction and home financing industries.

**Federal Home Loan Bank System and Home Owners Loan Corporation.** Beginning in 1932, the Federal Government initiated a number of programs intended to revitalize residential mortgage financing. The first of these programs was the establishment of the Federal Home Loan Bank System (FHLB). The primary goal of this new organization was to increase the volume of funds available for home financing. Although the FHLB remains an important indirect source of mortgage funds today, its authority to make direct loans to home buyers was repealed in 1933, with establishment of the Home Owner's Loan Corporation (HOLC).

The HOLC operated between 1933 and 1954 and was authorized to refinance existing mortgages on one to four family dwellings that were due to be foreclosed or otherwise canceled. The most significant contribution made by HOLC was the popularization of the long-term amortized mortgage. This innovation in home financing played a major role in stabilizing the home finance market and fostered the phenomenal growth in private home ownership that has taken place since the 1930's.

**Federal Housing Administration and Veterans Administration.** In June 1934, the Federal

Housing Administration (FHA) was created by the enactment of the National Housing Act. In addition to its program of mortgage insurance, the FHA was given authority to charter and supervise private national mortgage associations in the hope of stimulating investment in home financing. In conjunction with FHA insurance, the national mortgage associations were intended to organize a secondary mortgage market and thereby more efficiently allocate the limited available supply of mortgage credit. Although the FHA insurance program is still in effect and has added some stability to the mortgage market, the FHA did not succeed in establishing a single private mortgage association, even though several applications for charters were filed. The authority of the FHA to charter private national mortgage associations was repealed in the Housing Act of 1948. Thus, the desired level of secondary market activity failed to develop.

The Veterans Administration (VA) was created by the Serviceman's Readjustment Act of 1944. As the name of the act implies, the original purpose of the program was to aid servicemen returning to civilian life. The VA mortgage, however, has developed into a major housing market instrument, paralleling the FHA insured mortgage. Although the specific terms, conditions, and eligibility requirements differ between the two programs, both FHA and VA provide backing for individual residential mortgages, making them more liquid secondary market instruments.

**Reconstruction Finance Corporation Mortgage Company.** The Federal programs of the early 1930's failed to aid in the development of the desired secondary mortgage market, and they also failed to establish an efficient, well-functioning primary market in each local area of the nation. In an attempt to aid the reestablishment of a normal



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mortgage market, the Reconstruction Finance Corporation (RFC) created the RFC Mortgage Company in 1935 under Section 5(c) of the RFC Act.<sup>2</sup> Until its dissolution in 1948, this organization, in cooperation with the FHA, assisted in the development of the secondary mortgage market through purchases of FHA-insured mortgages and, later, mortgages guaranteed by the VA.

**Federal National Mortgage Association.** In 1938, when it became apparent that no national mortgage associations would be formed and that the RFC Mortgage Company purchases would not be sufficient to meet the home financing needs of the nation, the RFC was requested by the President to organize a national mortgage association. The primary purpose of the new Federal National Mortgage Association (FNMA) was to provide:

secondary market facilities for home mortgages,...[and] supplementary assistance to the secondary market for home mortgages by providing a degree of liquidity for mortgage investments, thereby improving the distribution of investment capital available for home mortgage financing...<sup>3</sup>

At first, only FHA mortgages were eligible for purchase by FNMA, but eligibility was extended to cover VA mortgages in 1948. FNMA remained a subsidiary of the RFC until 1950 when it was transferred to the Housing and Home Finance Agency, which became the Department of Housing and Urban Development (HUD) in 1965. In 1956,

<sup>2</sup>Section 5(c) was added to the RFC Act on January 1, 1935, by P. L. 1, 74th Congress.

<sup>3</sup>Federal National Mortgage Association Charter Act, as amended through December 31, 1969 (Washington, D. C.: Office of the General Counsel, Federal National Mortgage Association) p. 1.

FNMA instituted two procedures designed to improve the agency's performance as a secondary market facility: the stand-by commitment and the purchase option.

Stand-by commitments are agreements by FNMA to purchase a specific mortgage within a stipulated time period at an agreed-upon price that was below the current market price.<sup>4</sup> Builders taking out stand-bys were able to obtain construction loans from commercial banks that otherwise would not have been willing to make loans. If the mortgage market had improved by the time the final mortgage was placed with the bank, the holder of the stand-by could sell the final mortgage to the highest bidder. If no alternative buyers were available, FNMA would purchase the mortgage at the pre-arranged price. FNMA provided the stand-by commitments for a fee of 1 percent of the mortgage balance, which was absorbed by the builder or passed on to the final mortgage buyer, depending on market conditions. For an additional fee of 0.5 percent, the seller of a mortgage to FNMA could obtain a purchase option which allowed him to repurchase the mortgage from FNMA within nine months at FNMA's purchase price. These procedures were intended to provide a greater degree of liquidity for mortgage investments and were used until 1968.

The legislation creating HUD in 1965 provided that FNMA retain its separate identity, allowing FNMA to be reorganized in 1968 and divided into two separate corporations. Under the terms of this reorganization, all of the Federally financed Special Assistance Functions and Management and Liquidating Functions were turned over to a new

<sup>4</sup>Since May 4, 1968, stand-by commitments have been limited to multi-family mortgages.

Government operated corporation, the Government National Mortgage Association (GNMA). The privately financed secondary market operations remained with FNMA, which later became privately owned and managed by its stockholders.

**Summary.** From the 1930's until the passage of the Housing Act of 1968, the secondary market for mortgages was virtually limited to VA and FHA backed mortgages. Even among these Government supported mortgages, trading was light and most purchases were preceded by commitments, technically making them primary market transactions. Usually today when FHA and VA mortgages are sold, either with or without commitments, they are grouped into blocks, and the originator of the mortgages continues to service them for a small fee.

Although the Federal programs did not succeed in developing a viable secondary market for mortgages, these programs and the wider use of amortization had a great effect on the terms of a typical mortgage. For example, the length of the mortgage was greatly increased to allow full amortization of the loan and still provide reasonable monthly payments. Instead of being similar to a short-term renewable note, the mortgage became a long-term obligation, usually with a maturity between 15 and 30 years. The loan to price ratio, an indication of the relative sizes of the mortgage and the downpayment, also increased. As amortization and Government insurance attenuated risk, lenders became more willing to accept larger loans relative to downpayments.

## DEVELOPMENT OF THE SECONDARY MARKET

Before discussing the secondary mortgage market, it is necessary to define what is meant by secondary market transactions. For the purpose of

this article, a secondary market transaction has taken place if the mortgage being traded was already in existence at the time the transaction was first initiated. This definition is designed to eliminate mortgage purchases dependent upon commitments from the final lender.<sup>5</sup>

**Problems.** The major obstacles to the development of a competitive secondary mortgage market can be grouped into five categories: (1) commodity differentiation, (2) lender differentiation, (3) differentiation among states, (4) differentiation within states, and (5) imperfect market information. The fact that FHA and VA backed mortgages have a known risk, represent a more standardized instrument, and, therefore, are more capable of being traded nationally has led to the relative success of the secondary market for these instruments.

The problem of commodity differentiation stems from the fact that differences in the quality of the real property and the credit standing of the borrower affect the risk and asset value of a mortgage. In turn, this results in differences in yields, amortization, equity, and Federal insurance. The state laws governing issuance of the mortgage, as well as the measures of property value, may also cause variations from one mortgage to another. When all of these variables are taken into consideration, it is often difficult for a nonlocal secondary buyer to determine precisely what he is purchasing.

Mortgages also differ by the type of lender making the original loan. The various groups of lenders tend to concentrate their holdings among particular types of mortgages having distinct

<sup>5</sup>Commitments in this instance are agreements by mortgage holders to purchase specified volumes of mortgage loans from a mortgage originator prior to the closing of the loan.

## ECONOMIC REVIEW

characteristics. For example, life insurance companies, mortgage companies, and most savings banks prefer to deal in FHA and VA mortgages, while commercial banks and savings and loan associations primarily hold and purchase conventional mortgages.

Differentiation of mortgages among states is due to differences in laws governing foreclosure procedures, usury ceilings, and taxation of out-of-state lenders. Differences within states stem chiefly from differences in the costs of doing business in metropolitan areas as opposed to rural areas and small communities.

The great diversity among mortgages has resulted in imperfect market knowledge. Because of the lack of homogeneity among mortgages, it is difficult for potential buyers of mortgages to participate in a unified national market trading a uniform product. Generally, the knowledge concerning availability of existing mortgages for purchase and sale is restricted to small groups of potential investors.

To encourage and facilitate trading in the secondary mortgage market, it was necessary to foster changes in the mortgage instrument itself. Most other capital market instruments have larger, more uniform, nonamortized denominations and are easily traded, making them more attractive to most capital market investors. In its initial form, however, the mortgage instrument is denominated in relatively small amounts and requires on-site knowledge of the property being mortgaged for an accurate judgment of its quality. The most common method of overcoming heterogeneity, increasing the denominations, and attenuating the risk of holding an individual mortgage is the packaging of numerous individual mortgages into large blocks or pools. These blocks of mortgages can then be bought and sold in the secondary

market.

**Mortgage Companies.** During the 1948-1954 period, some important developments did occur, particularly the emergence of the modern-day mortgage company. Due to the pent-up demand for housing after World War II and the fact that FNMA was not successful in establishing a national secondary mortgage market, a large proportion of the financing of new homes was met by private institutional lenders. While commercial banks, savings and loan associations, and mutual savings banks were expanding in their local markets, life insurance companies began purchasing mortgages on a national basis. Mortgage companies developed as the agents of the insurance companies to facilitate the investment needs of the life insurance companies and meet their desire to avoid servicing loans—which would have required local offices. To encourage these correspondent relationships and to ensure the availability of large volumes of mortgages, life insurance companies committed themselves to purchasing mortgages from the mortgage companies prior to the actual closing of the loans, and frequently before construction of the homes. Some mortgage companies currently conduct some uncommitted business, but it is of relatively little importance.<sup>6</sup> On balance, the bulk of all mortgage company sales are still based upon prior commitments.

The volume of loans that life insurance companies add to their portfolios fluctuates with money and capital market conditions, as well as their cash flows. This has caused the mortgage companies to turn to FNMA and mutual savings banks (which were permitted after 1951 to hold Federally underwritten mortgages originating

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<sup>6</sup>The introduction of pass-through participations may increase the volume of uncommitted business done by mortgage companies issuing the new securities.

outside of their market areas) for commitments. Because of wide fluctuations in the inflow of savings, however, mutual savings banks prefer to operate without prior commitments. This preference and the reluctance of some other investors to enter the mortgage market—e.g., pension funds—has encouraged some mortgage companies to maintain an inventory of mortgages in reserve, a practice that in turn has furthered the development of a secondary mortgage market. FNMA also began making stand-by commitments in 1956, in effect providing a buyer of last resort to the mortgage companies. The warehousing of mortgage loans by commercial banks also helped provide mortgage companies with needed liquidity. These companies obtain interim financing by putting up notes against the collateral of their total assets, which include unsold completed mortgages as well as partially completed mortgage loans that may or may not have committed buyers. These “warehoused” mortgages are then redeemed from the commercial banks when payment is received from the final mortgage holders.

**Role of FNMA.** The establishment of FNMA provided a buyer of FHA mortgages; in its first year of operation, FNMA purchased 17 percent of all mortgages insured by FHA. During the World War II years, however, FNMA sold most of its mortgage holdings at a profit and did not return as an active supporter of a secondary mortgage market until after its new charter and reorganization in November 1954. Prior to 1956, all sales of mortgages to FNMA represented existing mortgages and, therefore, were true secondary market transactions. Since August 1956, FNMA has made advance commitments, but only for FHA and VA mortgages. FNMA purchases mortgages with funds raised through issuing deben-

tures in the money and capital markets. The agency performs many of the functions of a central mortgage bank and, in its role in the secondary market, acts primarily as a “buyer of last resort.” To encourage sellers to seek other buyers, FNMA has tried to keep its offering prices at a minimum level. Since 1956, FNMA has provided repurchase arrangements which allow the seller to repurchase a mortgage previously sold to FNMA at the original purchase price within a specified option period, normally nine months.

From the mid-1950's and 1960's, FNMA was successful in establishing a secondary market for Government underwritten mortgages. While it is true that the vast majority of transactions were based on commitments, the market mechanism was established and some transactions did take place. Since 1956, sales by FNMA from its portfolio have been generally moderate, although in 1958 and 1963 the dollar volume of sales exceeded purchases (see Table I). The greatest shortcoming of the secondary market as it developed was the exclusion of conventional mortgages—the largest category of mortgage debt.

**Mortgage-Backed Securities.** Following the most recent reorganization of FNMA in 1968 and the passage of the Emergency Home Finance Act of 1970, the stage was set for a more active development of a secondary market for conventional mortgages, and the secondary market for Federally underwritten mortgages was expanded. The most important innovations over the past few years have been the packaging of mortgages into blocks for sale, either directly as pass-through participations or indirectly as mortgage-backed bonds, and the establishment in 1970 of the Federal Home Loan Mortgage Corporation (FHLMC), a subsidiary of FHLB. Both FHLMC and FNMA have been authorized to purchase FHA

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TABLE I

Federal National Mortgage Association's Purchases and Sales of  
Federal Housing Administration and Veterans Administration Mortgages  
(Thousands of Dollars)

Year	Total Purchases	FHA Purchases	VA Purchases	Total Sales	FHA Sales	VA Sales
	(1)	(2)	(3)	(4)	(5)	(6)
1954	\$ 24	\$ 11	\$ 13	---	---	---
1955	86,049	19,934	66,115	---	---	---
1956	574,538	121,619	452,919	\$ 5,014	\$ 1,250	\$ 3,764
1957	1,021,044	238,799	782,245	2,887	2,049	838
1958	259,535	184,550	74,985	465,568	138,843	326,725
1959	734,569	553,526	181,043	3,474	3,048	426
1960	980,495	696,453	284,042	42,093	28,796	13,297
1961	624,390	453,695	170,695	521,999	318,629	203,370
1962	547,427	404,941	142,486	390,667	195,103	195,564
1963	181,290	162,850	18,440	779,824	389,474	390,350
1964	197,548	181,989	15,559	78,091	44,541	33,550
1965	756,933	627,134	129,799	46,562	14,508	32,054
1966	2,080,617	1,635,124	445,493	73	73	---
1967	1,399,602	911,708	487,894	11,744	7,710	4,034
1968	1,944,380	1,297,568	646,812	358	188	170
1969	4,219,969	2,807,387	1,312,582	---	---	---
1970	5,078,813	3,791,523	1,287,290	20,293	18,410	1,883

---: Less than \$50,000.

Source: Federal National Mortgage Association

and VA mortgages from originating sources, combine these mortgages into large blocks or pools, and then issue bonds that are secured by the blocks of mortgages to public investors. The bonds are guaranteed by GNMA. Pass-through participations are issued by private financial organizations and differ from mortgage-backed bonds in several respects. Only FHA and VA mortgages are eligible to back the participations, thus attenuating the risk of final default. The originator retains the servicing of the mortgages and passes the monthly mortgage payments, plus any prepayments, on to the holder of the pass-through participation after deducting a nominal service charge.<sup>7</sup> As an additional protection for

the investor, GNMA guarantees the performance of the servicing agent.

In addition, both FNMA and the FHLMC have been authorized to purchase conventional mortgages for their portfolios; but as of the present time, only FHLMC has made any purchases. The FHLMC has also been given authority to issue conventional mortgage backed bonds, but these would not be guaranteed by GNMA and would, therefore, be difficult to market.

The primary purpose of the new mortgage-backed instruments is to attract large investors, such as pension funds, which traditionally have been reluctant to invest in mortgages through the secondary mortgage market and in some cases prohibited from doing so. These securities eliminate the paper work of handling individual and highly diverse mortgages and through the GNMA

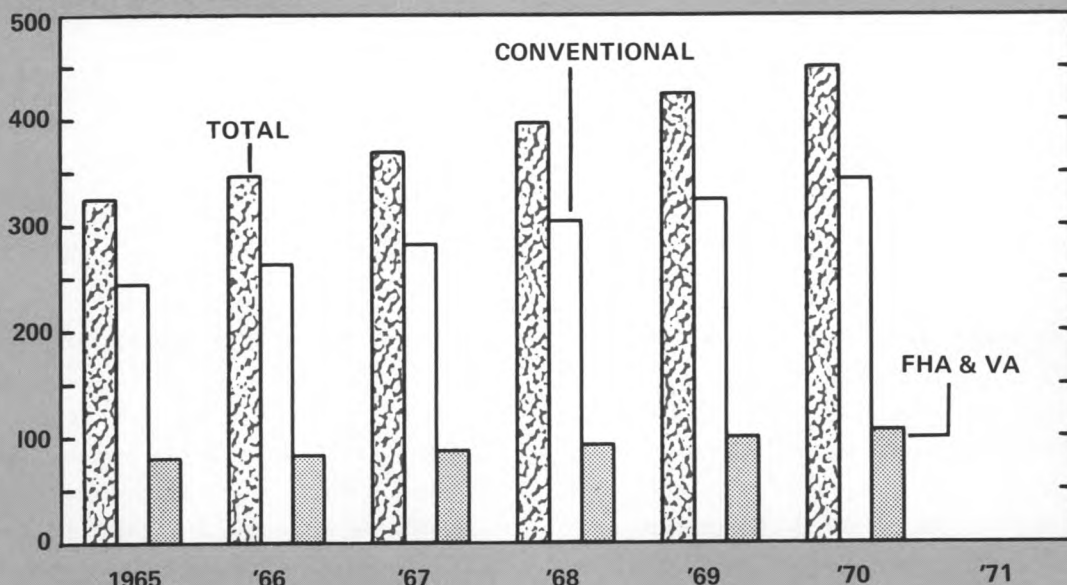
<sup>7</sup>The detailed treatment of late payments and prepayments varies among issuers.



Chart 1.

**MORTGAGE DEBT OUTSTANDING**

BILLIONS OF DOLLARS



END OF PERIOD

Last entry: 1970

Source: Board of Governors of the Federal Reserve System

guarantees meet the legal liquidity requirements often imposed on pension funds. The new securities also have the characteristics of other capital market instruments, in that they are conducive to active and frequent trading in the secondary market and can be held as long-term portfolio investments.

Since FNMA has been primarily concerned with FHA and VA mortgages, it was not expected to play an active role in the development of the mortgage-backed bond or a secondary conventional mortgage market. However, largely because of the influence of HUD, FNMA has proved to be

the more active innovator and participant in the new securities. FHLMC has for the most part followed FNMA even though the FHLB and the savings and loan associations deal almost exclusively in primary conventional mortgages. The interest of the FHLB and the savings and loan associations in the development of the new bonds and the secondary conventional mortgage market would appear to be a reasonable expansion of their previous operations.

**THE MORTGAGE MARKET SINCE 1965**

**General Trends.** The ebb and flow of funds into

## ECONOMIC REVIEW

TABLE II

### Annual Rate of Growth of Mortgage Debt Outstanding

	Total	Conventional	Government Guaranteed	
			Federal Housing Administration	Veterans Administration
1966	6.62%	7.62%	5.38%	0.65%
1967	6.56	7.08	5.49	3.92
1968	7.37	7.78	7.00	4.40
1969	6.99	6.69	8.22	5.42
1970	6.06	5.90	8.21	4.28
Average annual growth rate	6.7	7.0	6.9	3.7

Sources: Board of Governors of the Federal Reserve System and Federal Reserve  
Bank of Cleveland

the mortgage market since 1965 have been sensitive to changes in overall economic activity, especially to conditions in the money and capital markets. During periods of limited economic growth and declining interest rates, funds were readily available; while in periods of rapid economic expansion, funds were scarce, and many lenders were completely out of the mortgage market despite high interest yields. Chart 1 shows the total volume of mortgage debt since 1965. Although this outstanding debt has increased annually, the dollar volume of new loans has fluctuated. The proportion of loans having Government guarantees has also varied as money market conditions changed. To a large extent, mortgage credit is a function of the volume of savings flows into commercial banks and the thrift institutions. The mortgage market cannot, therefore, effectively compete with the money and bond markets for funds, because of the vulnerability of the inflows to the spread between yields on savings accounts and other alternative investment outlets.

Since 1965, total mortgage debt outstanding in the United States has increased from \$326 billion

at the end of 1965 to \$451 billion at the end of 1970, at an annual average rate of 6.7 percent. During this period, the fastest rate of growth occurred in 1968 when total mortgage debt outstanding increased by 7.4 percent; the slowest rate was 6.1 percent in 1970, considerably below any of the preceding four years (see Table II). Mortgage loans guaranteed by the Federal Government grew more slowly than the total between 1966 and 1968, but FHA loans have grown much more rapidly than conventional loans since 1968. However, at the end of 1965 and 1970, conventional loans outstanding represented 69 percent of total mortgage loans outstanding.

The trend toward greater Government participation in the mortgage market since the credit crunch of 1966 is also apparent in the volume of new mortgage loans made. In both 1966 and 1969, savings flows at commercial banks and other thrift institutions fell sharply, causing a reduction in the volume of funds available for mortgage lending. Although the data are incomplete and only show mortgage loans made by savings and loan associations, the trend is partially discernible from Table III, especially when it is recognized that nearly all



TABLE III

Mortgage Loans Insured by the Federal Housing Administration and Veterans Administration and made by Savings and Loan Associations  
(Millions of Dollars)

	FHA		VA		Savings and Loan Associations	
	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change
1965	\$ 8,689	+ 6.87%	\$2,652	- 6.81%	\$24,192	-0-
1966	7,320	-15.75	2,600	- 1.96	16,924	-30.04%
1967	7,150	- 2.32	3,405	+30.96	20,122	+18.89
1968	8,275	+15.73	3,774	+10.83	21,983	+ 9.24
1969	9,129	+10.32	4,072	+ 7.89	21,847	- 0.61
1970	11,908	+30.44	3,442	-15.47	21,387	- 2.10

Sources: Board of Governors of the Federal Reserve System and Federal Reserve Bank of Cleveland

TABLE IV

Total Residential Mortgage Debt Outstanding by Type of Lender  
(Millions of Dollars)

	Commercial Banks		Savings and Loan Associations		Mutual Savings Banks		Life Insurance Companies	
	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change
1965	\$32,387	11.94%	\$110,306	8.85%	\$40,096	9.89%	\$55,190	8.53%
1966	34,876	7.68	114,427	3.73	42,242	5.35	59,369	7.57
1967	37,642	7.93	121,805	6.44	44,641	5.67	61,947	4.34
1968	41,433	10.07	130,802	7.38	46,748	4.71	64,172	3.59
1969	44,573	7.57	140,347	7.29	48,682	4.13	66,254	3.24
1970	45,640	2.39	150,562	7.27	49,937	2.57	68,693	3.68

Sources: Board of Governors of the Federal Reserve System and Federal Reserve Bank of Cleveland

mortgage loans made by savings and loan associations are conventional in nature. In addition, commercial banks normally make a substantial amount of conventional mortgages; but as Table IV shows, the increase in mortgages outstanding at commercial banks was extremely small in 1970, indicating that conventional mortgage loan originations probably decreased substantially from previous year levels.

Comparing early 1970 mortgage market results with those from 1966 shows several marked

contrasts between the effects of the two periods of severe credit restraint on the mortgage market. Most striking is the behavior of FHA-insured mortgages. Rather than allowing funds to dry up and the number of new loans made to decrease sharply, as in 1966, FNMA increased its purchases of FHA and VA mortgages. This stepped up FHA activity in the mortgage market in 1970 increased the volume of insured loans to \$11,908 million or 30 percent more than in the previous year. The total volume of FHA mortgage loans outstanding

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increased to \$72 billion in 1970.<sup>8</sup>

FHLB pursued an aggressive "advance" policy in 1970; as a result, savings and loan associations maintained the volume of mortgages made in early 1970 better than they did in 1966. These institutions closed \$21 billion of new mortgage loans in 1970, only 2 percent less than in 1969 and 2.4 percent less than the 1968 cyclically large volume. In 1966, they had made only \$17 billion of new loans, a decline of 30 percent from 1965. The strong market support action taken by the various Federal housing agencies is probably largely responsible for the relatively small percentage decrease in housing starts in 1969 and 1970 and the short duration of the slump in housing starts.<sup>9</sup> The three major sources of private mortgage funds—commercial banks, mutual savings banks, and life insurance companies—seem to have curtailed their volume of mortgage lending more severely during 1969-1970 than 1966, causing total mortgage debt outstanding to increase less rapidly in the more recent period (see Table IV). In 1969 and 1970, life insurance companies did not have the freedom to choose freely among the alternative uses of funds as did the other financial intermediaries because of contractual arrangements contained in their policies. A substantial share of their investment funds had to be used to

meet the enlarged demand for policy loans.<sup>10</sup>

**Interest Rate Effects.** Generally, in choosing among various competing uses of funds, commercial banks and life insurance companies, of all the major mortgage lenders, have the fewest legal restrictions.<sup>11</sup> Savings and loan associations and mutual savings banks are limited by law to a relatively narrow choice of investments.<sup>12</sup> Further complicating the mortgage market is the dependence of three of the largest mortgage lenders upon time and savings deposits for their funds. As alternative investment outlets with higher rates of return develop, the net flow of funds into these institutions is likely to decrease, partly because of "inflexibilities" on rates paid. As can be seen in Chart 2, commercial banks experienced a net outflow of time and savings funds in 1969.

Interest rate differences have a double effect on the volume of mortgage lending. First, as rates on competing investment instruments rise, suppliers of funds tend to decrease their purchases of mortgages. This is particularly true when mortgage

<sup>10</sup>Due to special circumstances arising from policy loans, insurance companies made fewer mortgage loans than in the previous year from 1966 through 1969. In 1970, life insurance companies increased their volume of mortgage loans made to \$7.0 million from \$6.6 million in 1969, still well below the volume of \$9.9 million in 1965 and \$9.2 million in 1966. See *The Tally of Life Insurance Statistics*, Institute of Life Insurance.

<sup>11</sup>For life insurance companies, this includes the possibility of acquiring equity in the mortgage property.

<sup>12</sup>Mutual savings banks enjoy somewhat more freedom of choice than savings and loans inasmuch as they are able to hold United States, corporate, and municipal bonds, and corporate stocks as well as mortgages and consumer credit instruments. Savings and loan associations are generally restricted to real estate loans within fairly small geographic areas.

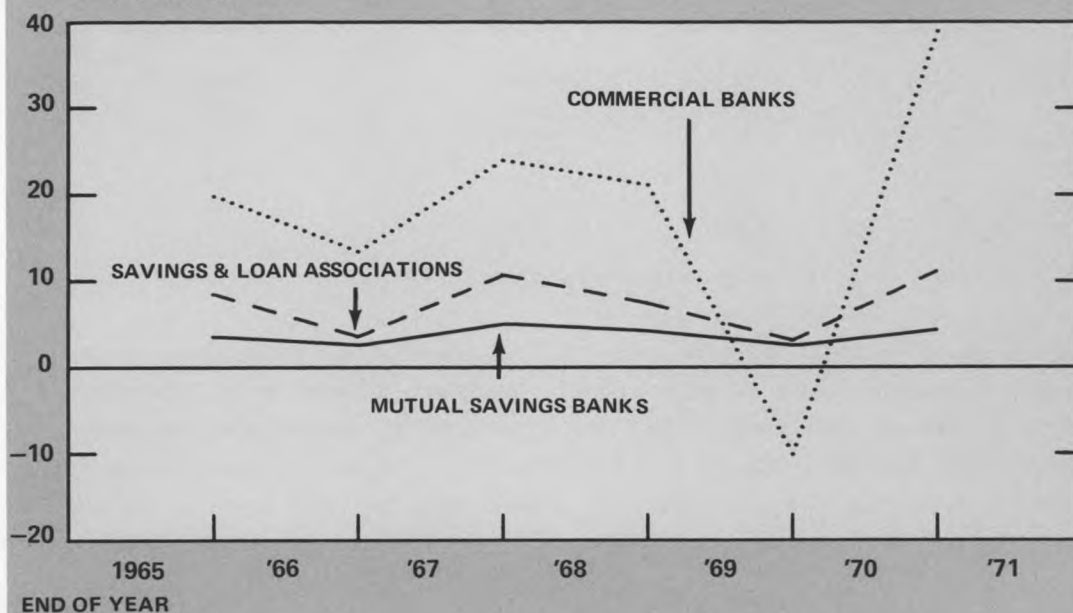
<sup>8</sup>Unpublished data, Board of Governors of the Federal Reserve System.

<sup>9</sup>The period most comparable to the 1966 "credit crunch" spans the second half of 1969 and early 1970. The recent impact of tight credit markets on mortgage lending, however, was more intense during 1970 than 1969.

Chart 2.

## NET SAVINGS FLOWS\*

BILLIONS OF DOLLARS



END OF YEAR

Last entry: 1970

\*CUMULATIVE TOTAL

Source: Board of Governors of the Federal Reserve System and Federal Reserve Bank of Cleveland

interest rates are held below the level of market rates, often though artificial interest rate ceilings (state usury laws). Second, as interest rates increase, generally time deposit growth at commercial banks and other savings institutions is retarded, and the available supply of loanable funds at these institutions is decreased. This second impact is magnified when maximum interest rate regulations on deposits, imposed by the various regulatory agencies, are effective. It is unlikely, however, that these institutions, because of their long-term loan portfolios, could become fully competitive with market interest rates.

During periods of high interest rates, demand for new residential mortgages is also depressed because of the increase in the total cost of a home. As was true during 1969 and 1970, interest rate advances and generally tighter mortgage terms frequently occur during periods of inflation so that the costs of property are higher, thus discouraging mortgage borrowing.

It therefore appears that the primary mortgage market can be quite sensitive to monetary policy. In general, the market expands during periods of expansionary monetary policy, and it is one of the first and most strongly affected economic sectors

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TABLE V

**Federal Home Loan Bank Operations**  
(Millions of Dollars)

	Advances Made	Repayments	Total Advances Outstanding (End of Period)		Long-term Advances Outstanding (End of Period)	
	Amount	Amount	Amount	Percent Change	Amount	Percent Change
1965	\$5,007	\$4,335	\$ 5,997	+12.61%	\$2,923	+ 17.91%
1966	3,804	2,866	6,935	+15.64	1,929	- 34.00
1967	1,527	4,076	4,386	-36.75	401	- 79.21
1968	2,734	1,861	5,259	+19.90	392	- 2.24
1969	5,531	1,500	9,289	+76.63	855	+118.11
1970	3,256	1,929	10,615	+14.27	7,534	+781.16

Sources: Federal Reserve Bank of Cleveland and Federal Home Loan Bank Board

during periods of restrictive monetary policy. Although influencing the volume of total expenditures in the economy is one of the goals of monetary policy, spending for housing has social value, which may partially exempt it from the desired results for the credit markets as a whole. Consequently, FNMA and FHLB have recently been attempting to lessen the impact of monetary policy on the housing industry and the mortgage market.

The FHLB, through the issuance of short- and long-term advances to member institutions, can affect their liquidity and, therefore, the ability of a given savings and loan association to make new loans. Short-term advances are often taken out by FHLB members to compensate for seasonal variations in savings flows and loan demand. Longer-term advances, which require specific collateral, tend to increase the amount of money available to the mortgage market as a whole and, particularly, to those regions of the country where the local lending institutions may have insufficient funds to meet mortgage loan demand. Although the volume of advances has always increased rapidly during periods when interest rates are rising, the FHLB

took additional steps to encourage the taking out of long-term advances in the 1969-1970 period (see Table V). To add greater support to the recovery in the mortgage market in late 1970 and early 1971, the FHLB began to discourage the early repayment of these advances and to encourage its members to make additional mortgage loans instead.

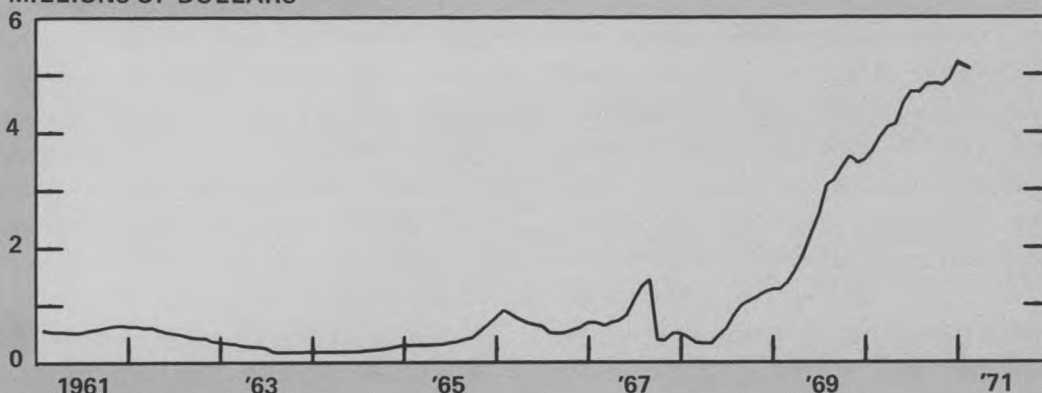
The secondary market operations of FNMA affect the overall availability of funds in the mortgage market more directly than the FHLB. FNMA is capable of increasing the total amount of funds available during periods of monetary restraint through the purchase of mortgages in the market and decreasing the amount of money available during periods of rapid credit expansion through the sale of mortgages. This action somewhat offsets the general effects of monetary policy. In addition, both FNMA and the FHLB finance a large portion of their support operations through funds raised in the bond market.<sup>13</sup> This

<sup>13</sup>Until the increase in the minimum denomination of these bonds in 1970, apparently a substantial amount of funds were being withdrawn from thrift institutions and commercial banks to purchase the FNMA and FHLB bonds.

Chart 3.

## FNMA MORTGAGE COMMITMENTS OUTSTANDING

MILLIONS OF DOLLARS



END OF PERIOD

Last entry: January 1971

Source: Board of Governors of the Federal Reserve System

has the effect of drawing funds into the mortgage market, where they may be more urgently needed in terms of social values. In periods of tight credit conditions such as 1966 and 1969, total mortgage sales by FNMA were extremely small, while purchases of mortgages were at record levels (see Table I; Columns 1 and 4). Although the purchases are preceded by commitments, they do serve the purpose of channeling funds—that would otherwise go elsewhere—into the mortgage market. The sale of a mortgage, however, constitutes a true secondary market transaction and acts to absorb excess available funds of mortgage lenders. In the 1969 period of increasing mortgage rates, FNMA borrowed funds in the private bond markets to increase its purchases of FHA and VA mortgages and to give support to the primary market. Largely due to this support, FHA and VA were able to increase their mortgage loan activity in 1969 by 10

percent and 8 percent, respectively; whereas in 1966, the volume had decreased by 16 percent and 2 percent (see Table III).

As would be expected, the volume of commitments increased during periods of "tight" credit and decreased as credit conditions eased (see Chart 3). By providing mortgage companies and builders with funds in this manner, FNMA again helped soften the burden of monetary policy on the housing industry.<sup>14</sup> Since May 6, 1968, FNMA has been conducting a "free market" auction of commitments for the future purchase of eligible single family FHA and VA mortgages, as well as purchasing eligible FHA and VA mortgages "over the counter." Some multi-family mortgages,

<sup>14</sup>Leo Grebler and Oliver Jones, *The Secondary Mortgage Market*, (Los Angeles: University of California, 1961) p. 138.



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however, are still purchased by FNMA through stand-by commitments or at negotiated prices on an individual case basis.

**The Secondary Market.** Commercial banks and savings and loan associations in general do not originate mortgage loans with the intention of selling them. At times, however, they take advantage of the existence of the secondary market to adjust their portfolios, both by selling any oversupply and by purchasing additional mortgages if the market conditions indicate that new mortgages should not or cannot be made. Due to the Government backing and standard high quality of FHA and VA mortgages, most of the purchases and sales involve FHA and VA mortgages. These portfolio adjustment purchases and sales are not based on prior commitments and therefore qualify as genuine secondary market transactions. In spite of the many efforts to develop a secondary market since the 1930's, most of the purchases and sales of existing mortgages are only marginal secondary transactions because the initial loan, in most cases, would not have been made without a commitment from the final holder.

In order to draw new sources of funds into the mortgage market, particularly the large private pension funds, the GNMA pass-through participation was developed. Since the program became operative in February 1970, 992 applications to form mortgage-backed pass-through participations have been received by GNMA, totaling \$3.9 billion; of this amount, \$2.3 billion have been sold and delivered, although commitments have been received for more.<sup>15</sup> These new FHA and VA mortgage-backed securities have not markedly

improved the secondary market, but they have gained some acceptance and should continue to increase the scope of the secondary market. So far, \$1 billion of mortgage-backed bonds have been issued by FNMA, and only \$615 million by FHLMC. There has been virtually no new secondary market activity involving conventional mortgages. The slow start in issuing these new mortgage-backed securities is due at least partially to the easing of money market conditions in 1970 and the adequate supply of loanable mortgage funds that has characterized the period since the introduction of the securities.

In general, during periods of interest rate stability, the yields on mortgages in the secondary market are below those available in the primary markets, an expected result of charges for servicing and other costs of origination. The yields on Aaa corporate bonds are also generally below yields on FHA-insured mortgages purchased in the secondary market. This spread between corporate bond and FHA mortgage yields is due chiefly to the well-established bond market mechanisms, the greater degree of competition in the bond market, and the larger denominations of the bonds.<sup>16</sup> It is likely that the yield on the newly established mortgage-backed securities will be between the two, perhaps approaching the yield available on Aaa corporate bonds.

Throughout 1965, when interest rates were stable, the yields on the various instruments behaved as expected (see Chart 4). In 1966 when interest rates began to increase steadily, the secondary market yield increased relative to the conventional mortgage yield; it was substantially

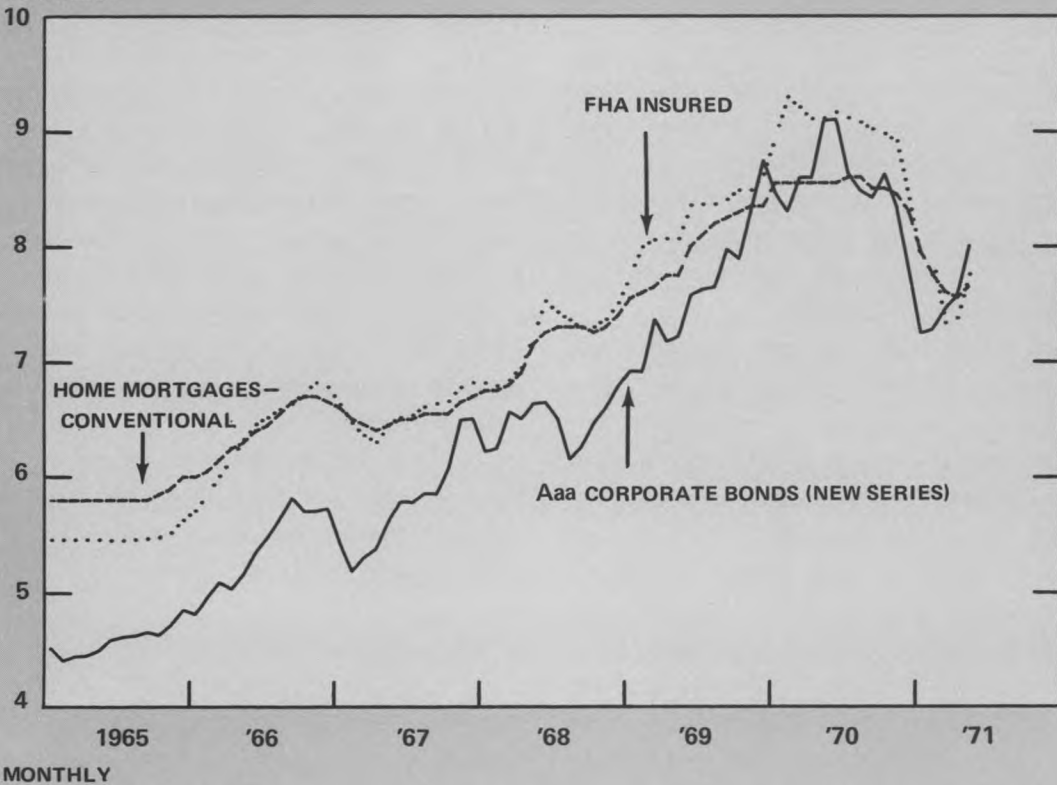
<sup>15</sup> All data concerning mortgage backed securities are as of July 19, 1971.

<sup>16</sup> Risk is not considered because the data used for secondary mortgage yields are based on FHA-insured mortgages.

Chart 4.

## SELECTED INTEREST RATES

PERCENT



MONTHLY

Last entry: May 1971

NOTE: Mortgage data based on FHA field-office reports for market areas of insuring office cities. For "conventional," average interest rates are for first mortgages on new homes. For "FHA-insured," weighted averages of private secondary market bid prices for certain new-house mortgages are converted to annual yield. Breaks in FHA insured series indicate periods of adjustment to changes in contractual interest rate. For corporate bonds, weighted average of new publicly offered bonds with at least 5-year call protection are used.

Source: Board of Governors of the Federal Reserve System

above the conventional mortgage yield when interest rates finally peaked in 1970. This probably resulted from the fact that the secondary market for mortgages is more competitive than the primary market and is, therefore, more sensitive to

changing market conditions. Conventional (primary) rates are usually set for given periods and require administrative action to change. In times of increasing interest rates, this will lead to the market determined secondary rates increasing



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more rapidly, while the reverse is true during periods of declining rates. In addition, during the most recent period of increasing interest rates, primary mortgage rates were restrained by state usury ceilings. Although there were fewer legal restrictions on the secondary market yields, these yields were constrained by Government pressure, partly because of the social implications of high mortgage rates. This permitted the yield spread between Aaa corporate bonds and the secondary mortgage yield to narrow. In fact, the yield on Aaa corporate bonds was greater than the yield on FHA-insured mortgages purchased in the secondary market in late 1969.

One of the most important changes in the mortgage market since 1965 has been the relative withdrawal of the insurance companies (see Table VI). As interest rates increased and the rates of return on alternative investments increased relative to the yield on mortgages, the insurance companies began to turn to other investment outlets. One of their frequently used alternatives was the purchase of equity in the property being mortgaged. In addition to purchasing fewer mortgages, the insurance companies began to sell off a larger proportion of their portfolios of mortgages. In 1965, sales of mortgages equaled 7.1 percent of those purchased, while sales were 23.6 percent of purchases in 1969.

Commercial banks, usually net sellers, also tended to cut back their participation in the secondary FHA market between 1965 and 1969, when banks generally reduced all mortgage activity. On the buyer's side of the market, mutual savings banks were forced to cut back their activity when savings flows declined. The smaller buyers of FHA mortgages, such as industrial banks and finance companies, also withdrew from the market. Mortgage companies were affected more

directly by the impact of economic conditions on the housing construction industry than by the yield structure of various alternative investments.

To counteract the reduced participation of the life insurance companies and others in the secondary market, the Federal Government increased its participation. As is shown in Table I, FNMA became much more active in the purchase of FHA mortgages in 1966 than in any previous period. In 1968, as conditions became increasingly tight in the mortgage market, other Federal agencies also became large scale purchasers, increasing the Federal agency share of total purchases from 7.7 percent in 1965 to 58.2 percent in 1968, and 46.5 percent in 1969 (see Table VI). Although savings and loan associations are only marginal participants in the FHA mortgage market, they did increase their volume of purchases in 1967 and 1969 when yields on FHA mortgages climbed above those available on conventional home mortgages.

## CONCLUDING COMMENTS

Some of the improvements long sought by experts in the secondary mortgage market have come about since 1968 or are currently in the planning stage. The most discussed improvements relate to the development of (1) a market maker and (2) a central mortgage bank.<sup>17</sup>

Most notable of the accomplished reforms has been the institution of the "free market auction" by FNMA that allows the yields which it receives on FHA and VA mortgages to fluctuate with market conditions. The administered rates, which

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<sup>17</sup>For a more detailed discussion of the secondary mortgage market and suggestions for expansion and improvement of the market, see Grebler and Jones, *The Secondary Mortgage Market*.

TABLE VI

Total Purchases and Sales of Federal Housing Administration Insured Mortgages  
by Type of Institution  
(Thousands of Dollars and Percent Distribution for Year)

Type of Institution	1965		1966		1967		1968		1969	
	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales	Purchases	Sales
Commercial banks	\$ 681,124 10.8%	\$1,014,234 16.1%	\$ 547,439 8.1%	\$1,078,969 15.9%	\$ 422,326 9.7%	\$ 762,770 17.5%	\$ 310,418 4.1%	\$ 872,301 11.8%	\$ 321,402 4.9%	\$ 892,695 13.6%
Savings and Loan Associations	\$ 314,051 5.0%	\$ 127,764 2.0%	\$ 260,868 3.9%	\$ 122,481 1.8%	\$ 442,915 10.1%	\$ 86,654 2.0%	\$ 661,709 8.9%	\$ 80,927 1.1%	\$ 849,303 12.9%	\$ 149,484 2.3%
Mutual Savings Banks	\$2,390,693 37.9%	\$ 169,191 2.7%	\$1,783,350 26.4%	\$ 138,592 2.1%	\$1,205,473 27.6%	\$ 107,732 2.5%	\$ 972,241 13.1%	\$ 45,751 0.6%	\$1,195,747 18.2%	\$ 287,477 4.4%
Insurance Companies	\$1,461,598 23.2%	\$ 103,432 1.6%	\$1,351,700 20.0%	\$ 166,673 2.5%	\$ 693,847 15.9%	\$ 63,520 1.5%	\$ 585,631 7.9%	\$ 55,839 0.8%	\$ 489,139 7.4%	\$ 115,355 1.8%
Mortgage Companies	\$ 231,868 3.7%	\$4,627,680 73.5%	\$ 197,839 2.9%	\$5,017,489 74.2%	\$ 103,151 2.4%	\$3,252,511 74.5%	\$ 219,984 2.9%	\$3,853,611 52.0%	\$ 306,752 4.7%	\$4,349,561 66.0%
Federal Agencies	\$ 484,434 7.7%	\$ 177,952 2.8%	\$1,956,085 29.0%	\$ 23,172 0.3%	\$1,029,064 23.6%	\$ 10,930 0.2%	\$4,333,150 58.2%	\$2,422,616 32.7%	\$3,064,781 46.5%	\$ 701,761 10.6%
Others*	\$ 735,603 11.7%	\$ 80,531 1.3%	\$ 657,339 9.7%	\$ 212,716 3.2%	\$ 467,417 10.7%	\$ 80,400 1.8%	\$ 359,195 4.9%	\$ 77,515 1.0%	\$ 357,634 5.4%	\$ 85,948 1.3%
TOTAL	\$6,302,518	\$6,302,518	\$6,762,313	\$6,762,313	\$4,369,701	\$4,369,701	\$7,452,859	\$7,452,859	\$6,590,901	\$6,590,901

\* Includes industrial banks, finance companies, endowed institutions, private and state benefit funds, etc.

Source: U. S. Department of Housing and Urban Development

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had been used previously, tended to distort the allocation process of the market. Potential investors were faced with both the uncertainties of the market and the additional problem of anticipating the judgmental decisions of the administrators.

FNMA and the FHLMC are also moving in the direction of developing a standardized conventional mortgage instrument. Although little progress has been made in standardizing state laws, FNMA is in the process of developing a standard mortgage contract for each state, with as much homogeneity among states as possible. When this project is operational, some national homogeneity will exist, cutting down the current extent of market segmentation. The primary purpose of this program is to facilitate the purchase of conventional mortgages by FNMA and FHLMC, but it will also help develop more reliable conventional mortgages and broaden the potential market for them.

Further standardization of statutory restrictions would probably lead to increased competition among the various primary lenders. Currently, the multitude of restrictions tends to isolate the various local markets from each other, discouraging secondary market transactions. A more homogeneous product would also be brought about by the adoption of a uniform code concerning foreclosures, redemption periods, laws

for doing business, and taxation of out-of-state lenders. In addition, competition could be increased by the easing of geographic restrictions on primary lending activity, allowing the flow of funds to go directly to the areas of the country having the greatest need.

Improving the marketability of the mortgage instrument, however, will serve little purpose if investor entry into the secondary market is not also improved. One possibility of increasing the confidence of potential investors in the marketability of a mortgage is to establish Federally chartered market makers or a central mortgage bank for conventional mortgages. These market makers would act as central clearing houses for purchases and sales of mortgages. Combined with a workable classification system and simplified legal and administrative procedures, the market makers could increase the volume of secondary trading and the scope of those participating. The results of such a move would be similar to the advantages of trading a corporate stock listed on an established stock exchange over trading an unlisted stock. Not only would the large institutional buyers enter the market, but as confidence in marketability increases, smaller scale traders might also enter. A central mortgage bank could also act as a clearing house for market information and provide the environment needed to develop the secondary mortgage market.

