Mortgage Finance and Construction in the American Economy since the End of the War

As prospects for the year 1956 are weighed, the roles which construction and its financial counterpart, mortgage credit, have played in maintaining the high level of employment and output since the war, are assuming a central place. In the ten years 1946 through 1955 about 10.3/4 million houses were started, with 1955 almost reaching the record level of 1950. Almost all of the housing units were privately financed. The total non-farm mortgage debt increased by almost $ 91 billion, the mortgage debt on non-farm 1-4 family housing units alone by $ 70.5 billion.

Whether looked at from the « real » side or the financial side, the figures are big even for America. The questions which arise in interpretation and in understanding what has happened and in assessing what may happen in the future are: what has been behind the enormous boom in construction activity? What has been the role of mortgage finance? And what effects did and does the increase in the mortgage debt have on the capital and money market?

1. - The Construction Boom.

In a complicated economy such as the American economy represents, it would be exceedingly rash to credit one sector of the economy with bearing the main burden of economic growth, particularly as in point of fact all sectors have expanded vigorously. It is true, nevertheless, that new non-farm residential construction not only formed the bulk of all construction, but a suprisingly large share of gross private domestic investment. Gross private domestic investment during the years 1946 through 1955 amounted to $ 446.2 billion, an annual average of almost $ 45 billion. Residential non-farm construction during the same ten year period amounted to $ 103.9 billion, or almost one fourth. Over the whole period, the relative importance of non-farm residential construction in total private gross domestic investment has been growing steadily from 1946, when it was still restricted to about one seventh of private gross investment, to 1955 when it was about 28%. When the substantial fluctuations in inventory investments are allowed for, the significance of residential construction becomes even more startling. Moreover, next to producers' durable equipment, residential non-farm construction provided the largest share of total fixed investment.

Non-farm residential construction is of particular interest, not only because it is very much more important quantitatively than either farm residential or commercial and industrial construction. Its significance in the present context arises also out of the fact that commercial and industrial construction is only relatively rarely financed by mortgages.

On the « real » side explaining the housing boom there are at least three factors to be specifically mentioned. The first and most obvious is the tremendous increase in population since the war, which has taken everyone including demographers by surprise and which shows no sign of abating. The second fact is that between 1929 and 1930 and the end of hostilities there was very little housing construction in the United States; during the first part of the period, because of the generally depressed conditions of the economy and some preceding overbuilding; during the war because of shortages of material and men for any non-war

supporting activities. Thus a tremendous backlog of housing demand built up ready to become reality if and when conditions changed. The third fact to be mentioned is, therefore, the tremendous accumulation of liquid resources during the war which initially sparked the postwar spending, and since then the continuing high prosperity of the American economy. These three developments must now be spelt out in detail.

2. - Population Change.

In 1930, the population of the continental United States was 123,077,000. The number of households was about 30 million, with 4.1 persons in a household. In 1940 the population had increased by 9,047,000 persons to 132,124,000. The number of households had increased at the same time by 5.1 million to about 35.1 million. By the end of 1955 the American population had increased to 166,512,000, and the number of households to about 49 or 49.5 million. Table I gives a very rough calculation of the relation of population change, household increase and housing construction as measured by housing starts.

TABLE I

POPULATION AND HOUSING CONSTRUCTION (a)

Year	Total population in 1000	Increase over previous date	Number of households in million	Change	Housing starts during period preceding (c)	Housing surplus (+) or deficit (—) Col. 5 — col. 4 in mill.
	1	2	3	4	5	6
1920	106,466		24.7			
1930	123,077	16,611	30.0	+ 5.3	7.034	+ 1.734
1940	132,124	9,047	35.1	+ 5.1	2.647	— 2.453
1950	151,683	19,559	44.1	+ 9.0	5.391	— 3.609
1953	159,630	7,947	47.0	+ 3.1	3.322	+ 0.222
1955	166,512	6,882	49.5 (b)	+ 2.5	2.650	+ 0.150

(a) *Sources*: Joint Committee on the Economic Report, Potential Economic Growth of the United States during the Next Decade, Washington 1954; Economic Report of the President, January 1956. Joint Committee on the Economic Report, Economic Indicators, monthly, and the same, Historical Supplement 1955.

(b) My estimate, based on change of 1950-1953. No official figures available as yet.

(c) Period starting with year of preceding row.

In order to get a clearer picture, it is necessary to go back to the census of 1920. Though the reader must be warned against taking the statistics on the number of households and the housing deficit or surplus too seriously, in particular because there is some interrelation between the definition of a household and of a dwelling unit, the following conclusions nevertheless stand out: The housing boom of the twenties produced a surplus in housing which was only gradually absorbed in the thirties. But the low rate of construction of the decade of the thirties was due both to the housing surplus and the relatively weak population increase. The housing deficit undoubtedly increased during the next decade 1940-1949, when population and number of families increased vigorously. It is virtually certain that by 1955 a considerable dent was made in the accumulated housing shortage; but while family formation will certainly slacken for a while as the numerically small classes of the 1930's become of marriageable age, and while therefore new housing starts are apt to decline somewhat in the near future, construction will nevertheless maintain substantial levels. The reason for this prediction should become clear in the arguments of the following pages.

There would be no point to go into too great demographic details. But the following additional comments need to be made to assess the importance of the population change more correctly. First, the population figures refer to the population as a whole, while the housing starts refer only non-farm residential construction. This understates the need for construction. For, while total population has increased vigorously, the farm population has decreased absolutely and relatively. Moreover, not only has the non-farm population grown more than total population, there has been at the same time a tremendous movement out of the central cities into the suburbs. In addition, the « classic » migration from the older eastern to the newer western parts of the United States has continued unabated. These internal population movements would have

created a substantial demand for new housing even if there had been no overall increase in population. They have given a tremendous impetus to the demand for housing of the postwar period.

In accounting for these facts of the postwar construction boom, no account has been taken of obsolescence of houses, destruction through fires or redevelopment of cities etc. which can alone amount up to about 400,000 units a year. Or to the demand which comes from an upgrading of the family income earner, as he rises in the world. All these facts go far to explain the tremendous demand for construction which has persisted throughout the postwar years and is likely to continue to exist at a high level.

3. - National Income and Liquid Savings.

Yet, like all such « explanations » which base on « need » something essential is lacking. The figures explain actually only why people would want to purchase houses, *if* the price of houses relative to alternative expenditures is right, and *if* the potential customers have the necessary income. « Real » needs by the very nature of our economic machine are always an incomplete explanation.

With the exception of 1949 and 1953, national income has in each postwar year been bigger than in the preceding one. Moreover, personal consumption expenditures, much the largest component of gross national product increased in *real* terms year by year even during the two postwar recessions and the Korea boom. This in itself has tended to maintain payments on homes previously bought, and to keep new mortgage money flowing into the housing market.

Moreover, financial saving by individuals increased phenomenally during the war when rationing and direct allocations limited the manner in which most of the rapidly increasing money earnings could be spent. These liquid savings were available for spending after the war as soon as the various war time restrictions were removed giving an impetus to the absorption of 8 million persons released from the armed forces. « Financial Saving of Individuals » may take the form of accumulation of currency, demand and savings deposits, investments in savings and loan associations, insurance and pension reserves, purchases of government and other securities, and liquidation of mortgage and other debts. This last item may sound surprising, makes, however, perfectly good sense in a country in which individuals have easy access to bank credit and instalment purchasing on everything from a house via a car to a wedding ring is highly developed. « Financial Saving by Individuals » is a flow concept, i.e. it refers to saving undertaken during a given period of time. It is not a stock concept, i.e. the figures do not show what the asset position was but only how it changed.

During 1939 and 1940, total personal saving was about 4.1/4 billion, mostly in the form of deposits and insurance, and somewhat offset by a liquidation of securities and increase in debts. In 1941, personal saving jumped to $ 10.52 billion; and the net accumulation of the years 1941 through 1946 inclusive was 171 billion dollars. During the years 1943 and 1944, the mortgage debt was even in small part liquidated. But already during 1946 there was a substantial increase in the mortgage debt.

Now, the years 1947 through 1954 fall conveniently into two subgroups. From 1947 to 1950 inclusive the net financial saving of individuals fell year by year from $ 6.67 billion in 1947 to $ 1.80 billion in 1950, i.e. they were substantially smaller in dollar terms than they had been in 1939-40 even though incomes and prices were substantially higher. Bank deposits were even liquidated throughout 1948 and 1949. But the chief reason for the fall in financial saving turns out to be a rapid increase in the residential mortgage debt which during 1950 amounted to $ 7.16 billion.

After 1951 throughout 1954 annual increases in financial assets of individuals vary between about $ 11 and 13 billion. But

throughout these years, the mortgage debt kept increasing at an annual rate of between 6.1/4 and 8.1/2 billion dollars. This itself indicates to what a great extent the mortgage debt served as an outlet for saving or, to put it into « real » terms, to what great an extent housing construction maintained the high level of economic activity. During the first three quarters of 1955 — the most recent figures available at the writing — liquid saving was $ 4.12 billion but the mortgage debt increased by the record amount of $ 9.13 billion in nine months. In other words, consumers were back on a spending spree, and going once more into debt, both mortgage and otherwise, at an increased rate. Moreover, they saved increasing amounts through Savings and Loan Association and Life Insurance Companies, both of which made huge sums of money available to the mortgage market. Table II gives the detailed figures which have just been summarized.

4. - Changes in Mortgage Credit.

The increased role of mortgage financing can best be understood in this context. Once more it is necessary to go back to the 1920's and 1930's to understand properly the changes which had occurred and which made the burst of mortgage financed construction of the postwar years possible. Mortgages in the 1920's were essentially locally given credits, without standardized conditions and a very limited national market. This description could be challenged in detail but not in substance. Mortgage interest rates were high, the loan-to-value ratios low and the duration for which they were given short. Moreover, mortgages as a rule were either not amortized at all, or at best partially amortized. The low loan-to-value ratios meant the existence of second and third mortgages with higher rates of interest so that the effective mortgage rates were even higher than the usual figures

FINANCIAL SAVING BY INDIVIDUALS, 1939-1955 (in $ bil.) — Table II

	Total	Currency and Deposits	Savings and Loan. Ass.	Insurance Reserves	Securities	Liquidation of	
						Mortgage debt	Other cons. debt
1939	4.25	3.00	0.04	3.01	– 0.53	– 0.50	– 0.78
1940–1945	161.57	71.42	3.24	35.72	51.06	– 1.51	1.65
1946	13.74	10.56	1.18	6.97	0.89	– 3.60	– 2.28
1947	6.67	2.01	1.20	7.13	3.51	– 4.46	– 2.73
1948	2.99	– 1.84	1.21	7.32	3.22	– 4.61	– 2.31
1949	2.86	– 1.46	1.51	6.05	3.03	– 3.87	– 2.40
1950	1.80	3.62	1.51	5.01	2.04	– 7.16	– 3.22
1947-1950 average	3.58	0.5825	1.3575	6.3775	2.95	– 5.025	– 2.665
1951	11.34	5.96	2.10	8.28	2.06	– 6.53	– 0.54
1952	12.98	6.84	3.07	9.22	3.96	– 6.26	– 3.85
1953	11.76	4.80	3.64	8.46	5.10	– 7.01	– 3.24
1954	11.85	6.84	4.48	7.92	1.56	– 8.58	– 0.37
1951-1954 average	11.9825	6.06	3.3225	8.47	3.17	– 7.095	– 2.00
1955							
first quarter	1.20	– 1.06	1.14	1.75	2.00	– 2.64	0.01
second quarter	–.45	0.17	1.44	2.41	0.96	– 3.28	– 2.16
third quarter	3.33	2.75	0.68	2.54	2.40	– 3.39	– 1.64
1955							
year estimate	4.64	abt. 2.00	abt. 4.3	abt. 8.95	abt. 7.15	abt. – 12.00	abt. – 5.00

Source: Economic Report of the President, January 1956, p. 179.

given for first mortgages indicate. The existence in turn of second and third mortgages produced a substantial element of instability in the debt structure.

This was also true for the effects of a short contract length and a lack of amortization schedules. True, the actual as distinct from the legal length of contract was somewhat longer since the mortgages were as a matter of course prolonged as long as conditions remained favorable. But by that very fact the pressure to liquidate them introduced instabilities just at a moment when it should be absent, and — from the standpoint of our discussion — would tend to discourage particularly those lenders for whom liquidity is important from going into the mortgage market.

The enormity of the catastrophy of the Great Depression has produced traumatic effects which are still with us. All debtors were very badly hit, but most of all mortgage debtors. To prevent the collapse from becoming bottomless, the Home Owners Loan Corporation (HOLC) was started, basically as a rescue measure. It served essentially to make frozen mortgages liquid by refinancing them with Government money. By 1936 the rescue operation was essentially successfully performed and a liquidation process of the HOLC started which came to a profitable end after the war.

At the same time the longer range problem was tackled by the establishment of the Federal Housing Administration (FHA), an insuring rather than a lending agency. FHA-insured mortgages had in addition to their regular mortgage rate an additional 1/2 of 1% insurance premium. With the FHA structural changes were initiated which began to come to fruition when the war interrupted them; but whose fruits can now be reaped. It must be stressed, however, that these changes took place in a larger context, in which federal budget deficits, easy money policies, new central banking powers and so on played their major role. This will be discussed in somewhat greater detail below, sections 6 and 7.

In the first place, the whole interest rate structure fell. By 1936, mortgage rates had essentially reached their lowest level of 4-4.1/2% on balance outstanding. The nominal rate fell from about 6-6.5% to 4-4.5%. The effective rate fell much more, since loan-to-value ratios in the case of FHA insured homes rose to 80% and in some cases even to 90% so that second and third mortgages became unneccessary and the lower rate applied to the now much larger first mortgage.

Moreover, this mortgage was standarized through FHA rules, insured, amortized by small monthly payments and had increasing contract lengths, ranging, before the war, to about 22 years, and in special cases after the war, with supplemental Veterans' Administration (VA) guarantees to 30 years with no down payment or a 5% down payment. At the same time the Federal National Mortgage Association was established (FNMA) which stood by as a residual purchaser or seller of FHA guaranteed VA insured mortgages.

It is difficult to exagerate the importance of these changes which have just been so soberly put on paper, and of some others which look even less spectacular and which will be mentioned presently. The Home Owners Loan Corporation (HOLC) in essence substituted Government money directly for private money which had been frozen, and assisted in an orderly liquidation of the mortgage debt. It got its money from issuing Government guaranteed bonds which of course appeared in the Federal debt. HOLC was essentially a temporary and limited rescue operation of the home mortgage market. It is difficult to imagine what would have happened without it.

The FHA itself does not give mortgages, but it insures mortgages which meet certain specifications. This means a standardization of mortgages which made mortgages negotiable instruments which could be bought and sold almost with the same ease as stocks or bonds. Moreover, FNMA saw to it that the secondary mortgage market worked. Hence mortgages

which, looked at individually, were given for up to 20 or 30 years, became in fact almost as liquid as 20 years government bonds, with a corresponding attractiveness of this type of investment to banks, life insurance companies and other financial intermediaries. Moreover, the regular amortization schedules set up return flows to the financial intermediaries. This meant that for an individual large holder of mortgages, even 20-30 year mortgages which he did not intend to sell on the secondary market, became quickly quite liquid assets. The obverse of this coin is, of course, that no investor can relax with the feeling that he has solved his investment problem with acquiring a batch of 20 year mortgages, since scheduled repayments quickly build up to large liquid amounts.

What does all this amount to as seen from the standpoint of the economy as a whole? Where once different parts of the money and capital markets were somewhat separate so that funds could not flow from different sectors freely into others, this mobility of funds has greatly increased. Aside from the mentioned standardization of the mortgage instrument itself, a number of other legal changes have contributed to this. The Federal Home Loan Banking System has been created to which both Savings and Loan Association and life insurance companies can belong, though in fact the membership of life insurance companies is negligible. The FHLB System performs similar functions for thrift institutions which the Federal Reserve System performs for commercial banks. By assisting the interregional flow of mortgage money it has also substantially improved the working of that part of the capital market. Thus what appears as mere « savings » institutions has to some extent been transformed into credit creating institutions.

Other legal changes have equally worked in increasing the efficiency of the capital market through improving the flow of funds. For example, Mutual Savings Banks are traditionally concentrated in the capital rich but older states of the Union. Yet, though the greatest economic activity went on in the newer parts of the country, they were restricted by law to mortgage investments within a limited radius of their domicile. A change in the law in about 1949 giving them greater latitude in their mortgage investments brought greater funds into that market. Similar changes were made at that time also for life insurance companies and earlier for commercial banks who in the not too distant past would have been looked upon as rather « unsound » for making large investments in mortgages — and who would indeed have been quite unjustified in making such investments as long as the institutional framework had not been appropriately changed by law.

We are touching here at a change in the monetary system which goes closely to the heart of monetary policy. It can perhaps be made clearest by referring to the monetary policy of the Federal Reserve System during the period during which interest rates on government bonds were pegged. Because of the expansion of the Federal Debt, the various financial intermediaries had come to hold large amounts of Government Securities of varying maturities. After the war when mortgage lending became highly profitable and other private paper at profitable rates became once more available in large quantities, life insurance companies and other financial intermediaries sold off large amounts of Government bonds to shift into mortgage and other private investments. To the extent that these Government bonds were purchased by the Federal Reserve Banks or the commercial banking system, this led to a direct expansion of the money supply. Thus life insurance companies could generate flows of funds which were much greater than the savings flowing into them. They were in fact as credit creating as commercial banks.

The old textbook accounts in which there was a wicked government affecting the money supply by means of the printing press so eloquently described in Goethe's Faust, while on the other hand there were « virtuous » thrift institutions who could only lend what

was saved and could therefore not affect the credit supply, has been a carricature of the real relations of the money and capital market for a long time. It is, of course, still axiomatic that only the banking system, including the central bank, can create credit. But we are dealing with a closely interrelated set of markets for money and financial assets of various liquidities, the supply of which is closely linked to bank credit and budget policy. This means that mortgage credit like any other credit can be now affected easily by money and fiscal policy. The corollary of this development is that policies affecting construction and their financial counterpart, mortgages, have to be considered from broad economic viewpoints of employment policy and price stabilization policy.

5. - Mortgages and the Asset Preferences of Mortgage Lenders.

Nothing illustrates better the improvement in the working of the capital market, and its increased homogenity — i.e. the increased fluidity among the various sectors of the capital market — than the emergence of commercial banks as major lenders on the mortgage market. Tables III and IV show for selected years the relative importance of the major lender groups on the mortgage market

TABLE III

PERCENTAGE DISTRIBUTION OF MORTGAGES ON 1-4 FAMILY PROPERTIES HELD BY MAJOR LENDER GROUPS, SELECTED YEARS

	Savings and Loan Ass.	Life Insurance Co's	Mutual Savings Banks	Commercial Banks	Indiv. and others	FNMA
1930	32	9.2	12.2	11.6	34.5	—
1940	22.5	10.5	12.5	13.6	29	—
1945	27.8	12.2	10.2	15.6	29.5	—
1950	29	18.1	9.7	21	18.8	3
1954p	32	20.5	11.6	17.8	14.2	3.1

p=preliminary data. Figures may not add up to 100% because of rounding.

TABLE IV

PERCENTAGE DISTRIBUTION OF MORTGAGES ON MULTIFAMILY AND COMMERCIAL PROPERTIES HELD BY MAJOR LENDER GROUPS, SELECTED YEARS

	Savings and Loan Ass.	Life Insurance Co's	Mutual Savings Banks	Commercial Banks	Indiv. and others	FNMA
1930	1.7	20.2	18.8	8	51	—
1940	1.6	26.2	21.2	12.8	38	—
1945	1.8	29.5	18.6	11.2	37.7	—
1950	2.4	29.5	18	14.8	35	negl.
1954p	3.9	28.5	21	14.2	32.5	0.3

p=preliminary data. Figures may not add up to 100% because of rounding.

as measured by the amount of mortgages held.

To interpret these figures, a few comments must first be made on the individual lenders and their asset preferences. Savings and Loan Associations are, of course, typically receivers of individual savings — see Table II above —, and their whole raison-d'être consists in the giving of mortgages, essentially in 1-4 family properties. Their whole asset preference schemata are basically very simple: they invest in mortgages, government bonds or cash. Their nexus to the capital market is, essentially threefold: they receive deposits from individuals. They can borrow from commercial banks or from the Federal Home Loan Banking System, or they can acquire or sell government bonds on the open market. In their willingness to lend on mortgage account they have little choice because they have few alternatives. In their lending activities they are therefore influenced primarily by the rate of savings of individuals and chiefly by the long term interest rates on the government bond market. All of these factors combine to explain why the Savings and Loan Associations have held their own on the mortgage market for 1-4 family properties, and why they have made vigorous and successful attempts to enlarge their share on the mortgage market for multifamily and commercial properties, not

traditionally their field, and still not of major importance to them.

The decline in the relative importance of Mutual Savings Banks has had a number of causes, but after the war the restriction on their investments which we have mentioned above, was the main drag. Its removal after 1950 accounts for the increase in their share of the market.

We may dispose of the group « individual and others » next. This group, which includes benevolent associations and other non-profit organisations such as colleges and universities (which being overwhelmingly privately endowed institutions in America must invest their endowment profitably and safely) has lost substantially in relative importance. This is simply one side of the medal, the other side of which is reflected by the increased life insurance and stock and bond holdings of individuals, presented on Table II. « Individuals and others » have clearly preferred to go increasingly into debt to the financial institutions and at the same time to save increasingly through them (1).

The emergence of commercial banks as a major mortgage creditor would be unthinkable without the creation of the standardized FHA guaranteed or VA insured mortgage, or without FNMA, which as Table III shows has played an important marginal role. For it is FNMA as the residual purchaser of mortgages which gives them that final touch of liquidity required by bank investors. The commercial banks are of course the main suppliers of our money, and they are traditionally « short » lenders. Yet their asset preference structure is rather complicated. Without for a moment doubting their need for liquidity they can yet chose between investments of different maturities. Subject to prudent diversification of their portfolios, they can chose between commercial bills, government securities from the short Treasury note to long term bonds, stocks and bonds or corporations and mortgages. Mortgages, it will be recalled, not only have a market which is only slightly less efficient than the stock market, but being regularly amortized, they generate a constant return flow of money which with proper maturity distribution makes mortgages in fact quite liquid investments for large lenders.

Given these facts, the investments of banks would be very much influenced, as also those of life insurance companies to a somewhat smaller degree, by the interest rate structure. Since the commercial banks form the very core of the monetary system, they are particularly sensitive to changes in the discount rate and the other traditional means of monetary policy. Why should a commercial bank in 1920, say, lend very much on mortgage account even when this was legally permisible, if mortgage interest on a 3 year mortgage ranged between 6 and 6.2% while the bank could get on a 3 months customer's loan 6.68%? (2). Or when partially tax exempt governments yielded 5.8%, and AAA corporate bonds over 6%?

Even in 1930 mortgage rates of 6.1-6.2% compared with commercial loan rates of 4.85%. By 1935 the mortgage rate had dropped only by 0.6% to 5.6% while the commercial loan rate had dropped almost 2% to 2.93%. By 1945 the spread between the long and the short rate had widened to 4.4% for mortgage interest and 2.2% on short term business paper. By 1954 the short term rate had hardened again to about 3.6% and, as Table III indicates, the bank liquidated some of their mortgage holdings in favor of other investments.

Thus the changes in the capital market have, as far as the banking system is concerned, introduced a new flexibility and a

(1) It is obvious, however, that mortgages granted by individuals to other individuals would not show in Table II, since both debtor and creditor would be within the same sector, and hence the transaction would wash out. Only if individuals were lending on mortgage account to institutions outside the « individual and other sector » would the figures in Table II be affected.

(2) Figures for mortgage rates from sample in possession of National Bureau of Economic Research; customers' loans (old series) in Federal Reserve Board, Banking and Monetary Statistics, p. 463. Bond yields ibid.

sensitiveness to monetary and fiscal policies which is, if not new, certainly much greater than before the war. The commercial banks, being at the center of the market for funds, are most sensitive to changes in short interest rates. In their case more than in that of any other mortgage lender, will a change in short rates affect the distribution of their asset and spill over as it were to the longer markets including the mortgage market. And this will not only be true for interest rate policy narrowly defined. Open market policy in government bonds of various maturities will quickly (3) affect mortgage lending, and so will the Treasury's debt policy. Moreover, the relationship works both ways: An increased demand emanating from the mortgage market will quickly spill into the banks and into other sectors of the economy.

All of this is theoretically new only to those economists who thought they could make a clear conceptual distinction between the capital market (on which supposedly « savings » were transacted) and the money market. Whatever the merit of this view was some time ago — and it probably had never much to say for it — the institutional changes which have occurred in the American economy since the Great Depression have made it completely unrealistic. But whatever the theoretical points to be made are, it is certain that the *actual* interrelation of the market for investments of varying maturity and liquidity has become substantially more perfect than it used to be. We shall return to this point in the next section when we shall discuss the interrelation between the mortgage debt and the supply of money and attempt to draw some conclusions as to the effectiveness of various policies which can affect the demand and supply of mortgage credit.

But first, what of the asset preferences of life insurance companies? The growth of life insurance companies has been truly phenomenal: Total assets of life insurance companies in 1938 were $ 18.880 billion. By 1940 they had increased to $ 30.802 billion. In 1945 they were $ 44.797 billion and by November 1955, the last available figure, they had increased to $ 89.491 billion. The pressure to invest is tremendous. Here too the essential asset choices are between Government bonds, corporate securities and mortgages and direct investments. Only short term paper is of minor importance. Here too a great sensitivity to movements in the interest rate structure must be expected. A comparison of the relevant yields on alternative investments with the growth of the importance of life insurance companies in the 1-4 family mortgage market is revealing.

(3) It is, of course, realized that there is always some lag while previous commitments are worked off.

TABLE V

MORTGAGE RATES OF LIFE INSURANCE COMPANIES AND THEIR SHARE IN THE MORTGAGE MARKET AS MEASURED BY HOLDINGS OF MORTGAGES ON 1-4 FAMILY PROPERTIES

	Life Insurance rates 1-4 fam. properties	AAA bond yields	Yields U. S. Government	Share of Life Insurance Co's in the holding of 1-4 family mortgages	Share of Mortgages in Life Ins. Assets
1930	6 %	4.55	3.3 (1)	9.2 %	29.2 %
1940	4.6 %	2.84	2.7 (1)	10.5 %	16.4 %
1945	4.4 %	2.62	2.3	12.2 %	13.1 %
1954	4.5-5 % (2)	2.90	2.53	20.5 %	28 %

(1) Partially tax exempt.
(2) Estimated.

It must, however, not be supposed that because the Life Insurance Companies do not normally invest in short term assets (4) their nexus with the money market is not intimate. In fact their large holdings of Government bonds makes them directly subject to monetary and fiscal control and — particularly in times of pegging of the interest rate structure — gives them unexpected powers of credit creation; powers linked closely with their belief in the stability of the interest rate structure (and of the economy in general).

(4) There are exceptions such as loans to insured on their insurance, postponed premium payments, or Government Treasury bills etc. accumulated against tax liabilities; but they are quantitativily unimportant.

6. - Mortgages, the Money Supply, and Economic Policy.

The greater homogeneity of the capital market has undoubtedly for better or for worse added new dimensions to economic policy, so much so that the usual discussion which gives within economic policy a logical priority to monetary policy, and within monetary policy to the discount rate, appears as a gross over-simplification — unless it is, of course, meant as a kind of short hand expression for the whole range of monetary and other economic policies.

In most general terms the aim of economic policy in a free market economy consists in establishing conditions of high employment and continuous growth, preferably at stable prices. The inflation problem appears as an excess of demand over what can be produced in the economy. Viewed from a « real » standpoint, resources should not remain unnecessarily idle for long and should produce goods demanded by the people. The excess demand can come from all kinds of sources; it is partly a matter of analytical convenience and partly a question of facts whether it is described in terms of « investment being bigger than savings », or « the money supply is too big » or « consumers do not save enough ».

The approach through asset preferences can be seen to have several distinct advantages: it enables us to focus on sectors of the economy: it enables us to introduce institutional and historical changes into a theoretical framework; and it helps one to see monetary and other economic policies in a consistent framework.

There is little question that after the war a considerable inflationary pressure emanated from construction and its financial counterpart, mortgages. We have already described how deferred demand, population growth and a reduction in the cost of acquiring a house (through lowering interest rates, giving higher loan-to-value ratios and lengthening the period of repayment all of which combined to bring

STRUCTURE OF THE AMERICAN INTERNAL DEBT, SELECTED YEARS TABLE VI (a)
in billion $

Year	Net total Public and Private	Total Public	of which Federal	Total Private	of which total corporate	of which nonfarm mortgages	of which other nonfarm debt	Total individual
1930	191.0	30.6	16.5	160.4	89.3	32.0	27.3	71.1
1940	189.9	61.3	44.8	128.6	75.6	26.0	17.9	53.0
1945	406.3	266.4	252.7	139.9	85.3	27.0	20.4	54.6
1946	397.4	243.3	229.7	154.1	93.5	32.4	20.5	60.6
1950	490.7	239.4	218.7	251.3	142.1	59.3	37.6	109.2
1954	605.5	263.6	230.2	341.9	176.6	94.5	53.2	165.3

Source: United States Department of Commerce, Survey of Current Business, May 1955.

(a) All figures refer to the end of the year.
The year 1946 has been included because the rapid reduction of the Federal debt in 1946 (and also the increase during 1945 which is not shown) were largely on paper. A last war loan in 1945 raised the debt and the cash balance of the Federal Government. The reduction of 1946 was largely due to the repayment of the last loan and of unused balances. The reduction thereafter was genuine and out of taxation.
The reader familiar with the American Federal debt picture may be surprised by the low figure of $ 230.2 billion for 1954. In essence the *net* debt is the debt held outside the Government, while the gross debt includes also the socalled duplicating debt, of which the largest item are Government bonds held by Government Trust funds. The latter amounted by the end of 1954 to $ 49.6 billion. The gross debt was by the end of 1954 $ 278.8 billion.

the monthly charge of buying a house well below the monthly rental) led to a persistent demand for housing and mortgage money. To understand, however, what happened as a result in the monetary system as a whole, i.e. in the economy, one has to see the mortgage debt in the internal debt structure of the United States. (The United States is a net international creditor at present, both in the stock (asset) and the flow (income) sense). Table VI gives the data for selected years.

The figures show, that between 1930 and 1940, there was essentially a substitution of the Federal Debt for all other debts, with the total internal indebtedness being somewhat smaller in 1940 than in 1930. The wording « Substitution » is not a metaphor but is to be taken quite literally; in a complicated economy such as the American one, the money supply is closely linked with the internal debt. Private debt increases make repayment of Federal debts as much possible as vice versa.

Two other factors are worth noting: first, the liquidation of the mortgage debt was kept in check. We already noted the success of the HOLC rescue operation. Secondly, inspite of the New Deal, the Federal Debt even at the end of 1940 was only about 23,5% of the total internal debt. By 1945, all debt components increased, but least of all the mortgage debt, and by far the most the Federal debt which, as a result of the war was now about 65% of the internal debt.

Between 1945 and 1950 the process is reversed, and private debt is again substituted for Federal Debt. But again we should note a few things which are relevant. The first is, that the Federal Debt not only declined relatively to the total debt, but that it declined absolutely. The second is that in spite of quite genuine debt repayments and budget surplusses after 1946 the period was one of vigorous expansion at rising prices. The third is that the mortgage debt increased more vigorously than other consumer debt, though it had fallen by less in the preceding period.

From the depression low on the whole period of the 1930's was one in which the money supply in the hands of the public (defined as adjusted demand deposits, time deposits and currency outside banks) increased vigorously and by about the amount as the total budget deficit. Nevertheless, it would be wrong to make the deficit responsible for the whole increase in the money supply. For, about half of the budget deficit was financed by bonds purchased by the non-bank public and by Government Trust funds, and had thus no direct effect on the money supply. The other half (roughly) of the increase in the money supply is accounted for by the gold inflow. Private loans played a very subordinate role.

During the war the dominant influence on the money supply was, of course, the Federal Budget deficit. Yet this increase in the debt had different causes and effects than similar increases had in European war economies. The American economy experienced an enormous expansion of *private* producing capacities which were financed with Government money. With a slightly different policy all of this financing could have been done through bank credits to private firms. A substantial part, though not all of the increase in the Federal Debt could thus have been replaced by a corresponding increase in the private debt. Yet with all this debt increase it is noteworthy that, though the accumulated deficit from 1941 through 1945 was about 151 billion dollars, the increase in the money supply was only $ 54 billion. Of the remainder the non-financial public acquired $ 60.8 billion worth of Government securities during the war.

The combination of large holdings of Government bonds in the hands of the non-financial public with the pegging of the interest rate structure which was quite rigid until 1950 (and which in one form or another will of course always exist as long as the central bank has some control over the money and capital market) played a major if not decisive role in the postwar period. The point to be made is not so much that with rigid pegging it was up to the life insurance companies how many Government bonds they wanted to monetize at a fixed price; this particular period ended with the famed accord between the Treasury and the Federal Reserve System of 1951. The important point seems to me to be the greater subtlety which has been introduced into economic policy by the fact that the Federal Reserve System can in effect through its open market operations affect the reserves of financial intermediaries such as life insurance companies, and has thus a much more direct influence on their investment policies than ever before.

From the end of 1946 through the end of 1950 the total supply of money in the hands of the public (as defined above) rose by over $ 12 billion. Mortgages held by the banking sector increased by about $ 9.9 billion, while all mortgages held by financial institutions increased by $ 24 billion. Now one interesting feature of this period is that there was a genuine reduction of the Federal Debt out of taxation. Even so, the economy was so liquid and the reserves were so large that the commercial banks increased their loans and investments including mortgage loans (but exclusive of investments in US Governments) by almost $ 30 billion. Now the point is that the insurance companies increased their assets during this period by $ 15.8 billion, *selling* at the same time $ 7.2 billion worth of Government bonds in order to have more money available for other and presumably more profitable investments. It is of course not possible to say that they pumped $ 7.2 billion more money into the economy than they received in savings. While literally true, the effect of their Government bond sales is different depending on how much they sold to the non-financial public, and how much was bought by the banking system. But we can be sure that *there* was one source of the inflationary pressure of the period.

Something very similar happened with the balance sheets of Savings and Loan Associations. They received $ 6.2 billion in savings money, but invested in new mortgages $ 6.5 billion, the difference being made up by sales of Government Bonds to the open market and borrowings from the Federal Home Loan Banking System.

No one, we can be sure, did *not* spend money during this period because he could not get a loan. I have made some very rough calculations (which are not reproduced here) indicating that about $ 7 billion out of the increase in the money supply of $ 12.2 billion may be attributed to mortgages, the rest to other loans and investment. But it is important to note that the budget was actually a deflationary force during this period, that any U.S. bonds sold by the life insurance companies etc. were on balance *not* purchased by the banking system, but by other non-financial investors or Government Trust funds; that in short the inflationary pressures were basically financed by the credits of the commercial banking system given to the private sector of the economy.

With 1950 a new period of budget deficits started, due to the outbreak of the Korean war and the cold war, a period of deficits which is likely to come to an end only during the current fiscal year. The calendar years 1951 to 1954 inclusive saw deficits of about $ 22 billion but only $ 11.5 billion of the bonds issued to finance it were bought by the commercial banking system and the Federal Reserve Banks, i.e. only slightly over half was clearly inflationary. Yet the money supply in the hands of the public increased by about $ 32.8 billion. The center of the stage was held by the lending operations of the commercial banks: $ 4.7 billion of the $ 25.4 billion increase in their net loans were mortgage loans. Once more the experience of the earlier postwar period is repeated also for the other lenders: Life Insurance Companies invested additional $ 9.1 billion in mortgages and an additional $ 12.5 billion in other securities except Governments. Yet they received only $ 16 billion of savings capital. They sold $ 4.4 billion of Governments, an amount which corresponds to what either the Federal Reserve System *or* the commercial banks purchased. One is tempted, and considering

everything, probably justified, to say that therefore about a quarter of the increase in the assets of life insurance companies was inflationary (5). This, one should add, in a period in which monetary policy had recovered its flexibility.

7. - Economic Policy and the Control of Construction.

We have stressed several times the complexity of economic policy of which monetary policy is a central part. It would go beyond the confines of this brief account to discuss the interrelation of the various parts which make up economic policy in a free market economy. But it should be stressed that the chief aim of this policy is to create the conditions of an expanding economy with a high level of employment and without inflation, and with a (politically determined) desirable distribution of tax and other burdens.

At least in a country such as the United States in which the balance of payments presents no problem, in which the competitive spirit is well developed and guarded over by anti-trust and similar legislations as well as by technological change, and in which productivity of labor is high and rising rapidly, the center of such a policy is directed towards influencing the demands by consumers, businesses and the government so that overall and by sectors no excesses of shorfalls arise.

This sentence is, of course, more programmatic in nature than a detailed operative statement. As far as mortgage credit is concerned, we can follow it up in some detail. Changing discount rates — the classic means of monetary policy — will directly affect asset preferences of commercial banks and indirectly also of all other lenders. It is apt to influence the availability of mortgage credit by making it more or less profitable compared to alternative outlets, and it is apt to influence in particular not so much the rate of interest on mortgage loans but some other dimension of credit as the length for which a mortgage loan will be given, or the loan-to-value ratio.

Now it should not be overlooked, as it frequently is, that though the aim of raising the discount rate is to cut down the demand for credit, and the supply of credit by making it more expensive, this « more expensive » need not mean just a higher interest payment. What matters to a mortgage borrower is how much he has to pay per month and how much cash he has to pay down. The monthly payment which consists of an interest charge, an amortization payment and tax payment, can be varied chiefly by changing its amortization payment component and the required down payment since the interest rate is already low. And even if the income of the borrower permits considerable monthly payments, he may not have sufficient cash on hand if the loan-to-value ratio is low. For these reasons mortgage credit is much more easily affected by changing the last two dimensions of credit than by altering the mortgage rate itself.

In this context the creation of a thirty year mortgage for veterans with no down payment required is a step of the greatest significance. It is also startling to discover that this radical step was introduced by the present conservative government. Social aspect aside, the chief significance of this innovation is to permit the small fellow to go into debt, or, to put it differently, for the small fellow to acquire assets in almost a painless way. For the little man, the crucial limitation on his

(5) This statement raises a number of methodological questions which it is impossible to discuss adequately in the context of the present paper. The following remarks must suffice. First, how is it possible to make statements about the economy as a whole which are based on what happens in one sector alone? This obviously cannot be done. For this reason, a detailed discussion (which actually underlies the statements made here) would have to consider the balance sheet changes of all institutions in the capital market simultaneously. Secondly, however, when this is done additional implied assumptions have to be made. In order to make the statement in the text to which this footnote is appended correct it must be assumed that the purchase of Government securities by commercial banks have not induced them to make fewer loans in other sectors. The proposition in the main body of the text is therefore not simply a balance sheet identity. The implied statement that banks bought the Governments without reducing their other loans is derived, not merely from an inspection of balance sheet changes, but a knowledge of the economic history of the period.

house purchase is the amount of cash he has to pay down. The variation on the theme of down payments can now be playd with considerable subtlety on a large body of mortgages. I shall return to these aspects of this radical innovation below.

The raising of the discount rate will automatically affect the other credit conditions somewhat. In the historic situation of the war and postwar years, medium long loans have become more attractive with higher short rates than very long loans. This was due to the fact that when the interest rate structure was frozen the spread between short and long rate was quite big. With the unpegging the interest rate structure became more normal and the spread between the short and long rates narrowed. Nevertheless, the other dimensions of credit add also other dimension to monetary policy. Thus Regulation X, permitting the Federal Reserve Board to control mortgage credit more directly corresponded to similar legislation with respect to other consumer credits. Even though at the margin some evasion is always possible, it is nevertheless true that under modern circumstances loans on mortgages, and consumer purchases can be much more effectivily affected by regulations concerning downpayments and length of contract than by variations in the interest cost of credit. Not to consider this part of monetary policy is simply blinding oneself to important economic developments. Regulation X was applied in 1950 after the outbreak of the Korean war. Because of previous lending commitments it became effective in March 1951, with the result that housing starts fell from 1.4 million units in 1950 to 1.1 million unites in 1951. But by 1952, Regulation X was suspended, and mortgage credit eased and expanded. In 1953 mortgage credit tightened again but as it became apparent that there would be a recession the Federal Reserve reversed itself, and mortgage credit expanded rapidly as « down payments and maturity terms (became) exceptionally attractive to borrowers in 1954 », as the Annual Report of the Federal Reserve System for 1954 put it (p. 2/3).

As with all things one must not try to prove too much. No one will deny that monetary policy in the classical sense worked. Yet there were other things too. In the present context it is of interest to note that the socalled 100% loans for veterans were suspended for a while and down payments of 5%-7.5% of the value of the house demanded, which helped to restrict credit. At the same time it should be noted that there are also other legislations in the American economy which favor the home owner and permit some control over the rate of construction. For reasons of social policy, home owners have always been favored in the American income tax legislation: in computing their taxes they may deduct mortgage interest from their incomes, but do not have to report as income imputed rents. Since the war home owners received another special treatment with respect to capital gains. A home owner selling his house at a paper profit but reinvesting in another house at the inflated value within a specified time reports but is not taxed on this capital gain, a treatment quite different from that given to other capital gains which may be just as much on « paper » only.

Many other examples could be given which illustrate the flexibility of the control of mortgage credit. It is, for example, influenced by commitments of the Federal National Mortgage Association to stand by to purchase FHA insured mortgages on the secondary mortgage market, and so forth.

What has in fact happened can be described as follows: it is generally realized that a free market economy at least of an American type has within wide limits the means of controlling its own economic fate by influencing the total effective demand. Investment decisions by entrepreneurs control one part, fiscal policy another part of all spending decisions. But the largest part is controlled by consumers making decisions on their expenditures. Their decisions as to house purchases are related in nature to investment decisions

by entrepreneurs, even though they are made by consumers: they are not routine decisions, they are postponable, and they are only partially related to past and present income. This is, of course, true for consumers' decisions on expenditures on durable goods in general, expenditures which in the United States are typically financed on credit.

A cynic has remarked that the modern American home owner has become the janitor of the life insurance company. Behind this clever remark is hidden a very significant change on the market for housing space. Where most homes are rented, the housing expenditure is in the first instance made by the owner who through renting must recuperate his capital, who therefore must calculate closely. The mere renter can if necessary give up his apartment rather easily, move to a cheaper one or double up with someone else. The risk of capital loss in this case is entirely on the relatively few home owners, not the renters.

When owner occupied houses become the rule, as in America, the risk of capital loss is shifted to the now very numerous purchasers. But at the same time home ownership will be an economic proposition as long as it is cheaper to buy than to rent, and as long as there is a market for old houses, as well as for new ones. The latter is given on the one hand through a rapidly expanding population which is at the same time also highly mobile, so that for people moving out of a locality others are moving in. The former is largely controlled by a comparison of the cost of building and of obtaining credit with possible rentals. It is no accident that most homes built recently were owner occupied houses and that apartment houses are in America essentially a matter of the few large cities, particularly on the two coasts.

In fact, the low downpayment and the amortized mortgage have meant that people have in *fact* continued to rent their homes, though in *law* the title to the house belongs to the de facto renter. It has meant, secondly, that through repayment of mortgages people have accumulated savings, against which they themselves can borrow again. Since they have to live somewhere, and since it *has* been in fact cheaper to buy than to rent, the dangers of default for any reason except loss of income are very small — and this is different from a rented house, where an apartment can be given up easily when income falls a little. Experience has shown that people will go to great length to keep their home — and this too explains the popularity of mortgages on small houses with life insurance companies.

Thus the creation of the fully amortized FHA guaranteed mortgage, of a secondary mortgage market and of the facts we have discussed above has made it possible for economic policy in general and monetary policy in particular to influence the level of construction to a degree not even dreamed of before.

When during 1955 there appeared to be dangers of housing surpluses and inflationary pressures mounted, lengths of contract on VA insured loans were reduced from 30 to 25 years, and downpayments increased from zero to 5-7.5%. For, as the Economic Report of the President states: « All these steps were part of a general and concerted credit policy. Housing loans insured or guaranteed by the Federal Government now represent over two-fifth of the entire home mortgage debt. For this reason, if for no other, the Government has a direct responsibility in helping to maintain a sound housing and mortgage market. It has a corresponding duty to use its own programs wisely, so as to promote stable economic growth as well as progress towards better housing » (6).

At the same time, there is a substantial stability in the mortgage market because the repayments are scheduled and the debt amortized over a long period. It has recently been fashionable to discuss whether consumer credit is excessive or not. Whatever the answer given to this question, it is certain that mortgage credit as set up at present cannot be the sudden deflationary force, as it was during the

(6) Economic Report of the President, January 1956, p. 40.

Great Depression particularly on the farm mortgage market. The mere fact that the problem of renewing short term credits will not arise (as it did with the mortgages of the late twenties and early thirties) will also make modifications easier, and introduces considerable stability into this important sector of the internal debt.

8. - Social Implications of Economic Policy.

It is a matter for future historians to decide in how far the economic effects of the institutional changes of the 1930's were foreseen and in how far they just happened. The question, however, suggests itself to what an extent the Government could affect the supply of housing without this really costing anyone anything. We have mentioned already the special favorable treatment which home owners in general get from the income tax and capital gains tax legislation, and which veterans get with respect to 100% mortgages. An analyst may be permitted to pause for a moment and ask why should it be cheaper to buy than to rent? What are the social effects of the easy mortgage credit? While final answers can be given only by history, a few tentative answers may be given now.

In comparing the cost of renting with the cost of buying the problem would have to be posed as follows: why should it be cheaper to borrow $ 10000 to buy a house than to borrow the same amount, invest it elsewhere and use the proceeds to rent? The answer is, of course, that other things being equal and in equilibrium, people should be indifferent to what they do. But in the present context it is of particular interest to note that other things are not equal, even aside from tax treatments already mentioned. First, home ownership should be nominally cheaper than renting even in equilibrium simply to make up for reduced liquidity and mobility in order that the effective price be the same. But much more important is that the little fellow cannot make the experiment: he simply cannot borrow $ 10000 on the same terms for any other purpose except buying a house.

Two major social changes have been introduced by the thirty year mortgage aside from the ones we have already mentioned throughout this paper. A little man — and most people are little fellows even in the fabulous land of unlimited opportunity — gets a virtually painless way of accumulating an equity in his house, i.e. of savings. This obviously works with no cost to anyone as long as the level of employment and output remains high and therefore the Government is not called upon to make good on its insurance. But as we have repeatedly pointed out, this kind of mortgage finance itself permits a great deal of control of effective demand in the economy as a whole. The preferential tax treatment is, of course, a different matter.

Secondly — and this is said with considerably mixed feelings — the time honored relations between creditors and debtors in particular with respect to their interest in preventing inflation have changed very much in favor of debtors. In some respect it is true that almost all groups in the economy have now an interest in the debtor side of the picture. True, individuals have not only mortgages and other debts but also life insurances which will deteriorate with inflation. But the very least that has happened is that all groups in the economy have developed at least a strong and conscious interest in maintaining high and expanding levels of employment.

A final word of warning. The success of the change in the mortgage market depends not only on them being seen in context of general economis policies. They depend also on the great and rising productivity of the United States. Undoubtedly, other countries can learn something from studying the changes in the American economy. But it would be a tragedy if the success of the American policy appropriate to a country in which most everybody is intimately familiar with banks and other forms of credit led other countries to adopt them, lock, stock and barrel to situations in which they could produce only inflation.

Wolfgang F. Stolper