A report
to the membership
of the
American Council of
Life Insurance

Kenneth M. Wright
Vice President &
Chief Economist

Economic & Investment Report 1975

HOWARD
OF

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by
Kenneth M. Wright
Vice President and Chief Economist
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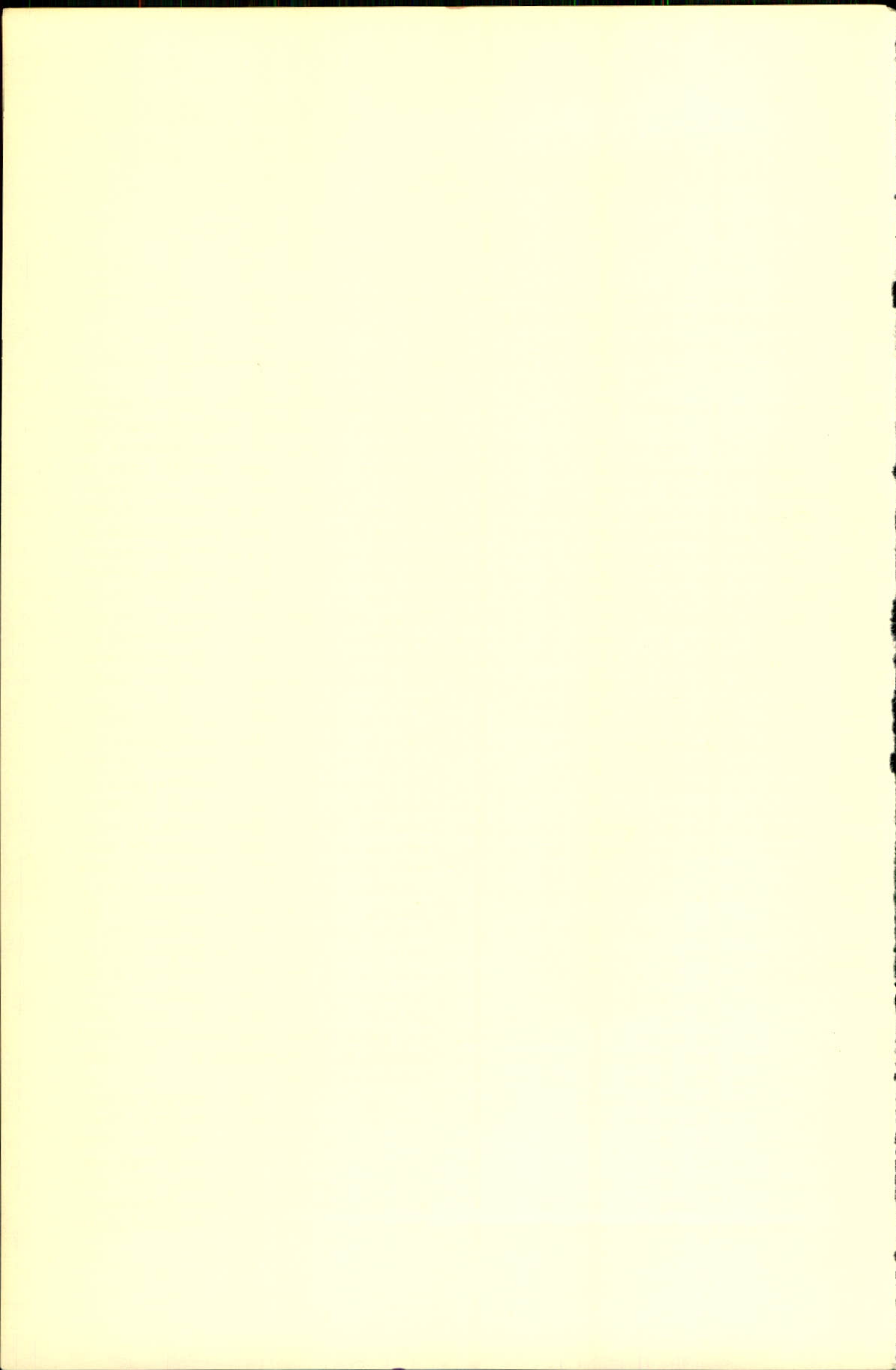


ECONOMIC AND FINANCIAL DEVELOPMENTS IN 1975

A Year of Transition

1975 was a year of transition for the American economy as the recession ended, recovery began, and inflation showed hopeful signs of abatement. Typical of a transition period, however, considerable uncertainty about the underlying strength of the economy remained. In the most severe recession since World War II, economic activity reached its trough during the second quarter and then began an irregular, although strong, upward reach. Unemployment, which peaked at a postwar record high of 9.2 percent in May, receded only slightly and remained above 8 percent for the rest of the year. Inflation, which ran at double-digit levels during most of 1974, showed marked improvement in 1975. The downward drift in the inflation rate encountered periodic reversals during the year, leaving the outlook for prices clouded and keeping inflationery expectations alive.

In real terms, after adjusting for price changes, gross national product declined by about 3 percent in 1975. This year-over-year measure of the decline in economic activity, however, masks the marked fluctuations that occurred during the year. Real production plummeted at an annual rate of about 11-1/2 percent in the first quarter, increased at a modest 2 percent in the second, surged upward at a rate of 13-1/2 percent in the third, and then finished the year at a more modest but still substantial rate. The quarterly pattern of changes in real GNP in 1975 was largely dominated by changes in business inventory investment. Chart A makes this clear by dividing *changes* in real GNP between *changes* in business inventory investment and *changes* in final sales of GNP. Business inventories were drastically reduced but the pace of liquidation slowed during the year, thereby giving an upward push to real GNP. By contrast, the growth in real final sales was modest and less impressive than real GNP growth. Unless real final sales develop more upward momentum than achieved thus far in the recovery, doubts will remain as to the strength of future economic expansion.

On the inflation front, prices rose in 1975 by about 8-3/4 percent above the average for 1974, as measured by the GNP price deflator. At this rate, price inflation does not appear much improved over the 1974 experience when prices increased by over 10 percent, but the quarterly pattern of inflation shows a more optimistic picture. After increasing at a sizzling 14-1/2 percent annual rate in the closing quarter of 1974, inflation slowed to 8-1/2 percent in the first quarter of this year and then retreated further in the remainder of the year, slipping below 5 percent in the third quarter. Other general price indexes also showed a marked slowing in inflation rates for 1975 compared with 1974.

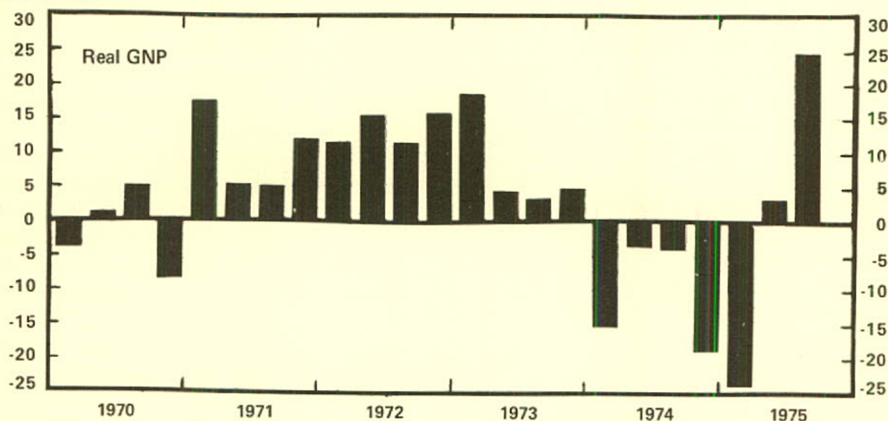
Uncertainties in the economy at large were mirrored by developments in financial markets, and those markets often threatened to move to center stage and call into question the timing, vigor, and staying power of the economic recovery. Specifically, fears were widespread about

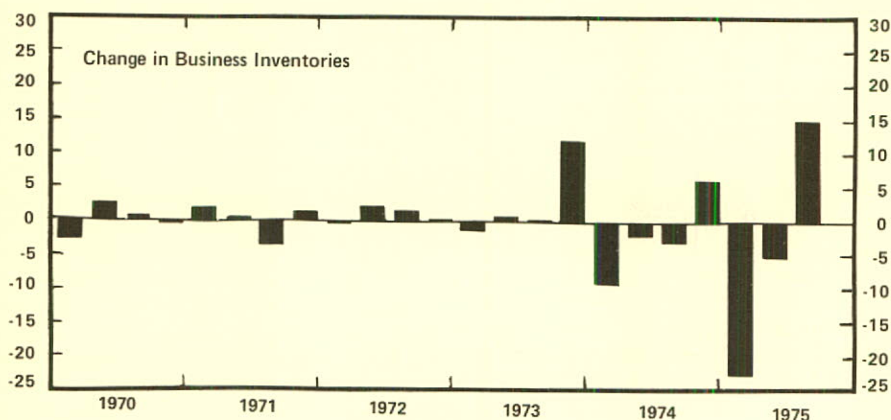
Chart A

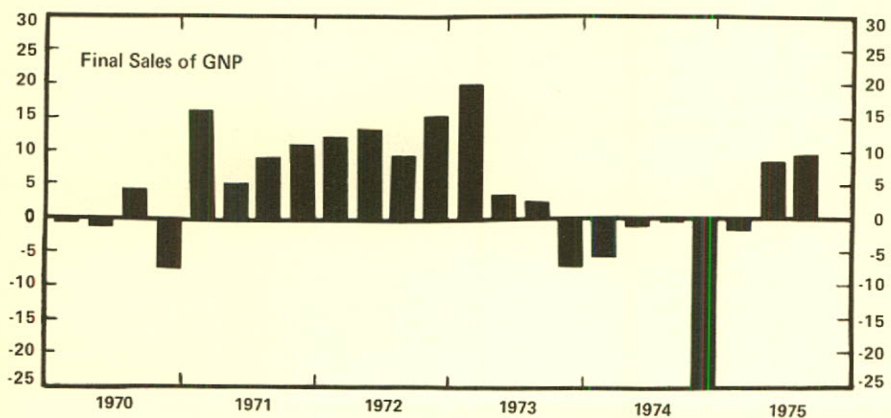
Real GNP: Changes from Preceding Quarter

(Seasonally Adjusted at Annual Rates)

Billions of 1958 dollars







the ability of financial markets to provide necessary funds to the private sector in the face of record borrowing by the Treasury. In addition, the financial markets were buffeted by the shock waves of actual or imminent defaults by a number of major borrowers, highlighted by widespread bankruptcies in the real estate field, collapse of a major retail chain, and a threat of default by New York City which was averted only by drastic fiscal reforms and last-minute federal assistance. These developments heightened investor emphasis on credit quality, with the result that borrowers with doubtful credit standing were required to pay sizable risk premiums on their interest costs or were excluded from the credit markets altogether.

For the year as a whole, yields on seasoned corporate bonds showed little net change and intra-year fluctuations remained within a narrow band. As may be seen from Charts B and C, this pattern of rate movements appears remarkably stable when compared with the period from early 1973 through most of 1974, when long-term bond yields climbed steeply. The relative stability of long-term rates in 1975 contrasts sharply with the pronounced volatility in short-term rates during the year. After a precipitous drop in most money market rates in January, short-term rates drifted to generally lower levels until June, when a surprise tightening in Federal Reserve policy pushed rates upward again through early October, although they did not regain previous highs (see Chart B). After early October, as Federal Reserve policy eased, rates on short-term securities about erased the June-to-October rise. On balance, short-term rates were substantially lower by December than they were when the year opened.

The combination of stable long-term rates at high levels and a drop in short-term rates well below long-term rates resulted in an upward-sloping yield curve throughout 1975, with the effect of reducing somewhat the competitive pressures on long-term markets from high-yielding short-term securities.

In the corporate bond market, the stability of yields on seasoned securities persisted despite a record volume of new issues. The monthly volume of corporate debt issues coming to the public market averaged $2.6 billion in 1975, well above that of 1974 and 1971 when public bond calendars were at previous peaks. In fact, in 1975, several months of over $3 billion in new public issues were recorded. Private placement volume was not at record highs, but was nevertheless substantial, running at an average monthly rate of $675 million in the first nine months of the year, up from a $525 million monthly average in the same period of the previous year. Both the largest public industrial issue and the largest private placement on record were brought to market in 1975. In March, General Motors Corporation sold a split offering of $600 million of medium-term notes and long-term debentures to the public and Sohio/BP announced in July the conclusion of the financing of their portion of the Alaskan pipeline with the private placement of $1-3/4 billion in debt with 75 institutions.

Uncertainty over the probable course of inflation and the consequent future trend in long-term rates continued to focus much investor interest on medium-term maturities. Medium-term issues (generally 5 to 10 years to maturity) represented 40 percent of all public issues in 1975, up from the high 30 percent level of the previous year and well above levels of 8 percent and 20 percent in 1973 and 1972, respectively. Many issues reaching the public market were split between a medium- and a longer-term component as a response to this maturity preference by investors.

Investors continued to be quality conscious in the corporate bond market in 1975, as evidenced by the spread between yields on seasoned Aaa and Baa corporate bonds which remained at about 150 basis points through most of the year. After trending downward for several years, this risk premium had begun to widen markedly in the late summer and early fall of 1974, and had climbed to over 180 basis points by February 1975, more than double the spread just one year earlier. Since that time, the spread has narrowed slightly but has hovered in the 150 basis-point range.

Chart B

Yields on Prime Bonds and U.S. Treasury Bills

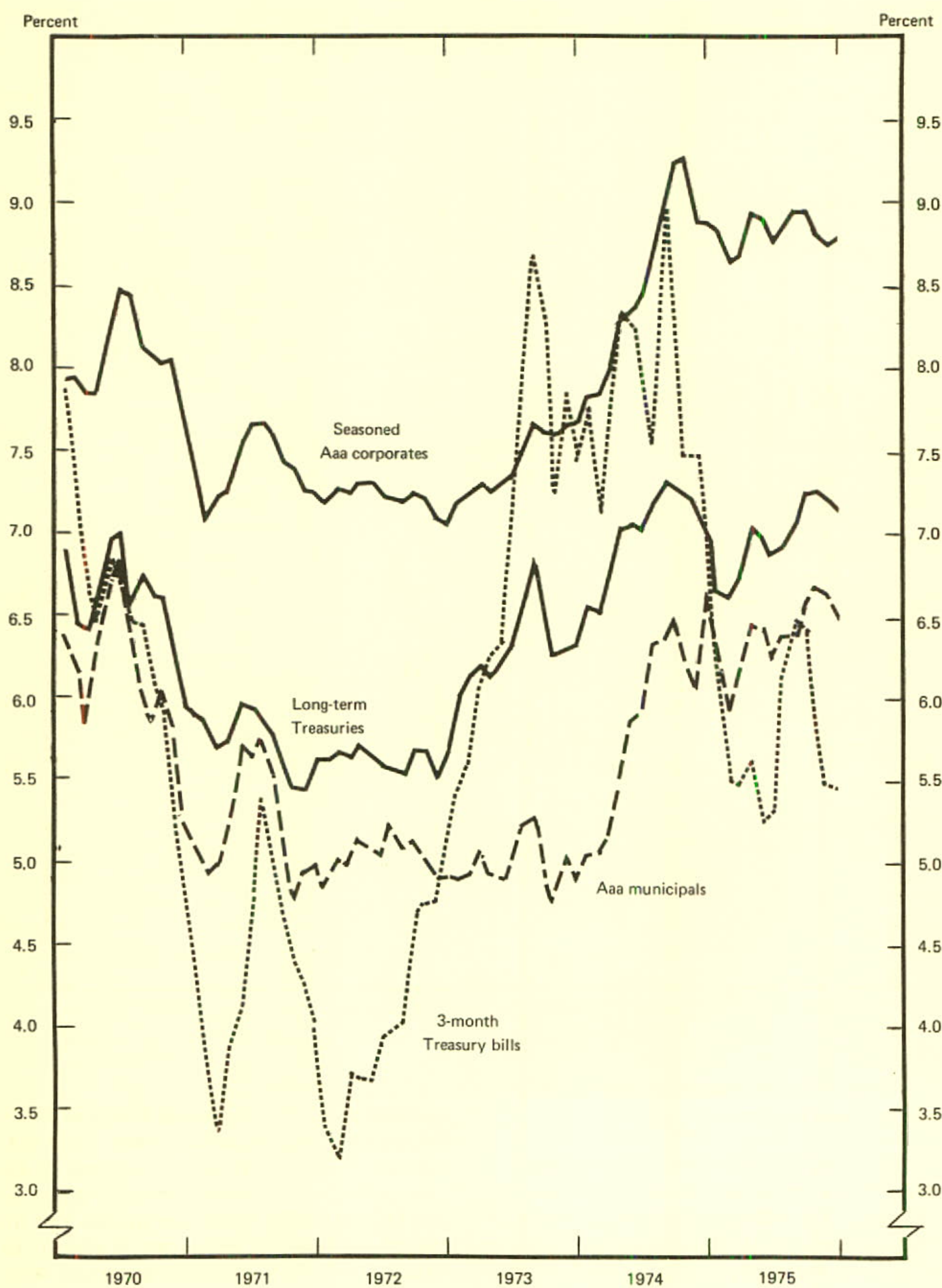
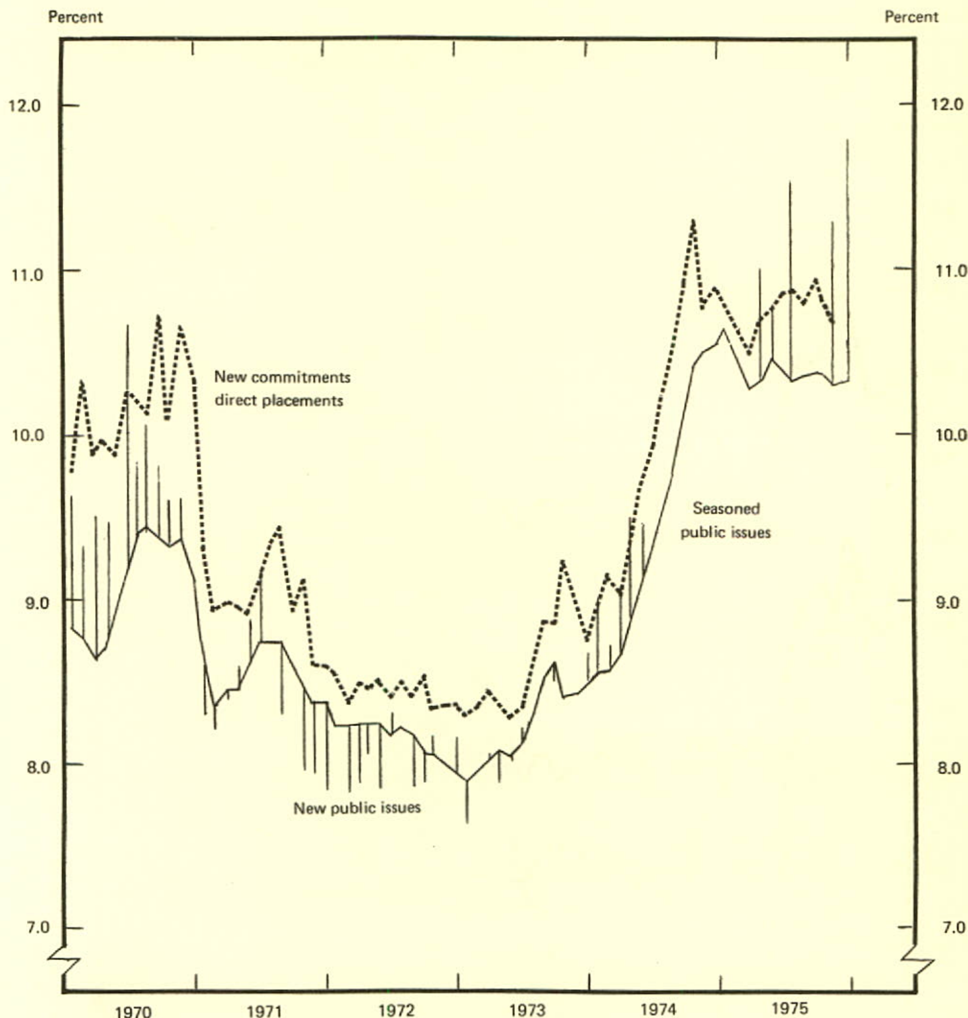


Chart C

Yields on Baa Corporate Bonds



Money and Capital Market Flows in 1975

The general weakness in economic activity was reflected in a decline in the volume of funds raised in money and capital markets in 1975 as large increases in Treasury financing and long-term corporate borrowings were more than offset by a drop in the aggregate demand for funds from other users. According to estimates prepared by the Association's economics department, total financial flows in 1975 decreased to $199 billion from $211 billion in 1974. A systematic analysis of estimated credit flows through financial markets in 1975, based on partial and incomplete data for the year, is shown in Table 2. To facilitate comparison with the previous year, data for 1974 are shown in Table 1. (In this analysis, amounts refer to *net* increases in outstanding debt of borrowers rather than

Table 1

SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS IN 1974

(In billions of dollars)

Sources of funds	*Securities*					*Mortgages*		*Loans and Credit*				Total sources of funds
	Corp. bonds	*Corp. stocks*	*State & local*	*Fed. Gov't*	*Fed. agency*	*Residential*	*Nonresidential*	*Consumer credit*	*Commercial paper*	*Business loans*	*All other loans*	
Life insurance companies	4.0	2.2	0.3	−0.1	0.2	−0.3	4.9	–	1.1	–	2.7	14.9
Noninsured pension funds	4.7	2.3	–	−0.1	1.3	*	–	–	–	–	–	8.1
State-local retir. funds	8.4	3.5	−0.6	0.7	−0.1	0.3	–	–	–	–	–	12.3
Savings and loan assns.	–	–	–	2.2	1.1	15.0	2.6	0.2	–	–	–	21.0
Mutual savings banks	1.0	0.2	*	−0.6	0.4	1.1	1.0	−0.1	0.3	–	–	3.3
Commercial banking	1.1	*	5.5	−2.6	3.6	7.1	5.5	2.8	0.8	34.9	3.5	62.2
Federal Reserve Banks	–	–	–	2.0	3.2	–	–	–	–	0.9	–	6.2
Federal loan agencies	–	–	0.8	−0.2	*	13.8	3.0	–	–	1.9	3.1	22.4
Nonfinancial corporations	–	–	0.6	0.8	*	–	–	3.3	4.9	3.5	–	13.1
Fire and casualty cos.	3.8	−1.4	1.8	*	0.3	–	*	–	–	–	–	4.5
Real estate inv't trusts	–	–	–	–	–	0.5	0.3	–	–	–	–	0.9
Mutual funds	−0.4	−0.5	–	*	–	–	–	–	1.8	–	–	0.9
Foreigners	1.3	0.5	–	3.6	–	–	–	–	–	7.2	–	12.6
Individuals and others	1.2	−2.0	9.8	5.6	11.5	0.5	−0.8	3.4	−0.9	–	–	28.3
Total uses of funds	25.1	4.8	18.2	11.3	21.5	38.0	16.5	9.6	8.0	48.5	9.4	210.8

*$50 million or less.

The uses of funds measure the net changes in outstanding loans and securities; the sources of funds measure the net changes in ownership. Because of rounding, components may not add to totals shown.

Table 2

ESTIMATED SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS IN 1975

(In billions of dollars)

	Securities					*Mortgages*		*Loans and Credit*				
Sources of funds	*Corp. bonds*	*Corp. stocks*	*State & local*	*Fed. Gov't*	*Fed. agency*	*Residential*	*Nonresidential*	*Consumer credit*	*Commercial paper*	*Business loans*	*All other loans*	*Total sources of funds*
Life insurance companies ...	7.9	2.2	0.5	0.6	0.2	−1.0	4.4	—	1.1	—	1.6	17.4
Noninsured pension funds ..	4.0	4.3	—	3.0	0.2	*	—	—	—	—	—	11.5
State-local retir. funds	7.5	2.4	1.0	1.4	0.6	0.1	—	—	—	—	—	13.0
Savings and loan assns.......	—	—	—	7.0	3.3	25.0	3.7	*	—	—	—	39.0
Mutual savings banks	3.5	0.2	0.6	2.4	1.9	1.9	0.4	0.1	*	—	—	11.0
Commercial banking	1.5	*	3.5	30.0	2.0	1.2	2.0	*	*	−15.0	3.7	29.0
Federal Reserve Banks	—	—	—	5.5	1.0	—	—	—	—	*	—	6.5
Federal loan agencies	—	—	0.3	*	*	16.6	3.4	—	—	−0.4	1.2	21.0
Nonfinancial corporations ...	—	—	*	16.3	−0.5	—	—	1.2	*	1.5	—	18.5
Fire and casualty cos.	3.1	−0.8	2.0	1.3	−0.4	—	*	—	—	—	—	5.2
Real estate inv't trusts	—	—	—	—	—	−1.0	−1.2	—	—	—	—	−2.2
Mutual funds	1.1	−0.8	—	*	—	—	—	—	1.4	—	—	1.7
Foreigners	0.3	4.0	—	10.0	—	—	—	—	—	−3.3	—	11.0
Individuals and others	2.6	−2.5	7.1	7.0	0.2	−0.3	−0.7	4.2	−1.5	—	—	16.0
Total uses of funds	31.5	9.0	15.0	84.5	8.5	42.5	12.0	5.5	1.0	−17.2	6.5	198.8

*$50 million or less.

The uses of funds measure the net changes in outstanding loans and securities; the sources of funds measure the net changes in ownership. Because of rounding, components may not add to totals shown.

gross flotations of new issues, and to *net* changes in the holdings of specified assets by investors.)

Foremost among the users of funds in 1975 was the federal government, which borrowed $84.5 billion to finance an all-time record budget deficit. The pressure of this enormous Treasury borrowing was only partly offset by the $13 billion decline in net borrowings by federal credit agencies to $8.5 billion in 1975. The largest net purchasers of governments in 1975 were the commercial banks which took an estimated $30 billion, about 35 percent of the net Treasury issues in 1975. Nonfinancial corporations, thrift institutions and some contractual savings institutions were very heavy purchasers of Treasury securities for the first time in many years. Foreigners were substantial buyers of U.S. government securities in 1975, as they added about $10 billion to their holdings over the year.

Business corporations drastically curtailed their total external financing in 1975, as corporations made sizable cutbacks in inventories and fixed investment outlays in the midst of the deepest recession of the postwar period. Nevertheless, the volume of stock and bond financing increased markedly as corporations sought to restructure their balance sheets. The net increase in corporate bonds in 1975 was an all-time record $31.5 billion, over $6 billion more than the previous high in 1974. The huge volume of corporate bond flotations in 1975 reflected the efforts of corporations, particularly manufacturing firms, to rebuild liquidity and to convert short-term bank borrowing into more permanent financing. A large proportion of the funding accomplished in 1975 was by high-quality credits, leaving many lower-rated borrowers unable to meet their liquidity rebuilding needs. As may be seen in Tables 1 and 2, life insurance companies almost doubled their net purchases of corporate bonds over the previous year, while state and local retirement funds continued to be heavy buyers. Noninsured pension funds and fire and casualty companies, which had increased their participation in this market in 1974, continued to make sizable net purchases of corporate bonds in 1975. Mutual savings banks also found this investment outlet attractive.

In the face of a modest recovery in equity markets and the need by many corporations to bring down dangerously high debt-equity ratios regardless of cost, net issuance of corporate stock nearly doubled to $9 billion in 1975. Although high by the standards of the last decade, this amount fell far short of net new stock issuance during the buoyant stock market atmosphere of 1971-72. On the sources side of the market, foreign investors were heavy buyers of equities in 1975 relative to the past, and indeed their participation exceeded that of life insurance companies and of state and local retirement funds and almost equalled that of noninsured pension funds. Fire and casualty companies, important traditional net purchasers of common stock, decreased their holdings for the second straight year.

Business firms relied less on short-term means of financing in 1975 than in the preceding year, and in the aggregate were actually able to pay down bank loans, in many cases with the proceeds of corporate bond flotations. The weakness in short-term loan demand enabled the Treasury to finance its deficit with less pressure on financial markets than would have otherwise been the case. Business loans (largely bank and finance company loans to business) registered a dramatic absolute drop of about $17.2 billion in 1975 after a record increase of $48.5 billion in the previous year (see Tables 1 and 2). Even the typical fourth quarter increase in business loans was sluggish compared with earlier periods, as improvements in cash flow beginning about midyear meant that many business corporations had less need for bank and other short-term financing.

Net borrowing by state and local governments was $15 billion in 1975, compared with $18.2 billion in 1974. This sector of the financial markets was dominated by the specter of possible default by New York City and State through much of the year. The widely publicized difficulties of New York, coupled with a slowdown in tax receipts as a result of the recession, caused many local govern-

mental units to hold down the growth in expenditures and to curtail market borrowings. Adding to the difficulties of the tax-exempt market was the reduced participation by commercial banks and casualty insurance companies, two of the major suppliers of funds to state and local borrowers in earlier years.

With rising incomes and the added stimulus of sizable tax cuts and rebates, consumers were able to achieve a considerable improvement in their overall financial position during 1975. They sharply slowed their use of consumer credit to only $5.5 billion, a further slowdown from $9.6 billion in 1974 and far below the record increase of $23 billion in 1973. In addition, consumers used a higher percentage of their increased incomes, partly as a result of the tax rebate, to increase savings, some of which took the form of increased flows into the thrift institutions. These savings inflows, in turn, were an important factor in the expansion in the net flow of funds into the residential mortgage market, which was also bolstered by increased lending by the federal loan agencies. The net increase in residential mortgages was $42.5 billion in 1975, compared with a $38 billion increase in 1974. The rise over 1974 was more than accounted for by home mortgages, as multifamily mortgage flows continued to decline from the peak levels of 1972.

Nonresidential mortgage credit increased only $12 billion in 1975, down from $16.5 billion in 1974 and well below the peak of $21.6 billion reached in 1973. The net flow of funds into the commercial mortgage market (office buildings, shopping centers, and other commercial structures) fell by about half, from $11.6 billion in 1974 to an estimated $6.8 billion in 1975. Farm mortgage lending increased, largely due to the greater activity of government farm loan agencies.

Data on the sources of funds show sizable increases in 1975 in the amounts supplied by each of the major groups of savings institutions—life insurance companies, noninsured pension funds, state and local retirement funds, savings and loan associations, and mutual savings banks. Not only did the actual dollar amounts of the funds supplied by these institutions surge upward, but in 1975 they provided 45 percent of the total funds raised in money and capital markets, compared with 28 percent in the previous year. A counterpart of the increased availability of funds from the major savings institutions was the reduction by nearly half in the amounts supplied by "individuals and others" directly to money and capital markets in 1975.

Life insurance companies supplied a record $17.4 billion in 1975, up from $14.9 billion in 1974. As shown in Table 2, corporate bonds were the major outlet for life company funds, with $7.9 billion added to their holdings. An estimated $4.4 billion in funds were channelled into nonresidential mortgage holdings, an amount well below the previous year and reflecting the generally lackluster state of demand for funds in this sector. Continuing a trend begun in 1971, life companies decreased their holdings of residential mortgages in 1975, although at a faster rate. Typically, decreases in home mortgage holdings of life companies have been partly offset by increases in multifamily mortgage holdings. In 1975, however, with a downtrend in apartment construction, life companies slowed their net acquisitions of multifamily mortgages dramatically. Corporate stock holdings (adjusted to exclude capital gains and losses) rose by an estimated $2.2 billion, the same amount as in the previous year. Policy loans rose $1.6 billion in 1975, down sharply from the record increase of $2.7 billion the year before. (A more detailed report of life company investment activities is found later in this report.)

Noninsured pension funds supplied $11.5 billion in 1975, an increase of nearly $3.5 billion over 1974. State and local retirement funds are estimated to have provided $13 billion, compared with $12.3 billion the year before. Despite some disintermediation that occurred in the summer months when market rates of interest rose above fixed deposit rates, depositary thrift institutions experienced all-time record savings flows in 1975, permitting them to improve their liquidity positions and to expand their flows of funds to money and capital markets to record amounts. Savings and loan associa-

tions provided some $39 billion in 1975, compared with only $21 billion in the preceding year. Mutual savings banks more than tripled their supply of funds to $11 billion.

Commercial bank credit in 1975 registered an increase of only 4 percent, an extremely small gain against the record of the last decade and a half. The estimated $29 billion rise in total commercial bank loans and investments reflected sharply increased holdings of securities, partly offset by a decline in loans. As noted above, bank holdings of Treasury securities increased by an estimated $30 billion, the largest yearly gain in post war history, while net acquisitions of state and local government obligations were well below the average for recent years. In the loan account, mortgage holdings rose only modestly and consumer loans showed virtually no change over the year. Business loans of commercial banks registered a substantial decline, estimated at about $15 billion, for reasons set forth earlier.

In retrospect, the financial markets were subjected to severe testing in 1975 but responded to major shifts in credit flows with impressive adaptability. Early in the year, the idea that Treasury financing needs might run to $50 billion, $60 billion or even $70 billion was greeted with alarm and skepticism that borrowings of this size could possibly be absorbed without displacing the credit needs of other borrowers or forcing interest rates up to astronomical levels. Yet, actual Treasury debt financing for the calendar year reached $84.5 billion and corporate bond financing rose to a new yearly high of $31.5 billion, as noted above. The leeway for these record claims on the market was provided by the negative trend of business loans, which declined sharply in absolute amounts in 1975 following a record increase in the previous year—a swing of $65 billion in this key component of credit demand. Fortunately, the problem of financing the record federal deficit in 1975 was resolved without a disastrous collision between public and private credit requirements or a sharp increase in the level of interest rates. While financial difficulties in many quarters came to the surface during the year, they arose mainly from financial excesses originating in an earlier period, rather than from a general credit crunch in the usual sense. The resiliency and continuity of the U. S. money and capital markets during a particularly difficult period was truly impressive.

ECONOMIC AND FINANCIAL OUTLOOK FOR 1976

Prospects for Business Recovery

In the aftermath of the most severe recession of the postwar period, accompanied by an inflation rate that still hovers at an uncomfortable level, the deepseated sense of uncertainty that plagued businessmen and consumers over the past year has not been dispelled by the recovery achieved thus far. Consumer confidence over job security or better pay remains shaky and fears persist that a renewed upturn in inflation may develop by late 1976. Businessmen are skeptical about the strength of new orders and sales and hesitate to enlarge plant capacity in view of the current underutilization of facilities. Widespread misgivings have developed over the power of governments at various levels to "put things right" or even to manage their own fiscal affairs properly. All of these factors have engendered an attitude of caution among households and business firms. Although the economic recovery appears to be well under way, it is likely to be moderate and hesitant, rather than buoyant and robust.

Among the various economic sectors, the strongest gain is expected in consumer spending. Previously postponed purchases of consumer durable goods, fortified by rising personal income, should produce a better sales picture in the year ahead. Retail sales in recent weeks have already shown an encouraging upturn. However, demand for new residential building is likely to remain sluggish in the face of the high price of housing, despite an improved availability of mortgage credit. Housing starts in 1976 are expected to rise to slightly under 1.5 million units for the year, reaching an annual rate of about 1.6 million starts in the final quarter.

Business capital outlays are scheduled to rise in dollar terms but mainly because of higher prices rather than increased physical units. Moreover, a greater share of plant and equipment spending will consist of mandated investments for pollution control rather than expanded productive capacity. Additions to business inventories will be moderate, aimed at keeping stocks in balance with improved retail sales volume, but will provide only limited upward thrust to economic activity. Net exports, after a strong performance this past year, are projected at lower levels in 1976, resulting in a drag on economic recovery in the next few quarters.

The economic stimulus provided by the federal government will clearly remain substantial during the calendar year ahead, with a budget policy that will inject enormous sums into the spending stream while extending the tax reductions enacted in 1975 to counter recession. But government efforts to fill the economic gap left by sluggish private spending run the danger of a backlash of public concern over the ultimate consequences of record budget deficits, raising fears in many quarters that ongoing deficits may foster accelerated inflation at a later stage of the recovery.

At the state and local level, government expenditures in 1976 are expected to grow at a much slower rate than in recent years, in part because of the trau-

matic experience of New York City which has caused citizens in many jurisdictions to re-evaluate the soundness of fiscal management and spending programs. Growing voter resistance to rising state and local taxes has now been joined by an increased reluctance to approve debt-financed operating budgets or optional capital projects.

Although the gains in economic activity may be slow in coming, running well below the exceptional 13 percent rate of the third quarter of 1975, a significant improvement will still be felt in most sectors of the economy as the year progresses. Gross national product in real terms, after adjusting for prices, is estimated by the ALIA economics staff to increase in a range of 5-3/4 to 6 percent over 1975 with a strengthening trend through the year.

While this expected pace of expansion will fall short of our full economic potential, either in employment levels or plant utilization, it carries the promise of being more sustainable for an extended period of time. A faster pace of expansion might well bring greater upward pressure on price levels, re-igniting a new round of high inflation that would foster economic imbalances and financial excesses, leading to an ultimate downturn of the sort witnessed as recently as 1974-75. On balance, there is much to prefer about a moderate but sustainable pace of economic expansion in 1976.

Encouraging progress has been made in bringing down the "double digit" inflation rates of late 1974, though the year-over-year price advance in 1975, was still high at 8-3/4 percent. For 1976, the year-over-year inflation rate is projected at 6 percent, but little comfort can be taken from this statistical comparison in annual terms. As economic activity gains momentum, upward pressure on prices is likely to grow stronger in late 1976, reversing the substantial improvement in the inflation rate achieved in the latter half of 1975 and projected through the middle of 1976. By the closing quarter of next year, the inflation rate is estimated to accelerate to an annual rate of 7 percent or more, reflecting a tapering in productivity gains as the recovery matures, along with increased wage demands in major labor contract negotiations.

Assumptions on Government Policy

In order to develop specific forecasts, it is necessary to set forth certain assumptions with respect to fiscal and monetary policies so crucial to the course of economic activity. As noted earlier, the stimulus from federal budgetary policy will remain substantial in an effort to underwrite an improving trend in economic activity throughout the year. While the tax reductions of 1975 have now been extended into calendar 1976, it is assumed that no additional tax cuts of major proportions will be enacted. However, the Administration will encounter difficulties in convincing the Congress to hold back federal spending, with the result that the federal budget deficit is expected to total close to $75 billion in fiscal 1976, followed by a one-quarter "transitional" budget deficit of $16 billion as the federal government shifts its fiscal year from July to October. It is assumed that these high deficits will, in turn, be followed by a deficit of $40 billion or more in the 1977 fiscal year beginning next October. Sizable deficits are sometimes needed to counter deep recessions but can produce dangerous results when continued into a period of rising private business activity.

Monetary policy can be conducted with greater flexibility than fiscal policy and therefore can be expected to adjust more promptly to changing economic conditions in 1976. The recent relaxation in Federal Reserve policy that became apparent last October is considered to be temporary in nature, based on an effort to lift monetary growth rates above the very low levels of the summer months and also to avoid financial stringencies which might have worsened the New York City financial crisis. By the early spring of next year, the monetary authorities are likely to shift their policy targets toward somewhat greater restraint, although moves in this direction must take account of the heavy Treasury borrowing schedule arising from massive federal deficits. The degree of monetary restraint is

expected to tighten progressively later in the year, as the middle stage of economic recovery is reached and the focus of policy concern shifts toward greater efforts to keep inflation down.

These forecasts of economic activity and the related assumptions about the course of budget trends and monetary policy have a counterpart in the outlook for interest rates. Looking first at short-term money market rates, it seems likely that they will remain fairly close to the levels of mid-December 1975 for approximately the first three months of the year, with a possible downward tilt. The Federal Reserve is expected to continue broadly on its present course until the spring months, when a reappraisal of monetary policy in the face of strengthening loan demand and assured gains in business activity is likely to bring a tighter tone in Federal Reserve policy and hence in open-market rates. Further moves toward restraint could follow in the summer, particularly if the threat of higher inflation rates becomes more apparent. By year-end 1976, the stronger pace of business recovery and a more normal uptrend in business loan demand are likely to push short-term rates to levels 200 basis points or more above the rates at year-end 1975.

Longer-term rates on bonds and mortgages are expected to move lower during the first half of 1976 under the pressure of an abundant supply of institutional funds in relation to flat or declining demands from corporations, state and local governments and commercial mortgage borrowers. Indeed, corporate and municipal bond yields receded by substantial amounts in the closing weeks of 1975. By mid-1976, yields on high- and medium-quality corporate bond issues are likely to decline further by 50 to 75 basis points from mid-December, although lower-quality issues may not share the full benefit of this downward trend. Firming of short-term rates in the summer months is expected to bring to an end the slide in long-term rates. During the final months of 1976, increased demands as well as greater inflationary expectations are likely to bring long-term interest rates back up to, and possibly above, the levels at the close of 1975.

Projected Financial Flows in 1976

The financial market implications of the forecast presented above have been translated by the ALIA economics department into estimates of the sources and uses of funds in the U. S. money and capital markets in 1976. A detailed cross-section analysis of projected flows between the various sources and the matching uses of funds is set forth in Table 3. Summary estimates for 1976 are presented in Table 4 against the backdrop of earlier years beginning with 1967.

Total capital market flows in 1976 are expected to rise to approximately $242 billion, an increase of $43 billion over the preliminary total for 1975 and $16 billion above the previous high in 1973 (see Table 4). The larger total reflects, first and foremost, a $34 billion swing in business loans from an estimated $17 billion decline in 1975 to an advance of almost $17 billion in 1976. The reversal of inventory trends from the run-off of 1975 to moderate accumulation in 1976 is expected to raise business loan demand, especially in the latter half of the year, though the projected gain is considerably smaller than the record increases of 1973-74. A second factor of increased demand in 1976 will be in consumer credit, projected to increase by $16 billion as against a meager $5½ billion rise in the recession year of 1975 (see Table 4).

Net issues of corporate bonds in the coming year are expected to decline by $6.5 billion from the record $31.5 billion marketed in 1975. In view of the improvements in profits and internal cash flow that corporations will generate next year, some market observers have indicated an even greater fall-off in bond financing. But the strong appetite of institutional investors for corporate obligations should help to encourage bond flotations, especially if long-term bond yields move lower as expected during the first half. Many of the top-quality corporations that dominated the new issue market last year have now accomplished much of their needed liquidity restoration, leaving more room for lesser-rated borrowers to approach the bond market in 1976. Also, an upturn in business capital spending in late 1976 should be

Table 3

OUTLOOK FOR SOURCES AND USES OF FUNDS IN THE U.S. MONEY AND CAPITAL MARKETS IN 1976

(In billions of dollars)

	Securities					*Mortgages*		*Loans and Credit*				
Sources of funds	*Corp. bonds*	*Corp. stocks*	*State & local*	*Fed. Gov't*	*Fed. agency*	*Residential*	*Nonresidential*	*Consumer credit*	*Commercial paper*	*Business loans*	*All other loans*	*Total sources of funds*
Life insurance companies ...	8.4	2.7	0.3	0.3	0.1	–0.7	4.2	–	0.8	–	1.9	18.0
Noninsured pension funds ..	3.8	5.0	–	3.2	*	–	–	–	–	–	–	12.0
State-local retir. funds	7.8	3.4	0.4	1.0	0.3	0.1	–	–	–	–	–	13.0
Savings and loan assns.	–	–	–	4.0	2.0	30.0	3.4	0.1	–	–	–	39.5
Mutual savings banks	3.8	0.4	0.2	2.0	1.2	3.0	0.3	0.1	*	–	–	11.0
Commercial banking	1.0	*	4.0	23.0	1.2	2.2	1.8	7.8	*	12.0	7.0	60.0
Federal Reserve Banks	–	–	–	10.0	0.5	–	–	–	–	0.5	–	11.0
Federal loan agencies	–	–	0.1	*	*	11.4	3.7	–	–	0.6	2.7	18.5
Nonfinancial corporations ...	–	–	*	14.5	*	–	–	3.0	1.8	2.7	–	22.0
Fire and casualty cos.	3.5	*	1.0	1.0	*	–	*	–	–	–	–	5.5
Real estate inv't trusts	–	–	–	–	–	–1.3	–1.0	–	–	–	–	–2.3
Mutual funds	0.6	–0.3	–	1.0	–	–	–	–	1.2	–	–	2.5
Foreigners	0.1	4.5	–	8.0	–	–	–	–	–	0.9	–	13.5
Individuals and others	–4.0	–3.7	6.0	10.0	4.7	0.3	–1.4	5.0	1.2	–	–	18.0
Total uses of funds.........	25.0	12.0	12.0	78.0	10.0	45.0	11.0	16.0	5.0	16.7	11.5	242.2

*$50 million or less.

The uses of funds measure the net changes in outstanding loans and securities; the sources of funds measure the net changes in ownership. Because of rounding, components may not add to totals shown.

Table 4

SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS, 1967-76

(In billions of dollars)

Sources of funds	*1967*	*1968*	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*	*1975e*	*1976e*
Life insurance companies	8.2	8.3	8.6	8.9	11.9	12.8	15.4	14.9	17.4	18.0
Noninsured pension funds	5.3	5.8	6.0	6.9	7.4	6.5	7.2	8.1	11.5	12.0
State and local retirement funds	4.0	4.7	5.6	6.1	6.2	7.8	9.2	12.3	13.0	13.0
Savings and loan associations	9.2	10.2	9.9	11.6	29.2	36.4	27.1	21.0	39.0	39.5
Mutual savings banks	5.2	4.3	3.2	4.1	10.0	10.4	5.4	3.3	11.0	11.0
Commercial banking	37.4	40.1	17.2	36.6	51.4	75.4	83.3	62.2	29.0	60.0
Federal Reserve Banks	4.8	3.7	4.2	5.0	8.9	0.3	9.2	6.2	6.5	11.0
Federal loan agencies	4.4	4.7	7.0	10.3	7.3	7.7	14.4	22.4	21.0	18.5
Nonfinancial corporations	1.8	10.3	10.2	–1.7	10.1	9.1	16.6	13.1	18.5	22.0
Fire and casualty companies	1.8	2.7	2.6	4.9	6.3	6.6	5.0	4.5	5.2	5.5
Real estate investment trusts	–	0.2	0.9	2.1	2.5	4.9	4.5	0.9	–2.2	–2.3
Mutual funds	1.3	3.5	2.6	1.7	0.4	–1.8	–2.5	0.9	1.7	2.5
Foreigners	2.7	2.4	1.3	11.0	27.3	10.7	5.1	12.6	11.0	13.5
Individuals and others	–5.1	2.7	30.2	1.9	–16.5	13.0	26.2	28.3	16.0	18.0
Total sources	81.0	103.6	109.6	109.4	162.3	199.9	226.0	210.8	198.8	242.2
Uses of funds										
Corporate bonds	16.0	14.0	13.5	22.9	23.9	19.1	12.7	25.1	31.5	25.0
Corporate stocks	2.5	0.4	4.7	7.7	13.6	14.0	9.8	4.8	9.0	12.0
State and local government issues	7.9	9.8	10.7	11.3	17.9	14.7	14.1	18.2	15.0	12.0
Federal Government issues	8.2	9.8	–2.2	12.9	26.0	14.3	7.8	11.3	84.5	78.0
Federal agency issues	3.6	6.4	6.8	8.2	3.4	9.7	21.6	21.5	8.5	10.0
Mortgages: Residential	16.0	18.6	20.4	19.2	36.8	51.2	50.3	38.0	42.5	45.0
Nonresidential	7.0	8.8	7.4	7.2	12.1	17.7	21.6	16.5	12.0	11.0
Consumer credit	4.5	10.0	10.4	6.0	11.2	19.2	22.9	9.6	5.5	16.0
Commercial paper	3.4	4.1	11.4	0.5	–1.0	2.6	6.4	8.0	1.0	5.0
Business loans	6.1	16.0	22.4	6.9	9.1	22.3	45.4	48.5	–17.2	16.7
All other loans	5.9	5.8	4.2	6.5	9.3	15.2	13.3	9.4	6.5	11.5
Total uses	81.0	103.6	109.6	109.4	162.3	199.9	226.0	210.8	198.8	242.2

e — estimated.

The uses of funds measure the net changes in outstanding loans and securities; the sources of funds measure the net changes in ownership. Because of rounding, components may not add to totals shown.

accompanied by an increase in bond flotations for this purpose.

With a stronger profits picture in view for next year, market receptivity to new issues of corporate stock should show some improvement. Although many corporations will find the cost of equity capital quite expensive, they are likely to raise funds through stock issues almost regardless of cost in order to strengthen their debt-equity ratios and to protect present bond ratings. With this outlook, net new issues of corporate stock are projected at $12 billion next year, compared with an estimated $9 billion in 1975.

In the federal sector, projected budget deficits translate into net Treasury borrowings in calendar 1976 of $78 billion, an amount second only to 1975 for claims on the financial markets. As shown in Table 3, the bulk of the needed funds again will be provided by commercial banks, nonfinancial corporations and foreign investors, with individual investors also stepping up their purchases in the search for safety of principal and also because of more attractive interest rates later in the year. Federal agencies are expected to raise $10 billion in net new money, somewhat more than in 1975 but still well below the record amounts of 1973 and 1974 (see Table 4). In the state and local government sector, the net increase in debt is estimated at $12 billion for 1976, a $3 billion decline from 1975 and the smallest figure in several years (see Table 4). Although market suspicion of municipal bonds may subside after New York City finances are stabilized, the object lesson of *de facto* default has reduced the willingness of the citizenry to allow local governments to incur operating deficits that require debt financing or to embark upon capital projects that increase their debt burdens.

In the mortgage market, residential loans are estimated to increase by $45 billion, somewhat above the figure for 1975 but still below the $50 billion levels of 1972 and 1973 (see Table 4). In contrast, funds flowing into nonresidential mortgages (largely on commercial properties) are projected to decline further to $11 billion, roughly half the amount used in this market as recently as 1973. Lack of economically viable projects, rather than a shortage of mortgage funds, has been the main factor of curtailment in this market. Rising utility costs and higher taxes have outstripped rental levels with a consequent inability to project profitable development of office buildings, shopping centers or motels in most areas.

Projections of the sources of funds in 1976 show that generally well-maintained savings flows into institutional channels, together with some pickup in bank credit expansion, will provide a total supply of funds sufficient to finance the moderate expansion of economic activity in 1976. As shown in Table 3, commercial banking is expected to supply $60 billion in funds, more than double the amount provided in 1975. This is an 8 percent increase in bank credit, a relatively moderate rate of growth for a period of economic expansion. Most of the increase in bank credit expansion will be attributable to an improvement in business and consumer loan demand. Business loans at commercial banks will increase by about $12 billion in 1976, compared with a decline of $15 billion in 1975. Net extensions of consumer credit by the banks will approach $8 billion in 1976, as against a negligible amount in 1975. As mentioned earlier, the banks will once again be major suppliers of funds to the U.S. government securities market, although somewhat less than in the previous year.

Life insurance companies are expected to supply $18 billion to the money and capital markets in 1976, a continued increase over the $17.4 billion provided in 1975. The major outlet for these funds is expected to be the corporate bond market as net acquisitions exceed $8 billion, the largest amount to reach this market from any institutional investor group. Net acquisitions of corporate stocks are estimated at $2.7 billion in 1976, compared with $2.2 billion in 1975. Nonresidential mortgage lending by life companies is estimated at $4.2 billion, a further decline from the record flow of $5 billion in 1973. Typically, the commitment lead time on commercial properties is long, and the fact that new commitments for nonresidential mort-

gages declined sharply in 1975 suggests that not much turnaround in life company lending in this area can be expected before late 1976 at the earliest and probably not before 1977.

Among the other contractual savings institutions, noninsured pension funds are expected to resume their emphasis on common stocks, which were dominant among their investment outlets in the years before 1974. On the other hand, state and local retirement funds will continue to be a major supplier of funds to the corporate bond market, second only to life insurance companies (see Table 3).

Depositary thrift institutions—savings and loan associations and savings banks—provided almost one quarter of total capital market flows in the past year, despite a brief bout with disintermediation during the summer months. In the year ahead, thrift institutions are expected to provide equally large dollar amounts to the market place, with an increased volume of residential mortgage lending and a lesser emphasis on liquidity building through purchases of Treasury and agency securities. As shown in Table 3, savings and loans and the savings banks are estimated to provide $30 billion and $3 billion, respectively, to the residential mortgage market. However, the prospect for rising short-term rates in the latter part of 1976 poses the threat of renewed disintermediation for these rate-sensitive institutions, a likelihood that calls into question the extent and duration of the upturn in housing construction.

To summarize in the broadest terms, institutions that traditionally supply funds to the long-term capital market are expected to experience further growth in available funds at a time when demand for long-term capital overall is diminishing from the level of last year, thus implying downward pressure on long-term interest rates in the early months of 1976 and relatively little change for the year as a whole. Somewhat different forces are at work in the short-term credit area, where relatively weak demand for business loans is offset by heavy Treasury financing needs, with a prospect for short-term rates remaining close to present levels for the next few months. As economic recovery progresses and loan demands strengthen, a faster pace of monetary growth is likely to induce greater restraint on the part of the monetary authorities, followed by an upward climb in short-term interest rates during the latter part of 1976. Important to the future course of both long-term and short-term rates are expectations as to the outlook for inflation. If the pace of inflation accelerates in the later months of 1976 as presently projected, upward pressure on the entire structure of interest rates will be an inescapable consequence.

THE ECONOMIC AND INVESTMENT RESEARCH PROGRAM

For nearly 30 years, the life insurance business has demonstrated its interest in the improvement of financial and economic knowledge through a continuing program of economic and investment research under Association auspices. This program has consisted of two distinct but related aspects: outside research studies conducted by universities and other research organizations with financial support from the ALIA and research and analysis undertaken by the staff of the economics department. The main objective of the program, both outside research and internal studies, has been to assist the investment side of the life insurance business through factual analysis of national economic trends and the functioning of financial markets.

Outside Research Financed by the Association

Since 1946, the investment research program has provided outside research grants totaling over $3 million for basic research in the fields of savings, capital markets, housing, and interest rates. These various projects are widely regarded by scholars and public officials as having been among the most important studies published in these vital areas of financial research. They have been directed by a large number of outstanding economists, men of national reputation such as Arthur F. Burns, Raymond J. Saulnier, Raymond W. Goldsmith, and Simon Kuznets.

The Appendix to this report contains a complete list of the outside research studies which have received financial support through the Association's investment research program since its inception in 1946.

In 1971 the Association sponsored a research project of considerable interest to scholars and public officials, as well as to the life insurance business. Under the auspices of the National Bureau of Economic Research and directed by Dr. Phillip Cagan of Columbia University, a team of researchers from several universities began a study of "The Effects of Inflation on Financial Markets." These researchers are investigating the impact of inflation in five main areas: institutional portfolio policies, interest rates, household savings, convertible bonds and common stocks. A report on some highlights of this study was contained in the *1973 Economic and Investment Report* and published articles completed in connection with this project are listed in the Appendix. This study is now in the final stages of completion and it is expected that publication of the remaining portions will take place in 1976.

In 1973 the Association authorized financial support for another major project entitled "Demand and Supply Conditions in the U. S. Capital Markets, 1975-85." The research on this project is being undertaken through the Salomon Brothers Center for the Study of Financial Institutions of the Graduate School of Business Administration of New York University. Under the direction of Dr. Arnold Sametz, a team of New York University professors and other researchers are analyzing the principal factors determining the evolution of the financial structure and secular trends in

interest rates. *The 1974 Economic and Investment Report* outlined the scope of this project.

This fall some of the preliminary findings of this study were reported to the Investment Research Committee which oversees the direction and progress of such research. The following are among the major conclusions reached by the NYU research team: (1) capital investment in the decade through 1985 will be huge owing to both federally mandated as well as nonmandated investment; (2) personal saving rates will rise in spite of inflation and business saving rates will fall because of inflation; (3) there will be capital shortages in some sectors of the American economy rather than a total capital shortage; (4) demand pressures for capital funds and innovations on the supply side of financial markets will likely occur during the next decade; (5) interest rates to business are expected to be more volatile and more likely to remain above historic levels; and (6) there will be increased sensitivity to changes in yield differentials which will create more incentives for arbitrage and competition in money markets. In turn, this is expected to lead toward removal of regulatory ceilings on interest rates, thus making it less difficult for institutions to bid aggressively for funds. It is expected that manuscripts supporting these and other conclusions will be completed by the Spring of 1976. New York University plans to hold a conference wherein these papers will be discussed by interested scholars and market analysts before preparation of the final manuscript in the late summer.

In 1974 an investigation of "The Role of Private Pension Funds in Saving and Capital Formation in the United States" was undertaken by Norman B. Ture, under the auspices of the American Enterprise Institute for Public Policy Research. This study was also described in the *1974 Economic and Investment Report*, and some preliminary conclusions drawn from this research were reported to the Investment Research Committee as follows: Private pension growth in the past has been associated with basic structural changes in the U. S. economy, e.g., industrialization, mass production, and most importantly, expansion of the scale of operation of business firms. It has also responded to demographic factors such as urbanization, increases in longevity, and lengthening of the years a worker is in retirement. Also contributing to private pension fund growth were institutional changes such as the transformation during World War II of the income tax into a mass levy, which extended the desirability of tax-sheltered income to a much larger number of employees. War-time wage and price stabilization made pension contributions one of the few ways to increase total compensation. The development of social security has exerted opposing influences on private pension funds. On the one hand, it has tended to induce employees to finance longer periods of retirement, hence has increased the attractiveness of pension fund participation. On the other hand, it has tended to displace private personal saving, although this displacement effect has probably been less pronounced for pension funds than for other private saving. This study is expected to be published by the American Enterprise Institute in 1976.

In a fourth outside research project begun in late 1974, Dr. Hendrik Houthakker of Harvard University is investigating the "Economic Consequences of Rapid Inflation." While Dr. Houthakker is using whatever statistical evidence he deems necessary, this monograph will be cast in nontechnical language for intelligent laymen rather than for professional economists and will be published by mid-1976 for distribution not only to member life insurance companies but to the general public as well. This monograph is expected to treat such topics as: (1) Keynesian economic policy from the 1930s through the 1960s followed by the emergence of rapid inflation with considerable unemployment in the 1970s; (2) the economics of inflation with considerable unemployment; (3) the background of the worldwide inflation of the 1970s; (4) the effects of inflation upon households; (5) adjustment within the firm to inflation and the effects of inflation on capital markets; (6) inflation and government revenues, expenditures, and policies; (7) international trade and finance

and the impact of inflation upon various groups of countries; and (8) Dr. Houthakker's summary and conclusions.

Staff Activities of the Economics Department

Collection and analysis of data on the investment operations of the life insurance business represent a major continuing function of the economics department of the ALIA. The industry data gathered and distributed to life companies in periodic statistical surveys serve not only as a management tool for company operations but also as a valuable source of current financial information for the Federal Reserve and other government bodies concerned with economic and financial policy. The continuing staff studies include monthly statistics on forward investment commitments of life insurance companies, quarterly data on the volume and sources of cash flow for investment, semiannual data on mortgage loan delinquencies and foreclosures, and annual data on mortgage lending income and costs of life insurance companies. In addition, monthly data on yields of directly placed corporate bonds and quarterly data on interest rates and other characteristics of income-property mortgage loans are tabulated by the economic research staff. Some of the information developed in these studies is presented in later sections of this report.

This year a new annual survey was undertaken at the direction of the Investment Research Committee for the purpose of obtaining measures of the yields on new cash investments made for the general accounts of life insurance companies. The responding companies represented over 65 percent of the assets of the life insurance industry and ranged in size from over $1 billion in assets down to those of about $100 million. These companies reported the volume of new cash acquisitions and gross annual yields on new residential, farm and nonfarm nonresidential mortgages as well as on specified new securities such as bonds, notes, debentures and preferred stocks. For these surveyed life insurance companies the weighted average yield on all specified new investments was 9.06 percent in 1974. The average yield on the major components such as mortgages, bonds and preferred stocks was 8.86 percent, 9.22 percent and 10.49 percent, respectively.

A major function of the economics department is its work with various policy-making committees of the American Council of Life Insurance and of the ALIA Division of the Council. For example, the economics staff provides support to the Economic Policy Committee and its Subcommittee on Fiscal and Monetary Policy which, on behalf of the life insurance business, prepare testimony each year for submission to the Joint Economic Committee of the Congress in its hearings on the Economic Report of the President. In addition, the Economic Policy Committee conveys the viewpoints of the life insurance business to officials in Washington through periodic meetings with the U. S. Treasury Department, the Federal Reserve Board, and various Administration officials involved in planning economic policy.

Activities of the Financial Section of the ALIA Division and the operation of the annual Life Officers Investment Seminar also receive staff support from the economics department. The Life Officers Investment Seminar is held at Rockford College in Illinois for two weeks each June. The Financial Section holds an annual meeting each fall, and in April three regional meetings are scheduled to facilitate discussion of financial topics by investment officers.

Another ALIA activity receiving staff support from the economics department is the Executive Round Table program. Each year a limited number of chief executive officers or chief administrative officers of member life insurance companies meet in one of two three-day meetings to hear nationally prominent speakers in the fields of management, economics, and marketing and to participate in workshops on management problems.

As a guide to investment strategy and the future course of interest rates, the economics staff also prepares analyses of the demand and supply of funds in the money and capital markets, setting forth estimates of future trends against the

background of historical data. The current staff analysis of the sources and uses of capital funds, including forecasts for 1976, is presented in preceding sections of this report.

Still another function of the economics department is its liaison role with the academic community, especially in matters concerning the investment activities of life insurance companies. This role involves responding to inquiries for investment data, describing current investment attitudes and policies, and reviewing research manuscripts by academic authors working in the investment field. In a broad sense, the economics staff serves as a spokesman on the investment aspects of the business in an effort to improve public understanding of the investment policies and practices of life insurance companies.

Another staff function is to conduct special research projects of timely interest to the investment side of the life insurance business, as well as to persons outside the life insurance industry. A staff research project, described in last year's report under the title "The Role of Life Insurance Companies in the U. S. Economy," was accepted for publication by Richard D. Irwin, Inc. The monograph, by Dr. George A. Bishop, director of economic research of the ALIA, will appear in book form early in 1976 under the title, *Capital Formation Through Life Insurance: A Study in the Growth of Life Insurance Services and Investment Activities.* The objective of the book is to explain the role of life insurance in facilitating and stimulating public saving and making possible a more efficient allocation of investment funds. The book examines the life insurance business over the past quarter century reviewing (1) the growth and changing mix of life insurance products and the effect on reserves and assets, and (2) changes in the investment activities and the relative importance of life companies in various sectors of the capital market. The study suggests that despite a slowdown in the rate of growth of saving through life insurance in the 1950s and the 1960s, this growth is likely to continue at approximately its historic rate. Provided inflation remains moderate, life insurance companies will remain a major institution for pooling the savings of the public and allocating these funds to real capital formation to meet the priorities of an expanding economy.

In its capacity as the research arm of the Association, the economics department worked closely this year with the Subcommittee on Investment Aspects of Valuation Problems. Two major proposals put forward by ALIA with regard to the Mandatory Securities Valuation Reserve (MSVR) received the approval of the National Association of Insurance Commissioners (NAIC) at its annual meeting in Seattle, Washington in mid-June, 1975.

The first change permits companies to apply capital gains on common stocks in the years 1975 through 1977 to the restoration of surplus incursions brought about by common stock losses in 1973 and 1974. During the prolonged stock market decline of 1973-74, markdowns in the value of common stocks effectively wiped out many life insurers' common stock reserves, which had been built up largely from the capital gains of earlier years. In many cases, the severity of the stock losses brought about substantial reductions in surplus, aggregating more than $1.5 billion for life insurance companies as a whole during 1974. Under previous NAIC rules governing the MSVR, subsequent realized and unrealized capital gains on common stocks were slated to flow into the common stock reserve component of the MSVR, leaving surplus in a depressed position until such time as the maximum reserve level had been reached and further market appreciation would "spill over" into the surplus account. The change in procedures approved this year by the NAIC will allow common stock gains in the next three years to flow directly into surplus, rather than into the MSVR. In those cases where a company would prefer to channel common stock capital gains into the reserve as before, provision has also been made for such an option through additional voluntary contributions to the common stock reserve component.

The fundamental purpose of the common stock portion of the MSVR is to serve as a "fluctuations reserve" to protect surplus from the volatility of com-

mon stock prices. In the 1973-74 experience, the amount of previously accumulated reserve proved inadequate to cushion against the prolonged market decline—a decline that was substantially reversed during the current year. The change in MSVR rules will serve to bring the surplus of life companies back to a more normal position by restoring the surplus incursions that had resulted from losses, largely unrealized, on common stocks held by life insurers.

A second modification of the MSVR rules provides for a strengthening of the bond and preferred stock component through a doubling of the annual formula contributions to that reserve.

During the past five years, the bond reserves of most life insurance companies have declined in relation to holdings of bonds and preferred stocks—in many cases, such reserves had been fully exhausted by the end of 1974. Instrumental in the depletion of this reserve were the sizable Penn Central losses of 1970 and the markdown of Pan American Airlines obligations at the end of 1974. Special studies conducted by ALIA indicated that another important factor was "managed losses" arising from the outright sale of bonds for tax purposes or for other investment reasons during recent years.

By the end of 1974, the bond and preferred stock component of the MSVR had fallen below 0.60 percent of the bond and preferred stock portfolios of the industry at large, compared with 1.50 percent five years earlier. To strengthen this reserve, ALIA proposed a doubling of the annual formula contribution to that component by any life insurance company whose reserve has fallen below 50 percent of the maximum reserve for the component as of the prior year-end. This change in MSVR procedures has been approved by the NAIC on a permanent basis, and should help to rebuild the reserve to levels sufficient to meet future losses arising from defaults or from sales of bonds or preferred stocks at a loss.

Both changes became effective with the 1975 annual statements of life insurance companies.

ASSETS AND INVESTMENTS IN 1975

During 1975, assets held by life insurance companies grew at the fastest pace since the 1920s. The asset total of $288 billion at the end of 1975 increased 9.4 percent during the year, a rate that compares with a post-World War II high of 7.9 percent in 1972 and with 9.1 percent in 1945. The 1975 asset total reflects a net capital gain for the year of an estimated $4 billion, and when adjusted to exclude this amount, assets grew by 7.9 percent, the highest since 1945 for comparably adjusted rates. In each of the last three years, asset growth adjusted for net capital gain or loss came to 7 percent or more, significantly above the annual average of 5.6 percent in the 1960s and 6.5 percent in the 1950s. The recent acceleration in asset growth is largely attributable to the expansion of the pension business of the companies, not only in group plans but also in individual annuities, such as the Keogh plans and, more recently, the individual retirement accounts made possible under the Employee Retirement Income Security Act of 1974.

Estimates of year-end 1975 assets by investment classes are given in Table 5, together with the actual amounts held at the end of 1973 and 1974. The percentage distributions of assets, also included in the table, appeared fairly stable as compared with 1974, except for common stocks and mortgages. The asset share for common stock holdings showed the largest rise, increasing to 7.2 percent from 5.7 percent at the end of 1974, but nearly all of this shift reflected the improvement in market prices of stocks. The market rise factor in common stock holdings held down the asset shares of the other investment categories (most of which are valued on a stable basis), thus obscuring the extent of the shift of assets into corporate debt issues and deepening the decline in the share for mortgages. The asset shares of other categories were also affected but by no more than 0.1 percentage point.

Corporate debt issues held by life insurance companies passed the $100 billion level during 1975, rising to $106 billion, or 36.8 percent of total assets, by the end of the year. As noted in an earlier section of this report, corporate demands for bond financing were extraordinarily large in 1975, particularly in the public offerings market but also in the private placements market. The increased availability of funds from life companies in 1975 was an important factor in an upsurge in private placement financing, and these offerings together with the strong demands in the public market provided outlets for a growing share of life company funds. Included in the $106 billion total for corporate debt issues held at the end of 1975 were $5.1 billion for issues with maturities of one year or less, $5.3 billion for long-term issues of foreign corporations, and $95.5 billion for long-term securities of domestic corporations.

Mortgage loan holdings amounted to $89.7 billion, or 31.1 percent of year-end 1975 assets, the lowest share for such loans since the early 1950s. Mortgages on properties in the United States amounted to about $87 billion and foreign mortgages, which are nearly all on Canadian properties, amounted to $2.6 billion. Of the U.S. mortgage total, about half, or

Table 5

ASSETS OF U.S. LIFE INSURANCE COMPANIES, 1973-1975

(Dollar amounts in millions)

Asset Class	*December 31, 1973* Amount	%	*December 31, 1974* Amount	%	*Estimated December 31, 1975* Amount	%
Bonds, Notes, and Debentures						
U.S. Treasury	$ 3,444	1.4	$ 3,372	1.3	$ 3,925	1.4
U.S. Federal Agency	884	0.4	1,065	0.4	1,250	0.4
U.S. State and Local	3,412	1.4	3,667	1.4	4,175	1.4
Foreign Government and International	3,663	1.5	3,861	1.5	4,250	1.5
Total Government	11,403	4.5	11,965	4.5	13,600	4.7
Corporate–1 year or less	3,004	1.2	4,070	1.5	5,125	1.8
U.S. Corporate–Over 1 year	83,974	33.3	87,575	33.3	95,500	33.1
Foreign Corporate–Over 1 year	4,818	1.9	5,007	1.9	5,325	1.8
Total Corporate	91,796	36.4	96,652	36.7	105,950	36.8
Stocks						
Preferred	6,313	2.5	6,974	2.6	7,625	2.6
Common	19,606	7.8	14,946	5.7	20,700	7.2
Total Stocks	25,919	10.3	21,920	8.3	28,325	9.8
Mortgages						
Farm	5,996	2.4	6,327	2.4	6,725	2.3
Nonfarm	75,373	29.9	79,907	30.3	82,975	28.8
Total Mortgages	81,369	32.2	86,234	32.7	89,700	31.1
Real Estate	7,693	3.0	8,331	3.2	9,550	3.3
Policy Loans	20,199	8.0	22,862	8.7	24,425	8.5
Cash	2,071	0.8	1,999	0.8	2,100	0.7
Other	11,986	4.7	13,386	5.1	14,500	5.0
Total Assets	$252,436	100.0	$263,349	100.0	$288,150	100.0

The valuation basis for each classification is admitted asset (statement) value.
Source: Institute of Life Insurance, 1973-74.

$44 billion, represented loans on nonfarm nonresidential properties such as office buildings, shopping centers, warehouses, and so on; $36 billion was on residential properties—$19 billion for apartments and $17 billion for 1-4 family homes; and nearly $7 billion was on farm and ranch properties. These amounts compare with 1974 year-end holdings of $40.1 billion for nonresidential properties, $37.3 billion for residential properties, and $6.3 billion for farm mortgages.

Although far below the amounts held in corporate debt issues and mortgages, corporate stocks totaling $28.3 billion ranked as the third largest component of life insurance company assets at the end of 1975. Holdings of common stocks were $20.7 billion, compared with $14.95 billion at year-end 1974, and included an assumed market valuation gain of 28 percent, or about $4.2 billion. This gain was in contrast with, and partially offset, the sharp drop in market values of $6.15 billion in 1974. Preferred stocks, which are generally carried at stabilized values in life companies' accounts, amounted to $7.6 billion at end-1975, compared with $7 billion at end-1974. These investments are virtually all held in the general asset accounts of the companies while over 40 percent of common stocks are held by the companies in separate accounts. Separate accounts, which are established primarily for group pension business, are permitted wide latitude in investments, without regard to the investment limitations that govern the general accounts of life insurance companies.

The policy loan total of $24.4 billion at the end of 1975 represented a growth of 6.8 percent during the year as against a 9.4 percent rise in total assets. As a result, the policy loan asset share eased off to 8.5 percent from the recent peak of 8.7 percent in 1974.

Rate of Net Investment Income

The net rate of income from the invested assets of life insurance companies is estimated at 6.43 percent for 1975 when separate accounts are included and 6.51 percent when separate accounts are excluded. As shown in Table 6, the estimates reflect an increase from 1974 of 18 basis points in the rate of income on total invested assets (including separate accounts) and an increase of 20 basis points in the rate for the general accounts (excluding separate accounts). The 1975 rates were about one percentage point above those only four years earlier and compared with a 1965 investment income rate of 4.61 percent (with or without the minimal amount of separate accounts then held by the companies). The dollar amount of net investment income of $16.65 billion in 1975 increased by about 10 percent from 1974 as against the 1974 increase of 10.8 percent.

Table 6
NET INVESTMENT INCOME AND RATIO OF INCOME TO INVESTED ASSETS U.S. LIFE INSURANCE COMPANIES

Year	*Net Investment Income (Including Separate Accounts)*		*General Accounts*
	Millions	*Rate*	*Rate*
1970	$10,144	5.30%	5.34%
1971	11,031	5.44	5.52
1972	12,127	5.56	5.69
1973	13,670	5.88	6.00
1974	15,144	6.25	6.31
1975	16,650e	6.43e	6.51e

e – Estimated.

Source: Institute of Life Insurance, 1970-74.

Note: Rates are derived from dollar aggregates. Investment income is after investment expenses but before federal income taxes and includes interest, dividend, rental, and other income but excludes capital gains or losses.

Net Changes in Assets

The estimated net changes in broad categories of life company assets in 1975, together with the actual changes in 1973 and 1974, are shown in Table 7. The figures reflect valuation changes as well as net investment during the year. The increase in total assets of $24.8 billion in 1975 reflected an estimated net capital gain of $4 billion, compared with capital losses of $6.7 billion in 1974 and $4.7 billion in 1973. When adjusted for valuation changes, the asset increases came to $17.4 billion in 1973, $17.6 billion in 1974, and $20.8 billion in 1975.

The acceleration in the increase in total assets in 1975, together with a smaller growth in policy loans, permitted unusually large net investments in all categories of debt securities, both governmental and corporate. In addition, investments in directly owned real estate increased sharply, to some extent reflecting a shift from mortgage lending. The pace of net investment in corporate stocks was about the same as in 1974, and the net investment in mortgages slowed markedly from the previous year.

Net investments by life insurance companies in corporate debt issues during 1975 were unprecedented in dollar terms, reaching $9.3 billion including both short- and long-term issues. While short-term issues increased by $1.1 billion, the same as in 1974, the corporate bond component increased by $8.2 billion as against a 1974 increase of $4.2 billion. (The latter reflects an adjustment of the actual figure for writedowns in the carrying values of some corporate issues that became ineligible for valuation at amortized cost in the 1974 annual statements.) Included in the corporate bond total was a net investment of $0.3 billion for foreign corporates in 1975 as against $0.2 billion in 1974.

The net investment during 1975 in government bonds and notes, including international agency issues, was far above any other year back to 1946, since most of the period was marked by net disinvestment in governments. In total, the 1975 net investment came to $1.6 billion, nearly three times the recent high in 1974, and included increases for all categories: U.S. Treasury securities, Federal agency issues, U.S. state and local obligations, and foreign government issues, including international agency securities. Of the $738 million increase shown in Table 7 for U.S. Treasury and Federal agency

Table 7
NET CHANGES IN ASSETS, 1973-1975
U.S. LIFE INSURANCE COMPANIES
(In millions of dollars)

Asset Class	*1973*	*1974*	*Estimated 1975*
Bonds, Notes, and Debentures			
U. S. Treasury and Federal Agency	$ −234	$ 109	$ 738
U. S. State and Local	45	255	508
Foreign Government and International	220	198	389
Corporate	5,656	4,856	9,298
Total	$ 5,687	$ 5,418	$10,933
Stocks	−926	−3,999	6,405
Mortgages	4,421	4,865	3,466
Real Estate	398	638	1,219
Policy Loans	2,196	2,663	1,563
Cash and Other Assets	930	1,328	1,215
Net Increase in Assets	$12,706	$10,913	$24,801

Note: Included in the above figures are a net decrease in assets of separate accounts of $28 million in 1973, $754 million in 1974, and an estimated increase of $3.6 billion in 1975.

securities, nearly $550 million was in Treasuries, reflecting a rise in Treasury bill holdings but also the first net increase in life company holdings of Treasury notes and bonds in many years. The net increase of $500 million in state and local obligations included nearly $200 million for securities of the Municipal Assistance Corporation, which was established by the state of New York during 1975 to aid in the refinancing of New York City municipal issues. Aside from this special situation, the net investment in tax-exempts ran only slightly above the 1974 amount. Another $400 million represented the 1975 investment in issues of foreign government and international agencies, and this amount was about double the volume in 1973 or 1974.

The 1975 net increase of $6.4 billion in corporate stock holdings included a valuation gain from the rise in market prices of an estimated $4.2 billion. In contrast, the 1974 net decrease of $4 billion in stock holdings reflected a valuation loss of $6.2 billion. Excluding valuation changes, the net investment in stocks amounted to $2.2 billion in each year. In 1975, common stock investments amounted to $1.55 billion and preferred stocks to $650 million, little different from the 1974 amounts of $1.5 billion and $726 million.

The net increase of $3.5 billion in mortgage holdings fell well below the increases of the two preceding years. Among the components, mortgage loans on nonresidential properties increased by $4 billion in 1975 following net investments of $4.6 billion or more in 1973 and 1974. The most notable shift was in loans on multifamily properties, which increased only about $0.3 billion as against $1.1 billion in each of the two preceding years. The 1975 increase for farm mortgages amounted to $400 million, somewhat above the net investment of $331 million in 1974 and the largest since the mid-1960s. The 1975 net decrease in holdings of 1-4 family mortgages came to $1.3 billion, slightly less than the 1974 decrease of $1.4 billion. The continued slow pace of home sales produced a further reduction from 1974 in the amounts representing loans paid off in full.

The net increase in holdings of real estate came to $1.2 billion, nearly double the sizable increase for this category in 1974. Most of the real estate holdings of life insurance companies represent investments in income properties but also included are home and branch office buildings and properties acquired as the result of mortgage loan foreclosures.

The net increase in policy loans of $1.56 billion in 1975 slowed noticeably in dollar terms from the record increase of $2.66 billion in 1974, and the rate of growth declined to 6.8 percent from 13.2 percent in 1974. The latest year marked only the third time in the past ten years that the growth rate for policy loans fell below that for total assets. Thus, a greater share of the net new money inflow was available for capital market investments than in most other recent years. Moreover, the net demands for loans from policyholders were relatively evenly spaced throughout 1975, limiting the uncertainties of the impact of these loans on available funds.

Acquisitions of Investments

The activity of life insurance company investment departments is more fully shown by the figures on investment acquisitions than by net changes in assets. Acquisitions reflect funds from new money, that is, net asset growth adjusted for valuation changes; amounts for reinvestment arising from sales, calls, and repayments of existing investments; the multiple transactions in short-term issues used for temporary investments; and amounts involved in exchanges and refinancings of longer-term investments.

In 1975, acquisitions of investments reached a record high, largely reflecting the growth in new money funds and an accompanying stepup in the transactions in short-term debt issues. Total acquisitions of about $126 billion, including over $85 billion of short-term issues, increased 8 percent from 1974 and about 5 percent from the previous high in 1973. When short-term issues were excluded, 1975 acquisitions of $41 billion were 15 percent above 1974.

Short-term issues, which have accounted for over two thirds of total

acquisitions in recent years, are largely comprised of corporate debt, such as commercial and finance company paper. Corporate paper amounted to $79 billion in 1975, and U.S. Treasury and federal agency issues amounted to about $6 billion.

As may be seen in Table 8, corporate bonds made up by far the largest single part of longer-term investments in 1975, followed by mortgages, corporate stocks, policy loans, government bonds, and real estate acquisitions. Corporate bond acquisitions of $16.6 billion were some $5 billion more than in 1974 with both domestic and foreign corporate bond investments accelerating markedly from earlier years, reaching $15.8 billion for U.S. corporates and $750 million for foreign corporates.

Mortgage loan acquisitions of $9.4 billion dropped about $2 billion from the volume in the two preceding years but nevertheless were above the totals in the years 1967-72. Included in the 1975 total were $8 billion of nonfarm conventional loans, over $1 billion of farm mortgages, and $300 million of government-backed loans. In contrast with nonfarm mortgages, farm mortgage acquisitions increased from the two preceding years, but by only a minor amount.

Corporate stock acquisitions of $5.6 billion increased somewhat from the reduced total of 1974 but ran well below the totals of 1971-73. The increase of some $800 million from 1974 reflected rising market prices and corresponded closely with the increase in amounts received from stock sales; thus, net acquisitions of corporate stocks were about the same as in 1974.

Policy loan acquisitions dropped 14 percent from the record 1974 amount to total $4.6 billion, about the same as in 1973. Although the 1975 total was sizable by historical standards, the downturn from 1974 in the demands for such loans was the significant development, releasing funds for investment in capital market instruments.

Cash Flow for Investment

Quarterly surveys of cash flow, instituted in 1957 by the research staff, provide information on the amount and the sources of funds available to life insurance companies for long-term investment. In this reporting system, "cash

Table 8
ACQUISITIONS OF INVESTMENTS, 1973-1975
U.S. LIFE INSURANCE COMPANIES
(In millions of dollars)

Asset Class	*1973*	*1974*	*Estimated 1975*
Bonds, Notes, and Debentures—Over 1 year			
U. S. Treasury and Federal Agency	$ 468	$ 524	$ 1,450
U. S. State and Local	501	552	800
Foreign Government and International	416	380	650
Corporate	12,741	11,266	16,550
Total – Over 1 year	14,126	12,722	19,450
Stocks	8,198	4,832	5,650
Mortgages	11,463	11,339	9,425
Real Estate	1,177	1,294	1,800
Policy Loans	4,602	5,332	4,600
Acquisitions excluding short-term issues	39,566	35,519	40,925
Short-term debt issues	81,223	81,543	85,350
Total Acquisitions	$120,789	$117,062	$126,275

Source: Institute of Life Insurance.

flow" is defined as the net increase in ledger assets (reflecting premium payments and investment income, net of benefit payments, expenses, and taxes), the return flow from existing investments (i.e., repayments and sales), and miscellaneous items, including borrowed money; funds available from these sources are reduced by net increases in cash position, by net repayments of borrowed money, and by net increases in policy loans to arrive at the total of funds available for long-term investment in securities, mortgages, and real property. Cash position is comprised of holdings of short-term securities as well as cash and bank deposits, and the cash flow total reflects the net change in holdings of short-term issues.

On the basis of this definition, cash flow of life insurance companies is estimated to total $32.5 billion during 1975, $6.5 billion above the 1974 total of $26 billion and nearly double the cash flow total in 1970, as shown in Table 9. Most important to the 1975 increase in cash flow was the acceleration in ledger asset growth, but the slower pace of policy loan increases was also a significant factor. In 1975, the net increase in policy loans diverted $1.56 billion from funds otherwise available for market investments, $1.1 billion less than in 1974, when policy loans increased by $2.66 billion. The estimates in Table 9 for all U.S. life insurance companies are expanded from the cash flow totals reported by a sample group of companies, and the 1975 figure reflects their projections of a sizable cash flow total in the final quarter of the year.

The 1974 and 1975 quarterly totals of cash flow and its components as reported by the sample group are provided in Table 10. In each of the three quarters of 1975, total investment funds (before meeting the net increase in policy loans) and the cash flow total (after policy loans) ran above the corresponding period of 1974. At the same time that long-term investment funds increased, holdings of short-term securities also grew, as indicated by the persistent increases in cash position. In the final quarter of the year, some reduction in liquidity positions was expected to augment other sources of funds so that cash flow into long-term investments was projected to run $2.2 billion above the final quarter of 1974. On balance, however, cash position of life insurance companies at the end of 1975 was above that a year earlier.

For the three quarters of 1975 combined, cash flow of the reporting companies ran $2.3 billion above the comparable period of 1974, and the ledger asset increase alone accelerated by nearly this amount. The return flow of funds from securities ran well ahead of the 1974 amount, reflecting not only growing amounts from maturities but also increased sales of bonds as well as stocks. In addition, a slower pace of policy loan increases in 1975 was a positive factor, since the increases in the first nine months of 1975 fell $700 million below the pace in the comparable 1974 period for the sample group. In contrast with

Table 9
ESTIMATES OF CASH FLOW FOR MARKET INVESTMENTS
U.S. LIFE INSURANCE COMPANIES
(In billions of dollars)

Year	*Amount*	*Year*	*Amount*
1964	$16.7	1970	$16.6
1965	18.2	1971	25.3
1966	16.9	1972	30.8
1967	16.8	1973	31.0
1968	17.3	1974	26.0
1969	14.9	1975	32.5p

p — Preliminary.

Table 10

INFLOW OF INVESTMENT FUNDS OF REPORTING LIFE INSURANCE COMPANIES, QUARTERLY

(In millions of dollars)

Sources of Investment Funds	*1974*				*1975*		
	I	*II*	*III*	*IV*	*I*	*II*	*III*
Net change in:							
Ledger assets	$3,158	$2,172	$2,944	$3,423	$3,579	$2,915	$3,908
Cash position*	−629	632	−285	−612	−76	−272	−1,380
Mortgages – total	1,225	1,112	1,003	968	1,038	1,031	1,170
Amortization and partial prepayments	762	673	649	644	711	643	654
Prepayments in full	453	413	341	305	319	371	485
Sales	10	26	13	20	8	17	31
Securities – total	1,491	1,555	1,419	1,858	1,754	1,982	1,825
Maturities	565	781	785	1,107	783	872	839
Calls	95	169	160	207	152	180	164
Outright sales	831	606	475	544	818	929	823
(bonds)	(221)	(162)	(198)	(202)	(287)	(377)	(351)
(stocks)	(609)	(445)	(276)	(342)	(531)	(552)	(472)
Sales of real estate	42	30	30	30	14	18	28
Sales and repayments of other assets	6	8	8	7	6	12	6
Net change in liability for borrowed money	43	88	−112	−51	121	−52	−91
All other sources	7	1	−6	1	1	**	**
Total investment funds	5,343	5,596	5,002	5,625	6,438	5,634	5,467
Net increase (−) in policy loans	−337	−521	−717	−522	−346	−265	−268
Total cash flow	$5,006	$5,075	$4,286	$5,103	$6,092	$5,369	$5,199

*An increase in cash position is shown as a negative and a decrease is shown as a positive figure.

**Less than $500,000.

Reporting companies represent 76 percent of the total assets of U.S. life insurance companies.

these developments, the return flow from the mortgage accounts, rather than increasing with portfolio growth, lagged behind the 1974 amounts. Most significant was the decline in mortgage amortizations and partial prepayments, a shortfall that apparently reflects the rise in mortgage loan delinquencies, for which data are given in a later section of this report.

MORTGAGE COMMITMENTS OF LIFE INSURANCE COMPANIES

New mortgage commitments made by life insurance companies in 1975 declined even further from the already reduced volume of 1974, reflecting the sharp drop in construction activity in these years. During the first nine months of 1975, mortgage commitments amounted to $5 billion, some 30 percent below the total of $7.2 billion in the comparable period of 1974, following a 40 percent decline in 1974 from 1973. The curtailment in new commitment activity in 1974-75 was indicative of a weak demand for the financing of new projects and of lenders' concerns about the quality of proposed loans. The recent experience of recession coupled with extraordinary rates of inflation led to a situation in which the projected rental income from proposed new construction was not sufficiently large to cover operating costs and debt service requirements and still provide an adequate return to developers.

As indicated by Table 11, commitments made on residential properties came to only $360 million during the 1975 nine-month period, a steep drop of 68 percent from the like period of 1974. Nonresidential mortgage commitments totaling $3.95 billion in the three quarters of 1975 decreased by nearly one fourth from the comparable 1974 period. Although farm mortgage commitments of roughly $675 million decreased 30 percent from the 1974 nine-months total, this decrease was measured from a sizable 1974 amount.

Over the past six years, the composition of mortgage commitments has shifted noticeably. The $5 billion total for the nine months of 1974 was comprised of 79 percent for nonresidential mortgages, nearly 14 percent for farm loans, and 7 percent for residential mortgages; the proportions for the year 1970 ran 60 percent for nonresidential, 5 percent for farm, and 35 percent for residential properties.

In 1975, as in 1974, the limited volume of new commitments fell well below the amounts disbursed for mortgages, producing a decrease in the backlog of outstanding commitments. At the end of September, the backlog amounted to about $9.6 billion, 20 percent below the level at year-end 1974.

The estimates of new and outstanding commitments for future mortgage lending by life insurance companies have been provided by the research staff to the Department of Housing and Urban Development (HUD) over the past six years. The estimates are based on the monthly reporting of a sample of companies, which for many years have provided data on forward investment commitments to the Association. HUD serves as the collecting agency for mortgage commitment data and for figures on gross mortgage flows of eleven lending groups. The gross mortgage flow data of life insurance companies are provided by the Institute of Life Insurance, and the statistics for all lending groups are available in monthly news releases of HUD.

Table 11
NEW COMMITMENTS MADE FOR MORTGAGES ON U.S. PROPERTIES
U.S. LIFE INSURANCE COMPANIES
(In millions of dollars)

Year or Quarter	*Farm*	*Nonfarm*		*Total*
		Residential	*Nonresidential*	
1970	$ 285	$1,979	$3,381	$ 5,645
1971	590	2,912	6,122	9,624
1972	817	4,052	8,260	13,129
1973	1,128	3,129	9,768	14,025
1974	1,112	1,298	6,077	8,487
1974 I	318	367	1,426	2,111
II	429	493	2,173	3,095
III	224	263	1,533	2,020
IV	141	175	945	1,261
1975 I	261	89	934	1,284
II	172	133	1,567	1,872
III	245	138	1,453	1,836

Note: Data are estimates based on the reporting of a sample group.

INCOME PROPERTY MORTGAGE COMMITMENTS

During the past eleven years a sample of life insurance companies has provided to the ALIA research staff detailed information on each nonfarm mortgage commitment of $100,000 and over for multifamily and nonresidential properties. The reporting was undertaken in order to continue a series covering the period 1951 through June 1965 developed by the Study of Interest Rates, a research project financed by the Association and conducted by the National Bureau of Economic Research. The mortgage commitment portion of the Study of Interest Rates had the benefit of substantial support from the Federal Reserve Board in the form of staff and computer time provided for the processing and analysis of the extensive volume of statistics collected under the NBER project. A Federal Reserve Board staff economic study by Robert Moore Fisher and Barbara Negri Opper, cited in the Appendix to this report, provides an analysis and summary of the data for the period 1951-70.

Table 12 provides commitment totals and averages for some of the loan characteristics covered by the ALIA surveys. As shown by the quarterly averages, interest rates on mortgage commitments increased somewhat in the third quarter of 1975, partially recovering from a decline in the second quarter, and the latest averages were roughly 10 basis points below the peak levels in late 1974 and early 1975. Although high by historical standards, mortgage interest rates continued, as in 1974, to run below corporate bond rates, a reversal of the usual spread in favor of mortgages. The recent interest rate relationships are yet another aspect of the reduction in construction activity and the attendant weak demand for mortgage financing.

Mortgage commitment volume in the income-property series roughly paralleled the pattern of decrease shown by the new mortgage commitments of all life insurance companies, as described in the preceding section. The decline was, however, more pronounced in the income-property

Table 12
COMMITMENTS OF $100,000 AND OVER ON MULTIFAMILY AND NONRESIDENTIAL MORTGAGES MADE BY REPORTING LIFE INSURANCE COMPANIES, 1966-1975

Year or Quarter	*No. of Loans*	*Total Amount Committed*	*Average Loan Amount*	*Average Interest Rate*	*Weighted Average Interest Rate*	*Average Loan-to-Value Ratio*	*Average Term (Years/ Months)*
		($000,000)	($000)	(by #)			
			Annual Totals and Averages				
1966	2,796	$2,516	$ 900	6.42%	6.35%	70.0%	20/5
1967	2,726	3,027	1,111	6.97	6.92	71.0	21/2
1968	2,569	3,244	1,263	7.66	7.65	73.6	22/11
1969	1,788	2,921	1,633	8.69	8.62	73.3	21/8
1970	912	2,341	2,567	9.93	9.86	74.7	22/8
1971	1,664	3,983	2,393	9.07	8.99	74.9	22/10
1972	2,132	4,987	2,339	8.57	8.50	75.2	23/3
1973	2,140	4,833	2,259	8.76	8.70	74.3	23/3
1974	1,166	2,603	2,232	9.47	9.47	74.3	21/3
			Quarterly Totals and Averages				
1974 I	268	540	2,014	9.05	8.97	73.9	22/1
II	436	947	2,171	9.23	9.19	74.6	21/6
III	321	789	2,457	9.80	9.78	74.2	21/2
IV	141	328	2,326	10.31	10.28	74.4	19/3
1975 I	123	248	2,016	10.28	10.29	73.6	21/10
II	166	503	3,032	10.15	9.98	74.2	21/7
III	154	409	2,655	10.23	10.16	73.7	21/6

Averages are based on number of loans except for the weighted interest rate which is derived by weighting each rate by the amount of the commitment.

Reporting companies have accounted for about 55 percent of nonfarm mortgages held by U.S. life insurance companies over the years shown.

series, with the total of $1.2 billion for the first three quarters of 1975 falling 49 percent below the already small amount in the comparable period of 1974. To some extent, the sharper decrease was accounted for by commitments involving a property on which the reporting company held an existing loan. These commitments are not reportable in the income-property series, since the contract rate for the new loan does not provide a reasonably close measure of current market rates. In the economic setting of 1975, additional lending on existing loans often offered more feasible lending opportunities than proposed new buildings. The volume of reportable commitments in the first three quarters of 1975, $1.2 billion, was the lowest for any comparable period since the early 1960s when, of course, a similar dollar amount financed considerably more new construction and purchases of existing buildings.

With one notable exception, the contraction in commitment volume in 1975 was fairly widespread geographically. Among the nine geographic divisions of the United States, the West South Central division showed an increase in dollar volume during the first nine months of 1975 over the same period of 1974, an increase fully accounted for by commitments on properties located in the state

of Texas. Accordingly, the West South Central division accounted for an unusually high proportion of the total, just over 20 percent of the 1975 volume, up from 9 percent in 1974. Properties in Texas alone accounted for 16 percent of the 1975 total, an indication of the relatively minor impact of the recession on this area. The dollar amounts committed for properties in the Mountain division and also for Canadian properties were fairly well maintained as compared with 1974. In contrast, the amounts for other areas were down by about 50 to 75 percent. Even in the Pacific division, commitment volume decreased by nearly 60 percent from the 1974 nine-months total, and the share of total commitments for this division dipped to under 9 percent as against a share of 12-15 percent in the years prior to 1974. Apparently, the business loan usury limit of 10 percent in California, applicable to life insurance company lending, has been an additional factor contributing to the above-average decline in commitments made for this area in periods when market rates exceeded 10 percent.

The weighted average interest rates in Table 12 are broken down by major property types in Table 13 for recent years and quarterly periods. As may be seen, in the third quarter of 1975, mortgage rates for most property types, aside from Canadian NHA loans, ranged from about 10 to 10-¼ percent. In total, rates had moved up by about 3/8 percent from the third-quarter 1974 average. Much larger increases were shown, however, by two categories, institutional and recreational properties and hotels and motels. In the latest three quarters, the interest rates for hotels and motels returned to the typical pattern of running above average whereas in late 1974 the commitments on these properties had carried below-average rates.

For the three quarters of 1975 combined, office buildings and commercial retail properties accounted for 35 and 34 percent, respectively, of the dollar volume of commitments, and industrial properties represented the next highest proportion at 9 percent. Industrial properties, however, accounted for 24 percent of the number of commitments made, nearly as much as the shares for office buildings and retail properties (27-26 percent). Loan size averaged about $1 million for industrial properties as against about $3.4 million for office buildings and retail stores. Conventional apartment loans accounted for under 4 percent of the dollar total of commitments, even below the small 1974 share of 14 percent and in marked contrast with shares of 40 percent or more in the late 1960s.

Table 13

AVERAGE CONTRACT INTEREST RATES BY MAJOR PROPERTY TYPE ON COMMITMENTS OF $100,000 AND OVER MADE BY REPORTING LIFE INSURANCE COMPANIES

Property Type	*1971*	*1972*	*1973*	*1974*	*1974*		*1975*		
					III	*IV*	*I*	*II*	*III*
Conventional apartments	8.98%	8.53%	8.67%	9.18%	9.83%	10.12%	10.09%	9.97%	10.15%
Office buildings	8.90	8.46	8.61	9.44	9.75	10.29	10.17	9.94	10.02
Commercial retail	9.04	8.40	8.58	9.54	9.79	10.40	10.01	9.91	10.13
Commercial services	9.18	8.65	8.82	9.55	10.22	10.23	10.16	9.87	10.13
Institutional and recreational	9.08	8.73	8.90	9.55	10.02	*	11.35	10.28	10.69
Industrial	9.26	8.54	8.77	9.54	9.86	10.45	10.31	10.13	10.24
FHA apartments	7.57	7.21	–	–	–	–	–	–	–
NHA apartments	9.40	9.04	9.02	*	–	–	*	*	11.06
Hotels and motels	9.62	8.75	9.11	9.60	9.56	10.18	10.48	10.28	10.25
Total*	8.99	8.50	8.70	9.47	9.78	10.28	10.29	9.98	10.16

*Data not shown where there are fewer than three loans. The total may include a few commitments for property types not shown separately. Averages are derived by weighting each rate by the amount of the commitment.

INCOME AND COSTS OF MORTGAGE LOAN PORTFOLIOS

Results of the regular annual surveys conducted by the ALIA research staff dealing with the income and costs of mortgage portfolios held by life insurance companies are provided in Table 14, which shows the 1974 ratios in the perspective of selected earlier years. As may be seen, the gross income ratio of the surveyed portfolios reached 7.21 percent in 1974, 24 basis points above the 1973 ratio. New loans moving into the portfolio carried interest rates averaging 8.94 percent, 35 basis points above the 1973 average, but new loans represented only about 13 percent of the 1974 portfolio.

In a broader perspective, the average net income rate increased markedly over the fourteen years from 1960 to 1974, due largely to improved gross income rates but also to improved operating cost ratios. Gross income rates moved up sharply in the latest four years, by about as much in this short period as in the ten years from 1960 to 1970. On the other hand, the decreases in cost ratios were concentrated in the 1960s. The average cost ratio decreased slightly in 1971 and held steady thereafter.

The improvement in cost ratios during the 1960s accompanied the shift of portfolios into loans on multifamily and nonresidential properties from mortgages on 1-4 family homes, an indication of the lower unit costs of the larger loans on income properties. In this connection, it should be noted that the averages in Table 14 are derived from aggregates of dollar figures and accordingly are heavily influenced by the experience of companies having sizable investments in mortgages. The underlying studies indicate that the majority of reporting companies experienced higher costs than shown by the weighted average for all companies. The average of cost ratios based on number of companies came to 0.44 percent in 1974 as against the 0.31 percent ratio derived from dollar aggregates and given in the table.

With respect to the components of total costs, originating fees and premiums (paid in order to acquire loans) have been an insignificant item for a number of years. There usually is not a separately stated originating fee when loans are generated by correspondents who retain the servicing on these loans. Servicing fees, paid to mortgage correspondents on a continuing basis over the life of the loans, declined during the 1960s as mortgages on income-producing properties increased as a proportionate share of mortgage portfolios. Income property loans, although varying widely in size, typically involve service fees that represent a smaller percentage of the loan amount than is needed for home loans. Service fee ratios in the table are based on the total loan portfolio, which includes loans that are serviced directly by company personnel. The underlying data indicate that loans serviced by mortgage correspondents carried service fee costs averaging about 0.22 percent in 1974.

Mortgage repayments slowed markedly in 1974 from 1973, and the average turnover period of the mortgage portfolios of surveyed companies lengthened noticeably to 15.2 years from 12.7 years in 1973. Turnover periods in the table also reflect the weighting by the large

portfolios. For the majority of companies, turnover period ran somewhat shorter than the average in Table 14 but nevertheless paralleled the pattern of lengthening in 1974.

The surveys of income and costs of mortgage portfolios have been conducted by the research staff since 1948 and had their origin with similar studies, covering the years 1945-47, that were conducted by the National Bureau of Economic Research. Section VI of the Appendix to this report provides the reference to the Saulnier monograph which incorporated the results of the initial studies.

Table 14
AVERAGE RATE OF INCOME AND COSTS AND TURNOVER PERIOD OF MORTGAGE LOANS HELD BY REPORTING LIFE INSURANCE COMPANIES

	1960	*1965*	*1970*	*1973*	*1974*
			(In percent)		
Gross accrual income	5.04%	5.54%	6.14%	6.97%	7.21%
Operating costs	.49	.44	.34	.31	.31
Originating fees and premiums	.03	.03	.01	*	*
Servicing fees	.21	.18	.14	.12	.11
Home and branch office costs	.25	.22	.19	.19	.20
Net accrual income	4.55	5.11	5.80	6.66	6.90
			(In years)		
Turnover period	12.6	10.6	17.0	12.7	15.2

*Less than .005 percent.

Note: Because of rounding, components may not add to totals shown. Cost items were available only on a cash accounting basis prior to 1973. Net income ratios assume that costs were equal on the two accounting bases. Reporting companies have accounted for about 85 percent of mortgage loans held by U.S. life insurance companies.

MORTGAGE DELINQUENCY AND FORECLOSURE EXPERIENCE

Data on mortage loan delinquencies and foreclosures have been reported to the ALIA research staff in considerable detail by a representative sample of life insurance companies since 1954. The reporting, which currently is semiannual (quarterly prior to 1972), permits the computation of delinquency and foreclosure rates on two bases, dollar amounts and numbers of loans. The two sets of rates may differ widely in their levels and even diverge in their direction of change, particularly when loans recently added to the portfolio—those most likely to become delinquent—are relatively few in number and large in dollar size as compared with seasoned loans in the portfolio. Rates based on dollars have been substantially above those based on numbers in recent years, but prior to 1964, rates by numbers were higher. In Table 15, only rates based on dollar amounts are shown.

At mid-1975, the latest reporting date, total mortgage delinquencies reached an unprecedentedly high level for the twenty-two year period covered by the surveys. The latest reading of 3.29 percent represented a particularly sharp rise from the end-1974 rate of 2.41 percent, following persistently sharp rises throughout the 1970s. The mid-1975 rate compares with a rate of 0.55 percent at the end of 1969, just prior to the onset of the uptrend in delinquencies, and with the low for the series of 0.45 percent in the late 1950s.

The rise in delinquency rates was most marked for nonfarm conventional loans, the largest component of mortgage holdings. At 3.75 percent, the rate for conventional mortgages was far above the rates for FHA, VA or farm mortgage loans, a relationship that first emerged in mid-1974. The farm mortgage delinquency rate of 1.99 percent in mid-1975 was the highest shown for these loans in Table 15, but farm delinquencies are seasonally large at mid-year dates, and the latest rate was below the peak for these loans (2.44 percent) reached in mid-1971. In contrast with these levels based on dollar amounts, rates by numbers of loans averaged 0.95 percent for all loans in mid-1975, including 0.90 percent for nonfarm conventional mortgages and 0.39 percent for farm loans.

Further detail on nonfarm loans by property type underlying the mortgages is also provided by most of the reporting companies, in addition to the type of financing information in Table 15. Multifamily properties have involved increasingly high delinquency rates over the past several years, reaching 5.54 percent in mid-1975. The rate for nonresidential income properties came to 3.31 percent, while for 1-4 family properties the rate came to a relatively favorable 1.04 percent.

Loans in process of foreclosure, which are included with delinquent loans, also climbed to a series high in 1975, averaging 0.87 percent of total loans held, a level that was similar to, or even above, the rate for total delinquencies prior to 1970. Based on numbers of loans, in-foreclosure rates have been relatively stable at a low level, 0.11 percent in mid-1975, since this measure reflects the dominance in portfolios of the still numerous 1-4 family mortgages, which for life insurers are largely seasoned loans.

Table 15
MORTGAGE DELINQUENCY RATES OF REPORTING LIFE INSURANCE COMPANIES

	Nonfarm Mortgages						
End of Period	*FHA*	*VA*	*Canadian NHA*	*Conventional*	*Total Nonfarm*	*Total Farm*	*Total Mortgages*
1955	.62%	.83%	.51%	.44%	.58%	.48%	.57%
1960	.82	.98	.42	.40	.61	.21	.58
1965	1.79	1.29	.83	.58	.93	.28	.87
1970	1.34	.95	.84	.74	.85	1.51	.91
1971	1.65	1.00	.94	.74	.90	1.59	.96
1972	1.85	1.08	.41	1.02	1.13	1.38	1.15
1973	1.99	.96	.79	1.56	1.57	.63	1.49
1974 June	1.63	.89	.27	1.93	1.83	1.18	1.77
December	1.69	1.12	.26	2.79	2.57	.71	2.41
1975 June	1.82	1.10	.46	3.75	3.42	1.99	3.29

Note: Rates are based on dollar amounts and represent the ratio of delinquent loans to total loans held in the specified category. Delinquent loans include loans in process of foreclosure as well as those with two or more monthly interest payments past due in the case of nonfarm mortgages and, for farm mortgages, those with interest in arrears more than 90 days. Reporting companies have accounted for 75-85 percent of the assets of U.S. life insurance companies.

APPENDIX

**Outside Research Studies
Supported by the Association**

I. *A Study of Saving in the United States,* Raymond W. Goldsmith (published in three volumes by the Princeton University Press, 1955 and 1956)

II. The Study of Capital Formation and Financing (conducted by the National Bureau of Economic Research under Simon Kuznets)

A. Monographs (Princeton University Press)

1. *Capital Formation in Residential Real Estate: Trends and Prospects,* Leo Grebler, David M. Blank, and Louis Winnick, 1956.
2. *Capital in Agriculture: Its Formation and Financing Since 1870,* Alvin S. Tostlebe, 1957.
3. *Financial Intermediaries in the American Economy Since 1900,* Raymond W. Goldsmith, 1958.
4. *Capital in Transportation, Communications, and Public Utilities: Its Formation and Financing,* Melville J. Ulmer, 1960.
5. *Capital in Manufacturing and Mining: Its Formation and Financing,* Daniel Creamer, Sergei Dobrovolsky, and Israel Borenstein, 1960.
6. *Trends in Government Financing,* Morris A. Copeland, 1961.
7. *Capital in the American Economy: Its Formation and Financing,* Simon Kuznets, 1961.

B. Papers

1. *The Role of Federal Credit Aids in Residential Construction,* Leo Grebler, Occasional Paper 39, 1953.
2. *Capital and Output Trends in Manufacturing Industries, 1880-1948,* Daniel Creamer, Occasional Paper 41, 1954.
3. *The Share of Financial Intermediaries in National Wealth and National Assets, 1900-1949,* Raymond W. Goldsmith, Occasional Paper 42, 1954.
4. *Trends and Cycles in Capital Formation by United States Railroads, 1870-1950,* Melville J. Ulmer, Occasional Paper 43, 1954.
5. *The Growth of Physical Capital in Agriculture 1870-1950,* Alvin S. Tostlebe, Occasional Paper 44, 1954.
6. *Capital and Output Trends in Mining Industries, 1870-1948,* Israel Borenstein, Occasional Paper 45, 1954.
7. *The Volume of Residential Construction, 1889-1950,* David M. Blank, Technical Paper 9, 1954.

III. The Study of the Postwar Capital Markets (conducted by the National Bureau of Economic Research)

A. Monographs (Princeton University Press except as noted)

1. *Postwar Market for State and Local Government Securities*, Roland I. Robinson, 1960.
2. *The Postwar Residential Mortgage Market*, Saul B. Klaman, 1961.
3. *The National Wealth of the United States in the Postwar Period*, Raymond W. Goldsmith, 1962.
4. *Studies in the National Balance Sheet of the United States*, Volume I: Raymond W. Goldsmith and Robert E. Lipsey; Volume II: Raymond W. Goldsmith, Robert E. Lipsey, and Morris Mendelson, 1963.
5. *The Flow of Capital Funds in the Postwar Economy*, Raymond W. Goldsmith, 1965 (Columbia University Press).

B. Papers

1. *The Volume of Mortgage Debt in the Postwar Decade*, Saul B. Klaman, Technical Paper 13, 1958.
2. *The Postwar Rise of Mortgage Companies*, Saul B. Klaman, Occasional Paper 60, 1959.
3. *United States Savings Bond Program in the Postwar Period*, George Hanc, Occasional Paper 81, 1962.
4. *The Measurement of Corporate Sources and Uses of Funds*, Eli Shapiro and David Meiselman, Technical Paper 18, 1964.

IV. Corporate Bond Project (Financial Research Program, conducted by the National Bureau of Economic Research)

A. Monographs (Princeton University Press except as noted)

1. *The Volume of Corporate Bond Financing Since 1900*, W. Braddock Hickman, 1953.
2. *Corporate Bond Quality and Investor Experience*, W. Braddock Hickman, 1958.
3. *Statistical Measures of Corporate Bond Financing Since 1900*, W. Braddock Hickman, assisted by Elizabeth T. Simpson, 1960.
4. *Trends in Corporate Bond Quality*, Thomas R. Atkinson, assisted by Elizabeth T. Simpson, 1967 (Columbia University Press).

B. Papers

1. *Trends in Cycles in Corporate Bond Financing*, W. Braddock Hickman, Occasional Paper 37, 1952.
2. *Corporate Bonds: Quality and Investment Performance*, W. Braddock Hickman, Occasional Paper 59, 1957.

V. Studies in Agricultural Finance (Financial Research Program, conducted by the National Bureau of Economic Research under Raymond J. Saulnier)

A. Monographs (Princeton University Press)

1. *Mortgage Lending Experience in Agriculture*, Lawrence A. Jones and David Durand, 1954.
2. *Patterns of Farm Financial Structure*, Donald C. Horton, 1957.

B. Papers

1. *Costs and Returns on Farm Mortgage Lending by Life Insurance Companies, 1945-1947*, Raymond J. Saulnier, Occasional Paper 30, 1949.
2. *Agricultural Equipment Financing*, H. Diesslin, Occasional Paper 50, 1955.

VI. Studies in Urban Mortgage Finance (Financial Research Program, conducted by the National Bureau of Economic Research under Raymond J. Saulnier)

A. Monographs (for the National Bureau of Economic Research by H. Wolff Book Manufacturing Co., Inc., except as noted)

1. *Urban Mortgage Lending by Life Insurance Companies*, Raymond J. Saulnier, 1950.
2. *The Impact of Government on Real Estate Finance in the United States*, Miles L. Colean, 1950.
3. *Urban Real Estate Markets: Characteristics and Financing*, Ernest M. Fisher, 1951.
4. *History and Policies of the Home Owners' Loan Corporation*, C. Lowell Harriss, 1951.
5. *Commercial Bank Activities in Urban Mortgage Financing*, Carl F. Behrens, 1952.
6. *Urban Mortgage Lending: Comparative Markets and Experience*, J. E. Morton, 1956 (Princeton University Press).

VII. The Study of Interest Rates (conducted by the National Bureau of Economic Research under Jack M. Guttentag)

A. Monographs (Columbia University Press)

1. *The Behavior of Interest Rates: A Progress Report*, Joseph W. Conard, 1966.
2. *Yields on Corporate Debt Directly Placed*, Avery B. Cohan, 1967.
3. *Essays on Interest Rates*, Volume 1, edited by Jack M. Guttentag and Phillip Cagan, 1969. Contains the following essays:
   a. "The Influence of Interest Rates on the Duration of Business Cycles," Phillip Cagan.
   b. "The Behavior of Residential Mortgage Yields Since 1951," Jack M. Guttentag.
   c. "The Structure of the Mortgage Market for Income-Property Mortgage Loans," Royal Shipp.
   d. "A Study of Liquidity Premiums on Federal and Municipal Government Securities," Phillip Cagan.
   e. "The Yield Spread Between New and Seasoned Corporate Bonds, 1952-63," Joseph W. Conard and Mark W. Frankena.
   f. "Interest Rates and Bank Reserves—A Reinterpretation of the Statistical Association," Phillip Cagan.
4. *New Series on Home Mortgage Yields Since 1951*, Jack M. Guttentag and Morris Beck, 1970.
5. *Essays on Interest Rates*, Volume 2, edited by Jack M. Guttentag, 1971. Contains three essays first published as Occasional Papers (see below) and the following essays:
   a. "The Influence of Call Provisions and Coupon Rates on the Yields of Corporate Bonds," Mark W. Frankena.
   b. "The Geographic Structure of Residential Mortgage Yields," E. Bruce Fredrikson.
   c. "The Ex Ante Quality of Direct Placements, 1951-1961," Avery B. Cohan.
   d. "Expectations at the Short End of the Yield Curve: An Application of Macaulay's Test," Thomas Sargent.
   e. "The Expectations Component of the Term Structure," Stanley Diller.
6. *The Channels of Monetary Effects on Interest Rates*, Phillip Cagan, 1972.

B. Papers

1. *The Cyclical Behavior of the Term Structure of Interest Rates*, Reuben A. Kessel, Occasional Paper 91, 1965 (Columbia University Press).
2. *Changes in the Cyclical Behavior of Interest Rates*, Phillip Cagan, Occasional Paper 100, 1966 (Columbia University Press).
3. *The Seasonal Variation of Interest Rates*, Stanley Diller, Occasional Paper 108, 1969 (Columbia University Press).
4. *Mortgage Commitments on Income Properties: A New Series for 15 Life Insurance Companies, 1951-70*, Robert Moore Fisher and Barbara Negri Opper, Board of Governors of the Federal Reserve System, Staff Economic Study #79, 1973.

VIII. Tax Policies for Economic Growth (conducted by the National Bureau of Economic Research under Norman Ture and Hal B. Lary)

A. Monographs (Columbia University Press)

1. *Accelerated Depreciation in the United States, 1954-60*, Norman B. Ture, 1967.
2. *Executive Compensation in Large Industrial Corporations*, Wilbur G. Lewellen, 1968.
3. *Tax Changes and Modernization in the Textile Industry*, Thomas M. Stanback, Jr., 1969.

IX. A Study of the Effects of Inflation on Financial Markets (conducted by the National Bureau of Economic Research under Phillip Cagan)

A. Published Articles

1. "Interest Rates and Prices in the Long Run," Thomas J. Sargent, *The Journal of Money, Credit, and Banking*, Vol. V, No. 1, Part II, February 1973 (Ohio State University Press).
2. "Rational Explanation and the Dynamics of Hyperinflation," Thomas J. Sargent and Neil Wallace, *International Economic Review*, Vol. 14, No. 2, June 1973 (University of Pennsylvania).
3. "What Do Regressions of Interest on Inflation Show?" Thomas J. Sargent, National Bureau of Economic Research, *Annals of Economic and Social Measurement*, Vol. 2, No. 3, July 1973.
4. "Common Stock Values and Inflation—The Historical Record of Many Countries," Phillip Cagan, National Bureau of Economic Research, *National Bureau Report Supplement 13,* March 1974.
5. "Price Expectations and Households' Demand for Financial Assets," Lester D. Taylor, National Bureau of Economic Research, *Explorations in Economic Research*, Vol. 1, No. 2, Fall 1974.

X. Other Published Studies

A. *Economic Aspects of Atomic Power*, Samuel Schurr and Jacob Marschak, 1950 (Princeton University Press).

B. *Investment Timing: The Formula Plan Approach*, C. Sidney Cottle and W. Tate Whitman, 1953 (McGraw-Hill).

C. *The Mutual Mortgage Insurance Fund,* Ernest M. Fisher and Chester Rapkin, 1956 (Columbia University Press).

D. *Corporate Earning Power and Market Valuation, 1935-1955*, C. Sidney Cottle and W. Tate Whitman, 1959 (Duke University Press).

E. *The Secondary Mortgage Market*, Oliver Jones and Leo Grebler, 1961 (University of California).

F. *The Value of the Call Privilege*, Arleigh Hess and Willis Winn, 1962 (University of Pennsylvania).
G. *Valuation of Securities Holdings of Life Insurance Companies*, Harold G. Fraine, 1962 (Richard D. Irwin, Inc.).
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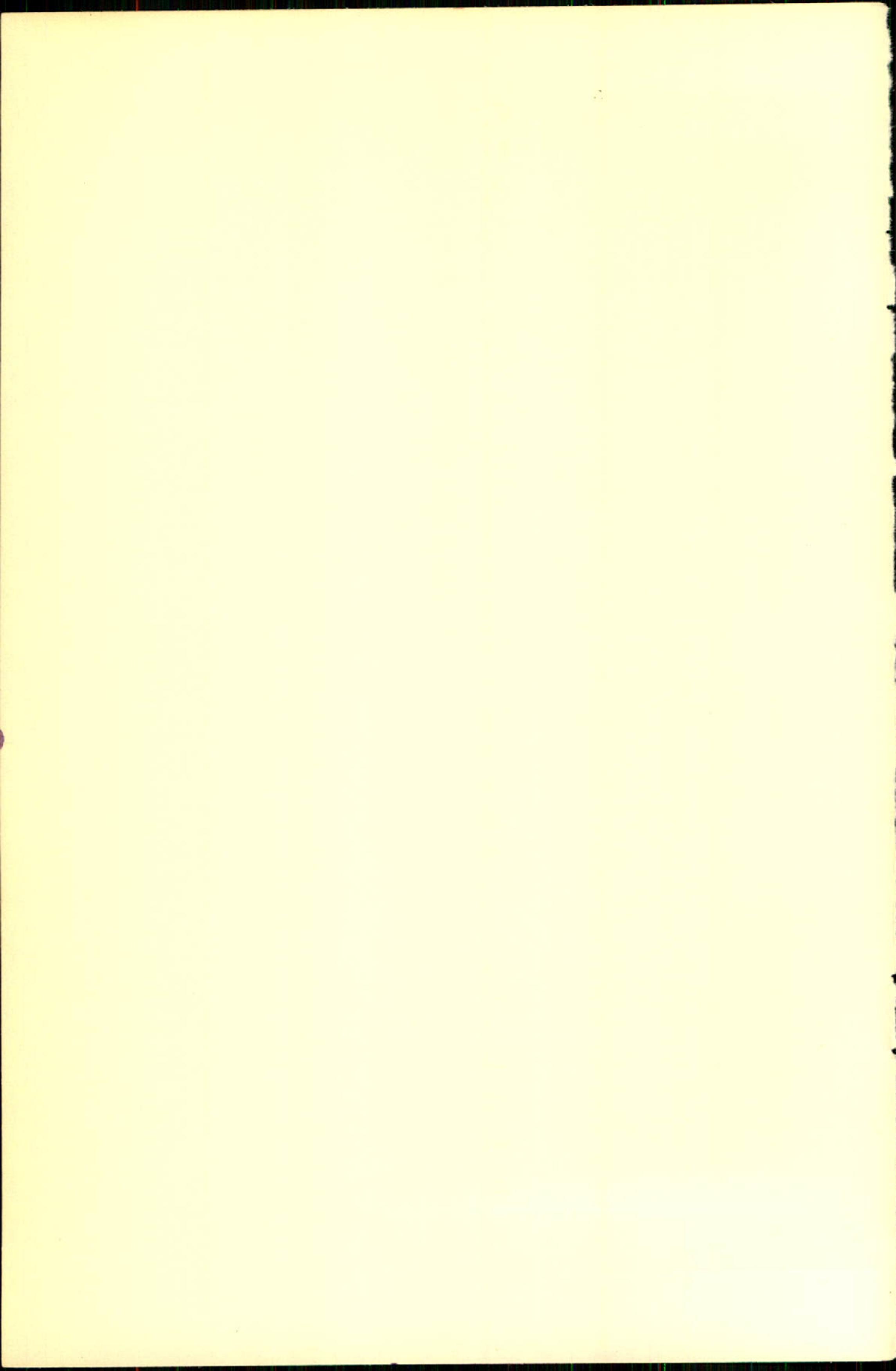
I. *Private Pension Funds: Projected Growth*, Daniel M. Holland, National Bureau of Economic Research, Occasional Paper 97, 1966 (Columbia University Press).
J. *Inflation and the Price Indexes*, Jules Backman and Martin R. Gainsbrugh, 1966 (National Industrial Conference Board).
K. *Pension Funds of Multiemployer Industrial Groups, Unions, and Nonprofit Organizations*, H. Robert Bartell and Elizabeth T. Simpson, National Bureau of Economic Research, Occasional Paper 105, 1968 (Columbia University Press).
L. *Economic Aspects of Pensions: A Summary Report*, Roger F. Murray, National Bureau of Economic Research, 1968 (Columbia University Press).
M. *The Economics of Interest Rate Ceilings*, J. Robert Lindsay, The Bulletin of the Institute of Finance, December 1970 (New York University).
N. *Inner-City Housing and Private Enterprise*, Frederick E. Case, 1972 (Praeger Publishers).
O. "Cyclical Variations in the Risk Structure of Interest Rates," Dwight M. Jaffe, *Journal of Monetary Economics*, Vol. I, No. 3, July 1975 (North-Holland Publishing Company).



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