1973 ECONOMIC AND INVESTMENT REPORT

A Report to the Membership

of the

American Life Insurance Association

by

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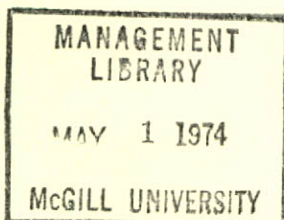
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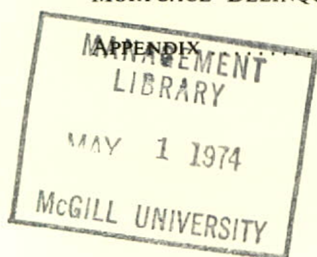
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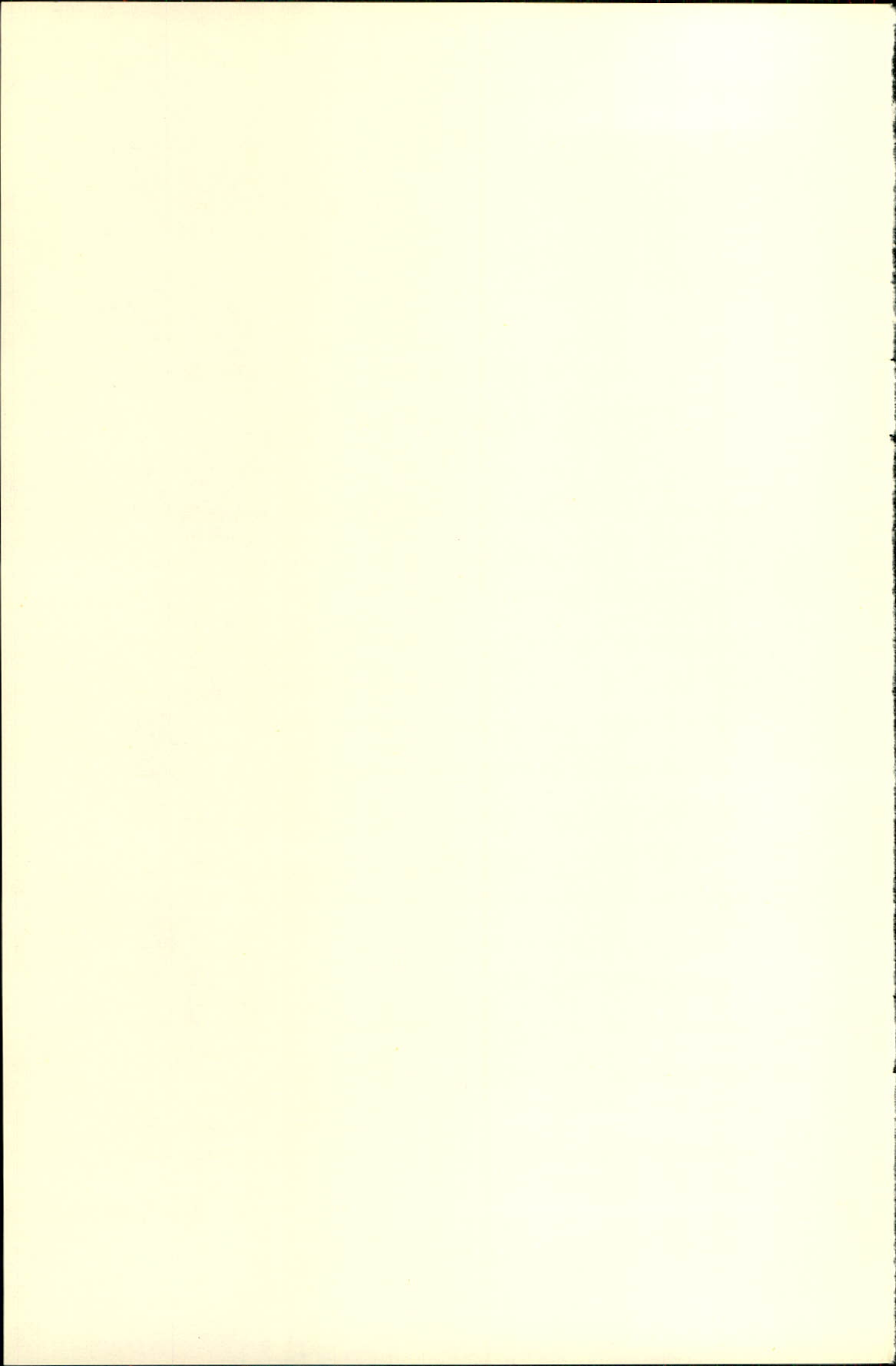


1973 ECONOMIC AND INVESTMENT REPORT

Economic and Financial Developments in 1973

The Year of the Unexpected

Viewed in retrospect, the year just ending has been most notable for a sequence of surprise developments and unforeseen events which set off shock waves through the economy and the financial markets. In mid-January, the mandatory wage-price controls of Phase II were replaced by a voluntary system under Phase III while the Price Commission and Pay Board were abolished, to the surprise of many. In February, market observers were caught off guard by a second devaluation of the U. S. dollar, not long after the first devaluation in 1971. As the year progressed, the pace of inflation accelerated, led by sharply rising food prices but evidenced also in strong advances in wholesale commodity prices. In mid-June, a 30-day price freeze was suddenly imposed to halt the upsurge in consumer prices; when Phase IV was announced in mid-July, stiffer standards were adopted with prenotification requirements and mandatory limits resembling Phase II.

On the financial scene, a major surprise of the year was the suddenness and severity of "disintermediation" at savings institutions beginning in July and persisting until the early fall. The reason for the heavy withdrawals from savings accounts was similar to the now-familiar episodes of 1966 and 1969; rising short-term interest rates reached levels that provided strong incentives to shift funds into higher-yielding open market paper. Although regulatory ceilings on savings accounts and certificates were boosted in early July, the upsurge in market rates was even greater and the movement of funds ran into the billions of dollars. As a direct consequence of disintermediation at thrift institutions, the availability of home mortgage credit was sharply curtailed and housing starts plunged to their lowest levels in three years. The rise in market rates also led to an upsurge

in policy loans at life insurance companies, which suffered drains from cash flow even greater than the worst months of the policy loan squeeze in 1969.

Adding to the uncertainties created by these events, political developments arising from the prolonged Watergate investigations cast a long shadow over the economic and financial scene. The possibility of discontinuity of political leadership remained a cautionary factor through much of the summer, heightened by the resignation of the Vice President in early October. While the economic impact of these political events is difficult to measure, they represented a disturbing influence in the debt and equity markets over many months.

An even greater shock to the economy was the emerging energy shortage, brought swiftly to crisis proportions after the interruption of Arab oil supplies in late October. While the prospect of widespread energy shortages had been a matter of earlier concern in some quarters, the Arab oil embargo and the subsequent actions to conserve petroleum supplies raised alarms not only over the impact on particular industries but also over the broader implications for overall output and employment. As one reaction, stock market prices plummeted in a few short weeks by 20 percent or more below the pre-crisis levels of early October.

Overall performance of the economy in 1973, as measured by statistics on gross national product, left much to be desired. In real terms, GNP advanced by almost 6 percent, slightly below the previous year's growth, but a slowdown in the quarterly pattern of real growth was registered as the year progressed, with a flattening in consumer spending for durable goods and an absolute decline in residential construction after mid-year. Energy shortages in the final quarter of 1973 began to have an impact on output in some sectors, with a further slackening in real growth. The quarterly pattern of GNP in both current dollars and real growth is shown in Table 1.

On the inflation front the implicit price deflator for GNP, the broadest measure of prices, rose by 5.3 percent over the average of 1972, as against a 3.2 percent rise in the preceding year (see Table 1). A more pertinent comparison is found, however, in the 7.1 percent increase in the GNP deflator between the fourth quarter of last year and the final quarter of 1973. Inflation was even worse when measured by other indexes: wholesale prices in November stood 17.5 percent above the level one year earlier, while consumer prices had risen by 8.4 percent over the same period. A graphic view of the accelerating pace of inflation in 1973 is provided in Chart A.

In the financial markets, the first half of 1973 witnessed a continued

TABLE 1
GROSS NATIONAL PRODUCT, 1971-1973
(Seasonally adjusted annual rates)

Year and Quarter	*GNP (current dollars)*		*Annual Growth Rates*		
	Level	*Change*	*Current Dollars*	*Real Growth*	*Price Factor*
	(In billions of dollars)		*(In percent)*		
1971 I	$1,027.2	$ 35.4	15.0%	9.1%	5.5%
II	1,046.9	19.7	7.9	2.9	4.9
III	1,063.5	16.6	6.5	3.6	2.8
IV	1,084.2	20.7	8.0	6.6	1.3
1972 I	1,112.5	28.3	10.9	4.9	5.7
II	1,142.4	29.9	11.2	9.5	1.6
III	1,166.5	24.1	8.7	5.8	2.8
IV	1,199.2	32.7	11.7	8.1	3.3
1973 I	1,242.5	43.3	15.2	8.7	6.1
II	1,272.0	29.5	9.9	2.4	7.3
III	1,304.5	32.5	10.6	3.4	7.0
Calendar 1971	1,055.5	78.4	8.0	3.2	4.7
1972	1,155.2	99.7	9.4	6.1	3.2
1973e	1,288.0	132.8	11.5	5.9	5.3

e—Estimated by ALIA economics department.

steep rise in short-term money rates, primarily stemming from extremely heavy demands for short-term business credit. Treasury 90-day bill rates advanced to more than 7 percent by mid-year, continuing the strong upward surge that began in early 1972 (see Chart B). In the corporate bond sector, despite a moderate volume of new bond flotations, market yields moved higher under the impetus of growing concern over renewed inflation. As shown in Chart C, yields on direct placements moved essentially sideways in the first half, although rates on public issues of Baa corporates showed a firming trend.

The most dramatic events in the money and capital markets came after mid-year, triggered by visible moves toward a more restrictive monetary policy by the Federal Reserve authorities. Yields on Treasury bills, commercial paper, and short-term Federal agency securities moved sharply higher, setting the stage for a massive outflow of savings deposits from thrift institutions into higher-yielding market paper. The extreme sensitivity of the money market to fears of a full-scale "credit crunch" were illustrated by the events of early August. The bank prime rate, which by July had regained its mid-1969 peak of 8½ percent, was raised further to 9 percent — an all-time high. Treasury bill rates also set new records in mid-August with a 90-day auction rate just under 9 percent; the Federal

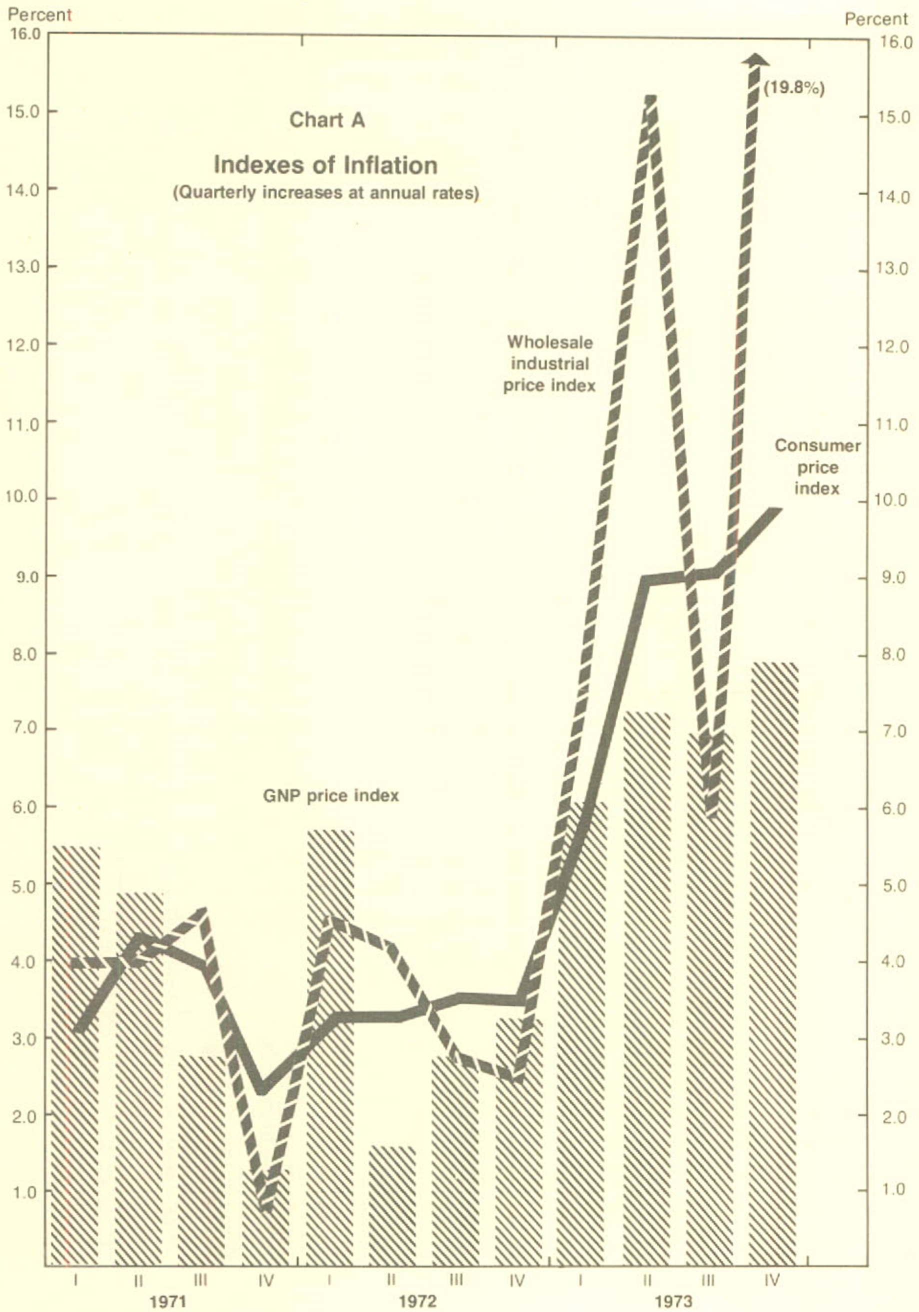
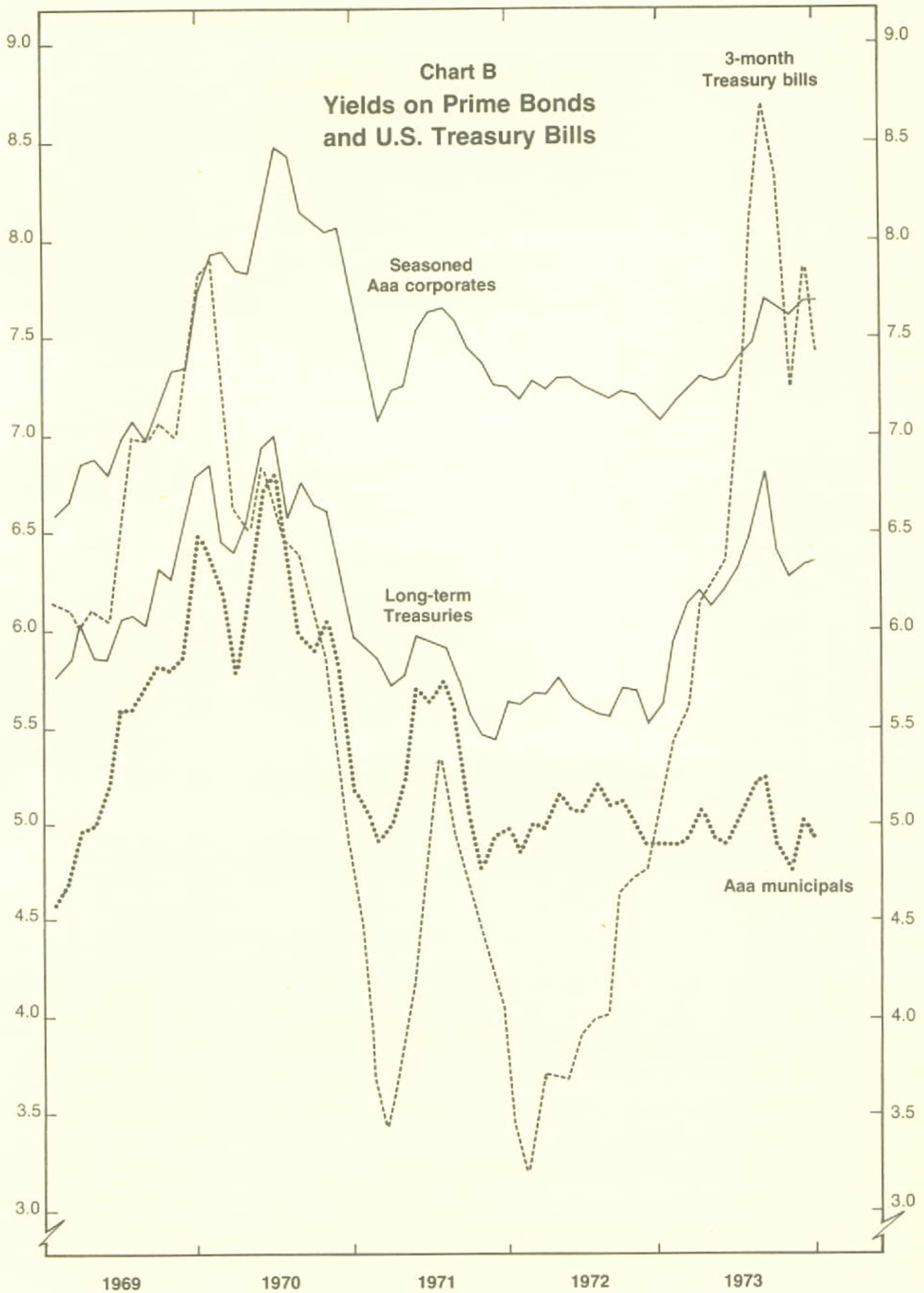
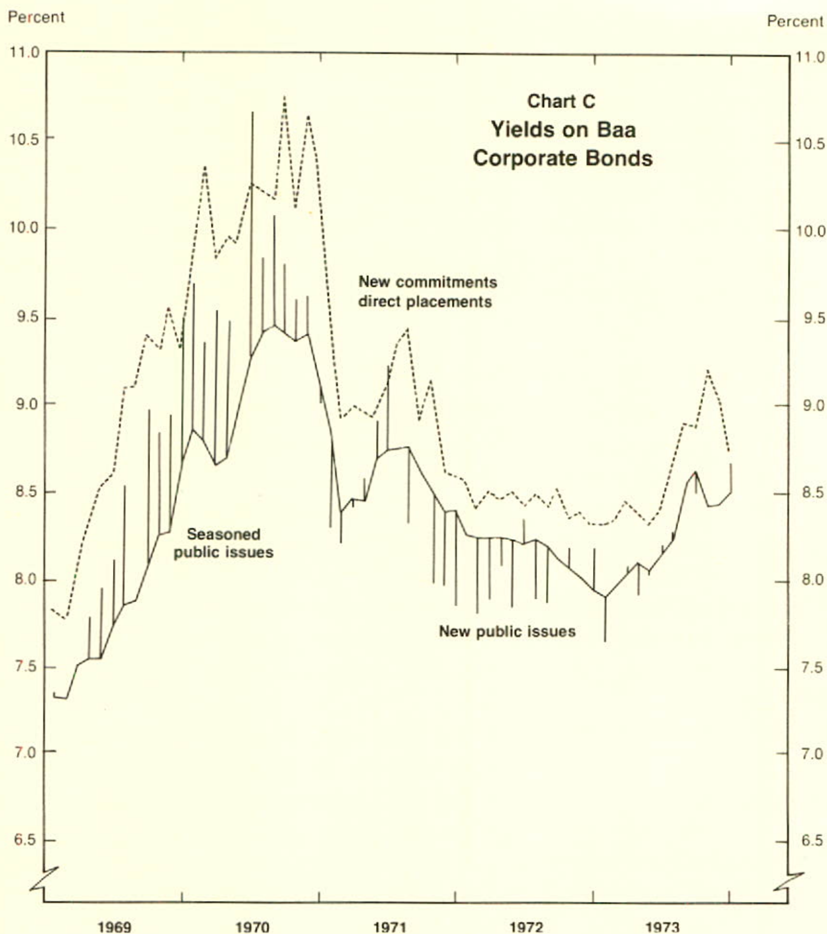


Chart A
Indexes of Inflation
(Quarterly increases at annual rates)
Percent
Percent
16.0
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(19.8%)
Wholesale industrial price index
Consumer price index
GNP price index
I
II
III
IV
1971
1972
1973


Percent
Percent
Chart B
Yields on Prime Bonds
and U.S. Treasury Bills
3-month
Treasury bills
Seasoned
Aaa corporates
Long-term
Treasuries
Aaa municipals
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
1969
1970
1971
1972
1973



Reserve discount rate was raised to a record 7½ percent. In this environment, and despite the light volume of corporate financing, new-issue Aa utility yields shot up to 8½ percent in early August. Home mortgage rates also advanced sharply, reflecting the virtual cessation of new commitments from thrift institutions. The prime loan rate at commercial banks climbed in September to a new high of 10 percent.

In late September, a calmer mood developed and both short-term and long-term rates retreated sharply from the August peaks as shown in the accompanying charts. The market seemed to sense that the monetary

authorities had reached the outer limits of their restrictive policy intentions; by late October, 90-day bills were auctioned below 7 percent. The prime rate was lowered to 9¾ percent, while yields on high grade corporate bond offerings sagged below 8 percent. In the closing weeks of the year, a firming trend in yields again developed, spurred by the growing calendar of corporate debt offerings and a renewed demand for business loans and other short-term credit. The commercial bank prime rate was raised in early December to its previous peak of 10 percent and new-issue Aa corporate utility yields at mid-month advanced once more above 8 percent.

Money and Capital Market Flows in 1973

The cross currents in the financial markets in 1973 may be seen in systematic fashion through analysis of "flow of funds" data on the demand for and supply of money and capital market funds. Estimates prepared by the ALIA economics department for capital market flows in 1973, based on partial and incomplete data for the year, are presented in Table 3 while statistics for the previous year are shown in Table 2 to facilitate comparison. In this form of analysis, dollar amounts refer to *net* increases in the outstanding debt of borrowers (rather than gross flotations of new issues) and to net changes in holdings of specified assets by various investor groups.

Total investment flows from life insurance companies in 1973 reached an estimated $14.7 billion, compared with $12.8 billion in 1972. As may be seen in Table 3, sectors of greatest investment interest continued to be corporate bonds, nonresidential mortgages, and common and preferred stock. However, policy loans (shown in the "all other" category of the tables) rose by just over $2 billion — more than double the increase of the previous year but still below the record surge in policy loans in 1969 and 1970. Other forms of contractual long-term savings also moved higher in 1973 as the investment flows of noninsured pension funds advanced to an estimated $7 billion while state and local funds (including operating funds as well as retirement systems) registered an estimated $11 billion flow for the year.

In contrast, the role of deposit-type savings institutions was reduced in 1973 by the sharp disintermediation suffered by savings and loan associations and mutual savings banks after mid-year. The effect on mortgage lending by savings and loan associations was cushioned, however, by sizable advances from the Federal Home Loan Banks which served to offset the heavy savings outflows of the summer months. As shown in Table 3, savings and loan associations provided $30 billion to the capital

Table 2

SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS IN 1972

(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*	*Business credit*	*Consumer credit*	*All other*	*Total sources of funds*
Life insurance companies	$ 6.4	$ 3.7	$ *	$ *	$ 0.1	$−1.7	$ 3.1	$ 0.2	$ —	$ 0.9	$ 12.8
Noninsured pension funds	−0.8	7.1	—	0.9	0.1	−0.7	—	—	—	—	6.6
State and local funds	4.8	3.0	−0.3	1.3	0.6	−0.1	—	—	—	—	9.2
Savings and loan assns.	—	—	—	0.9	3.4	28.5	3.5	—	0.2	—	36.5
Mutual savings banks	2.8	0.6	0.5	−0.1	0.4	4.1	1.5	*	0.3	0.2	10.3
Commercial banks	1.4	—	6.3	2.1	3.9	10.8	6.0	20.4	10.1	11.4	72.4
Federal Reserve Banks	—	—	—	−0.3	0.7	—	—	−0.2	—	—	0.3
U.S. investment accounts	—	—	—	10.9	−0.2	—	—	—	—	—	10.7
Federal loan agencies	—	—	0.3	−1.3	−0.1	5.2	1.2	—	—	—	5.4
Mutual funds	0.2	−1.8	—	0.1	—	—	—	−0.3	—	—	−1.8
Fire and casualty cos.	−0.1	3.0	3.3	−0.3	−0.1	—	*	—	—	—	5.8
Nonfinancial corporations	—	—	1.0	−1.5	0.7	—	—	8.0	5.4	—	13.6
Foreigners	−0.1	2.1	—	8.4	0.1	—	—	−0.1	—	—	10.5
Individuals and others	4.5	−4.7	1.2	4.1	0.2	5.1	2.4	0.5	3.2	—	16.5
Total uses of funds	$19.1	$13.0	$12.3	$25.2	$ 9.8	$51.2	$17.7	$28.5	$19.2	$12.6	$208.7

*$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 3

ESTIMATED SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS IN 1973

(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*	*Business credit*	*Consumer credit*	*All other*	*Total sources of funds*
Life insurance companies	$ 6.2	$ 3.6	$ 0.1	$−0.3	$ 0.2	$−1.2	$ 4.3	$−0.3	$ —	$ 2.1	$ 14.7
Noninsured pension funds	1.9	5.1	—	0.1	0.3	−0.4	—	—	—	—	7.0
State and local funds	3.6	3.5	−0.7	0.3	3.8	0.5	—	—	—	—	11.0
Savings and loan assns	—	—	—	−1.2	1.2	25.1	4.6	—	0.3	—	30.0
Mutual savings banks	−0.8	0.4	0.1	−0.6	0.5	4.0	1.2	0.1	0.3	0.2	5.4
Commercial banks	0.3	—	1.0	−8.2	8.3	11.8	7.6	35.7	11.8	1.0	69.3
Federal Reserve Banks	—	—	—	7.0	0.8	—	—	*	—	—	7.8
U.S. investment accounts	—	—	—	12.0	−0.3	—	—	—	—	—	11.7
Federal loan agencies	—	—	*	1.2	*	8.5	2.0	—	—	—	11.7
Mutual funds	−0.9	−2.1	—	0.5	—	—	—	1.1	—	—	−1.4
Fire and casualty cos.	1.1	2.0	3.3	−0.2	*	—	*	—	—	—	6.2
Nonfinancial corporations	—	—	*	2.0	1.5	—	—	9.0	5.5	—	18.0
Foreigners	0.2	3.3	—	−0.4	*	—	—	2.9	—	—	6.0
Individuals and others	1.7	−7.6	5.0	5.2	6.4	2.5	2.8	3.1	4.1	—	23.2
Total uses of funds	$13.3	$ 8.2	$ 8.8	$ 17.4	$22.7	$ 50.8	$22.5	$51.6	$22.0	$ 3.3	$220.6

*$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.

markets in 1973, compared with the record $36.5 billion total shown in Table 2 for 1972. The drop in savings bank funds reaching the capital market was proportionately larger, with a decline from $10.3 billion in 1972 to $5.4 billion this year.

Commercial banks were by far the largest single supplier of funds to the money and capital markets, with an estimated increase in total loans and investments of $69 billion in 1973, almost as much as the $72 billion increase of the previous year. Record demands for business credit dominated the banking picture with an increase of almost $36 billion, but mortgage credit was also a sizable factor with an estimated $19.4 billion rise. Nonbank forms of business credit, including commercial paper, bankers' acceptances and net trade credit also expanded, producing an estimated $51.6 billion rise in total business credit, as shown in Table 3.

Funds supplied by the "individuals and others" category rose to an estimated $23 billion, an amount exceeded only in the "credit crunch" year of 1969. Included in this category along with the household sector are such investor groups as brokers and dealers, personal trust accounts, mortgage companies, credit unions, and REIT's. The heavier volume of funds invested by individuals directly in higher-yielding open market paper was the counterpart of disintermediation from all types of savings institutions.

On the demand side of the market, corporate borrowing was focused primarily on commercial bank loans, which rose by record amounts, as noted earlier. Net issues of corporate bonds amounted to an estimated $13.3 billion in 1973, considerably below the $19 billion total of the previous year. Similarly, net issues of corporate stock declined to an estimated $8.2 billion, compared with $13 billion in 1972. In the state and local government sector, the influx of funds from federal revenue sharing apparently worked as a partial substitute for borrowed funds, and net issuance of state and local debt declined to an estimated $8.8 billion from $12.3 billion in 1972.

The impact of U. S. Treasury financing in 1973 was the lowest in several years at an estimated $17.4 billion. Rising tax receipts in a period of higher corporate profits and personal income, together with stringent Administration policies to restrain federal spending totals, narrowed the federal budget deficit and reduced the borrowing needs of the Treasury in calendar 1973. In contrast to the experience of 1972, when foreigners supplied over $8 billion of Treasury debt requirements, net foreign investment in U. S. government securities was slightly negative in 1973, as may be seen in Table 3. While Treasury demands were lower, federal agency debt financing advanced sharply in 1973 to an estimated $22.7 billion — more than

double the record amount raised in the preceding year. In large part, this huge increase reflected agency support of the mortgage market through credit activities of the Federal Home Loan Banks and the Federal National Mortgage Association, seeking to counteract the interruption of mortgage flows from thrift institutions.

In the mortgage market itself, the net increase in residential mortgage debt was approximately $50.8 billion, only fractionally below the increase of 1972. Although new housing starts dropped sharply as a result of the July-September disintermediation, the mortgage figures were kept high through disbursement of earlier commitments on homes and apartments completed during the latter half of the year. Nonresidential mortgage financing of office buildings, shopping centers, and other commercial properties accounted for an estimated $22.5 billion in 1973 — a record increase for this form of debt — supplied mainly by life insurance companies, savings and loan associations, and commercial banks.

Another area of strong demand in 1973 was the consumer credit sector. Spurred by credit financing of automobiles and other consumer durable goods, consumer credit rose by $22 billion, topping the record increase of the previous year. The sharpest rise in consumer debt came in the early months of 1973, followed by a slower pace in the second half as sales of autos and other hard goods flattened out.

Economic and Financial Outlook for 1974

The year ahead presents an unusual challenge to forecasters, whether they are professional economists, corporate planners, or financial officers. Predicting the twists and turns of economic activity normally requires an intimate knowledge of the intricacies of the business cycle, mixed with a realistic grasp of political forces shaping government policies that bear on the course of business activity. For 1974, the task is made more difficult by the need for special assumptions in two critical areas: the future of wage-price controls and the impact and duration of the energy shortage.

Every forecaster or business planner now faces the question of what changes to anticipate in the nature and coverage of wage and price controls next year. In 1973, the control system was shifted to a voluntary basis under Phase III, then to a temporary price freeze, and later to a more stringent control program under Phase IV — all within a few short months. With these decisions resting in the hands of a small group of policymakers, none of these shifts was predictable more than a few days in advance. Nevertheless, it is essential to make a specific assumption about wage-price controls for the year ahead. It presently appears most

probable that major sectors and industries will be decontrolled as rapidly as possible in the coming months, in an effort to allow market forces to encourage maximum production and to increase supplies. This direction in policy has already been signaled by recent actions to lift controls on cement, nonferrous metals, and automobiles. By the spring, only a handful of industries may be subject to control to meet special situations, although broader standby authority may be extended when present legislation expires on April 30.

The energy crisis has posed another major uncertainty for the economic outlook. The Arab oil embargo, coming on top of a petroleum shortage that was visible many months ago, has drastically altered the outlook for economic activity in 1974. The impact of the oil shortage upon production schedules in individual industries, upon consumer buying patterns, upon modes of transportation, and even upon the American life style remains the subject of uncertainty and conjecture. But the overall implication is clearly for a downtrend in economic activity and possibly for an extended period. Before the energy crisis burst upon the scene in late October, forecasters had predicted a slowdown in real economic growth in 1974, though the majority view was that a recession, in the technical sense of negative or zero growth for two successive quarters, would be narrowly avoided. In preparing the present forecast, it has been assumed that the cutoff of Arab oil supplies will persist through the winter months but that a partial resumption of Arab oil imports will occur by the late spring. Nevertheless, energy shortages are expected to be a restraining factor throughout the year, holding total production below potential. The depressing influence of energy shortages, radiating through every sector of the economy in some degree, now leads to a conviction that 1974 will be a recession year.

The nature of the oncoming recession deserves examination, since it will differ from previous downturns in a way that does not call for the traditional policy remedies. In its standard form, a recession typically has reflected a downturn in demand following a period of overexuberance or excessive demand in the economy. For example, inventory swings have often produced recessions, with an overbuilding of stocks followed by a sharp run-off in inventories, leading to declines in output and employment. Economic booms created by simultaneous strong demand for housing, consumer goods, and plant expansion are sometimes followed by a saturation period in which falling demand leads to a temporary recession. But the nature of the 1974 recession appears to be quite different, brought on by limitations on output rather than a lack of effective demand.

While the scarcity of energy supplies dominates current headlines, it should be remembered that shortages of basic materials and capacity limits in many lines were already restraining real output earlier in 1973. In an economy with supplies running below demands, the traditional counter-recession stimulants of easy monetary policy and rising federal deficits may not be appropriate, since they would add to demand without the capability to increase supply. Indeed, with energy shortages imposing limits on capacity and output, expansionary policies that stimulate demand would simply serve to drive up prices more sharply. Government policymakers thus face a very new environment in which to carry out their responsibilities to foster a stable and non-inflationary economy.

Turning to the specifics of the 1974 outlook, gross national product in current dollars is estimated to rise next year to $1,385 billion from an estimated $1,288 billion in 1973. The $97 billion increase will result almost entirely from higher prices. Real output for the year as a whole is expected to increase very slightly, less than one percent over the total for 1973, which implies that at least two quarters will show zero or negative growth, thus meeting the economists' definition of a "recession."

On the price side, the outlook is equally grim. Measured by the overall inflation index used for GNP, prices in 1974 are estimated to rise more than 7 percent above the average for 1973. The comparable inflation rate for GNP in 1973 was 5.3 percent with a strong upward tilt as the year progressed. Though reluctantly offered, this forecast is believed to be realistic in view of the latent price pressures currently held back by direct controls, the short supply of many basic commodities both here and abroad, and the production impasse in many lines created by the energy crisis. The phenomenon of rising prices in the face of an economic downturn may seem paradoxical, but this prospect is logical and consistent in the context of supply limitations which are responsible for both.

In translating this forecast of economic activity into projections of financial market conditions, the Association's economic staff has prepared estimates of sources and uses of funds in the money and capital markets for 1974. A detailed cross section analysis of expected flows between various sources and specified uses of funds is presented in Table 4. A summary tabulation of the 1974 estimates is shown also in Table 5 against the historical perspective of prior years beginning in 1965.

Total capital market flows in 1974 are expected to decline to approximately $196 billion, compared with an estimated $220 billion total in 1973. A major factor in this lower total will be the reduced demand for short-term business credit, which is expected to decline from over $50 billion

TABLE 4

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

(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*	*Business credit*	*Consumer credit*	*All other*	*Total sources of funds*
Life insurance companies	$ 6.7	$ 3.7	$ 0.1	$−0.1	$ 0.2	$−1.2	$ 4.6	$ 0.5	$ —	$ 1.2	$ 15.7
Noninsured pension funds	2.3	5.3	—	0.5	*	−0.8	—	—	—	—	7.3
State and local funds	4.5	3.8	−0.5	−0.5	2.6	−0.2	—	—	—	—	9.7
Savings and loan assns.	—	—	—	0.1	1.7	25.0	4.8	—	0.4	—	32.0
Mutual savings banks	1.5	0.6	0.4	−0.1	0.4	3.7	1.3	*	0.2	*	8.0
Commercial banks	0.5	—	8.0	8.0	7.5	9.2	7.2	26.6	6.0	1.0	74.0
Federal Reserve Banks	—	—	—	6.0	0.9	—	—	0.1	—	—	7.0
U.S. investment accounts	—	—	—	14.0	−0.2	—	—	—	—	—	13.8
Federal loan agencies	—	—	0.2	1.0	*	7.0	1.8	—	—	—	10.0
Mutual funds	0.5	−1.1	—	−0.1	—	—	—	0.2	—	—	−0.5
Fire and casualty cos.	1.0	3.3	3.6	−0.5	−0.1	—	*	—	—	—	7.3
Nonfinancial corporations	—	—	0.5	−1.0	*	—	—	7.2	3.5	—	10.2
Foreigners	0.4	3.0	—	−5.0	0.1	—	—	1.5	—	—	*
Individuals and others	1.6	−9.6	−1.2	1.7	2.4	1.8	2.3	1.4	1.4	—	1.8
Total uses of funds	$19.0	$ 9.0	$11.0	$24.0	$15.5	$44.5	$22.0	$37.5	$11.5	$ 2.2	$196.2

*$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 5

SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS, 1965-1974

(In billions of dollars)

Sources of funds	*1965*	*1966*	*1967*	*1968*	*1969*	*1970*	*1971*	*1972*	*1973e*	*1974e*
Life insurance companies	$7.8	$7.9	$8.3	$8.5	$8.8	$9.1	$11.7	$12.8	$ 14.7	$ 15.7
Noninsured pension funds	5.2	5.5	5.3	5.7	5.6	7.1	7.2	6.6	7.0	7.3
State and local funds	6.3	6.0	3.8	7.0	12.0	5.1	4.5	9.2	11.0	9.7
Savings and loan associations	9.6	4.2	9.1	10.2	10.0	11.6	29.4	36.5	30.0	32.0
Mutual savings banks	3.9	2.7	5.0	4.4	3.0	4.0	10.0	10.3	5.4	8.0
Commercial banks	28.5	17.7	36.5	38.8	15.5	31.8	49.8	72.4	69.3	74.0
Federal Reserve Banks	3.8	3.6	4.8	3.7	4.2	5.0	8.9	0.3	7.8	7.0
U.S. investment accounts	1.3	8.2	8.4	4.9	11.2	7.7	8.7	10.7	11.7	13.8
Federal loan agencies	1.4	5.0	2.8	3.5	5.7	8.0	5.2	5.4	11.7	10.0
Mutual funds	2.0	2.5	1.4	3.7	2.6	1.7	0.4	−1.8	−1.4	−0.5
Fire and casualty companies	1.1	1.9	1.8	2.7	2.6	4.8	6.5	5.8	6.2	7.3
Nonfinancial corporations	5.2	0.9	2.9	9.6	9.0	−0.1	10.2	13.6	18.0	10.2
Foreigners	−0.2	−1.7	2.0	1.5	0.1	11.0	27.1	10.5	6.0	*
Individuals and others	−1.7	13.4	−3.4	−0.8	28.0	5.5	−11.5	16.5	23.2	1.8
Total sources	$74.2	$77.8	$88.7	$103.4	$118.4	$112.3	$168.2	$208.7	$220.6	$196.2
Use of funds										
Corporate bonds	$8.1	$11.1	$16.0	$14.0	$13.8	$22.8	$23.7	$19.1	$ 13.3	$ 19.0
Corporate stocks	*	1.2	2.3	−0.9	4.3	6.8	13.5	13.0	8.2	9.0
State and local gov't. issues	7.7	6.3	7.9	9.8	10.7	11.4	17.0	12.3	8.8	11.0
Federal Government issues	2.6	8.5	15.4	13.4	10.2	20.9	35.0	25.2	17.4	24.0
Federal agency issues	2.4	6.7	5.1	7.0	6.8	8.4	4.5	9.8	22.7	15.5
Mortgages: Residential	19.0	13.8	16.0	18.6	20.4	19.2	36.8	51.2	50.8	44.5
Nonresidential	6.6	7.5	7.0	8.8	7.4	7.2	12.1	17.7	22.5	22.0
Business credit	15.8	14.1	10.1	18.1	31.0	6.7	8.4	28.5	51.6	37.5
Consumer credit	9.6	6.4	4.5	10.0	10.4	6.0	11.2	19.2	22.0	11.5
All other	2.5	2.2	4.4	4.6	3.4	3.0	6.0	12.6	3.3	2.2
Total uses	$74.2	$77.8	$88.7	$103.4	$118.4	$112.3	$168.2	$208.7	$220.6	$196.2

*$50 million or less. 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.

to approximately $37 billion next year. A second area of lesser demand is the consumer credit field, where the estimated $11.5 billion increase in 1974 is approximately half the rise registered for 1973 when consumer durables spending was a strong factor. In the case of corporate demand, greater use of the long-term bond market is in prospect with net issues expected to rise from $13 billion this year to $19 billion in 1974. Financing of higher capital outlays and the funding of short-term bank loans will be the major forces behind heavier corporate bond flotations. Net issues of corporate stock, both common and preferred, are expected to total $9 billion, somewhat above 1973 but well below the $13.5 billion peak of net stock issues in 1971.

In the government sector, net Treasury borrowings in 1974 are estimated at $24 billion, an increase of about $7 billion over 1973, mainly reflecting a larger budget deficit anticipated to result from a rising trend of federal spending and a slower growth of tax revenues. Roughly offsetting the larger amount of Treasury financing will be a lower volume of federal agency issues, estimated to decline from the record $22.7 billion of 1973 to $15.5 billion next year.

Commercial bank loans and investments are estimated to expand by $74 billion in the coming year, somewhat above the $69 billion increase estimated for 1973. As may be seen in Table 4, a large portion of the bank credit supplied in 1974 will take the form of investments in state and local securities, U. S. government securities, and federal agency issues, while bank loans will increase by much smaller amounts than in 1973 because of reduced demands for both business credit and consumer credit. Bank credit flowing into the mortgage market is expected to decrease only moderately, however. Underlying these forecasts for commercial banks is the assumption that Federal Reserve policy will remain fairly restrictive, seeking to accommodate legitimate credit needs without a massive shift toward monetary ease. In a recession induced by shortages of supply rather than a lack of demand, the traditional justification for an easy credit policy in a recession period will not apply.

A basic question as to the direction of capital market flows in 1974 relates to the extent of re-intermediation into savings institutions which supply the mortgage market. In the forecasts presented in Tables 4 and 5, the judgment has been made that savings and loan associations and mutual savings banks will experience a sizable return flow of savings funds in 1974, though not at the peak levels of 1972. Although competing short-term interest rates are not expected to drop to the low levels reached in previous recession periods, they appear likely to move down to levels which no longer siphon off savings flows from deposit-type thrift institu-

tions. The prospect of substantial re-intermediation indicates a resumption of credit flows into residential mostgages by the spring of the year, reviving this credit-starved sector of the economy and helping to strengthen housing production in the second half of 1974. A corollary of these developments is the estimate that funds supplied to the mortgage market by federal loan agencies will decrease, particularly in the latter part of 1974, as the need for this type of support abates.

The outlook for the mortgage market is for a $44.5 billion increase in residential mortgage credit in 1974, a sizable reduction from the two preceding years when the annual increase exceeded $50 billion (see Table 5). The sharp cutback in new mortgage commitments by thrift institutions last summer will show up in smaller disbursements in the early months of 1974, though the resumption of more normal savings inflows is expected to produce a rise in both commitments and disbursements by the late spring. The resultant turnaround in housing starts should provide a counter-recessionary stimulus to housing activity in the second half of 1974. Nonresidential mortgage credit used to finance shopping centers, office buildings, etc. is expected to fall off only slightly in 1974, holding close to the $22.5 billion total of 1973 as shown in Table 5.

Sources and uses estimates for 1974 are compared in Table 5 with the experience of 1973 and earlier years, thus facilitating a review of the major increases and decreases in sectoral credit flows. Among the institutional sources of funds, increases are projected in the availability of credit from almost every major supplier, with three principal exceptions. Nonfinancial corporations, which supplied an estimated $18 billion in 1973, are expected to provide about half as much next year as a result of runoffs in government security holdings and smaller extensions of trade credit and consumer credit. Foreign investors, which supplied an estimated $6 billion in 1973, are estimated to provide almost nothing on balance in 1974, with net purchases of common stocks and bankers' acceptances offset by net redemptions of U. S. Treasury securities accumulated earlier. Individuals and others, which accounted for an estimated $23 billion in 1973, largely because of disintermediation from thrift institutions, are expected to supply only a nominal amount in direct investments during 1974.

The composition of projected "uses of funds" in 1974 indicates a major shift in demand toward increased long-term financing, while the use of short-term credit will retreat sharply from the record levels of 1973. Table 5 shows considerable advance in the amounts raised through long-term corporate bonds, common and preferred stock, and state and local government obligations. Demand remains strong for nonresidential mortgage credit, while the decrease shown for residential mortgages stems from

reduced availability rather than lack of demand. On the other hand, short-term lending to both business and consumers is expected to fall off by substantial amounts, reducing pressure on those markets. Somewhere in the middle are the borrowings of the U.S. Treasury and federal agencies which can issue short-, medium-, or longer-term securities, but which are not expected to increase their net borrowings over 1973, taken together.

In appraising the 1974 outlook for interest rates, there are three major influences that must be considered: the balance between demand and supply in various markets; the role of Federal Reserve policy in determining the expansion of money and credit; and the influence of inflationary expectations on interest rate levels. As outlined above, the year ahead is expected to witness stronger demands for long-term credit and a lessening of demand for short-term business loans and consumer credit. Federal Reserve policy in a shortage-induced recession is unlikely to follow the traditional course of "active ease" to stimulate greater use of bank credit, though there may be a moderate relaxation of the recent restrictive policy. As to inflationary expectations, there is every indication that the rate of price increase will move higher in 1974 with a consequent rise in the "inflation premium" component of longer-term lending rates.

In translating these fundamentals into an interest rate forecast for 1974, it appears that longer-term rates will decline rather little if at all during the first half of next year, despite the downturn in overall economic activity. Yields on publicly offered Aa corporate utilities are expected to remain within a fairly narrow range between 7½ and 8¼ percent during the months just ahead, possibly settling to the lower end of the range by mid-year. With the reduced availability of home mortgage credit, interest rates on home loans are unlikely to ease before the middle of 1974, when improved credit flows will reach the mortgage market. In the short-term sector, a downward drift in rates on Treasury bills and related open-market rates seems probable during the first half of the year, but the magnitude of this decline will be moderate in relation to previous recessions when the monetary authorities pursued a policy of active ease. In contrast to short-term rate declines of several percentage points in past recessions, the decline in the next six months may be limited to 150 basis points or less.

The trend of interest rates beyond the first six months of 1974 is extremely difficult to forecast, in view of the uncertainties that abound and the critical assumptions that must be made as to the restoration of energy supplies and the timing and vigor of an economic upturn later in the year. In the present situation, it is advisable to operate within a fairly short time-horizon, adjusting policies and forward planning to new

developments as they emerge. While optimism has long been the keynote of successful business enterprise, caution is the watchword for the year ahead.

The Economic and Investment Research Program

For more than twenty-five 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: research and analysis undertaken by the staff of the economics department, and outside research studies conducted by universities and other research organizations with financial support from the ALIA. The main objective of the program, both internal studies and outside research, 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.

Staff Activities of the Economic Research Department

Collection and analysis of data on the investment operations of the life insurance business represent a major continuing function of the economic research department. 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, semi-annual 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 on 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.

A considerable part of the economics department's activities is devoted to working with various policy-making committees of the Association. Foremost among these functions is staff support of the Economic Policy Committee and its various subcommittees. Each year, for example, testimony on behalf of the life insurance business is prepared for submission

to the Joint Economic Committee of the Congress in its hearings on the Economic Report of the President. Policy viewpoints of the life insurance business are also conveyed to officials in Washington through periodic meetings with the U.S. Treasury Department, the Federal Reserve Board, and others involved in planning economic policy. Association staff economists also provide continuing support for the Subcommittee on Mortgage Lending, which is charged with responsibility in the field of mortgage legislation and housing policy. In this area, recent issues have revolved around the proposals in the President's Message on Federal Housing Policy and the regulation of settlement costs in home purchases.

Another function of the economics department is staff support for the Committee on Securities Investments, which is concerned with matters relating to the bond and stock investments of life insurance companies. Major issues before this committee have been the membership on stock exchanges by institutional investors such as life insurance companies, and the related question of the structure of commission rates on stock market transactions.

Activities of the Financial Section of the ALIA 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 held to facilitate discussion of financial topics by investment officers. These functions were developed by the American Life Convention to serve the interests of life company investment officers and have been continued under the auspices of ALIA.

In its capacity as the economic research arm of the Association, the staff frequently conducts special studies related to policy issues currently before the life insurance business. For example, the department undertook a series of studies to analyze the characteristics of policy loans of life insurance companies and the desirability of moving toward more flexible policy loan interest rates. In another instance, the economics staff developed a comparative study of special tax incentives to stimulate saving within a variety of foreign countries.

As a guide to investment strategy and the future course of interest rates, the economic research 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 1974, is presented in preceding sections of this report.

Other research projects currently being undertaken by economics

department staff include a study of the changing terms and characteristics of income-property mortgage lending by life insurance companies over the past 20 years. This research will draw upon data collected from life insurance companies by the National Bureau of Economic Research for the period 1951-1965 and by the Association since 1965. Another internal staff project is the preparation of a monograph on the description and analysis of the functioning of the life insurance business and its impact on the national economy, including the nature and importance of various insurance products and services, and the role of life companies in funneling policyholder savings into various sectors of the capital market.

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 for the investment aspects of the business to university researchers and financial trade groups, in an effort to improve public understanding of the investment policies and practices of life insurance companies.

Economics department staff members presently include Dr. Kenneth M. Wright, Vice President and Chief Economist; Dr. George A. Bishop, Director of Economic Research; Dr. John W. Eilert, Senior Economist; Mrs. Elizabeth Bancala, Director of Investment Studies; Dr. Thomas R. Robinson, Associate Economist; Mr. Anthony Palasik, Director of Statistical Services; and Mr. Nathaniel Cabanilla, Assistant Economist.

Outside Research Financed by the Association

In addition to the research activities of the ALIA economics department staff, the Association sponsors and finances outside research projects of particular importance to the investment side of the life insurance business. This research is conducted independently by universities and private research groups outside the life insurance business. It is planned and followed closely by senior staff and by the Investment Research Committee of ALIA. Since 1946, this program has provided research grants totaling close to $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.

In 1971 the Association sponsored another major research project of 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 began a study of "The Effects of Inflation on Financial Markets." This study investigates the effects of inflation in five main areas: institutional portfolio policies, interest rates, household savings, convertible bonds, and common stocks. These are the areas in which it was thought that important inflationary effects occur and in which recent professional research had suggested additional empirical and theoretical analysis would be fruitful.

Dr. John Lintner of Harvard University is responsible for the portion of the study dealing with investment policies of major financial institutions under inflationary conditions. Dr. Lester D. Taylor of the University of Michigan has investigated the influence of the consumer's price expectations on the household's saving and the composition of its financial assets. Dr. Stanley Diller of Columbia University is exploring data on convertible bonds for information on the impact of inflation on security yields. Dr. Phillip Cagan has in manuscript form the portion of this project which deals with comparison of available stock price indexes for ten Western countries plus Japan with corresponding commodity price indexes to provide a general indication of how stock values have kept pace with inflation.

Dr. Thomas Sargent of the University of Minnesota has completed his portion of the study which examines the relation between commodity price inflation and interest rates in three published articles.[1] On the basis of his empirical work, in which he examined the high correlation between interest rates and price levels over time, he challenges the hypothesis that higher rates of inflation lead to higher interest rates; instead, interest rates and inflation appear to be mutually determined and influence each other through feedback effects. In the context of this analysis, Dr. Sargent explores the adequacy of the contention that the public forms inflationary expectations on the basis of current and lagged rates of inflation. He shows that the use of a proxy for expectations based on naive extrapolations of past rates of inflation may yield unusually long lags when the actual lag may be quite short. This conclusion would follow if there were significant feedback effects between interest rates and prices. By challenging current theory in this field, his research opens the way to more careful

[1] For references, see the listings in the Appendix.

study of the interrelationships between the level of interest rates and the state of inflationary expectations.

This fall a study by Robert Moore Fisher and Barbara Negri Opper entitled *Mortgage Commitments on Income Properties: A New Series for 15 Life Insurance Companies, 1951-70* was distributed to member companies. This study is one of a series comprising *The Study of Interest Rates* project, and was published by the Federal Reserve Board as one of its staff economic studies. The authors analyzed monthly data starting in 1951 on loan volume and interest rates and other lending terms on first-mortgage commitments on office buildings, apartment houses, shopping centers, hotels and motels, and other income properties. The series covers new commitments of $100,000 and over on multifamily and nonfarm nonresidential real estate approved by 15 life insurance companies accounting for more than half of industry assets.

Fisher and Opper found sweeping changes between 1951 and 1970 in the terms of new mortgage commitments on income properties. In addition to substantial increases over time in contract interest rates and average loan size, a marked rise in average loan-to-value ratios and a lengthening of loan maturities occurred over the period. Before the late 1950's, average contract rates on income property mortgages were below the interest rates on home loans originated by life insurance companies; in the late 1950's, this relationship was reversed and the rates on income property loans have consistently exceeded those available on home loans.

The mortgage and real estate commitment series on income properties resulted from a joint effort by the National Bureau of Economic Research, the Board of Governors of the Federal Reserve System, and the American Life Insurance Association. Current data are compiled by the ALIA for distribution to member companies and summary figures are published in the Federal Reserve *Bulletin*.

Two other research studies were begun in July of this year. The first, undertaken by Professor Dwight Jaffee of the Financial Research Center of Princeton University, analyzed factors affecting the risk structure of interest rates by examining the yield spreads on corporate and municipal bonds of different risk ratings (quality ratings by Moody's or similar groups). This study was completed in the fall and will be distributed to member companies during 1974. The second project, conducted by a research team headed by Professor Arnold Sametz of New York University, undertakes to forecast demand and supply conditions in the U.S. capital markets from 1975 through 1985. This study focuses on major financial flows over the decade within an integrated framework of analysis, drawing implications for the level of long-term interest rates, differentials between

rates in various markets, innovations in patterns of financing, and changes in institutional investment flows. Completion of this three-year project is scheduled for late 1975.

A complete listing of the outside research studies which have received financial support through the investment research program since its inception in 1946 may be found in the Appendix to this report.

Assets and Investments in 1973

Assets of U. S. life insurance companies reached $253.2 billion at the end of 1973, 5.6 percent above the total of $239.7 billion a year earlier. The growth in assets in 1973 was limited by capital losses largely arising from the market valuation of common stocks, and these losses were also reflected in shifts in the proportionate distribution of assets. Estimates of the distribution of assets by investment classes are given in Table 6, together with the actual amounts held at the end of 1971 and 1972.

The 1973 asset distributions included a rising share for policy loans and a decreasing share for common stocks, in contrast with the preceding two years. Similar to 1972, however, were further rises in the shares for corporate debt issues and preferred stocks, while the proportion represented by mortgage loans again declined.

Corporate debt issues continued for the third consecutive year as the single largest component of assets, amounting to $92.4 billion or 36.5 percent of the total. While demands in the public market for corporate bond financing decreased further in 1973, directly placed bond offerings were well maintained at close to the record $9 billion level of 1972, an indication of the availability of funds from life insurance companies as well as other investors in this market. Corporate debt issues held by life companies at the end of 1973 included an estimated $2.7 billion for issues with maturities of one year or less, primarily commercial paper held for liquidity purposes. This volatile component, which may rise to $5 billion or more during the course of the year, is typically drawn down in the final weeks of the year when long-term investments in bonds and mortgages are taken down in particularly sizable amounts.

Mortgage loans, the next largest asset category, decreased to 31.6 percent of assets, making the seventh consecutive year of decline in their asset share. Of the $80.1 billion held at the end of 1973, $77.9 billion was on properties in the United States, and the balance of $2.2 billion in foreign mortgages was largely on Canadian properties. U. S. mortgages included $37 billion on residential properties, nearly $35 billion on nonfarm

TABLE 6

ASSETS OF U.S. LIFE INSURANCE COMPANIES, 1971-1973

(Dollar amounts in millions)

Asset Class	December 31, 1971 Amount	%	December 31, 1972 Amount	%	Estimated December 31, 1973 Amount	%
Bonds, Notes and Debentures						
U.S. Treasury	$ 3,828	1.7	$ 3,827	1.6	$ 3,500	1.4
U.S. Federal Agency	627	0.3	735	0.3	900	0.4
U.S. State and Local	3,363	1.5	3,367	1.4	3,450	1.4
Foreign Government and International	3,182	1.4	3,443	1.4	3,550	1.4
Total Government	11,000	5.0	11,372	4.7	11,400	4.5
Corporate—1 year or less	2,770	1.2	2,981	1.2	2,700	1.1
U.S. Corporate—Over 1 year	72,045	32.4	78,478	32.7	84,700	33.5
Foreign Corporate—Over 1 year	4,383	2.0	4,681	2.0	5,000	2.0
Total Corporate	79,198	35.7	86,140	35.9	92,400	36.5
Stocks						
Preferred	3,828	1.7	5,052	2.1	6,300	2.5
Common	16,779	7.6	21,793	9.1	21,100	8.3
Total Stocks	20,607	9.3	26,845	11.2	27,400	10.8
Mortgages						
Farm	5,601	2.5	5,678	2.4	5,925	2.3
Nonfarm	69,895	31.5	71,270	29.7	74,175	29.3
Total Mortgages	75,496	34.0	76,948	32.1	80,100	31.6
Real Estate	6,904	3.1	7,295	3.0	7,750	3.1
Policy Loans	17,065	7.7	18,003	7.5	20,100	7.9
Cash	1,763	0.8	1,981	0.8	2,000	0.8
Other	10,069	4.5	11,146	4.6	12,050	4.8
Total Assets	$222,102	100.0	$239,730	100.0	$253,200	100.0

The valuation basis for each classification is admitted asset (statement) value.

Source: Institute of Life Insurance, 1971-72.

nonresidential properties, and close to $6 billion on farm properties. These levels compared with $38.3 billion on residential properties at the end of 1972, $30.8 billion on nonfarm nonresidential properties and $5.6 billion in farm mortgages. Among the $37 billion of residential mortgages at year-end 1973, loans backed by 1-4 family properties amounted to $19.5 billion (down from $21.5 billion at year-end 1972), and multifamily mortgages came to $17.6 billion (up from $16.8 billion a year earlier). As in the preceding six years, amortization and other repayments of 1-4 family loans exceeded the new loans made by life insurance companies on these properties. Repayments of home loans again included substantial amounts —over half of the total—from loans prepaid in full. Prepayments usually result from homeowners selling their properties to new owners, and even though these prepayments slowed noticeably in the latter half of the year when mortgage interest rates increased, for the full year they ran nearly as much as in 1972.

Corporate stocks lost ground in 1973 as a share of total assets, interrupting the rapid gains of the preceding three years. In contrast to bonds, mortgages, and preferred stocks, the bulk of which are carried at amortized cost or other stabilized values in the annual statements of life insurance companies, common stocks are carried at market values. The total of $21.1 billion for common stocks at year-end 1973 reflected an estimated market valuation loss averaging 14 percent, a loss that obscured a sizable net investment during the year. Although much smaller in amount, preferred stocks of $6.3 billion gained noticeably in their share of assets for the second successive year as market offerings, particularly by public utility companies, were unusually large in these years.

Loans to policyholders on the cash values of their policies reached $20.1 billion by the end of 1973 and represented 7.9 percent of assets, slightly above the recent peak of 7.8 percent at year-end 1970 and the highest share in over thirty years. Demands for these loans accelerated sharply in 1973, particularly in August and September when monthly increases in policy loans exceeded the previous record months of 1969.

Rate of Net Investment Income

The net rate of income from the invested assets of life insurance companies is estimated at 5.79 percent for 1973 when separate accounts are included and at 5.93 percent when separate accounts are excluded. As shown in Table 7, the estimates reflect an increase from 1972 of 23 basis points in the rate of income on total invested assets, including separate accounts, and 24 basis points in the rate for the general accounts (exclud-

ing separate accounts). In dollar terms, net investment income is estimated at $13.48 billion in 1973, $1.35 billion above the 1972 total. Investment income, as noted in the table, excludes capital gains or losses.

TABLE 7

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

Year	*Net Investment Income (Including Separate Accounts)*		*General Accounts*
	$000,000	*Rate*	*Rate*
1969	$ 9,354	5.12%	5.15%
1970	10,144	5.30	5.34
1971	11,031	5.44	5.52
1972	12,127	5.56	5.69
1973	13,475e	5.79e	5.93e

e—Estimated.

Source: Institute of Life Insurance, 1969-72.

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 During the Year

The estimated net changes in broad categories of life company assets in 1973, together with the actual changes in 1971 and 1972, are shown in Table 8. Net asset changes reflect valuation adjustments as well as net investment during the year. The increase in total assets of $13.5 billion for 1973 included an estimated net capital loss of $3.2 billion whereas the increases of 1971 and 1972 included net capital gains. When adjusted for valuation changes, the asset increases came to $13.3 billion in 1971, $15.3 billion in 1972, and $16.7 billion in 1973.

Aside from valuation changes, the year 1973 differed from the preceding two years most importantly in an acceleration of the increase in policy loans and in the greater net investment in mortgage loans. As in 1971 and 1972, corporate debt issues, both long- and short-term, again showed by far the largest dollar increase, although the rise of $6.26 billion was less than the $6.94 billion of 1972. The corporate bond component alone, however, increased by $6.5 billion, as against $6.7 billion in 1972, while short-term issues decreased by $300 million in contrast with an increase of $200 million in 1972.

The small net increase in corporate stock holdings of $0.55 billion in 1973, compared with $6.2 billion in 1972, largely reflected the swings in market values. The loss in market values in 1973 was estimated at $3.1

billion as against a net gain of $2.5 billion in 1972. Excluding valuation changes, the net increase in holdings of total stocks amounted to $3.6 billion in 1973, close to the $3.7 billion of 1972. Net investment in common stocks of $2.3 billion in 1973 fell short of the 1972 total of $2.5 billion but net investment in preferred stocks of $1.3 billion was somewhat more than the $1.2 billion of 1972. As in other recent years, about half of the 1973 net investment in common stocks was for the separate accounts of the companies while preferred stocks almost entirely represented investments made for the general accounts.

The net increase in mortgage holdings of $3.15 billion was well above the increases of other recent years and was the largest since 1966. A sharp rise in nonfarm conventional loans of $4.1 billion was reinforced by an increase of about $250 million in farm mortgages, up from a small increase of $77 million in 1972. These increases were partially offset by decreases amounting to $1.2 billion in holdings of government-backed mortgages.

Among nonfarm mortgages in the United States, net investment in nonresidential mortgages was in record amount in 1973, amounting to $4.1 billion as against $3 billion in 1972. Loans on multifamily properties increased by $800 million as compared with $580 million in 1972, while the net decrease in holdings of 1-4 family mortgages slowed to $2 billion in 1973 from $2.25 billion in the previous year.

The 1973 net increase in policy loans of $2.1 billion was more than twice the increase in these loans in the preceding two years but fell short of the record rise of $2.5 billion in 1969. Early in 1973 it appeared that policy

TABLE 8

NET CHANGES IN ASSETS, 1971-1973
U.S. LIFE INSURANCE COMPANIES

(In millions of dollars)

Asset Class	*1971*	*1972*	*Estimated 1973*
Bonds, Notes, and Debentures			
U.S. Treasury and Federal Agency	$ −119	$ 107	$ −162
U.S. State and Local	57	4	83
Foreign Government and International	−6	261	107
Corporate	6,100	6,942	6,260
Total	$ 6,032	$ 7,314	$ 6,288
Stocks	5,187	6,238	555
Mortgages	1,121	1,452	3,152
Real Estate	584	391	455
Policy Loans	1,001	938	2,097
Cash and Other Assets	923	1,295	923
Net Increase in Assets	$14,848	$17,628	$13,470

Note: Included in the above figures are net increases in assets of separate accounts of $2.46 billion in 1971, $2.54 billion in 1972, and an estimated $0.7 billion in 1973.

loan demands would be considerably greater than in the preceding two years. The high level of short-term market rates of interest reached in the summer of 1973 triggered an acceleration in policy loan increases in amounts far greater than the peak months of 1969, but the pace subsided in the last three months of the year with the drop in market interest rates.

Acquisitions of Investments

The extent of life insurance investment activity, both in short-term and long-term market instruments, is shown more fully by acquisitions data than by net changes in assets. Acquisitions of investments were up sharply in 1973—the total, including short-term issues, reached $120 billion, an increase of 22 percent over 1972 and 51 percent over 1971. When short-term issues are excluded, 1973 acquisitions of $41 billion were 10 percent above those in 1972.

As shown in Table 9, short-term issues accounted for a large part of acquisitions, over 65 percent of the total in 1973, and grew by roughly 30 percent in both 1973 and 1972. The management of cash positions, in which these short-term issues play a major role, has had increasing attention from life insurance companies in recent years. In addition, the magnitude of short-term acquisitions in a twelve-month period reflects the large size of the units used in this market and the temporary nature of such holdings—perhaps for only a day or a week—with attendant multiple

TABLE 9

ACQUISITIONS OF INVESTMENTS, 1971-1973
U.S. LIFE INSURANCE COMPANIES
(In millions of dollars)

Asset Class	*1971*	*1972*	*Estimated 1973*
Bonds, Notes, and Debentures—Over 1 year			
U.S. Treasury and Federal Agency	$ 985	$ 678	$ 750
U.S. State and Local	385	436	525
Foreign Government and International	265	490	325
Corporate	11,727	14,257	14,500
Total—Over 1 year	13,362	15,861	16,100
Stocks	6,785	8,468	7,950
Mortgages	7,573	8,696	11,075
Real Estate	1,035	976	1,250
Policy Loans	3,400	3,252	4,775
Acquisitions excluding short-term issues	$32,155	$37,253	$ 41,150
Short-term debt issues	47,166	61,368	78,925
Total Acquisitions	$79,321	$98,621	$120,075

Source: Institute of Life Insurance.

transactions during a year. The 1973 total of $79 billion for short-term acquisitions was dominated by corporate issues, largely commercial and finance company paper, with only about $6 billion of the total reflecting U. S. Treasury and federal agency issues.

Corporate bond acquisitions of $14.5 billion in 1973 were about $250 million more than the sizable 1972 total, with $150 million of the increase in U. S. corporate debt issues and the remaining $100 million in foreign corporates. In addition to the relatively strong market demands for corporate bond financing, bond acquisitions also reflected some growth in the latest two years in the amounts received from bond maturities, amortization payments, calls, and sales—amounts which typically would be reinvested in the bond account.

Corporate stock acquisitions of about $8 billion were $500 million less than in 1972, reflecting to some extent reduced amounts from sales of stocks in a generally unfavorable stock market and a slower growth in separate accounts relative to the rapid growth of these accounts in earlier years. Sales and other disposals of stocks amounted to about $4.35 billion in 1973, compared with $4.75 billion in 1972.

Mortgage acquisitions increased by $2.4 billion above the 1972 total and at $11 billion were the largest since 1965. The total included $9.5 billion for nonfarm conventional mortgages, up from $7.46 billion in 1972, and $1 billion for farm mortgages, $300 million more than in 1972. Acquisitions of government-backed loans about equaled the 1972 total of some $500 million. Mortgage disbursements accelerated sharply in the third quarter of 1973, especially for loans backed by nonresidential properties, and were seasonally large in the final quarter of the year.

Acquisitions of policy loans were in a record amount of over $4.7 billion in 1973, about 47 percent more than in 1972 and well above the previous high of $4.15 billion in 1970. However, the high volume of policy loans made did not translate into a record net increase in holdings of such loans. Although acquisitions and the net increase in policy loans outstanding usually move together , the relationship is not a constant, since the net change in policy loans held reflects variations in the amounts for items decreasing the account—e.g., cash repayments, maturities, surrenders and lapses of policies involving loans.

Among the other items in Table 9, real estate acquisitions of $1.25 billion in 1973 showed further growth, reaching the largest amount yet recorded for the category. The small increase over 1972 in acquisitions of Treasury and federal agency securities was traceable to agency issues, although the latter at $300 million were less than U. S. Treasury issues of $450 million.

Acquisitions data reflect the many transactions that increase an investment account, some cash and some noncash. Many of the loans held by life insurance companies, mortgages and direct placement securities, are subject to renegotiation, and borrowers frequently seek additional financing. Refinancings and renegotiation of terms on existing loans may be reported as acquisitions with a counter entry in disposals representing the old loan. Transfers and exchanges within an asset category or between asset categories occur, and many of these involve little or no cash. Because of the inclusion of refinancings, exchanges, and bookkeeping transfers in the acquisition figures, they do not provide a fully meaningful measure of the amount of investment funds available from life insurance companies, and for this purpose it is necessary to consider data on cash flow.

Cash Flow for Investment

Quarterly surveys, instituted in 1957 by the research staff, provide information on the inflow of funds available to life insurance companies for long-term investment. In this reporting system, "cash flow" is defined as the net increase in ledger assets (reflecting premium payments and investment income, net of expenses), 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 policy loans, by net increases in cash position, and by net repayments of borrowed money when arriving at the total of funds available for long-term investment in securities, mortgages, and real property. Since cash position includes holdings of short-term securities as well as cash and bank deposits, total cash flow reflects the change in holdings of short-term issues but excludes the turnover of these securities.

On the basis of this definition, cash flow of life insurance companies is estimated to total $30.5 billion during 1973, little more than the $30.3 billion of 1972, reflecting a slowing of the growth in the latter half of the year. Most important in the slowdown in cash flow was the increase in policy loans, which diverted $2.1 billion from investment funds otherwise available for market investments, about $1.15 billion more than in 1972 (when policy loans increased about $940 million). The estimates given in Table 10 for all U.S. life insurance companies are expanded from cash flow data reported by a sample group of companies and reflect their projections for the final quarter of the year.

Quarterly totals of cash flow and its components as reported by the sample group are provided in Table 11. The principal cash flow compo-

TABLE 10

ESTIMATES OF CASH FLOW FOR MARKET INVESTMENTS
U.S. LIFE INSURANCE COMPANIES

(In billions of dollars)

Year		*Year*	
1964	$16.7	1969	$14.9
1965	18.2	1970	16.6
1966	16.9	1971	24.9
1967	16.8	1972	30.3
1968	17.3	1973p	30.5

p—Preliminary.

nents showing growth over 1972 were the net increase in ledger assets and the return flow from the securities account, but the growth in these items slowed in mid-year. Increased flows from bond sales and maturities were largely offset by a decrease in the amounts from sales of stocks, and realized losses limited the ledger asset increase. In the third quarter, the net increase in policy loans reached a record high, sharply reducing the investment funds total. At the same time, mortgage repayments fell short of the comparable period of 1972, reflecting a downturn in prepayments. The third-quarter cash flow total was well maintained, however, as net borrowings were relatively sizable and cash positions were reduced. The drawdown of cash position was in sharp contrast with the usual third-quarter buildup in holdings of cash and short-term securities, a buildup that is typically made in anticipation of a fourth-quarter decrease to meet the takedowns by borrowers of their loan commitments.

MORTGAGE COMMITMENTS OF LIFE INSURANCE COMPANIES

Based on the monthly reporting of a large sample of life insurance companies, estimates of new and outstanding mortgage commitments of all life insurance companies have been provided by the ALIA research staff to the Department of Housing and Urban Development over the past four years. HUD serves as the collecting agency of similar forward commitment data and figures on gross mortgage flows of ten lending groups. 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. The other groups covered in the reporting system at the federal government level are commercial banks, savings and loan associations, mutual savings banks, private noninsured pension funds, state and local government retirement funds, state

TABLE 11

INFLOW OF INVESTMENT FUNDS OF REPORTING LIFE INSURANCE COMPANIES, QUARTERLY

(In millions of dollars)

Sources of Investment Funds	*1972*				*1973*		
	I	*II*	*III*	*IV*	*I*	*II*	*III*
Net change in:							
Ledger assets	$2,509	$2,132	$2,599	$2,895	$3,287	$2,107	$2,503
Cash position*	−797	507	−971	1,245	−1,386	904	428
Mortgages–total	1,169	1,276	1,317	1,331	1,324	1,301	1,238
Amortization and partial prepayments	721	645	669	707	758	643	647
Other repayments	443	629	644	616	556	632	586
Sales	5	2	3	9	9	26	5
Securities–total	1,830	2,204	2,186	2,245	2,338	2,080	1,938
Maturities	642	871	669	829	641	886	706
Calls	148	148	143	213	244	154	141
Outright sales	1,040	1,185	1,374	1,203	1,453	1,040	1,092
(bonds)	(292)	(414)	(442)	(438)	(336)	(392)	(523)
(stocks)	(748)	(771)	(933)	(765)	(1,116)	(648)	(568)
Sales of real estate	18	35	31	46	52	63	36
Sales and repayments of other assets	12	11	8	16	19	7	6
Net change in liability for borrowed money	42	79	−63	63	−49	66	143
All other sources	**	**	**	1	**	8	2
Total investment funds	4,784	6,245	5,108	7,841	5,585	6,536	6,294
Net increase (−) in policy loans	−154	−206	−173	−185	−218	−299	−690
Total cash flow	$4,630	$6,039	$4,935	$7,656	$5,367	$6,237	$5,604

*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 78 percent of the total assets of U.S. life insurance companies.

and local credit agencies, mortgage investment trusts, GNMA pools and FHDA blocks of loans, and federal credit agencies.

Since forward investment commitments represent agreements to provide financing at some future date, they precede the actual disbursements of funds by varying periods of time, depending on the type of property, whether new or existing buildings are involved, whether the commitment is for the construction loan, the permanent loan, or both. Although life insurance company commitments may involve both the construction and permanent financing, a large proportion represents the long-term loan only, so that life company commitments provide the basis by which developers are enabled to obtain from other lenders, often commercial banks, the interim financing required during the construction period.

As shown in Table 12, new mortgage commitments were made in even greater volume in 1973 than in 1972. The total of $11.96 billion for the first nine months of 1973 exceeded the nine-month 1972 total of $10 billion by 19 percent. The extraordinarily large amount committed for nonfarm nonresidential mortgages ran $2 billion more than in the first nine months of 1972, and farm loan commitments ran nearly $300 million more while residential loan commitments fell short of their 1972 nine-month total by some $400 million. The $17.4 billion backlog of mortgage commitments outstanding at the end of September was $3.75 billion above year-end 1972, reflecting the excess of new commitments over disbursements on new loans and cancelled commitments.

TABLE 12

NEW COMMITMENTS MADE FOR MORTGAGES ON U.S. PROPERTIES U.S. LIFE INSURANCE COMPANIES

(In millions of dollars)

		Nonfarm		
Year or Quarter	*Farm*	*Residential*	*Nonresidential*	*Total*
1970	$285	$1,979	$3,381	$5,645
1971	590	2,912	6,122	9,624
1972	817	4,052	8,260	13,129
1972 I	203	938	1,799	2,940
II	218	1,119	2,446	3,783
III	175	1,098	2,037	3,310
IV	221	897	1,978	3,096
1973 I	273	1,000	2,444	3,717
II	338	998	3,189	4,525
III	273	725	2,718	3,716

Income and Costs of Mortgage Loan Portfolios

Surveys of income and costs of the mortgage portfolios of life insurance companies have been conducted by the research staff since 1948. The surveys had their origin with similar studies, covering the years 1945-47, conducted for the National Bureau of Economic Research by Dr. Raymond J. Saulnier. The NBER studies had aroused considerable interest among investment officers of the companies, and the research staff was asked to provide continuing data in this area. Results of the survey covering 1972 are given in Table 13 in the perspective of selected earlier years.

The average ratios in Table 13 are derived from aggregates of dollar figures and thus are heavily influenced by the experience of companies having sizable investments in mortgages. They include the results of individual companies that differ, sometimes widely, as to size and composition of mortgage portfolios, average size of loans, and the organization for originating and servicing loans. The underlying studies provide considerable detail intended to be of use to companies in accounting for differences from the weighted averages.

As shown in the table, the average net income rate increased markedly over the seventeen years from 1955 to 1972, due largely to improved gross income rates but also to decreases in the ratio for total operating costs. The improvement in cost ratios has been associated with increasing portfolios, since costs usually do not rise proportionately with portfolio

Table 13

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

	1955	*1960*	*1965*	*1970*	*1971*	*1972*
			(In percent)			
Gross cash income	4.51%	4.99%	5.46%	6.09%	6.36%	6.60%
Total costs	.59	.49	.44	.34	.32	.31
Originating fees and premiums	.07	.03	.03	.01	.01	.01
Servicing fees	.21	.21	.18	.14	.13	.12
Home and branch office costs	.31	.25	.22	.18	.17	.18
Net cash income	3.92	4.50	5.02	5.75	6.04	6.29
			(In years)			
Turnover period	9.6	12.6	10.6	17.0	13.2	11.9

Note: Because of rounding, components may not add to totals shown. Income and cost items are on a cash accounting basis and are percentages of the average of month-end holdings during the year. Reporting companies account for about 85 percent of the mortgage loans held by U.S. life insurance companies.

growth, and also with the shift of portfolios into conventional loans on multifamily and nonresidential properties. These loans, because of their larger average size, involve lower unit costs than loans on 1-4 family properties. In addition, like other business firms, life insurance companies have worked continuously to keep costs under control.

During 1972, the gross (cash) income ratio reached 6.60 percent, a marked rise of 24 basis points above the 1971 rate. New loans moving into the portfolio carried rates averaging 8.59 percent while loan repayments, which ran very high in 1972, generally involved lower rates. New loans, however, represented only a small fraction of the total portfolio—less than 10½ percent—and the income from these loans was heavily outweighed by the portfolio of older loans. Total operating costs averaged 0.31 percent of mortgage holdings in 1972, the lowest ratio yet recorded. The total cost ratio in particular reflects the weight of some of the largest portfolios. A more representative measure of individual company cost experience was the median rate of 0.42 percent or the average of company rates of 0.44 percent.

With respect to the components of total costs, originating fees and premiums (paid in order to acquire loans) have been a relatively minor 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, have declined in recent years as mortgages on income-producing properties have increased their proportionate share of mortgage portfolios. These loans, although varying widely in size, typically require service fees that represent a smaller percentage of the loan amount than is needed for home loans.

Mortgage repayments were sizable in 1972, accelerating even further beyond the 1971 pace, and the turnover period of the mortgage portfolios of surveyed companies shortened to 11.9 years from 13.2 years in 1971, in marked contrast with the record long turnover period of 17 years found in the 1970 survey.

Mortgage Delinquency and Foreclosure Experience

Data on mortgage loan delinquencies and foreclosures have been reported to the 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 often differ widely in their levels and may diverge in their direction of change, particularly so in recent years

when new loans—those most likely to become delinquent—have been relatively few in number and large in dollar size as compared with seasoned loans in the portfolio. Rates based on dollars have been noticeably above those based on numbers at recent dates but earlier, prior to 1964, rates by numbers were higher. In Table 14, only rates based on dollar amounts are shown.

At mid-1973, the latest reporting date, total mortgage delinquencies reached their highest level in the twenty years covered by the surveys, 1.27 percent of the dollar amount of loans held. The low point of the range, 0.45 percent, was set in 1957. The recent upturn in delinquency rates began with a sharp rise in 1970, following a downward trend in the last half of the 1960's, as shown in Table 14. The latest reading compared with a recent low of 0.55 percent at the end of 1969, 0.91 percent at the end of 1970, and 1.15 percent at the end of 1972.

The rise in delinquency rates after 1969 was in both farm and nonfarm loans, particularly at first in farm loans. In the latest two years, however, rates for nonfarm conventional loans, by far the largest component of mortgage holdings, increased persistently, reaching a series high of 1.26 percent in mid-1973, while the farm loan rate of 1.47 percent, though still

TABLE 14
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
1966	1.47	1.15	.54	.64	.86	.25	.81
1967	1.41	.98	.35	.61	.80	.60	.78
1968	.91	.88	.32	.53	.63	.57	.63
1969	.98	.87	.39	.44	.57	.36	.55
1970	1.34	.95	.84	.74	.85	1.51	.91
1971	1.65	1.00	.94	.74	.90	1.59	.96
1972 June	1.54	.78	.97	.90	.98	2.17	1.08
December	1.85	1.08	.41	1.02	1.13	1.38	1.15
1973 June	1.46	.84	.34	1.26	1.26	1.47	1.27

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.

high by historical standards, was nearly a full percentage point below its peak (2.44 percent) in mid-1971. In contrast with these levels, rates by number of loans averaged 0.80 percent in total, including 0.47 percent for farm loans and 0.62 percent for nonfarm conventional mortgages at mid-1973.

Further detail on nonfarm loans by property type underlying the mortgages is provided by most of the reporting companies, in addition to the type of financing information shown in Table 14. These breakdowns indicate delinquency rates for multifamily properties at well above average levels at recent reporting dates. In mid-1973, delinquency rates averaged 1.76 percent for multifamily properties but were noticeably lower for nonresidential properties at 1.22 percent and much lower for 1-4 family properties at 0.91 percent.

Loans in process of foreclosure, which are included with delinquent loans, averaged 0.20 percent of total loans held at the end of June 1973, somewhat below the series high of 0.26 percent at year-end 1972. Except for this improvement, in-foreclosure rates generally followed the path of delinquency rates, upward in the 1970's after the downward trend in the late 1960's. Based on numbers of loans, the in-foreclosure rate for total mortgages at mid-1973, 0.11 percent, was roughly half that based on dollar amounts, since the latter reflected the above-average size of seriously delinquent mortgages on farm and apartment properties.

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. Occasional Papers

1. *Trends and Cycles in Corporate Bond Financing,* W. Braddock Hickman, No. 37, 1952.
2. *Corporate Bonds: Quality and Investment Performance,* W. Braddock Hickman, No. 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. Occasional Papers

1. *Costs and Returns on Farm Mortgage Lending by Life Insurance Companies, 1945-1947,* Raymond J. Saulnier, No. 30, 1949.
2. *Agricultural Equipment Financing,* H. Diesslin, No. 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.
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