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# ***Economic & Investment Report 1977***



*A report  
to the membership  
of the American Council of  
Life Insurance by  
Kenneth M. Wright  
Vice President &  
Chief Economist*

EDWARD RUES LIBRARY  
OF MANAGEMENT  
SEP 8 1977  
BRIGIUM UNIVERSITY



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# ECONOMIC AND FINANCIAL OUTLOOK FOR 1978

## Legislative Impacts on Economic Trends

Public attention in the early weeks of 1978 has been focused on the Washington political scene, awaiting a resolution of the energy program deadlock, new Administration proposals for income tax reductions, reworked plans for tax reform, and new leadership in the formulation of monetary policy. The outcome of these wide-ranging policy changes can make a critical difference in consumer spending power, business investment decisions, savings patterns, and the course of interest rates. In evaluating the impact of new policy initiatives on economic activity and financial markets, every economic forecaster is forced to become a political forecaster, and this is particularly true in gauging trends over the next 12 to 18 months.

Among the unfinished business of last year's Congressional debates was the far-reaching and complex energy program, involving a spider web of production taxes, user taxes, consumer rebates and tax credits, and price ceilings which have brought deep controversy and temporary stalemate. Out of all the confusion, one fact seems clear: eventual passage of an energy program will mean significantly higher energy costs for the American public. What is less clear is when such increases will occur, how large they will be, and who will bear the initial brunt of these legislative actions.

The closing days of the first session of Congress saw passage of the much debated social security tax legislation, but the final bill raised immediate concern over the weight of added taxes on both workers and employers. The maximum annual tax for employees, after rising to \$1,071 in 1978, is scheduled for further boosts to \$1,404 next year and upward to over \$3,000 annually in 1987. In addition to this mounting tax burden, Administration economists have been troubled by the effects of inflation in pushing taxpayers into higher tax brackets because of bigger dollar incomes. Even when higher wages just keep pace with higher prices, leaving real wages unchanged, the tax result is the same as if a tax increase had been enacted. And this process has been working against taxpayers for quite a few years, exerting a substantial drag on spendable income.

Partly to offset the fiscal drag from steeply rising payroll taxes and from inflation-induced higher bracket rates, the Administration has proposed a combination of tax reductions and tax reform measures designed on balance to bring down federal taxes about \$25 billion, largely effective on October 1. Approximately one third would go to business tax reduction, with the remainder for individuals, particularly low- and middle-income taxpayers. Tax cuts of this magnitude can have a significant influence on the course of economic activity, without question. But the forecaster must look beyond the proposal stage to appraise the probable size and timing of eventual passage of a tax bill, before the fiscal impact on business activity and financial markets can be properly gauged.

Although a tax cut in a Congressional election year is bound to have a certain appeal, the hurdles to prompt passage of the tax proposals in their present form are impressive. Even though the Administration's tax cut plan is justified in part as an offset to fiscal drag from other tax factors, a recurrent question will be whether the economy is in need of added stimulus. Moreover, a \$25 billion tax reduction would keep the federal budget deficit in fiscal 1979 up to the \$60 billion mark already foreseen for the current fiscal year, arousing opposition from those who fear the consequences of rising interest rates and mounting inflationary pressures. Also, new tax proposals always generate legislative wrangling over what form tax reductions should take and which sectors should get how much. The simultaneous proposal of controversial tax reforms will add another complication to the forthcoming Congressional debates.

These considerations suggest that final passage of a tax reduction bill will encounter delays, possibly until the closing days of the session, with an effective date of January rather than October. Accordingly, the fiscal effects of tax revisions now before the Congress are expected to have little impact on economic activity in calendar year 1978. Not to be ignored, of course, are the effects of announced tax proposals on consumer attitudes and business psychology. But it seems unlikely that consumers will go out and spend a promised tax cut before it reaches their pockets, remembering the disappointment over the \$50 tax rebate last spring. And businessmen will not base hard decisions on proposed rate reductions or tax credits, after witnessing the withdrawal of detailed plans for tax reforms last fall.

Another aspect of the tax outlook is that the final reductions may turn out to be smaller than the \$25 billion proposed by the Administration. Resistance to the size of the cuts has already been expressed by key Congressional leaders, and doubts about fiscal stimulus will be reflected in compromises on the down side unless the economy in 1978 proves to be much weaker than now expected.

The Congress in the past has exhibited a wait-and-see attitude toward proposals based on future economic trends and this approach may lead to Congressional promises to consider a second-stage tax cut in 1979, if a softer economy in that year warrants such action.

### **Outlook for Economic Growth and Inflation**

The prospects for real growth in gross national product (GNP) in 1978 are for a year-over-year advance of 4¼ percent, compared with a rise of almost 5 percent last year and a gain of 6 percent in 1976. The smaller expected advance in 1978 will be reflected in a tapering in the quarterly growth rate of real GNP, which should slow to about 3 percent by the final quarter.

Behind this outlook for a weaker advance are projections of slower growth in most of the major private sectors. Consumer spending for autos and other durables is expected to rise by less than last year, but spending on nondurable goods is likely to make a better showing. Business outlays for capital goods are projected in recent surveys to increase in real terms about 4½ percent, against an 8 percent rise last year. Residential construction activity last year showed impressive gains, but continued growth in 1978 should be at a slower rate, particularly if mortgage credit from thrift institutions becomes less readily available. In the public sector, federal purchases of goods and services are slated to increase somewhat faster than last year, primarily because of rising defense outlays. A much sharper rise in spending is expected at the state and local government level, following two years of subdued growth.

The prospect of a further rise in the inflation rate is unquestionably the most disturbing aspect of the outlook for 1978. As measured by the price deflator for GNP, the year-over-year inflation rate is projected to rise to 6½ percent in 1978, compared with a 5½ percent rate last year. This unhappy conclusion is buttressed by the fact that the inflation rate pushed above 6 percent in the final quarter of 1977, and the wholesale price index accelerated in the closing months of last year, foreshadowing upward pressure on consumer prices in the months just ahead.

Our current inflation problems are of the "cost-push" variety, as opposed to excess demand pulling against strained capacity or bottlenecks in production. A primary cause is heavy wage demands, averaging somewhat over 8 percent per annum in recent labor contract settlements. After taking account of productivity gains of just over 2 percent, unit labor costs have been rising at a rate close to 6 percent, which producers must recoup through price increases of around 6 percent if they are to forestall declines in profit margins.

In addition, the minimum wage was raised in January by the Congress, with another increase scheduled for next year. Employer payroll costs have been further raised by the January increase in social security taxes, with an even bigger boost coming in 1979. The added burden of new energy taxes will fall heavily upon business firms which are the primary users of energy in our economy. With all these new pressures upon the cost structure of American business, it must be expected that they will be reflected in time at the other end of the production process in the form of compensating price increases.

The boost in social security taxes on the employee side also aggravates future wage demands, since workers are more conscious of "take-home pay" than the gross weekly wage before income and payroll tax deductions. Attempts to push these added taxes back on employers through heightened wage demands is only to be expected, and the consequent rise in labor costs will add to the pressure to raise product prices. All in all, the evidence about future price trends points to an inescapable verdict of accelerating inflation over the next 12 to 18 months.

As a footnote to the outlook for 1978, it is worth mentioning that the gross national product of the U.S. economy will cross the \$2 trillion mark early this year. Only seven years ago, in 1971, we reached the \$1 trillion level of GNP. In normal times, this might seem to occasion some form of celebration: the economists' version of the Bicentennial Year. But in these inflation-ridden times, it is necessary to point out the figure is merely a statistical illusion. Instead of doubling over the last seven years, the output of goods and services—measured in real terms—has risen only 25 percent. The rest has been inflation.

### **Outlook for Interest Rates**

Analysis of the future of interest rates typically must begin with an appraisal of the prospects for Federal Reserve policy, and many observers tend to personify such policy in the name of the incumbent Federal Reserve Chairman. In the final weeks of 1977, discussion focused on the likelihood of a replacement of Dr. Arthur Burns and a possible shift in policy emphasis. However, the appointment of G. William Miller as Federal Reserve Chairman provides no clear signals that monetary policy will shortly embark upon a significantly changed approach to the problems of economic stabilization and orderly financial markets. The voluntary retirement of Dr. Burns as a continuing Board member would seem to indicate, if anything, that he is content to see the new chairman take the reins without his own presence as a potential critic. Over



the next year or more, perhaps the only visible difference in the conduct of monetary policy will be closer consultation with the White House, in the interests of better coordination of economic policy objectives in both directions.

Recent policy actions of the Federal Reserve serve to remind us that international considerations must also play a role in monetary policy, along with domestic economic objectives. In its efforts to curb speculative pressures against the U.S. dollar, the Federal Reserve lifted the discount rate to 6½ percent on January 6 and subsequently raised the federal funds rate close to 7 percent. A sudden surge in short-term market interest rates has accompanied these actions, and long-term bond yields also have moved higher in response, as investors quickly adjusted their sights to changed monetary conditions. By mid-January, 3-month Treasury bill rates had risen to about 6½ percent, two-year Treasury notes were sold at just over 7½ percent and long-term Aa utilities were marketed at yields approaching 9 percent.

It had been widely expected that interest rates would move steadily higher over the first half of 1978, under the influence of a growing economy and a progressive tightening by the Federal Reserve to counter rising inflationary trends. Actions to defend the dollar have already pushed up rates in a few short weeks, however, to levels not expected to be reached until mid-year.

Forecasting the need for further actions to counter foreign exchange pressures is extremely difficult and perhaps even foolhardy. But it seems reasonable to believe that the battle on the international financial markets has not yet been won and that some further steps toward restraint will be taken over the next several months. Combined with domestic inflation trends and a continued strong demand for credit, rates are expected to move higher through the early summer. At the short end, another 75 to 100 basis points advance in rates appears likely, with the prime loan rate reaching the 9 percent level. Longer-term rates on corporate bonds are projected to rise around 50 basis points over the next six to eight months, bringing Aa utility yields above the 9 percent level during much of this period. Rates on home mortgages, already above 9 percent in many areas at present, are likely to move toward the 9½ percent level in response to changing credit conditions.

Further increases in interest rates are sure to produce growing concern over the strength of economic expansion as the year unfolds and, indeed, monetary factors are one reason that the forecast given above for real GNP includes a tapering in growth rates in the latter part of 1978. As rising interest rates inhibit the growth of spending and production, however, a conflict between domestic and foreign economic objectives may develop.

Domestic considerations point to a kind of "resistance level" in the extent of further tightening by the Federal Reserve, a limit beyond which international financial objectives must yield to internal economic conditions. A case in point is the effect of higher interest rates on the disintermediation of deposits from thrift institutions, as well as policy loan drains from life insurance companies. Yields available on Treasury securities in the last two months of 1977 were sufficient to produce sizable savings outflows from thrift institutions, and the market rate increases projected for the next several months are almost certain to accentuate the disintermediation trend. Such developments are as disconcerting to the Federal Reserve as they are unwelcome to thrift institutions and the housing market.

The purpose of citing these considerations is to suggest the likelihood that Federal Reserve tightening actions may not persist throughout the year ahead and that interest rates may flatten out by late summer, rather than continuing the advance now foreseen over the next several months. However, there is little reason to expect a strong retreat in interest rate levels during the latter half of the year under the business conditions and price trends that are presently envisioned.

### **Projected Financial Flows in 1978**

The gross volume of net financial flows through the U.S. money and capital markets is projected by the economics department of the Council to exceed \$400 billion in 1978—an impressive sum by any standard. Even more impressive is the fact that these flows will be almost double the figure for 1972 and quadruple the comparable total recorded a decade ago in 1968. These comparisons may be seen in the historical data set forth in Table 1.

Part of this steep rise has, of course, been the result of inflated dollars, but that is by no means the whole story, or even half. Most striking is the six-fold gain shown by savings and loan associations over this decade. Financial institutions active in the pension field have shown a three-fold advance, with life insurance companies leading the field. Somewhat disturbing is the eight-fold rise in funds supplied by federal loan agencies over this decade, surging to more than \$40 billion in the estimates for this year. The role of commercial banks has moved up and down with the business cycle and the changing posture of monetary policy, as might be expected. Foreign investor participation in U.S. capital markets also has waxed and waned over these years, reflecting in part the exchange position of the U.S. dollar. A strong uptrend since 1972 has been shown by "individuals and others" in their direct takings of

Table 1

## SOURCES AND USES OF FUNDS IN THE UNITED STATES MONEY AND CAPITAL MARKETS, 1968 - 78

(In billions of dollars)

Sources of funds	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977e	1978e
Life insurance companies .....	8.6	8.7	9.2	12.0	13.3	15.9	15.6	19.0	26.4	29.2	31.0
Noninsured pension funds .....	5.9	6.2	6.8	7.4	6.5	7.8	8.1	13.8	12.5	14.0	15.5
State and local retirement funds ...	4.7	5.6	6.2	6.5	8.3	9.1	9.3	11.6	13.6	14.0	14.5
Savings and loan associations .....	9.7	9.6	12.1	27.8	35.3	27.0	19.5	37.3	51.0	62.5	57.0
Mutual savings banks .....	4.4	3.0	4.0	9.8	10.0	4.7	3.3	10.9	12.7	11.5	10.0
Commercial banking .....	40.1	17.6	36.6	51.3	75.4	83.4	62.2	29.4	65.1	83.0	95.0
Federal Reserve Banks .....	3.7	4.2	5.0	8.9	0.3	9.2	6.2	8.5	9.8	6.7	12.5
Federal loan agencies .....	5.4	6.8	10.3	9.4	8.7	13.3	26.5	29.9	28.4	32.5	41.5
Nonfinancial corporations .....	10.1	13.2	4.1	5.0	8.5	13.1	11.0	15.2	20.9	22.0	24.0
Fire and casualty companies .....	2.7	3.4	4.0	4.9	5.5	5.8	4.1	6.6	8.8	11.0	11.0
Real estate investment trusts .....	0.8	1.2	1.9	2.3	4.1	5.6	0.2	-4.9	-3.7	-2.0	-1.2
Mutual funds .....	3.4	2.6	1.7	0.4	-1.8	-2.5	-0.2	0.4	-1.0	-0.5	-0.8
Foreigners .....	2.4	1.1	11.2	27.2	10.8	5.0	12.4	10.4	16.0	36.0	27.0
Individuals and others .....	3.6	30.1	1.1	-3.3	23.1	36.5	41.4	33.3	38.1	56.0	64.5
<b>Total sources .....</b>	<b>105.5</b>	<b>113.5</b>	<b>114.2</b>	<b>169.6</b>	<b>208.0</b>	<b>234.0</b>	<b>219.8</b>	<b>221.5</b>	<b>298.7</b>	<b>376.0</b>	<b>401.5</b>
<b>Uses of funds</b>											
Corporate and foreign bonds .....	15.1	14.5	23.8	24.8	20.1	13.6	27.2	38.1	38.3	33.0	32.0
Corporate stocks .....	-0.7	4.8	6.9	13.5	12.6	8.9	4.1	10.5	11.1	9.0	8.0
State and local gov't issues .....	9.8	10.6	11.3	17.8	15.0	15.0	17.8	13.8	17.1	29.0	26.0
Federal Government issues .....	9.8	-2.2	12.9	26.0	14.3	7.8	11.3	85.8	69.1	58.0	61.0
Federal agency issues .....	6.9	7.4	8.8	4.9	9.3	20.4	22.2	12.3	19.0	25.0	31.0
Mortgages: Residential .....	20.9	23.0	21.9	40.3	56.6	55.3	40.2	41.4	66.9	98.0	102.0
Nonresidential .....	8.9	7.6	8.0	12.3	20.4	24.6	20.3	15.8	19.8	28.0	32.0
Consumer credit .....	10.0	10.4	5.9	13.1	18.9	22.0	10.2	9.4	23.6	34.5	33.0
Commercial paper .....	4.1	11.4	0.5	-0.9	2.6	6.4	7.9	-1.8	3.6	12.0	10.0
Business loans .....	15.1	21.7	7.8	9.1	22.9	47.4	50.0	-13.8	6.4	36.5	49.0
All other loans .....	5.6	4.3	6.4	8.6	15.1	12.8	8.6	10.2	23.8	13.0	17.5
<b>Total uses .....</b>	<b>105.5</b>	<b>113.5</b>	<b>114.2</b>	<b>169.6</b>	<b>208.0</b>	<b>234.0</b>	<b>219.8</b>	<b>221.5</b>	<b>298.7</b>	<b>376.0</b>	<b>401.5</b>

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.

investment instruments as opposed to funds placed with financial intermediaries—apparently a reflection of historically high interest rates available in the marketplace.

The uses of funds shown in Table 1 are equally revealing of decade trends. Foremost among the increases shown there is the rise in federal government issues, estimated at over \$60 billion this year or six times the 1968 amount, although down from the \$86 billion peak of 1975. Federal agency issues have also worked higher over these years to a projected \$31 billion total in 1978, a four-fold increase over 1968. Residential mortgages are projected to receive over \$100 billion in credit in 1978, five times the amount a decade earlier. Other strong gainers are nonresidential mortgages and issues of state and local governments. Lesser growth has occurred in corporate bond issues (foreign and domestic), but business loans have shown a stronger though cyclically volatile growth trend.

Comparing the 1978 projections with the year just ended, the growth in total credit flows is relatively modest, a reflection of the tapering growth rate in the economy at large. Total sources and uses are expected to rise about \$25 billion in 1978, compared with increases three times that size in each of the two preceding years (see Table 1). Actual declines in net credit supplied in 1978 are estimated for savings and loan associations and savings banks because of the disintermediation trend described earlier, though the dollar amounts remain historically high. Adverse effects on the mortgage market are expected to be largely cushioned by a step-up in mortgage loan activities of federal loan agencies, whose provision of credit to various sectors of the capital market is expected to climb to a new high.

Another large change estimated for 1978 is in the foreign sector. Last year, the exchange problems of the U.S. dollar piled up dollar balances in foreign central banks, which in turn invested such claims in Treasury securities. This factor should lessen in 1978 as the extremes of our international difficulties are diminished, reducing the flow into Treasuries on the part of foreigners. Finally, the projection for individuals and others, the residual category, anticipates continuing high levels of direct investments in federal government and agency issues and tax-exempt securities, partly as a counterpart to the disintermediation from thrift institutions into high-yielding market securities.

On the demand side of the capital markets, net issues of corporate and foreign bonds, as well as common and preferred stock, are estimated to decline moderately from last year. At the same time, a substantial rise in the business loan category is expected, more than \$10 billion above the increase for 1977, as may be seen in Table 1.

Nonresidential mortgage loans are likewise on the upswing in 1978, and are projected to register their largest increase on record.

Net borrowing by the federal government is estimated to become larger in 1978, reflecting the heavy financing needs of the projected federal budget deficit. As discussed earlier, this estimate assumes that major tax cuts will not go into effect during calendar year 1978. Net issuance of federal agency securities is also projected to move up from the record level of last year. In contrast, state and local government issues are estimated to decrease from the extremely high level of last year, when a heavy volume of advance refundings helped to boost net borrowings to exceptional heights.

Credit flows to finance residential mortgages are expected to show only a moderate further rise in 1978, following the very large increase between 1976 and 1977. Disintermediation at savings and loan associations and savings banks is expected to curb the increase in home mortgage loans, but support from federal loan programs will be an offsetting factor. Consumer credit is projected to rise by another substantial amount in the year ahead, although slightly below the very large increase of 1977.

Cross-flows between the various uses of funds and the institutional and other sources of funds are projected for 1978 in Table 2. To facilitate comparison with the credit flows in the year just ended, Table 3 provides preliminary estimates for 1977 in the same format. It should be noted that amounts shown in these tables refer to net increases in outstanding debt of specified borrowers (rather than gross flotation of new issues) and net changes in holdings of specified assets by the indicated investor groups.

### **Life Companies in the Capital Markets**

Life insurance companies are projected to supply an estimated \$31 billion in net new money to financial markets in 1978, an increase of about \$2 billion over last year. This forecast reflects the expectation that the robust expansion in life company assets of the last three years will continue into 1978, although at a diminished pace. Barring unusual developments, cash flow should continue to advance in 1978 at a high rate, but the decelerating trend evident from industry reports in 1977 will be sustained.

Table 4 shows the 1978 forecast by the Council's economics department of the distribution of investible funds among various financial outlets, against the background of the investment pattern of life companies over the period since 1966. The amounts shown in the table are net changes in holdings of specified assets by life companies, adjusted for valuation changes. All of the various categories of financial outlets conform to standard industry

Table 2

**OUTLOOK FOR SOURCES AND USES OF FUNDS  
IN THE UNITED STATES MONEY AND CAPITAL MARKETS, 1978**

(In billions of dollars)

Sources of funds	Securities					Mortgages		Loans and Credit				Total sources of funds
	Corp. & foreign bonds	Corp. stocks	State & local	Fed. Gov't	Fed. agency	Residential	Nonresidential	Consumer credit	Commercial paper	Business loans	All other loans	
Life insurance companies	17.0	1.5	0.4	0.8	1.3	-0.7	8.3	-	0.3	-	2.2	31.0
Noninsured pension funds	3.5	6.0	-	3.4	2.5	*	*	-	-	-	-	15.5
State-local retir. funds . . . .	7.0	2.0	0.5	3.5	1.3	-0.2	0.4	-	-	-	-	14.5
Savings and loan assns. . . .	-	-	*	-1.0	3.0	50.5	4.0	0.5	*	-	-	57.0
Mutual savings banks . . . . .	0.7	0.2	0.2	-0.2	3.0	5.0	1.1	0.1	-0.1	-	-	10.0
Commercial banking . . . . .	-0.5	-	7.0	*	1.0	16.5	10.0	18.0	*	33.0	10.0	95.0
Federal Reserve Banks . . . .	-	-	-	10.0	2.5	-	-	-	-	*	-	12.5
Federal loan agencies . . . . .	-	-	0.1	-0.5	7.0	24.0	4.0	-	-	1.6	5.3	41.5
Nonfinancial corporations . . .	-	-	1.0	*	*	-	-	7.0	6.0	10.0	-	24.0
Fire and casualty cos. . . . .	*	0.5	9.0	1.0	0.5	-	*	-	-	-	-	11.0
Real estate inv't trusts . . . . .	-	-	-	-	-	-1.0	-0.2	-	-	-	-	-1.2
Mutual funds . . . . .	-0.5	-2.0	-	0.7	-	-	-	-	1.0	-	-	-0.8
Foreigners . . . . .	1.0	1.5	-	20.0	-	-	-	-	-	4.5	-	27.0
Individuals and others . . . . .	3.8	-1.7	7.8	23.3	8.9	7.8	4.4	7.4	2.8	-	-	64.5
<b>Total uses of funds . . . . .</b>	<b>32.0</b>	<b>8.0</b>	<b>26.0</b>	<b>61.0</b>	<b>31.0</b>	<b>102.0</b>	<b>32.0</b>	<b>33.0</b>	<b>10.0</b>	<b>49.0</b>	<b>17.5</b>	<b>401.5</b>

\*\$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, 1977**  
 (In billions of dollars)

Sources of funds	Securities					Mortgages		Loans and Credit				Total sources of funds
	Corp. & foreign bonds	Corp. stocks	State & local	Fed. Gov't	Fed. agency	Residential	Nonresidential	Consumer credit	Commercial paper	Business loans	All other loans	
Life insurance companies . . .	18.2	1.8	0.5	0.5	1.1	-1.8	6.3	-	0.9	-	1.7	29.2
Noninsured pension funds . . .	3.2	6.3	-	2.5	2.0	*	*	-	-	-	-	14.0
State-local retir. funds . . . .	6.7	2.3	*	4.0	1.2	-0.4	0.2	-	-	-	-	14.0
Savings and loan assns. . . . .	-	-	*	-0.2	3.0	54.2	4.3	1.2	*	-	-	62.5
Mutual savings banks . . . . .	1.2	0.3	0.4	0.1	2.5	5.5	1.0	0.3	0.1	-	-	11.5
Commercial banking . . . . .	-0.3	-	12.5	-4.0	*	18.0	10.0	18.5	*	21.2	7.1	83.0
Federal Reserve Banks . . . . .	-	-	-	5.8	0.9	-	-	-	-	*	-	6.7
Federal loan agencies . . . . .	-	-	*	*	5.0	18.2	3.3	-	-	1.8	4.3	32.5
Nonfinancial corporations . . . .	-	-	*	-3.0	*	-	-	7.5	8.0	9.5	-	22.0
Fire and casualty cos. . . . .	0.8	0.7	8.0	1.0	0.5	-	0.1	-	-	-	-	11.0
Real estate inv't trusts . . . . .	-	-	-	-	-	-1.6	-0.4	-	-	-	-	-2.0
Mutual funds . . . . .	1.0	-3.0	-	*	-	-	-	-	1.5	-	-	-0.5
Foreigners . . . . .	1.0	2.0	-	29.0	-	-	-	-	-	4.0	-	36.0
Individuals and others . . . . .	1.1	-1.4	7.6	22.3	8.8	5.9	3.2	7.0	1.5	-	-	56.0
<b>Total uses of funds . . . . .</b>	<b>33.0</b>	<b>9.0</b>	<b>29.0</b>	<b>58.0</b>	<b>25.0</b>	<b>98.0</b>	<b>28.0</b>	<b>34.5</b>	<b>12.0</b>	<b>36.5</b>	<b>13.0</b>	<b>376.0</b>

\*\$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

## LIFE INSURANCE COMPANIES AS A SOURCE OF FUNDS IN THE CAPITAL MARKETS

(In billions of dollars)

Year	Securities						Mortgages				Loans and Credit		Yearly total
	Corp. & foreign bonds		Corp. stocks	State & local	Fed. Gov't	Fed. agency	Residential		Nonresidential		Comm. paper	Policy loans	
	U.S.	Foreign					Home	Multifamily	Commercial	Farm			
1967	3.6	0.2	1.1	-0.1	-0.2	*	-0.5	1.4	1.6	0.3	0.1	0.9	8.4
1968	3.7	0.2	1.4	*	-0.2	*	-0.7	1.0	1.8	0.2	*	1.2	8.6
1969	1.9	0.2	1.7	*	-0.3	0.1	-1.1	1.3	1.7	*	0.8	2.5	8.7
1970	1.6	0.3	2.0	0.1	-0.1	0.1	-1.3	1.8	1.8	-0.1	0.8	2.2	9.2
1971	5.5	0.1	3.8	0.1	-0.2	0.1	-2.0	0.7	2.4	*	0.6	1.0	12.0
1972	6.4	0.6	3.7	*	*	0.1	-2.3	0.6	3.0	0.1	0.2	0.9	13.3
1973	5.8	0.4	3.6	*	-0.4	0.1	-1.8	1.1	4.7	0.3	*	2.2	15.9
1974	4.2	0.4	2.2	0.3	-0.1	0.2	-1.4	1.1	4.6	0.3	1.1	2.7	15.6
1975	8.1	1.1	2.1	0.8	1.4	0.4	-1.4	*	3.7	0.4	0.7	1.6	19.0
1976	13.0	3.7	3.1	1.1	0.6	0.9	-1.5	-0.5	3.4	0.7	0.4	1.4	26.3
1977e	16.4	1.8	1.8	0.5	0.5	1.1	-1.4	-0.4	4.9	1.4	0.9	1.7	29.2
1978e	15.0	2.0	1.5	0.4	0.8	1.3	-1.0	0.3	6.5	1.8	0.3	2.2	31.0

\*Less than \$50 million.

e-Estimated.

Because of rounding, components may not add to totals shown.



classification systems except foreign bonds which include issues of Canadian corporate and governmental units and of the World Bank and other international agencies, as well as those of others classified as foreign.

It is projected that life companies will add \$15 billion, or about half of their net new money, to their holdings of domestic corporate bonds in 1978. This amount is extremely large by historical standards and has been exceeded only once, in 1977, when \$16½ billion was placed in the corporate bond market. Nevertheless, the forecast indicates a decrease in net lending by life companies in this market at a time when total net new issuance of domestic corporate bonds is expected to remain at high levels. The sustained high demands for funds in the corporate bond market reflect the sizable amount of funding that continues to be done by corporations, and as capital spending moves higher over the course of 1978, borrowing for that purpose will become increasingly significant. The forecast for reduced participation by life companies is based on the expectation that the demand for funds from the mortgage market will accelerate strongly in 1978, providing a competing outlet for life company funds.

An addition of \$2 billion in foreign bonds to life companies' portfolios is expected in 1978, slightly above last year but still well below 1976 levels. The largest source of foreign bonds for life companies is from Canadian issuers, and in 1978 the large projected needs of Canadian provincial authorities will lead many of these borrowers to approach the U.S. market. Life companies are expected to provide some support for these efforts, but continuing concern over political conditions in Quebec should mean that many of these issues may not be as attractive as would otherwise have been the case.

Stock price performance was mixed in 1977, with equities of some of the nation's largest corporations showing weakness at a time when the stock prices of many smaller or medium sized businesses were on the uptick. The climate for stock prices is not likely to show improvement in 1978 as profits growth slows and discussions of energy and tax legislation continue to occupy public attention. Consequently, the general and separate accounts of life companies are expected to maintain their low rate of net acquisitions of stocks in 1978.

Life companies' net investment in mortgages is expected to rise to a record \$7½ billion in 1978 from less than \$5 billion in 1977. As a group, life companies are expected to continue to run down their portfolios of home mortgages, although at a lesser rate than in the last several years. On the other hand, the increases expected in multifamily housing starts in 1978 should lead to a rise in the

demands for multifamily mortgage financing. Meeting part of these demands, life companies are projected to add to their holdings of these mortgages this year, following three years of actual reductions.

The supply of new money by life companies to the nonresidential mortgage market should increase for the second straight year, reaching about \$8¼ billion, an all-time high and more than double the amounts invested in the lackluster years of 1975 and 1976. Both commercial (nonfarm nonresidential) and farm mortgage lending are expected to contribute to the growth. Demands for commercial mortgage financing should swell in 1978, especially considering the strong pickup in the value of construction of commercial and industrial buildings witnessed in 1977. The growing demand for this type of financing was already apparent last year at life companies as new commitments for mortgage loans on nonfarm nonresidential properties rose briskly and outstanding commitments climbed to their all-time highs. This surge in commitments is expected to result in a sharp increase in the net flow of funds by life companies into the commercial mortgage market to \$6½ billion in 1978 from about \$5 billion last year.

Net acquisitions of farm mortgages by life companies are estimated to reach \$1.8 billion in 1978, a further advance over the \$1.4 billion supplied in 1977 and well above the \$700 million amount in 1976. The farm sector has just gone through a major boom in capital expenditures and land prices that involved a relatively high level of debt financing, a part of which was accomplished in the mortgage markets. Commitments already on the books of life companies at the end of 1977 imply a sizable advance in lending in 1978, but beyond this year prospects are cloudy. The declines in farm income over the last four years have raised concerns over whether farmers are able to support further significant growth in their debt.

Net investment by life companies in state and local government securities is expected to diminish in 1978, while net acquisitions of Treasury and federal agency securities should rise further. The huge financing task ahead for the Treasury this year will rely in part on the flotation of long-term issues attractive to life companies. Also, issues of federal housing and farm finance agencies to raise money for their respective support programs are likely to provide opportunities to obtain high, relatively risk-free yields in 1978.

Finally, the net increase in policy loans is expected to reach \$2.2 billion in 1978, up from \$1.7 billion in 1977. The rise in interest rates projected for this year is likely to be sufficient to spur some growth in this type of borrowing, but there is little in the economic and

financial outlook to suggest that policy loans will emerge as the type of problem they were in 1973-74 or in 1969-70. Although the increase in these outflows in 1978 will approach earlier highs, the amount is much smaller relative to the projected \$31 billion total of new investible funds from life insurance companies.

## **ECONOMIC AND FINANCIAL DEVELOPMENTS IN 1977**

### **Continued Growth and High Inflation**

Despite the somber mood that seemed to pervade much of the business and financial community, the economy made quite a respectable showing in 1977. Even as it moved through its third year of expansion from the recession lows of early 1975, there were few of the excesses or imbalances that characterized previous cyclical upswings of comparable maturity. Production was robust without outstripping the growth in sales and normal inventory needs. Personal income advanced strongly, partly in response to very sizable increases in employment, and served as a propellant pushing purchases of new autos and consumer hard goods to higher ground. Homebuilding surprised almost everyone by nearly matching previous peaks. Business spending for structures and new equipment accelerated markedly from the pace of the preceding year, although it failed to measure up to the expectations of many analysts. Long-term interest rates were remarkably stable and unaffected by a steep rise in short-term rates, and there was little strain on the capacity of financial markets to meet the needs for credit. Inflation was still too high in 1977, but some encouragement could be taken in that prices did not accelerate as sharply as might have been expected for this phase of the business cycle.

While in retrospect these features of the last year are a commentary on the continued resiliency and vitality of the American economy, a number of problem areas were clearly evident. One of the most serious was the huge and rapid deterioration in the U.S. trade balance. While some weakening was expected, nothing of the magnitude that developed was anticipated, a factor which unsettled foreign exchange markets and sent the dollar sharply lower in relation to the currencies of some of our major trading partners. The trade imbalance was largely attributable to our growing oil import needs, and the continued absence of a workable energy policy suggested that little improvement was in sight in the period just ahead.

In fact, the failure to work out a sensible compromise on energy was only one of many policy uncertainties that seemed to overhang the economy in 1977. Other questions over the year were what type of tax proposals might surface, what type of anti-inflation program

might be adopted, and how much labor costs would be affected under changes in social security legislation, to name just a few. Many of these policy issues were a natural outgrowth of the change in Administration, but their quick resolution proved impossible. And the unsettled nature of the policy outlook was further emphasized by the choice in December of G. William Miller as the replacement for Dr. Arthur Burns as Federal Reserve Board Chairman.

Finally, in spite of the economy's record of growth, the achievement of full resource utilization proved intractable. Operating rates in manufacturing and in materials-producing industries remained below levels that in the past signalled the emergence of supply bottlenecks. The unemployment rate showed a sizable decline in 1977, but the improvement in the overall unemployment rate was not widely shared, as the rate for blacks and for young workers continued at uncomfortably high levels.

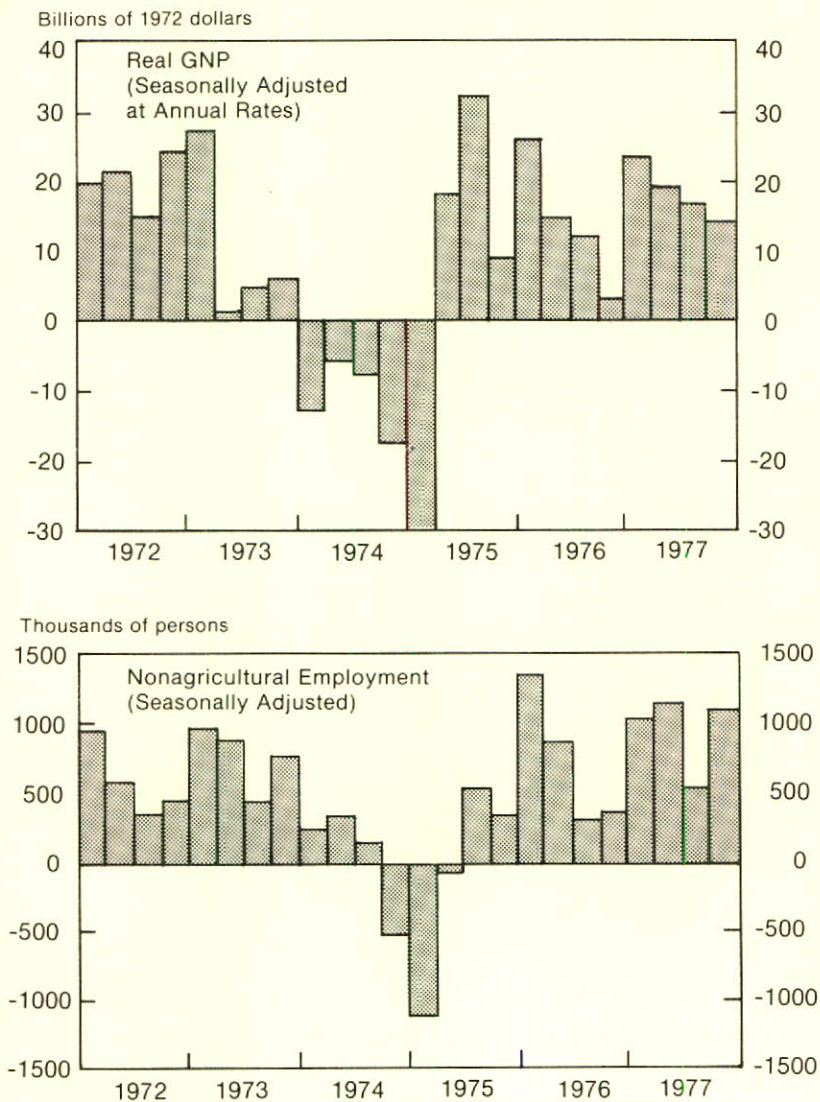
In real terms, after adjusting for price changes, gross national product rose almost 5 percent in 1977, above its long-term trend but less than the 6 percent growth achieved in 1976. There was, however, a more solid and balanced thrust to the economy in 1977 compared with the previous year. As the upper panel of Chart A shows, real growth was less volatile and showed greater sustained vitality than in 1976 when doubts developed about the durability of the upswing. The growth in real output, moreover, continued to provide a foundation for an increase in the number of jobs. Employment growth generally follows the pattern of changes in real output (see Chart A), but in 1977 employment increased by over 4 million persons, the largest single-year gain in the last three decades. The gains in employment outstripped the rapid growth in the labor force, and at year-end the unemployment rate was 6.4 percent, nearly 1½ percentage points below the level a year earlier.

Real GNP growth showed a steady tapering as the year progressed. This pattern was largely the result of the stepwise reduction in the pace of inventory investment over the course of the year, as businesses actively sought to align their inventories more closely with sales and avoid the sharp swings characteristic of recent years. Real final sales (real GNP less the change in business inventories) were generally strong and well-maintained throughout the year, as slower spending growth in one sector was offset by acceleration in others. Consumer purchases of durables, as well as business spending on equipment, were particularly brisk in the opening quarter but then moderated. As their advance slackened, however, spending by the federal government and the states and localities quickened, and some spark finally appeared in spending on commercial and industrial structures which continued for the remainder of the year. Residential construction expenditures

climbed steeply in the spring, leveled off in the summer, and then moved ahead again at a fast clip in the closing quarter.

All of the major indexes of price performance showed an acceleration in 1977 from the already distressingly high levels of the previous year. On a year-over-year basis, the GNP deflator rose

Chart A  
**REAL GNP AND EMPLOYMENT:  
 CHANGES FROM PRECEDING QUARTER**



about 5½ percent, compared with 5¼ percent in 1976, but the speed-up in inflation was even more pronounced by other measures. The consumer price index (CPI), which had risen about 5¾ percent in 1976, advanced even faster in 1977 at a 6½ percent rate, and the wholesale price index for finished goods (WPI) moved upward by nearly 6 percent in 1977, markedly above the 4¼ percent rise of the previous year.

Chart B plots the average annual inflation rate for each of these three indexes over the last decade or so, as well as the pattern of price changes within 1977. Looking at the annual data, it is clear that by all the measures shown, inflation in 1977 certainly improved relative to the pace of 1974-75. But small comfort could be taken from this improvement in that prices were advancing in 1977 at equal or faster rates than in most other years in this inflation decade. This fact serves as a grim reminder of just how intractable the inflation problem has become.

Of even greater concern for the near-term outlook, however, was the particular pattern of price behavior exhibited during 1977. As can be seen from the chart, both the CPI and the finished goods WPI, after a marked slowdown in the summer, began to accelerate late in the year. This observation is especially unsettling in the case of the WPI, which is generally taken to presage movements in the CPI. And, of course, with the importance of the CPI in a host of labor contracts, the general outlook for cost and price pressures in the months ahead is unsettling.

### **Financial Market Developments**

The absence of severe strains and tensions in the economy at large was mirrored in the generally calm and orderly conditions that prevailed in financial markets in 1977. Indeed, this is particularly noteworthy considering the sheer size of the total financing task that was accomplished in 1977. Large increases in short-term business financing, in the use of mortgage and consumer credit, and in the demands for funds by states and localities were easily met along with continued heavy long-term business financing requirements and only modest declines in Treasury and federal agency demands.

**Interest rate patterns.** Charts C and D depict yields on prime bonds and on lesser-rated corporates over the last several years. The general impression left by careful study of these charts is that long-term rates were remarkably stable in 1977, particularly as compared with 1976. Seasoned Aaa corporates were virtually flat in 1977 at a plateau of about 8 percent, following a period from late 1975 into the early days of 1977 when these rates showed a

Chart B  
**INDEXES OF INFLATION**  
 (Percent changes at annual rates)

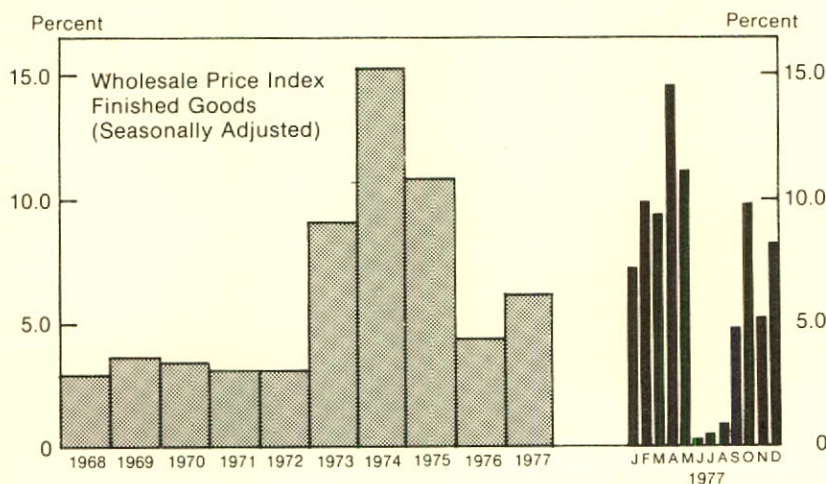
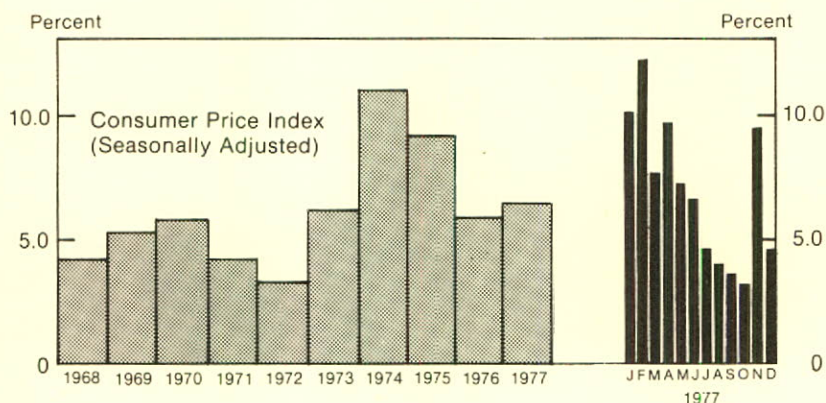
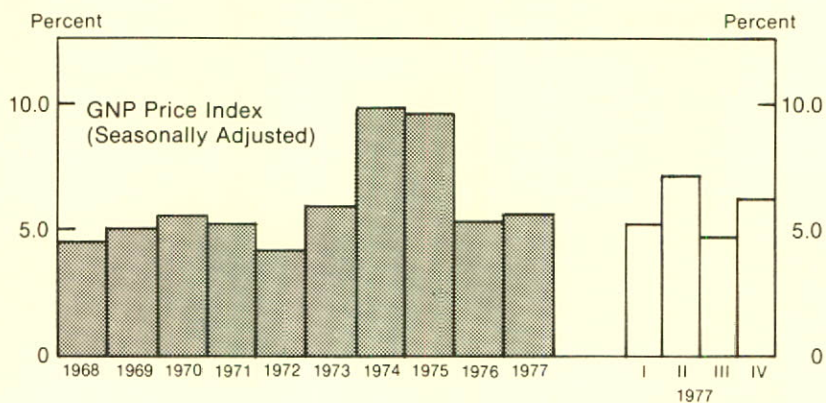
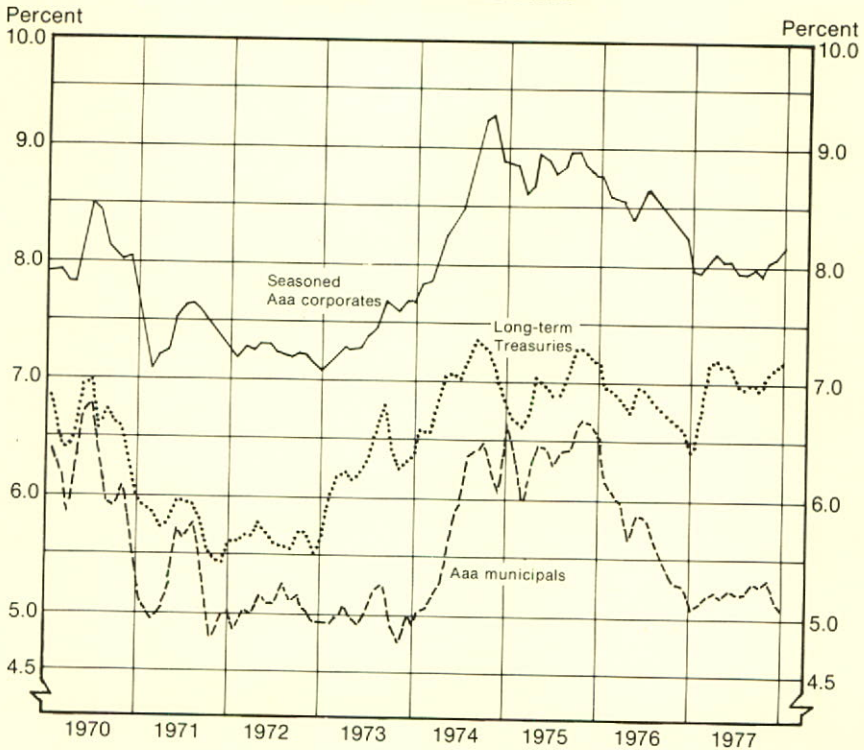




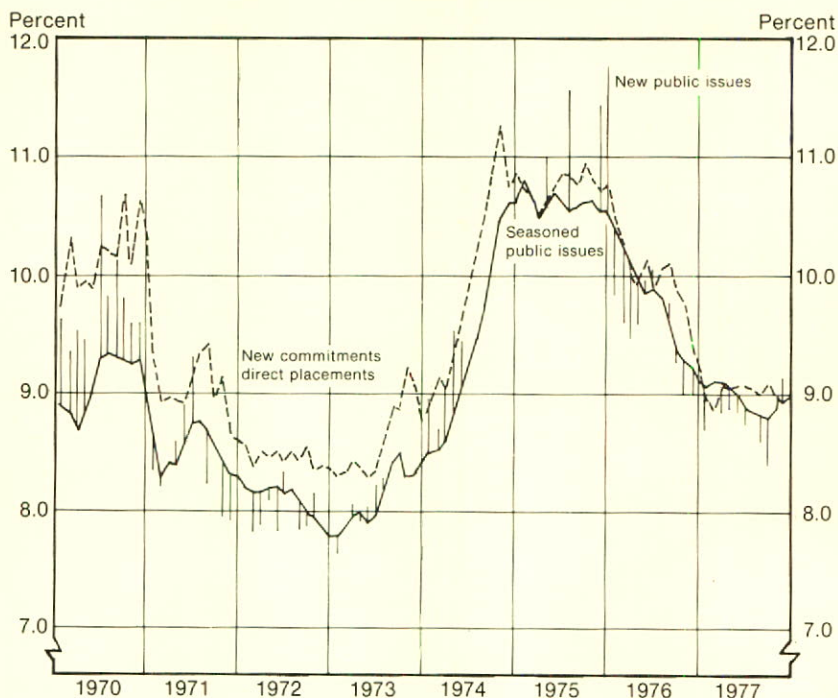
Chart C  
YIELDS ON PRIME BONDS



generally declining trend. The last period of such stable rates on Aaa bonds was in 1972 and early 1973. Yields on high grade municipals edged up until late in 1977, when these rates fell back to levels at the start of the year. Similarly, yields on seasoned Baa corporates (Chart D), which were slightly above 9 percent at the start of the year, fell off somewhat in the spring and summer months before erasing part of the decline by year-end. Rates on new publicly-issued Baa corporates traced much the same pattern as seasoned issues, and at the end of the year were only slightly higher than at the close of 1976. Commitment rates on fourth-quality credits in the direct placement market were less volatile than new-issue rates on debt of comparable quality in the public market, but dipped late in the year when rates on new Baa credits in the public market rose. As a result, the spread between rates on similarly rated direct placements and public issues disappeared.

By contrast with the comparatively stable rates that held in long-term markets, short-term rates rose by about 150 to 200 basis points over the course of 1977. Even so, at year-end these rates were only

Chart D  
YIELDS ON Baa CORPORATE BONDS



around 50 basis points above where they were when the economic expansion began in the spring of 1975. The increase in short-term rates occurred in two stages. After moving essentially sideways in the opening months of the year, the Federal Reserve began to nudge short-term rates higher in late April as part of its effort to bring the growth in the monetary aggregates into line with announced targets. By the end of May, these efforts began to show results, and the Federal Reserve acted to stabilize rates. Again in the summer, however, the Federal Reserve became alarmed over the rapid growth in the money supply and stronger-than-expected business loan demand. As a result, it took several actions to push short-term rates to higher ground, including increasing the discount rate in two stages to 6 percent from the  $5\frac{1}{4}$  percent level established in late 1976.

By late October, evidence mounted that the Federal Reserve's goals for money supply growth and loan demand were being met, and concern was growing that further advances in short-term rates might hinder economic growth. Consequently, the Federal Reserve made no further moves toward tightening, and short-term rates held in a very narrow band for the remainder of the year.

**Short-term business financing.** The continued growth in profits and other internally generated funds of business corporations in 1977 failed to keep pace with outlays for new plants and equipment, and corporate needs for outside sources of financing rose sharply. The surge centered in the short-term area, as long-term financing flattened out at a high level. In fact, the increase in business demands for short-term funds was an important factor in the uptick in short-term rates in 1977.

Perspective on just how dramatic this turnaround in short-term financing was in 1977 is provided in Table 5, which shows the net increase in outstandings for the major types of business credit. After a substantial decline in 1975 and only a small increase in 1976, short-term business credit is estimated to have risen by almost \$50 billion last year, very near the record advances of 1973 and 1974. Unlike earlier periods, however, the resurgence in demand was broadly based, extending to finance companies and the commercial paper market, and was not as heavily concentrated at the commercial banks. Indeed, the increase in finance company loans to business was the largest on record, and the growth in commercial paper outstanding was about equal to the record rise that occurred in 1969.

Of the estimated \$25 billion expansion in business financing at commercial banks, a relatively large proportion was at smaller, regional banks rather than at money center banks. For many of the nation's large and well-known corporations, the choices among alternative forms of short-term financing were heavily influenced by the costs. With the spread between the prime rate and the commercial paper rate favoring the paper market, larger firms exhibited a growing reliance on commercial paper to meet short-term needs in 1977. On the other hand, smaller or medium size firms, being less well-known, relied heavily on bank financing, frequently at the smaller or regional banks.

Table 5  
**NET NEW SHORT-TERM  
DOMESTIC BUSINESS CREDIT**  
(In billions of dollars)

	1973	1974	1975	1976	1977e
Bank loans .....	\$39.3	\$33.6	\$-18.0	\$-5.2	\$25.0
Finance company loans .....	5.0	4.8	2.1	5.4	9.5
Commercial paper .....	6.4	7.9	1.8	3.6	12.0
Acceptances & other loans .....	2.2	4.5	2.2	5.0	2.5
<b>Total .....</b>	<b>\$52.9</b>	<b>\$50.8</b>	<b>\$-15.5</b>	<b>\$ 8.8</b>	<b>\$49.0</b>

e-Estimated.

**Corporate stock and bond markets.** Although short-term credit accounted for the largest part of the increase in external business financing in 1977, long-term business demands for funds remained at high levels. For a third year, business relied heavily on long-term markets to fund debt and improve liquidity structures. In addition, money raised for purposes of expansion began to show some improvement.

New money raised in the stock market in 1977 dropped to an estimated \$9 billion from \$11 billion in 1976, despite the continued needs of business for new equity. Even so, the largest sum ever raised in a public stock sale by a U.S. corporation was accomplished in November when American Telephone and Telegraph offered shares valued at nearly \$720 million earmarked for advance redemption of about half of the outstanding 8¾ percent debentures due in 2000. The pattern of stock prices was mixed for the year as a whole. The Dow Jones Industrial Index of blue chip stocks plummeted about 17 percent, while stocks on the American Exchange rose 16½ percent to a new high and the NASDAQ composite of over-the-counter stocks advanced about 7½ percent.

Net new money raised in the corporate bond market was estimated at \$33 billion in 1977, down moderately from the record \$38 billion volumes of the previous two years. The decline in volume was almost entirely attributable to a fall-off in new Canadian issues coming to market. In late 1976 the intensified political division in Quebec Province led to general uneasiness on the part of many investors about some Canadian issues, and rates on certain Quebec issues rose dramatically in the months after the election. However, other foreign borrowers with high credit standing were able to approach the U.S. market with relative ease, as investors became more accustomed to foreign credits. An interesting development occurred in 1977 when a major New York bank started a commingled international bond fund as a way to interest its pension clients in foreign securities.

Gross borrowings in the domestic public bond market settled back in 1977, as many issuers continued their efforts to fund short-term debt and others sought money for new spending programs. Industrial issuers reduced their new financing, but utilities and many financial institutions increased their borrowings. Overall, the average monthly volume of new public issues by domestic corporations averaged about \$1.9 billion in 1977, down from the \$2.1 billion average per month in 1976. By far the largest part of this financing was long-term, as medium-term issues accounted for only 15 percent of new issues, compared with 29 percent in 1976 and over 40 percent in 1975. Moreover, investor insistence on

superior credit quality, evident two or three years ago, began to diminish in 1976 when many Baa-rated issuers were able to return to market. And in 1977, many B-rated industrial corporations succeeded in floating new debt issues, occasionally in combination with a stock issue. Investor interest was evident in that the amount of the principal was increased on a large percentage of these issues between registration and offering dates.

The volume of new issues by financial institutions was sizable in 1977, compared with 1976. Finance companies, experiencing heavy demands for consumer and business loans, were active issuers of long- and medium-term bonds. The largest new issue volume came from the captive auto finance companies, but other finance companies specializing in loans on accounts receivable and in factoring accounted for a significant volume. Commercial bank holding companies were also issuers of intermediate- and long-term debt in 1977, but perhaps the most newsworthy bank issue was the flotation in September by the Bank of America of \$150 million of mortgage-backed pass-through certificates, initially priced to yield a bit above Ginnie Maes. This was the first attempt by a private issuer to package conventional mortgages as backing for a security similar to Ginnie Mae pass-throughs.

Some savings and loan associations also sought financing in 1977 in the bond market through the issuance of mortgage-backed bonds, with a volume estimated at around \$1½ billion. This option for raising funds was open to only a limited number of large savings and loans, primarily because small associations (almost 85 percent of all federally-insured associations have assets of less than \$100 million) have trouble assembling an adequately sized pool of mortgages for such an offering.

**Directly placed bonds.** In contrast to the moderate easing in volume in the public market, borrowings by domestic corporations in the direct placement market moved somewhat higher in 1977 to an estimated average monthly volume of \$1.4 billion, compared with the previous record of \$1.3 billion in 1976. However, the strongest demands were recorded in the first half of 1977, as borrowings in the second half actually fell below the same period of the previous year. The composition of borrowers in the private market differed from the public market. Industrial issuers sharply increased their direct placement volume as their flotations in the public market declined. On the other hand, the increased use by utilities of the public market in 1977 was accompanied by a moderate reduction in borrowing from private sources. Financial institutions were active issuers in both segments of the bond market.

Life insurance companies continued to experience sizable amounts of cash flow in 1977, and were thereby able to place a large

amount of funds in the direct placement market, in spite of some revival in mortgage lending on nonfarm nonresidential properties. In general, funds were amply available from traditional lenders in the market, but a new source of revenue surfaced in May when the Saudi Arabian Monetary Agency purchased two entire public utilities issues. At least one other issue was financed by this new entrant in 1977, and it will be interesting to watch whether its participation grows in the months ahead.

**Mortgage borrowing.** With a modest decline in contract rates on nonfarm, nonresidential mortgages, and with the general improvement in economic conditions, the demand for funds in the commercial mortgage market accelerated sharply in 1977 from the comparatively weak pace of the preceding three years. New money invested in this market by all lenders was estimated at about \$19½ billion, slightly exceeding the previous peak in 1973, but these funds financed fewer properties because of increased construction costs. Life companies continued to supply about a quarter of all new money, but the share coming from commercial banks rose dramatically to about 45 percent in 1977 from about 36 percent in 1973.

The advance in commercial mortgage lending accompanied a strong pickup in private nonresidential building. The value of this type of new construction increased at an annual rate of 15 percent in the first eleven months of 1977, after having shown a small increase of only 2 percent in 1976 and an absolute decline of 14½ percent in 1975. A substantial amount of the increase in 1977 was attributable to increasing prices as the value of nonresidential building construction rose at an annual rate of only 6½ percent in deflated dollars. Even that increase, however, represented a sharp turnaround from the lackluster performance of the last few years.

Increases in 1977 in spending on nonresidential buildings were broadly based, but extraordinary gains were recorded for retail and wholesale establishments and for shopping centers. Dollar outlays on industrial buildings rose briskly for the first time since 1974, and office building construction began to strengthen after two years of weakness. After adjusting for the effects of price changes, spending on industrial buildings still showed a recovery, but office building construction was flat.

Generally, construction spending on new buildings begins to pick up about a year or so after a turnaround in housing. Housing starts began their upswing in 1975, and the building cycle followed this established pattern. Boom conditions were precluded, however, in part due to continued difficulties in meeting the zoning, environmental, and building codes in some areas. Moreover, while lending rates eased somewhat, uncertainties about the buoyancy of

the economy over the near-term kept the necessary rate of returns on these properties at high levels.

**State and local government finance.** State and local governments raised a record volume of funds in 1977, far and away in excess of any previous year. Gross issues topped \$45 billion, up over 30 percent from 1976. A large amount was for tax-exempt pollution control financing and for advance refunding of previously issued debt as a result of the favorable interest rate environment of 1977, but even absent these borrowings, demand for funds by the states and localities was strong.

It is estimated that net new money totaled around \$29 billion, about \$10 billion more than any previous year of high volume. These gains were all the more remarkable considering the cross currents afflicting this market as recently as the mid-1970s when investors were fearful that the shaky financial condition of New York City might spread. Several conditions, however, helped to allay these fears and to bring large investor support back to this market.

One of the most important factors was the improved fiscal health of many of the cities and states, which raised their credit standing. Receipts have grown strongly since 1975, largely as a result of the pickup in the economy and the shift by a number of governmental units to greater reliance on a personal income tax. Indeed, tax receipts have risen more rapidly than the debt they are required to support.

The major buyers of municipal securities entered the tax-exempt market with renewed confidence in 1977. With a better earnings picture, all sizes of commercial banks substantially increased their net purchases of tax-exempts; even the larger money center banks were heavy purchasers after being only occasional buyers of tax-exempts in recent years. Fire and casualty companies also stepped up their investment in tax-exempt bonds as a result of their sharp gains in profitability and cash flows. Finally, as the fears of many individual investors were overcome, they became a major source of funds to the municipal market in 1977, an interest encouraged by the growth of municipal bond funds.

**Federal government financing.** The U.S. Treasury borrowed an estimated \$58 billion from the public in 1977, about \$10 billion less than in 1976, and well below the record \$86 billion in 1975. Even though the 1977 figure was lower than in the previous two years of high volume, it was still a sizable amount by historical standards and particularly large for a year when the economy was growing at such a healthy clip.

Managing public debt borrowing of such magnitudes is a difficult task under any conditions, but the Treasury's problem was enlarged

by the run-up in short- and intermediate-term interest rates during 1977. The average interest rate on the public debt rose somewhat as the year progressed, and the timing, amount, and maturity of each new issue had to be decided in a way that would avoid unsettling financial markets. In spite of these and other difficulties, the Treasury was successful in keeping the average length of the marketable public debt from falling, as it continued to rely on notes and bond issues for new money and actually paid down some of its short-term issues on balance over the year.

In financing the deficit, the Treasury was aided by a substantial increase in the funds available from foreign sources and from state and local governments. Without these lender groups, Treasury borrowing costs might have climbed dramatically and threatened to squeeze against substantial private credit demands. State and local governments were estimated to have increased their holdings of Treasuries by between \$8 and \$9 billion in 1977. These governmental units undertook sizable advance refundings of earlier issues carrying interest rates above those prevailing in the current municipals market. Legally, the proceeds could not then be invested in higher-yielding marketable Treasuries but had to be placed in special arbitrage issues. The Treasury, thereby, benefited in an indirect way from the favorable interest rate environment in the municipals market.

Of all investor groups, however, foreign central banks were the largest purchasers of Treasury securities in 1977, increasing their holdings by nearly \$30 billion. The demand for U.S. governments by foreign central banks was especially pronounced after mid-year. As support operations for the sharply depreciating dollar grew in size, these central banks used their accumulated dollars to acquire interest-bearing Treasury securities. In addition, of course, large investments in Treasuries were made by OPEC nations that continued to receive dollar payments for their oil exports.

**Household borrowing.** Households sharply increased their demands for housing finance and for consumer credit to record amounts in 1977. As a consequence, their total liabilities rose by 15 percent or approximately \$136 billion. This is the largest rate of increase in households' liabilities since the decade immediately after World War II. Even so, the growth in disposable personal income to support this debt expansion was also sizable, and the ratio of income to total liabilities at the end of 1977 was close to the average for the 1970s.

The surge in demand for home mortgage financing (on 1-4 family structures) was a major phenomenon in the capital markets again in 1977 as it was in 1976. The net increase in home mortgage



borrowing by households amounted to an estimated \$87 billion, up from \$61 billion in 1976 and well above the average annual gain of \$36 billion in 1974 and 1975. The rise in home mortgage debt in the last two years could not be explained entirely by the increase in the number of new houses to be financed. As starts for 1-4 family structures rose from 950 thousand units in 1975 to 1.25 million units in 1976 and to 1.6 million units in 1977, the amount of mortgage money per housing start increased even more dramatically.

Some of the explanation for the bulge in mortgage demands by households was a swelling in the number of purchases of existing houses at even higher prices. The values of residential properties have risen at rapid rates in recent years as a result of general price inflation, and families gradually have become aware of the huge amounts of unrealized wealth they possessed. Many homeowners, therefore, withdrew the accumulated equity in their existing homes or sought to borrow part of their equity either to purchase a higher quality house or to meet other large expenses.

It is clear that a large part of the money raised from the sale of existing homes was applied to the downpayment on new homes. In fact, most new homes built in 1976 and 1977 were for the upgrade market and not for the first-time buyer, as about 65 percent of purchases of new homes were by households who previously owned one or more homes. The size and number of amenities of new homes have risen sharply in recent years, and the accumulated equity in old homes made more comfortable housing affordable for many.

The large pool of available funds from the equity component in existing housing helps to explain why the housing market was able to sustain the sizable increases in housing prices last year. Prices of previously occupied homes financed by conventional mortgages last year rose 15 percent, nearly double the rate of the preceding year, and prices of newly built homes, similarly financed, increased by 12 percent in 1977 from an 8 percent rise in the previous year. Mortgage terms gradually became more generous, as the term to maturity on new mortgages was lengthened and downpayments inched downward. Accommodation did not extend to mortgage loan rates, however. Effective rates on home mortgages were virtually flat all through 1977.

## INVESTMENT OPERATIONS OF U.S. LIFE INSURANCE COMPANIES in 1977

Investment funds of life insurance companies rose to record amounts in 1977. Corporate bonds continued as the major outlet for investment funds, in even larger dimensions than in 1976, but particularly notable was the recovery in mortgage lending from the low levels of recent years. Purchases of longer-term U.S. government securities were made in growing amounts while investments in the securities of state and local governments and of foreign governments were sharply reduced from the record totals in 1976. Especially marked was the reduced flow into common stocks where the net investment was the lowest in ten years, reflecting the limited interest in these equities for separate account investments. Preferred stocks, however, continued attractive for general account investments, and these net purchases were the largest in four years. Policy loan demands turned up from the low level of 1976 but had no significant dampening effect on other investments made by the companies.

### Major Investment Outlets

In the following sections covering the major investment outlets of life insurance companies, the focus is on net long-term investments, which are estimated at \$29.8 billion in 1977, 11 percent above the 1976 total of \$27.0 billion. In contrast with the amounts entered for life insurers in the sources and uses tables presented above, net long-term investments exclude short-term debt instruments and include real estate and other real property. Estimates of year-end 1977 assets and changes in assets, together with the final figures for 1975-76, are provided in Tables A-1 and A-2 of the Appendix to this report.

**Corporate bonds.** Corporate bonds accounted for about 58 percent of the net long-term investments made by life insurance companies during 1977, up from a 53 percent share in 1976. Portfolio holdings of domestic and foreign corporate bonds increased by over \$17 billion, or 15 percent, during 1977 to reach an impressive total in excess of \$132 billion. The 1977 increase came on top of previous high net investments of \$14.2 billion in 1976 and \$8.6 billion in 1975 (both figures adjusted for valuation changes).

While market offerings of corporate bonds through the public bond market fell back in 1977 from the heavy volume of the two preceding years, private placements of corporate bonds advanced to a new record, primarily reflecting the availability of funds from life insurers. Privately placed corporate bond offerings were estimated to total about \$17 billion in 1977, somewhat above the previous record of \$15.8 billion in 1976. These totals, which exclude foreign government issues directly placed with domestic investors, reflect the amounts paid for within the year and exclude takedowns deferred to subsequent years.

An important ingredient in the magnitude of the corporate bond market in 1977, as in the two previous years, was the volume of advance commitments made by life insurers for these securities. Forward commitments, which are a precursor to private placement investments but may also encompass public offerings, reached new highs in 1977, including particularly hefty totals in the first half of the year. Based on the reporting of a sample group of companies, new commitments for corporate bonds ran an estimated 12 percent above the earlier record volume in 1976. Despite the ongoing sizable takedowns of earlier commitments, the backlog of outstanding commitments for corporate bonds increased by an estimated 30 percent during 1977, on top of a buildup of nearly 25 percent in 1976, thus providing a substantial base for 1978 disbursements to borrowers.

Directly placed bonds, which account for the bulk of the commitment totals, include not only issues of upwards of \$50 million but also numerous small issues, running as low as a few million dollars, that could not feasibly be sold through public offerings. Many of the larger life companies make most of their corporate bond purchases through direct placements, which account for the greater part of life company investments in corporates. At the same time, a considerable volume of purchases by these and smaller companies are channeled to the public bond market, where offerings are dominated by issues rated in the top quality grades and that provide a higher degree of liquidity.

**Mortgages.** Mortgage lending by life insurance companies accelerated in 1977 over the slow pace in the previous year. These loans moved up to 16 percent of the total of net long-term investments, from an abnormally low 9 percent share in 1976. The net increase of \$4.75 billion in mortgage holdings was twice the 1976 amount and the largest since 1974. However, total mortgage holdings again declined as a share of total assets, dipping to 27.5 percent as against a recent high of 32.7 percent (at year-end 1974) and the postwar peak of 38.6 percent at the end of 1966.

Figures on the net increase in mortgage holdings do not fully portray the extensive activities required of mortgage departments in finding and making loans. Investment of new funds allocated to mortgages, as well as reinvestment of mortgage repayments and the refinancing of existing loans, produced gross acquisitions of over \$13 billion, one third more than in 1976. New commitments made for future lending reached record amounts, nearly doubling over the volume committed in 1976 (see Table A-3). Much of this commitment and lending activity was centered in mortgages on commercial, industrial, and other nonresidential properties, while the portfolios of residential mortgages continued to decline, as shown in the following sections.

**Nonfarm, nonresidential mortgages.** For the third consecutive year, the growth in the nonfarm mortgage portfolios of life insurers was entirely accounted for by loans secured by nonresidential buildings. The net investment in commercial, industrial, and institutional mortgages (on U.S. properties) accounted for one sixth of the long-term net investments made by the companies, up from one eighth in 1976.

Holdings of these nonresidential mortgages increased by an estimated \$4.9 billion in 1977, or over 10 percent, to total \$52.2 billion at the end of the year. The dollar increase was the largest on record, supplanting the 1973 high of \$4.7 billion; the latter, however, represented a record 15 percent increase in the portfolio then held.

The recovery in life company mortgage lending was dramatically shown by the acceleration in new commitments made for future lending. Commitments for nonresidential mortgage loans (on nonfarm properties in the United States) amounted to some \$15 billion in 1977, 85 percent above the 1976 volume (see Table A-3). The backlog of outstanding commitments for these mortgages increased about 60 percent during 1977 as against a 13 percent rise in 1976 and persistent decreases throughout 1974-75.

Among the variety of properties included in the broad nonresidential category, office buildings and shopping centers again in 1977 accounted for the greater part of life company commitment volume, in part because of the above-average size of the loans usually involved with these projects. The detailed reporting available from a sample group of companies showed a doubling in 1977 of the amount committed for office buildings over the 1976 total, a year when shopping centers had the edge. Moreover, the greater commitment activity showed up in virtually all types of buildings, including smaller retail stores, warehouses, manufacturing plants, hospitals, nursing homes, hotels, and motels.

**Multifamily mortgages.** The portfolio of multifamily mortgage loans held by life insurance companies declined by an estimated \$400 million in 1977, or 2 percent, to a total of \$18 billion at the end of the year. These results roughly paralleled those of 1976 when the net disinvestment of \$450 million also represented a 2 percent decline in portfolio holdings.

Apartment loans made by life insurers increased in 1977 to about \$925 million, 12 percent above the limited amount of gross loans made in 1976. But repayments and other disposals far exceeded new loans, accounting for the net decline. New commitments made for multifamily mortgages ran about 75 percent above the 1976 total, and the backlog of commitments outstanding rose to the \$1.5 billion level, two thirds above the backlog at the start of 1977. This level was low compared with the early 1970s, however, reflecting a moderate demand for apartment financing and limited interest on the part of a number of life companies.

Another factor bearing on the recent decreases in the portfolios of apartment loans and the limited interest in further investments has been the delinquency and foreclosure experience with these loans. The amount of delinquent apartment mortgages, including those in process of foreclosure, was still high in 1977, even though the rate at mid-year was significantly below the peak level a year earlier (see Table A-4). The amount of apartment loans foreclosed during 1977 was a running at an annual rate still in excess of 1 percent, or \$200 million, marginally lower than in 1976 though noticeably below 1975. Since the mid-year readings showed the rate for apartment loans in process of foreclosure also above the 1 percent level, this negative factor can be expected to continue into 1978.

**One-to-four family mortgages.** The holdings by life insurance companies of 1-4 family mortgage loans decreased by an estimated \$1.35 billion, or about 9 percent, in 1977 to total \$14.1 billion at the end of the year. The decrease was slightly less than the \$1.46 billion in 1976, reflecting an upturn in the amount of loans made, rather than any slowing in principal repayments. Gross loans made on 1-4 family properties exceeded \$650 million in 1977, the largest amount in the current decade and just above the volume in 1973. But gross loans continued to fall far short of loan repayments, \$2 billion in 1977, of which half came from prepayments in full. The net disinvestment in 1-4 family mortgages represented, of course, funds becoming available for reinvestment, usually in other kinds of mortgages.

New commitments made for 1-4 family mortgages in 1977 were about double the \$300 million committed 1976, in part reflecting a return to the single-family home mortgage market by a few

companies which had not been making these loans for a number of years. The yields from home mortgages in some areas of the country, where housing demands were especially strong, became more competitive in 1977; in addition, the relatively low risk of these mortgages and their availability for early funding combined to make them attractive in the 1977 investment setting. But there was no widespread return to the home mortgage market by life insurers, and most companies continued to find more attractive net yields in other areas of the mortgage markets as well as in bond investments.

**Farm mortgages.** The net investment in farm mortgages by life insurers was unusually large in 1977, accounting for nearly 5 percent of net long-term investments, up from 2.5 percent in 1976. Farm mortgages held by the companies increased by a record \$1.4 billion, or 19 percent, during 1977 to total \$8.8 billion at the end of the year, as against the previous high increase of \$675 million, or 10 percent of the portfolio, in 1976. These results, which were all the more notable because of the limited number of life companies active in farm mortgage lending, reflected the sizable amounts of new commitments made in 1976-77 and the relatively rapid turnover of these commitments. New commitments for farm mortgages were estimated to total \$2.5 billion in 1977, 65 percent above the high 1976 total (see Table A-3), and the backlog of commitments outstanding, which reached new highs during the year, increased by about one third over the backlog at the start of 1977.

**U.S. Treasuries and federal agency issues.** For the third successive year life insurance companies added to their holdings of the longer-term notes and bonds issued by the U.S. Treasury, in contrast with the persistent decreases in these holdings from 1946-74. Moreover, the latest increase nearly equaled those of the two preceding years combined. In 1977 the yields on longer-term Treasuries were unusually attractive relative to alternative investments involving higher risks; the yield spread of the highest quality corporates over long-term Treasuries (maturities of over ten years) was under 100 basis points in virtually all months of 1977 as against a more usual differential of 150-200 basis points. The net investment by life insurers in Treasury bonds and notes amounted to about \$825 million in 1977, up from \$309 million in 1976. The longer-term Treasuries held by life insurers increased by over 20 percent during 1977 to total \$4.8 billion at the end of the year; at the same time, holdings of under one-year maturities amounted to an estimated \$1.1 billion, a decrease of \$300 million from the high level at the end of 1976.

Net investment in longer-term federal agency issues, which typically carry higher yields than Treasuries, reached a record \$1.1 billion in 1977, roughly 3½ percent of the total of net long-term

investments, topping the previous high amount of \$870 million in 1976. Holdings of these longer-term agency issues by life insurers have been mounting rapidly in the last several years, increasing 50 percent in 1977 to a total of \$3.25 billion at year-end, and another \$150 million was held in the under one-year maturity issues of the federal agencies.

**Foreign government and international.** Life insurers cut back their net investment in the issues of foreign governments and international agencies in 1977 from the extraordinary amount reached in 1976. The 1977 net investment of \$925 million represented 3 percent of the total of net long-term investments, but this fell well below the \$2.5 billion, or 9 percent of total net long-term investments, in the previous year when Canadian provincial government issues loomed so large. Portfolio holdings of foreign government and international agency bonds increased 13 percent during 1977, on top of a 55 percent increase in 1976, to total \$7.9 billion at the end of the year.

**State and local securities.** The net investment by life companies in the securities of U.S. state and local governments also turned down in 1977 from the record 1976 amount. Holdings of these securities increased by \$500 million, or 9 percent, to total \$6.1 billion at the end of 1977, compared with a rise of about \$1.2 billion in these longer-term issues in 1976. Revenue bonds, including some industrial revenue bonds which are not exempt from federal income taxation, and pollution control issues figured heavily in the recent investments made by life companies, since their yields are more attractive than those generally available on general obligation bonds.

**Corporate stocks.** With declining stock market prices during most of the year, common stocks evidently had little appeal for life companies or their separate account clients in 1977. The net investment in common stocks for both the separate and general accounts came to an estimated \$800 million in 1977, by far the smallest amount in ten years, down sharply from the comparable 1976 figure of \$2.2 billion. Moreover, in 1977 the decline in stock market prices reduced the carrying values of common stock holdings by an estimated 12 percent, or \$3.1 billion, reversing the 1976 valuation gain of a similar dollar amount. On balance, the total portfolio of common stock holdings decreased by 9 percent during 1977 to an estimated \$23.4 billion at year-end.

Separate account net investment in common stocks dropped to an estimated \$350 million in 1977 from \$1.2 billion in 1976, even though the total net inflow for separate account investments increased from the \$1.5 billion in 1976 (the increase in separate account assets excluding the net capital gain of that year). At the

end of 1977, common stocks held in separate accounts were valued at an estimated \$11 billion, about 65 percent of total separate account assets. This was the lowest proportion on record, down from 75 percent at the end of 1976 and the previous low of 67 percent at the end of 1974.

General account net investment in common stocks is estimated at \$450 million in 1977, less than half the \$999 million total in 1976. The market value of common stocks held in the general accounts of the companies amounted to an estimated \$12.4 billion and represented 3.7 percent of general account total assets at the end of 1977, compared with \$13.5 billion and 4.4 percent of general account assets a year earlier.

Net investment in preferred stocks, made almost entirely for the general accounts of the companies, rose to an estimated \$1 billion in 1977, up from \$847 million in 1976. The larger net investment in 1977 corresponded with a rise in the private placement offerings of preferred stocks, which had been running in the range of about \$400-500 million in the preceding three years. The after-tax yields of preferred stocks make them attractive to a number of life companies, and life insurers are an important source of funds to this market where the annual offerings of new issues are limited, rarely amounting to as much as \$3.5 billion.

**Real estate.** Holdings by life insurers of directly owned real estate increased by an estimated \$825 million, or 8 percent, in 1977 to total \$11.3 billion at the end of the year. The 1977 increase was fairly similar in total to the \$855 million added in 1976 but noticeably different in composition. Nearly half of the 1977 net increase represented real estate acquired for investment purposes, up from about one quarter of the 1976 net increase. Real estate acquired in settlement of mortgage indebtedness accounted for an estimated 40 percent of the 1977 net addition to real estate holdings, somewhat less than the 44 percent, or \$380 million, in 1976. Properties held for the companies' own use accounted for the balance, about 15 percent of the 1977 net increase. At the end of 1977, the amount held in income real estate exceeded \$7.2 billion, or about 64 percent of the total value of real estate holdings; company-used properties came to an estimated \$2.45 billion; and other properties, largely those acquired in satisfaction of mortgage loans, amounted to an estimated \$1.6 billion.

**Policy loans.** Outstanding policy loans held by life insurance companies increased by nearly \$1.7 billion in 1977, or 6.4 percent, somewhat above the \$1.37 billion increase in 1976. The larger growth in the policy loan account in 1977 reflected both a moderate increase in the extensions of policy loans, in the order of 3 percent over gross loan acquisitions in 1976, and, more important, a



downturn in policy loan repayments and other terminations. These reductions in the policy loan account were in record amount in 1976 when it appears that many policyholders took steps to restore the loan values of their policies.

The 1977 percentage increase of 6.4 percent in policy loan holdings, although above the 5.6 percent rise in 1976, was still on the low side and compared with an average annual rate of increase of 12.3 percent during the preceding ten years, 1966-75. The relatively low 1977 percentage increase, however, reflected in part the much enlarged portfolio of policy loans, and the dollar increase was exceeded in only four earlier years, 1969-70 and 1973-74, when policy loan demands were extraordinary and the dollar increases ranged from \$2.2 billion to \$2.66 billion a year. At the end of 1977, policy loans outstanding represented 7.8 percent of total assets held by the companies, the lowest proportion since 1972.

### **Measures of Investment Performance**

The most widely available indicator of investment performance of life insurance companies is the rate of net investment income on the invested assets held in the general accounts. This rate and the underlying dollar amounts are required in the annual statements filed with the state regulatory authorities, and industry aggregates have long been compiled by Council staff. In 1977, the net rate of income on the investments held in the general accounts of the companies reached an estimated 6.98 percent, and the corresponding rate for total invested assets, including separate accounts, was estimated at 6.82 percent. The 1977 estimates shown in Table 6 indicate an increase from 1976 of 30 basis points in the net income rate of the general accounts and 27 basis points in the net rate for total invested assets.

The 1977 improvement of 30 basis points in the general accounts rate was among the most favorable on record, exceeded only by annual increases of 31 basis points in 1973 and 1974. Cash flow available for investment was at a record high in 1977, and although market yields on bonds and mortgages ran below those prevailing in 1976, rates on new investments were well above the average portfolio yield. The replacement of older investments made at lower rates with new loans at higher rates continued to improve portfolio results. As shown in the table, net investment income was estimated to total \$21.5 billion in 1977, an increase of about 14½ percent over the 1976 total, compared with an increase of nearly 14 percent in 1976 over 1975.

Another measure of investment results is the "new money" rate on long-term investments added to portfolios in a year, as

Table 6

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

Year	Net Investment Income (Including separate accounts)		General Accounts
	Millions	Rate	Rate
1972	\$12,127	5.56%	5.69%
1973	13,670	5.88	6.00
1974	15,144	6.25	6.31
1975	16,488	6.36	6.44
1976	18,758	6.55	6.68
1977	21,500e	6.82e	6.98e

e-Estimated.

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

distinguished from the rate of income on the total holdings of invested assets. Composite averages of the rates on new investments, which are not required in annual statement reporting, have only recently become available through reports made to the Council by a sample group of companies. This reporting provides gross annual yields, before deduction of investment or other expenses, on the fixed-income investments added to the general accounts of the companies. Gross yields on new investments in bonds, mortgages, and preferred stocks averaged about 9¾ percent in 1976 for the reporting group, a level largely sustained by the results of larger companies whose bond investments were dominated by direct placements. Yields on 1977 new investments undoubtedly fell below the 1976 results but nevertheless were expected to top the 9 percent level.

New investment yields reflect investment decisions made over a time period longer than a single year, since they include takedowns of securities and mortgages for which commitments were made in earlier years, as well as long-term investments which came to market in the current year. Thus, new money rates do not provide an accurate gauge of market conditions in a single year but are instead a measure of yields on the investments taken into the portfolios during a given year.

A more direct measure of current market trends is provided by the rates at which new commitments are made on bonds and mortgages. Average commitment rates on directly placed corporate

bonds, which had dropped sharply at the end of 1976, decreased somewhat further in the first months of 1977, recovered slightly in the early spring and then stabilized until the final months of the year when a further easing occurred. On balance, direct placement yields decreased about  $\frac{1}{4}$  of a percentage point during 1977 from the December 1976 level. Average commitment rates on income-property mortgage loans declined on balance during the first half of 1977 but then backed up slightly, stabilizing at around the 9 $\frac{1}{4}$  percent level. Summary data from the Council's surveys of income-property mortgage commitments are shown in Tables A-5 and A-6. As may be seen, the weighted average interest rate of 9.27 percent for income-property mortgage commitments made in the third quarter of 1977 was down 40 basis points from the 1976 fourth-quarter average. But these mortgage commitment rates were more competitive with bond rates in 1977 than they had been for the better part of the three preceding years, a reflection of the sharp drop in bond yields that occurred in late 1976 while mortgage commitment rates were well maintained.

Another measure of portfolio performance of life insurers is provided by the Council's annual surveys of the income and costs of the mortgage account. A summary of the results for 1976 and other recent years is given in Table A-7. The data of the reporting group are essentially the mortgage results that enter into the net income rate on total invested assets discussed above. The net income rate of the mortgage portfolios held by the reporting companies averaged 7.22 percent in 1976, a level that indicates the above-average contribution of mortgage portfolios to the overall portfolio income rate of 6.68 percent for all life insurers in 1976. The 1976 increase in the mortgage net income rate, however, came to 16 basis points, the same as in 1975, noticeably below the increases of 24-30 basis points in the four preceding years.

The slowing of the increases in the net income rate of mortgage portfolios reflected both the limited weight of new loans, carrying higher interest rates, added to the portfolios in 1975-76 and the high rates of mortgage loan delinquencies mentioned earlier (see also Table A-4). The full reports of the survey results provide income and cost ratios for companies grouped as to type of organization for servicing mortgages and further segregated as to size of mortgage portfolio. These surveys have long provided averages of the contract interest rates on mortgage loans closed each year, a rough measure of new money rates on these loans. As shown in Table A-7, loans disbursed in 1976 carried contract rates averaging 9.55 percent, the highest on record, up about  $\frac{1}{4}$  of a percentage point from 1975. The average included still high rates on farm mortgages,

close to 9.85 percent, but largely reflected the interest rates averaging about 9.50 percent on loans secured by nonfarm properties, particularly commercial and other nonresidential properties.

### Cash Flow for Investment

Cash flow for investment rose to a new high in 1977, surpassing the \$50 billion mark. The growth in cash flow, however, moderated from the stepped-up pace of 1975 and 1976. On a preliminary basis, the cash flow total of life insurance companies was estimated at \$51 billion, an increase of 10 percent from 1976, compared with an extraordinary rise of 38 percent in 1976 over 1975. The estimates of cash flow of the companies, given in Table 7, are expanded from the quarterly reporting of a sample group of companies, and the 1977 preliminary figure reflects their projections of a seasonally large fourth-quarter total that would outpace the limited increase over 1976 shown by the earlier quarters of 1977.

Table 7

### ESTIMATED CASH FLOW FOR MARKET INVESTMENTS U.S. LIFE INSURANCE COMPANIES

(In billions of dollars)

Year	Amount	Year	Amount
1970	\$16.6	1974	\$26.0
1971	25.3	1975	33.5
1972	30.8	1976	46.2
1973	31.0	1977	51.0p

p-Preliminary.

The sources of cash flow of the reporting group during the first three quarters of 1977 and the four quarters of 1976 are given in Table A-8. As indicated by the table, cash flow includes not only the growth in ledger assets representing new funds from insurance operations and investment income, but also the sizable amounts for reinvestment stemming from maturities and other repayments, calls, and sales of existing investments.

The cash flow totals of the reporting group were at high levels in each of the first three quarters of 1977, but only the second quarter showed significant growth over the corresponding period of 1976. A large part of the volatility in the quarterly totals was, typically, traceable to shifts in the change in cash position (holdings of cash

and short-term securities). Sizable buildups in cash position in the first and third quarters of 1977 limited the cash flow totals of those periods while drawdowns of liquidity positions added to investment funds in the alternate periods. For the first three quarters combined, cash flow of the reporting group ran 9 percent above the comparable period of 1976, and for the full year is estimated to run 10 percent over 1976, because of the accelerated growth projected for the final quarter of 1977.

Ledger asset increases for the reporting sample of companies accelerated by 9 percent in the first three quarters of 1977 over the like period of 1976, in contrast with a growth of 35 percent in 1976 over 1975. The amounts available for reinvestment generated by the mortgage accounts picked up decidedly in 1977, largely from prepayments in full but also from a recovery in amortization payments, including partial prepayments. The return flows from securities continued to grow, but less markedly than in 1976 except for enlarged amounts from sales of stocks. The net increase in policy loans diverted somewhat greater amounts from other investments in 1977 than in 1976, but the increase was still low relative to total investment funds. For the reporting group, policy loan demands moved up to about 3.5 percent of total investment funds during 1977, having dipped to an unusually low 2.9 percent in 1976.

### **Asset Growth**

Assets of U.S. life insurance companies increased at a historically high rate during 1977 but at a slower pace than in the two preceding years. The asset total reached an estimated \$350 billion at the end of 1977, increasing 8.9 percent during the year, the third highest percentage increase since 1945, exceeded only by the rises of 9.9 percent in 1975 and 11.1 percent in 1976. In contrast with the two preceding years when net capital gains gave added impetus to asset growth, the 1977 asset total was held down by a net capital loss, mainly reflecting the drop in stock market prices. When adjusted to exclude these fluctuations in valuation, assets increased by an estimated 9.9 percent during 1977, the second highest growth rate in nearly fifty years, just under the comparable increase of 10.0 percent in 1976.

In dollar terms, the 1977 asset increase amounted to an estimated \$28.75 billion as against \$32.25 billion in 1976. When adjusted for valuation changes, the increase came to a record \$31.85 billion in 1977, up from the previous highs of \$28.9 billion in 1976 and \$22.25 billion in 1975. The magnitude of these recent increases is more clearly seen in the perspective of earlier years: the estimated 1977

asset increase of \$31.85 billion, adjusted for valuation changes, was more than triple the figure only ten years earlier, \$9.5 billion, which in turn had moved up more gradually from the 1957 amount of \$5.55 billion.

The most notable factor in asset growth in recent years has been the expansion of both the group and individual annuity business of the companies. Annuity considerations were estimated to top the \$16 billion level in 1977, 15 percent above the 1976 volume of \$14 billion. The further growth in annuity income in 1977, however, was considerably more moderate than the record rise of 37 percent in 1976 or the 31 percent advance in 1975—a pace that could not be expected to be sustained. Nevertheless, this source of income continued to outpace the growth in the premium income from life and health insurance, and annuity considerations reached an estimated 22 percent of total premium receipts in 1977, up from 21 percent in 1976 and significantly above the 12 percent share of a much smaller total only five years earlier. Annuity income provides a particularly strong push to asset growth since current pension benefit payments are small by comparison and the investment earnings attributable to pension funds are exempt from federal income tax during the accumulation period. In addition to the expansion of the pension business, the total of net investment income, which is important to the asset growth of life insurers in any year, showed strong improvement in 1977, as noted earlier.

Even with the faster pace of recent years, the rate of asset growth of life insurance companies continued below that for a number of other financial intermediaries. All of the institutional groups set out in Table 8 showed an acceleration in asset growth in the last three

Table 8  
**AVERAGE ANNUAL RATES OF ASSET GROWTH**

	Five-year period			Three-year period
	1960-64	1965-69	1970-74	1975-77e
Life insurance companies ...	5.4%	5.7%	6.6%	9.6%
Noninsured pension funds ..	11.9	9.9	7.7	10.0
State and local government retirement funds .....	11.3	11.4	12.0	12.6
Savings and loan associations	13.4	6.3	12.8	16.1
Mutual savings banks .....	6.8	6.6	8.0	10.6

e-Estimated for 1977.

Asset growth of life insurance companies, noninsured pension funds, and state and local retirement funds was measured by the increase in assets adjusted for net capital gains or losses. The unadjusted increase in assets was used for savings and loan associations and mutual savings banks.

years, most notably the savings and loan associations. The savings and loans have been eminently successful in attracting savings funds, aided also by a regulatory climate generally favorable to the growth of these associations that are the major source of mortgage loans for residential housing. The recent improvement in the asset growth of noninsured pension plans, although reversing a steadily declining growth rate that emerged in the last half of the 1960s, was relatively less than the improvement shown by life insurance companies. As a result, the difference between the growth rates of the two groups has narrowed significantly further during the last three years, a marked change from the situation in the early 1960s for life insurers.

## THE ECONOMIC AND INVESTMENT RESEARCH PROGRAM

For three decades the life insurance business has demonstrated its interest in fundamental economic research to improve knowledge about the U.S. financial system. Through a continuing program of economic and investment research which began in 1946, the life insurance business has financed a long series of major research studies by scholars at leading universities and research organizations and also has developed extensive research and analysis by staff professionals in the Council's own economics department. The main objectives of this two-part program have been not only to assist the investment side of the life insurance business but also to contribute to the fund of basic economic knowledge and the understanding of financial markets.

During these thirty years, grants approaching \$4 million have been made for economic and investment research in such areas as savings, capital markets, pensions, housing, and interest rates. These studies are widely regarded by scholars and public officials as having been among the most important works published in these vital areas of financial research. A complete list is provided below of the studies published to date through the sponsorship of the economic research program funded by the life insurance business.

### **Outside Economic Research Financed by the Council**

A major outside research project, "Demand and Supply Conditions in the U.S. Capital Markets, 1975-1985," produced two published volumes in 1977 and a third is close to completion. This project was undertaken through the Salomon Brothers Center for the Study of Financial Institutions of the Graduate School of Business Administration of New York University. The two volumes, published by D.C. Heath and Company, were *Understanding Capital Markets, Volume I: A Flow-of-Funds Financial Model*, by Professor Patric H. Hendershott of Purdue University, and *Understanding Capital Markets, Volume II: The Financial Environment and the Flow of Funds in the Next Decade*, edited by Professors Arnold W. Sametz and Paul Wachtel of New York University. Volume I develops a financial flow-of-funds model designed for forecasting the flows of money and credit between major borrower and lender groups in the U.S. economy. This model



is then applied to such policy issues as an income tax cut, deposit rate ceilings, federal mortgage lending, and a mortgage interest tax credit. Volume II is comprised of thirteen chapters by various authors who focus on such issues as capital shortages, inflation and the composition of saving, financing the business sector, financial market innovations, and the impact of the foreign sector on U.S. capital markets. Professor Sametz has written a summary volume integrating the findings of the contributors to the first two volumes. The summary will be published in 1978.

Another publication in 1977 arose from an earlier project on "The Effects of Inflation on Financial Markets" conducted by the National Bureau of Economic Research. The results of this project, consisting of papers by various authors under the direction of Professor Phillip Cagan, have been published in a number of professional journals. The most recent publication was an article by Thomas A. Piper and Jasper H. Arnold, "Warrants and Convertible Debt as Financing Vehicles in the Private Placement Market," in the National Bureau journal, *Explorations in Economic Research*. The Piper-Arnold article examines various reasons why debt issues with warrants or conversion rights were common in the 1968-69 period but have been seldom used on debt issues in more recent years. This article and other special studies on the impact of inflation on financial markets have been summarized in a monograph by Professors Phillip Cagan and Robert Lipsey reviewing the state of economic knowledge in this field. This monograph is scheduled for publication in 1978.

The study of "Economic Consequences of Rapid Inflation" by Professor Hendrik Houthakker of Harvard University has been delayed and is undergoing revision to take account of benchmark changes in basic economic and financial data and recent economic events.

A major three-year research project under Council auspices was undertaken in 1976 to investigate the critical problem of "Capital Investment and Savings Requirements." The director of this study is Professor George M. von Furstenberg of Indiana University. He is being guided by a distinguished advisory committee which consists of three representatives of the life insurance business and six nationally known economists with special expertise in different aspects of savings and capital formation.

The study deals with two main questions: (1) the major determinants of saving and (2) the role of capital in economic growth. The first part is concerned with factors that influence private saving under changing economic conditions and shifting demographic trends; it will also look specifically into the impact on

savings of taxation, government regulations, expanded social security, and other governmental programs. The scholars involved in this part of the study include Professors James J. Heckman (University of Chicago), David F. Bradford (Princeton), Edward Kane (Ohio State), Dennis E. Logue (Dartmouth), Attiat F. Ott (Clark), and James Tobin (Yale). In addition, studies will be made by foreign scholars of the impact of government programs on saving in a number of countries abroad.

The second part of the study, the role of capital in economic growth, will include analyses of the growth in the stock of capital, gross and net rates of return, the allocation of the stock of capital among different uses, investment behavior by type of industry, and the impact of tax incentives. The principal investigators in these areas are Professors Dale W. Jorgenson (Harvard), M. Ishaq Nadiri (National Bureau of Economic Research), Clopper Almon (University of Maryland), and R. Jeffery Green (Indiana). A summary volume of the findings and analysis of policy implications will be prepared by Professor von Furstenberg.

### **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 Council. 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, quarterly data on interest rates and other characteristics of income-property mortgage loans, and annual data on gross yields of new investments are tabulated by the economic research staff. Some of the information developed in these studies is presented in other sections of this report.

A new annual survey on the quality of life companies' bond and preferred stock portfolios was begun this year, and the first report was released as *Investment Bulletin* No. 763. The study found that over 98 percent of the par value of bonds held at the end of 1976 by the reporting companies was eligible for valuation at amortized cost

under state reporting requirements. The balance of 1.53 percent of the bond portfolio was ineligible for amortization, including 0.87 percent for defaulted bonds. Nonamortizable bonds represented a slightly higher percentage of publicly issued bonds than of privately placed bonds. The latter constituted about 74 percent of the total bond portfolio in the general accounts for the surveyed companies.

Following up previous work on measures of investment performance, the Council staff has undertaken an examination of the problems in the use of the rate of net investment income, as currently defined for annual statements filed with state insurance departments. The issues involved were discussed at a meeting of the Subcommittee on Economic Research at the end of September, and the Chairman of the Subcommittee later appointed a task force from selected companies to work with staff in developing measures of investment income and performance that would be more useful for intercompany comparisons than the rate of net investment income as currently defined.

A major function of the economics department is its work with various policymaking committees of the American Council of Life Insurance. For example, the economics department provides staff support to the Economic Policy Committee and its Subcommittee on Fiscal and Monetary Policy and the Subcommittee on Economic Research. On behalf of the life insurance business, the Economic Policy Committee, with the support of the economics staff, prepares 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.

The staff has worked with a task force of the Economic Policy Committee in providing guidelines for a study of "The Economic Consequences of Changes in Accounting Standards." This study was commissioned early in 1977 by the Council at the request of the Financial Accounting Standards Board and was conducted by Professor George J. Benston of Rochester University. The findings will be distributed to member companies in the early part of 1978. The project is not part of the economic research grant program described above but is designed as background material for an FASB seminar to be held in March 1978.

The economics department also provides staff support to the Subcommittee on Investment Aspects of Valuation Problems. The department produces an annual report of the operations of the Mandatory Securities Valuation Reserve (MSVR) and from time to

time reviews the principles and rules of valuation of securities in life company portfolios. In the first half of the 1970s, the MSVR proved inadequate for the losses experienced by life insurance companies. In 1975, changes in the MSVR rules provided for a doubling of the annual formula additions to the bond and preferred stock component of the MSVR under certain conditions and allowed companies to apply capital gains in the years 1975 through 1977 to the restoration of surplus incursions brought about by common stock losses in 1973 and 1974. The recovery of the stock market by the end of 1976 enabled nearly all of the companies which had exhausted their common stock reserve in 1974 to completely restore the previous incursions of surplus and to add to their common stock reserve once more.

The decline of stock market prices in 1977, however, again used up a substantial portion of the common stock component of the MSVR of life companies. In May 1977, the Council submitted to the NAIC Valuation of Securities (EX3) Subcommittee a proposal for a permanent provision in the MSVR rules to allow capital gains on common stocks to be used initially to restore surplus incursions resulting from common stock losses. However, a much more limited provision was accepted at the annual NAIC meeting in December, providing for an extension of the time for restoration of only the 1973-74 surplus incursions. The staff will continue to monitor the operations of the MSVR.

Activities of the Financial Section of the Council and the operation of the annual Life Officers Investment Seminar also receive staff support from the economics department. The Financial Section holds an annual meeting each fall and is currently planning a spring meeting to be held in late April in conjunction with the Council's regional meeting in Minneapolis. These sessions provide a forum for discussion of financial topics by investment officers. The Life Officers Investment Seminar is held at Rockford College in Illinois for two weeks each June.

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 1978, 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. This year Dr. George Bishop and Dr. Thomas Robinson of the Council staff prepared a chapter on insurance companies as financial intermediaries for the second edition of *Financial Institutions and Markets*, a textbook edited by Murray E. Polakoff and others (to be published by Houghton Mifflin). In a broad sense, the economics department 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.

## ECONOMIC RESEARCH STUDIES SUPPORTED BY THE LIFE INSURANCE BUSINESS

**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).**

**Monographs (Princeton University Press)**

*Capital Formation in Residential Real Estate: Trends and Prospects*, Leo Grebler, David M. Blank, and Louis Winnick, 1956.

*Capital in Agriculture: Its Formation and Financing Since 1870*, Alvin S. Tostlebe, 1957.

*Financial Intermediaries in the American Economy Since 1900*, Raymond W. Goldsmith, 1958.

*Capital in Transportation, Communications, and Public Utilities: Its Formation and Financing*, Melville J. Ulmer, 1960.

*Capital in Manufacturing and Mining: Its Formation and Financing*, Daniel Creamer, Sergei Dobrovolsky, and Israel Borenstein, 1960.

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

**Monographs (Princeton University Press except as noted)**

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*The Postwar Residential Mortgage Market*, Saul B. Klamman, 1961.

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*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.

*The Flow of Capital Funds in the Postwar Economy*, Raymond W. Goldsmith, 1965 (Columbia University Press).

#### **Papers**

*The Volume of Mortgage Debt in the Postwar Decade*, Saul B. Klamman, Technical Paper 13, 1958.

*The Postwar Rise of Mortgage Companies*, Saul B. Klamman, Occasional Paper 60, 1959.

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*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).**

#### **Monographs (Princeton University Press except as noted)**

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*Corporate Bond Quality and Investor Experience*, W. Braddock Hickman, 1958.

*Statistical Measures of Corporate Bond Financing Since 1900*, W. Braddock Hickman, assisted by Elizabeth T. Simpson, 1960.

*Trends in Corporate Bond Quality*, Thomas R. Atkinson, assisted by Elizabeth T. Simpson, 1967 (Columbia University Press).

#### **Papers**

*Trends in Cycles in Corporate Bond Financing*, W. Braddock Hickman, Occasional Paper 37, 1952.

*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).**

#### **Monographs (Princeton University Press)**

*Mortgage Lending Experience in Agriculture*, Lawrence A. Jones and David Durand, 1954.

*Patterns of Farm Financial Structure*, Donald C. Horton, 1957.

#### **Papers**

*Costs and Returns on Farm Mortgage Lending by Life Insurance Companies, 1945-1947*, Raymond J. Saulnier, Occasional Paper 30, 1949.

*Agricultural Equipment Financing*, H. Diesslin, Occasional Paper 50, 1955.

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

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*The Impact of Government on Real Estate Finance in the United States*, Miles L. Colean, 1950.

*Urban Real Estate Markets: Characteristics and Financing*, Ernest M. Fisher, 1951.

*History and Policies of the Home Owners' Loan Corporation*, C. Lowell Harriss, 1951.

*Commercial Bank Activities in Urban Mortgage Financing*, Carl F. Behrens, 1952.

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### **Monographs (Columbia University Press)**

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*Yields on Corporate Debt-Directly Placed*, Avery B. Cohan, 1967.

*Essays on Interest Rates*, Volume 1, edited by Jack M. Guttentag and Phillip Cagan, 1969. Contains the following essays:

"The Influence of Interest Rates on the Duration of Business Cycles," Phillip Cagan.

"The Behavior of Residential Mortgage Yields Since 1951," Jack M. Guttentag.

"The Structure of the Mortgage Market for Income-Property Mortgage Loans," Royal Shipp.

"A Study of Liquidity Premiums on Federal and Municipal Government Securities," Phillip Cagan.

"The Yield Spread Between New and Seasoned Corporate Bonds, 1952-63," Joseph W. Conard and Mark W. Frankena.

"Interest Rates and Bank Reserves—A Reinterpretation of the Statistical Association," Phillip Cagan.

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*The Channels of Monetary Effects on Interest Rates*, Phillip Cagan, 1972.

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*The Seasonal Variation of Interest Rates*, Stanley Diller, Occasional Paper 108, 1969 (Columbia University Press).

*Mortgage Commitments on Income Properties: A New Series for 15 Life Insurance Companies, 1951-70*, Robert Moore Fisher and Barbara Negri Oppen, 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).**

**Monographs (Columbia University Press)**

*Accelerated Depreciation in the United States, 1954-60*, Norman B. Ture, 1967.

*Executive Compensation in Large Industrial Corporations*, Wilbur G. Lewellen, 1968.

4 *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).**

**Published Articles**

"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).

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"Warrants and Convertible Debt as Financing Vehicles in the Private Placement Market," Thomas R. Piper and Jasper H. Arnold III, National Bureau of Economic Research, *Explorations in Economic Research*, Vol. 4, No. 2, Spring 1977.

**X. Demand and Supply Conditions in the U.S. Capital Markets, 1975-85.**

**Monographs (D.C. Heath and Company)**

*Financial Innovation*, edited by William L. Silber, 1975.

*Understanding Capital Markets, Volume I: A Flow-of-Funds Financial Model*, Patric H. Hendershott, 1977.

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"The Financial Environment and the Structure of Capital Markets in 1985," Arnold W. Sametz, Robert A. Kavesh, and Dimitrius Papadopoulos, *Business Economics*, January 1975.

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

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

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*Private Pension Funds: Projected Growth*, Daniel M. Holland, National Bureau of Economic Research, Occasional Paper 97, 1966 (Columbia University Press).

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*Economic Aspects of Pensions: A Summary Report*, Roger F. Murray, National Bureau of Economic Research, 1968 (Columbia University Press).

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*The Response of Life Insurance Investments to Changes in Monetary Policy 1965-1970*, George A. Bishop, December 1971 (Life Insurance Association of America).

*Inner-City Housing and Private Enterprise*, Frederick E. Case, 1972 (Praeger Publishers).

"Cyclical Variations in the Risk Structure of Interest Rates," Dwight M. Jaffe, *Journal of Monetary Economics*, August 1975 (North-Holland Publishing Company).

*Capital Formation through Life Insurance: A Study in the Growth of Life Insurance Services and Investment Activities*, George A. Bishop, 1976 (Richard D. Irwin, Inc.).

*The Future of Private Pension Plans*, Norman B. Ture with Barbara A. Fields, 1976 (American Enterprise Institute).

## APPENDIX TABLES

Table A-1

### ASSETS OF U.S. LIFE INSURANCE COMPANIES, 1975-1977

(Dollar amounts in millions)

Asset Class	Dec. 31, 1975		Dec. 31, 1976		Est. Dec. 31, 1977	
	Amount	%	Amount	%	Amount	%
Bonds, notes, and debentures						
U.S. Treasury .....	\$ 4,736	1.6	\$ 5,368	1.7	\$ 5,900	1.7
U.S. federal agency .....	1,419	0.5	2,318	0.7	3,400	1.0
U.S. state and local .....	4,508	1.6	5,594	1.7	6,100	1.7
Foreign government and international .....	4,514	1.6	6,980	2.2	7,900	2.3
<b>Total government .....</b>	<b>\$ 15,177</b>	<b>5.2</b>	<b>\$ 20,260</b>	<b>6.3</b>	<b>\$ 23,300</b>	<b>6.7</b>
Corporate — 1 year or less .....	4,813	1.7	5,224	1.6	6,125	1.7
U.S. corporate — over 1 year .....	95,519	33.0	108,725	33.8	125,100	35.7
Foreign corporate — over 1 year ...	5,505	1.9	6,717	2.1	7,600	2.2
<b>Total corporate .....</b>	<b>\$105,837</b>	<b>36.6</b>	<b>\$120,666</b>	<b>37.5</b>	<b>\$138,825</b>	<b>39.6</b>
Stocks						
Preferred .....	7,757	2.7	8,568	2.7	9,575	2.7
Common .....	20,304	7.0	25,694	8.0	23,400	6.7
<b>Total stocks .....</b>	<b>\$ 28,061</b>	<b>9.7</b>	<b>\$ 34,262</b>	<b>10.7</b>	<b>\$ 32,975</b>	<b>9.4</b>
Mortgages						
Farm .....	6,753	2.3	7,425	2.3	8,825	2.5
Nonfarm .....	82,414	28.5	84,127	26.2	87,475	25.0
<b>Total mortgages .....</b>	<b>\$ 89,167</b>	<b>30.8</b>	<b>\$ 91,552</b>	<b>28.5</b>	<b>\$ 96,300</b>	<b>27.5</b>
Real estate .....	9,621	3.3	10,476	3.3	11,300	3.2
Policy loans .....	24,467	8.5	25,834	8.0	27,500	7.9
Cash .....	1,925	0.7	2,003	0.6	2,000	0.6
Other .....	15,049	5.2	16,499	5.1	18,100	5.2
<b>Total assets .....</b>	<b>\$289,304</b>	<b>100.0</b>	<b>\$321,552</b>	<b>100.0</b>	<b>\$350,300</b>	<b>100.0</b>

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

Separate account assets included in the data above totaled \$13.0 billion, \$16.2 billion, and an estimated \$16.9 billion at the end of the years 1975-77.

Table A-2

**NET CHANGES IN ASSETS, 1975-1977**

(In millions of dollars)

Asset Class	1975	1976	Estimated 1977
Bonds, notes, and debentures — over 1 year			
U.S. Treasury and federal agency .....	\$ 878	\$ 1,179	\$ 1,903
U.S. state and local .....	841	1,174	509
Foreign government and international .....	651	2,467	925
Corporate — U.S. and foreign .....	8,442	14,418	17,258
Total — Over 1 year .....	10,812	19,238	20,595
Stocks .....	6,141	6,201	-1,287
Mortgages .....	2,933	2,385	4,748
Real estate .....	1,290	855	824
Policy loans .....	1,605	1,367	1,666
Short-term debt issues .....	1,585	674	604
Cash and other assets .....	1,589	1,528	1,598
Increase in assets .....	\$25,955	\$32,248	\$28,748
<b>Memorandum:</b>			
Increase in assets excluding net capital gain or loss .....	\$22,250	\$28,941	\$31,850
Net long-term investments* .....	\$19,170	\$26,965	\$29,850

\*Defined as the net increase in assets, adjusted to exclude changes in cash, short-term investments, and non-invested assets as well as net capital gain or loss.

Table A-3

**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
1975	981	561	5,342	6,884
1976	1,518	1,204	8,286	11,008
1976 I	345	150	1,400	1,895
II	378	281	2,204	2,863
III	331	350	2,363	3,044
IV	464	423	2,319	3,206
1977 I	630	364	3,131	4,125
II	700	563	4,155	5,418
III	587	653	4,056	5,296

Note: Data are estimates based on the reporting of a sample group and represent commitments for future lending, exclusive of any amounts committed and disbursed within the same month.

Table A-4

### DELINQUENCY RATES OF REPORTING LIFE INSURANCE COMPANIES

<u>Nonfarm Mortgages by Type of Financing</u>							
End of Period	FHA	VA	Canadian NHA	Conven- tional	Total Nonfarm	Total Farm	Total Mortgages
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	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
December	1.90	1.29	1.11	4.02	3.68	1.27	3.47
1976 June	1.76	1.13	1.83	4.38	4.00	3.15	3.92
December	2.40	1.29	.80	3.57	3.37	2.07	3.25
1977 June	2.57	1.21	2.59	3.01	2.91	3.75	2.99

<u>Nonfarm Mortgages by Property Type</u>				
	1-4 family	Multifamily	Non- residential	
1970	.89%	1.05%	.70%	
1971	.93	1.01	.83	
1972	1.05	1.46	.98	
1973	1.01	2.66	1.23	
1974	1.09	4.23	2.33	
1975 June	1.04	5.54	3.31	
December	1.22	5.87	3.56	
1976 June	1.14	5.88	4.13	
December	1.24	4.97	3.26	
1977 June	1.17	4.53	2.77	

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 80-85 percent of the mortgages held by U.S. life insurance companies.

Table A-5

**COMMITMENTS OF \$100,000 AND OVER ON MULTIFAMILY  
AND NONRESIDENTIAL MORTGAGES MADE BY  
REPORTING LIFE INSURANCE COMPANIES, 1966-1977**

Year or Quarter	No. of Loans	Total Amount Committed \$000,000	Averages					
			Loan Size \$000	Interest Rate by #	Interest Rate by \$	Loan/ Value	Term yrs/mos	
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	
1975	599	1,717	2,866	10.22	10.14	73.8	21/9	
1976	1,059	3,571	3,372	9.83	9.78	73.6	21/10	
1976	I	143	534	3,734	10.10	10.08	74.0	21/4
	II	286	884	3,091	9.86	9.82	73.8	21/6
	III	325	1,159	3,567	9.81	9.71	73.6	21/11
	IV	305	993	3,256	9.70	9.67	73.3	22/4
1977	I	343	1,115	3,251	9.49	9.50	73.7	22/3
	II	470	1,385	2,948	9.29	9.22	73.5	21/7
	III	532	1,686	3,169	9.31	9.27	73.8	20/10

Averages are based on number of loans except for the interest rate based on dollars 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.

Table A-6

**AVERAGE CONTRACT INTEREST RATES BY PROPERTY TYPE IN THE UNITED STATES  
COMMITMENTS OF \$100,000 AND OVER MADE BY REPORTING LIFE INSURANCE COMPANIES**

Property Type	1973	1974	1975	1976	1976		1977		
					III	IV	I	II	III
U.S. PROPERTIES* .....	8.68%	9.41%	10.05%	9.72%	9.67%	9.63%	9.40%	9.17%	9.21%
Conventional apartments ...	8.66	9.16	10.09	9.69	9.70	9.62	9.47	9.33	9.30
Office buildings .....	8.58	9.37	9.98	9.68	9.59	9.58	9.34	9.06	9.03
Commercial retail .....	8.54	9.49	9.94	9.61	9.53	9.47	9.29	8.93	9.10
Commercial services .....	8.78	9.53	9.96	9.64	9.73	9.47	9.52	9.30	9.26
Institutional and recreational .....	8.90	9.55	10.82	9.91	9.98	9.81	9.53	9.80	9.70
Industrial .....	8.76	9.43	10.13	9.70	9.64	9.54	9.39	9.33	9.28
Hotels and motels .....	9.03	9.60	10.30	10.06	10.04	10.03	10.05	9.67	9.88
CANADIAN PROPERTIES ...	9.31	10.28	10.92	10.95	10.50	11.21	10.61	10.30	10.36
TOTAL* .....	8.70	9.47	10.14	9.78	9.71	9.67	9.50	9.22	9.27

\*The totals may include commitments for property types not shown separately. Averages are derived by weighting each rate by the amount of the commitment.

The reporting companies, which are the same in all periods, have accounted for nearly 55 percent of nonfarm mortgages held by U.S. life insurance companies over the years shown.



Table A-7

**INCOME AND COST RATIOS OF MORTGAGE PORTFOLIOS  
AND CONTRACT INTEREST RATES ON NEW LOANS  
REPORTING LIFE INSURANCE COMPANIES**

	1966	1973	1974	1975	1976
Gross accrual income ..	5.61%	6.97%	7.21%	7.35%	7.51%
Operating costs - total .	.41	.31	.31	.29	.29
Originating fees					
and premiums .....	.03	*	*	*	*
Servicing fees .....	.18	.12	.11	.10	.09
Home and branch					
office costs .....	.21	.19	.20	.19	.20
Net accrual income ....	5.20	6.66	6.90	7.06	7.22
Contract interest rate on new loans .....	5.89	8.59	8.94	9.28	9.55

\*Less than .005 percent.

Note: Because of rounding, components may not add to totals shown. The averages are derived from aggregates of dollar figures and reflect the weight of large portfolios, particularly in cost ratios; the average rate for total operating costs based on number of companies was 0.42 percent in 1976. For the years shown, reporting companies accounted for about 85 percent of mortgage loans held by U.S. life insurance companies. Comparable annual data are available since 1955; prior to 1955, separate data are available for farm and nonfarm portfolios.

Table A-8

## INFLOW OF INVESTMENT FUNDS OF REPORTING LIFE INSURANCE COMPANIES, QUARTERLY

(In millions of dollars)

Sources of Investment Funds	1976				1977		
	I	II	III	IV	I	II	III
Net change in:							
Ledger assets, adj. . . . .	\$5,052	\$4,150	\$5,043	\$ 5,805	\$5,204	\$4,660	\$5,675
Cash position* . . . . .	-524	-310	-93	783	-969	666	-1,105
Mortgages - total . . . . .	1,138	1,128	1,145	1,191	1,343	1,356	1,400
Amortization and partial prepayments	747	674	658	710	812	734	724
Prepayments in full . . . . .	369	446	480	418	524	581	627
Sales . . . . .	22	8	7	64	7	41	48
Securities - total . . . . .	2,458	2,498	2,291	3,040	2,640	2,843	2,527
Maturities . . . . .	980	957	816	1,175	841	1,125	891
Calls . . . . .	189	218	247	319	258	208	309
Outright sales . . . . .	1,289	1,323	1,228	1,545	1,542	1,510	1,327
(bonds) . . . . .	(659)	(677)	(688)	(771)	(685)	(780)	(575)
(stocks) . . . . .	(629)	(646)	(540)	(774)	(857)	(730)	(752)
Sales of real estate . . . . .	30	29	68	59	46	61	79
Sales and repayments of other assets . . . . .	8	30	11	15	12	12	11
Net change in liability for borrowed money	24	-16	-9	-58	8	84	-76
All other sources . . . . .	**	**	**	3	3	1	**
<b>Total investment funds</b>	<b>8,185</b>	<b>7,510</b>	<b>8,457</b>	<b>10,838</b>	<b>8,286</b>	<b>9,683</b>	<b>8,510</b>
Net increase (-) in policy loans . . . . .	-227	-271	-263	-244	-276	-332	-325
<b>Total cash flow . . . . .</b>	<b>\$7,957</b>	<b>\$7,239</b>	<b>\$8,195</b>	<b>\$10,594</b>	<b>\$8,010</b>	<b>\$9,352</b>	<b>\$8,185</b>

\*An increase in cash position is shown as a negative and a decrease is shown as a positive figure. Cash position is comprised of holdings of short-term securities as well as cash and bank deposits.

\*\*Less than \$500,000.

The change in ledger assets reflects premium payments and investment income, net of benefit payments, expenses, and taxes.

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



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