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

Kenneth M. Wright
Vice President &
Chief Economist

ECONOMIC AND INVESTMENT REPORT 1981

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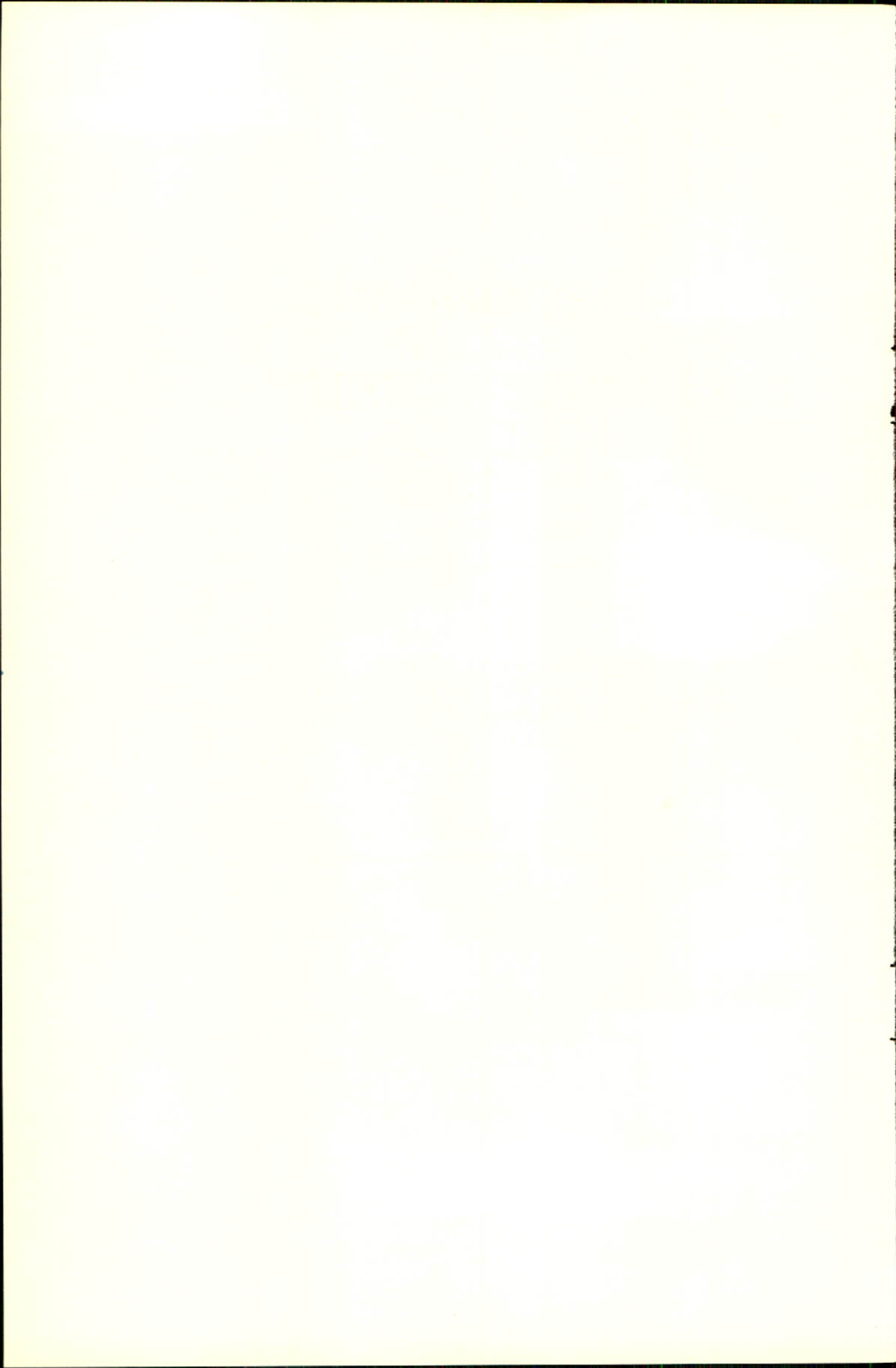


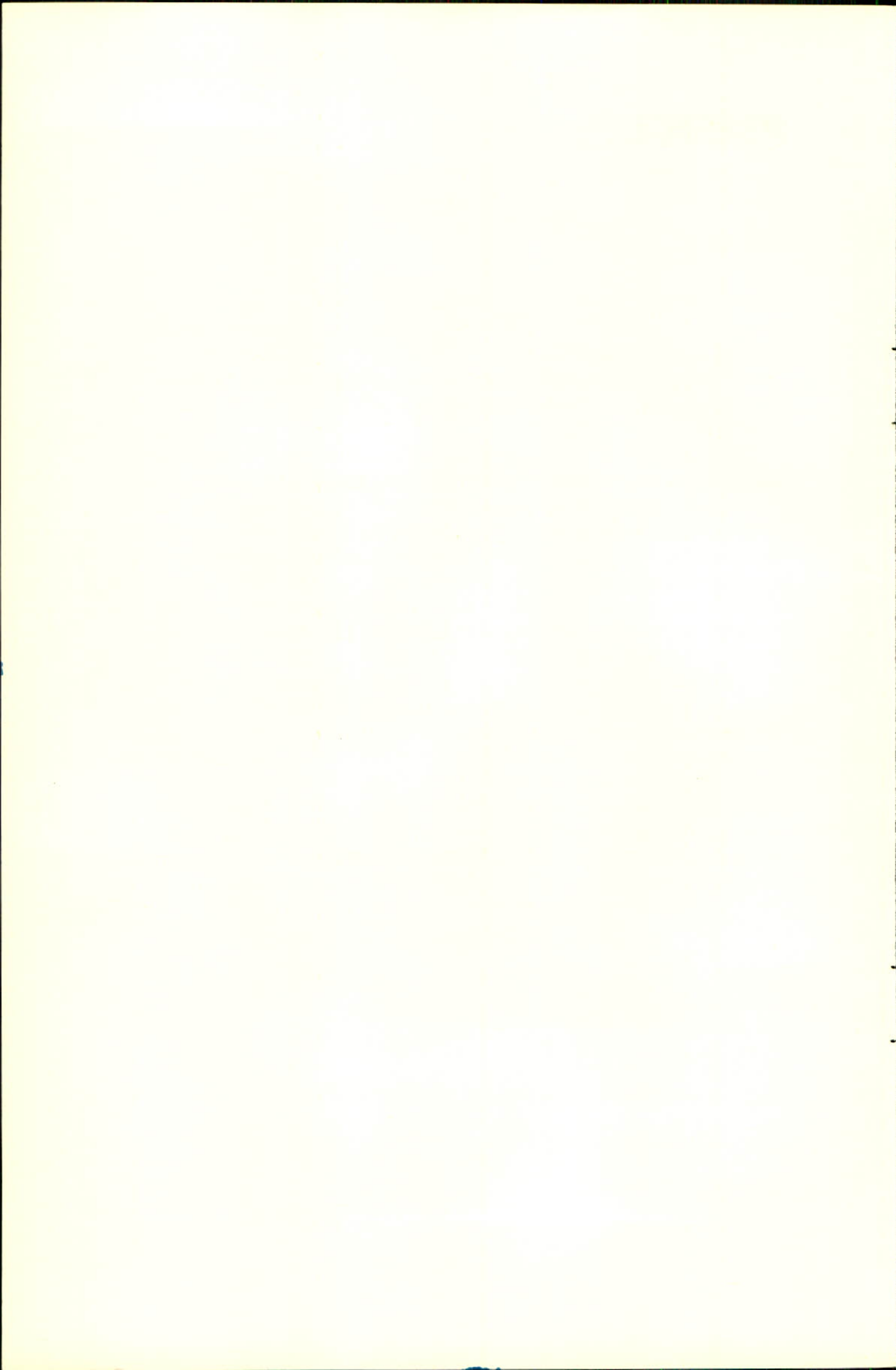
PREFACE

The resilience of life insurance companies in countering the challenges of prolonged inflation and volatile financial markets was highlighted in their investment operations in 1981. The companies made significant progress in adapting investments to changing financial conditions and in improving the match between invested assets and liabilities.

Developments in our national economy bear directly on the operations and performance of the life insurance business, most immediately on the investment side of the companies. In recognition of the interaction among life company investments, financial markets, and the national economy, the life insurance business has long maintained an economic research function within the American Council of Life Insurance. The business has made a substantial contribution to economic knowledge through a program of sponsored research projects, conducted independently outside the Council. This booklet reports to member life insurance companies and other interested parties on the progress of the fundamental economic and financial research projects funded by the business and conducted by outside research scholars. It also describes the economic and financial setting of 1981 and reports on the investment operations of life insurers during the year.

The present report reflects the efforts of several members of the economics department staff. George A. Bishop prepared the section on the economic research program; Peter M. Keir developed the section describing economic and financial developments in 1981; and Elizabeth H. Bancala was responsible for the section dealing with the investment operations of life insurance companies in 1981.

Kenneth M. Wright
February 1982



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THE ECONOMIC RESEARCH PROGRAM

Controlling inflation, promoting saving, and improving financial markets are major concerns of the life insurance business. These concerns are reflected in numerous research studies which have been funded by the business in the past and in three new projects which were undertaken in 1981.

A continuing program of fundamental research was developed within the life insurance business almost 40 years ago. Through its trade association, the business initiated the funding of a series of major studies by prominent scholars at leading universities and research organizations. In addition, an economic research department was established within its trade association with the purpose of not only guiding the outside research grants that were undertaken but also developing a better flow of economic intelligence in the financial area for the use of member companies.

Sponsorship of outside research has involved grants to support major studies of saving, capital markets, pensions, housing, corporate bond quality and investment performance, mortgage financing, the behavior of interest rates, the impact of inflation on financial markets, and capital investment and saving requirements for economic growth.

Grants exceeding $4 million have been made for research that is widely regarded by scholars and public officials as having been among the most important published in vital areas of economic and financial research. Moreover, through the work of staff professionals in its economics department, the American Council of Life Insurance has done extensive research and analysis of financial markets and the investment operations of life insurance companies. The main objectives of both the external and internal research have been to assist the investment side of the life insurance business and to contribute to the fund of basic economic knowledge and to a better understanding of financial markets. These activities are carried out under the guidance of the Council's Committee on Economic Research, composed of senior executives of member life companies.

In the Appendix to this report, a complete list is provided of the economic research studies published through the sponsorship of the life insurance business. The list also includes the larger studies produced by the Council's economics department.

New Outside Economic Research Financed by the Council

Professor Dale Jorgenson of Harvard University has carried out two research projects following up work he had done for the Study of Capital Investment and Saving directed by Dr. George von Furstenberg and published in 1980 (see Appendix). The first project, coauthored with Martin A. Sullivan, entitled "Inflation and Corporate Capital Recovery" was published in a volume edited by Charles R. Hulten, *Depreciation, Inflation, and the Taxation of Income from Capital* (The Urban Institute Press, Washington, D. C., 1981). The study concluded that the acceleration of capital recovery and the investment tax credit have outweighed the effects of inflation in their impact on the effective tax rate of corporations. The study also analyzes the pros and cons of various proposals for further acceleration of capital recovery and an increase in the investment tax credit. Most of the proposals current in early 1981 would reduce effective tax rates on corporations and increase the effective tax differentials on different types of assets. The authors suggest two alternative proposals. The first is immediate expensing of the cost of acquisition of assets. The second is a combination of a first-year cost recovery system and an investment tax credit with special characteristics. Each of these alternatives has certain advantages and disadvantages.

The second project of Dr. Jorgenson's, which is coauthored with Barbara Fraumeni, is entitled "The Role of Capital in U. S. Economic Growth, 1948-1978." The study shows definite evidence of a slowdown in the rate of growth of capital at the sectoral level. It is expected to be published in 1982.

A three-year study of the changing roles of corporate debt and equity financing in the last twenty years was authorized by the Council's Board of Directors in 1978. It is being carried out by the National Bureau of Economic Research under the direction of Professor Benjamin M. Friedman of Harvard University. The project has two primary objectives: (1) to interpret and empirically evaluate the roles played by debt and equity in financing capital formation in an era of rapid and unpredictable price inflation, complex patterns of intermediation, increasing internationalization of financial flows, and pervasive regulatory and tax constraints; and (2) to assess the practical opportunities for public policy to exploit a richer understanding of the underlying economics of debt and equity finance in promoting capital formation and financial stability.

The output of this project can be viewed in three parts. The first consists of the papers so far published in professional journals or books. Ten such studies are listed in the Appendix. The second is a set of papers presented in April 1981 at a conference in Williamsburg, Virginia. The purpose of the conference was to convey research findings

directly to business decision makers. There were some 60 participants from a variety of financial institutions and other business corporations. The University of Chicago Press will publish a volume of the Williamsburg conference proceedings with an introduction providing a review of the research project as a whole. Some of these papers have received a wide circulation as "Working Papers" of the National Bureau of Economic Research. Publication of the conference volume is scheduled for the spring of 1982.

A third part of the output will be a volume from a National Bureau Conference on research in the capital structure of U. S. business. The papers will cover the historical experience of debt and equity yields, hypotheses on regularities in corporate capital structures, and analyses of inflation, attitudes toward risks, and institutional influences on capital structures.

In the fall of 1981, three new research projects were authorized by the board of directors of the Council. The first is a study of inflation in ten countries to be directed and written in part by Professor Ezra Solomon, Dean Witter Professor of Finance, Stanford University. The study will examine the causes, consequences, and policy responses to inflation in the selected countries. The countries include the United States, West Germany, France, the United Kingdom, Italy, Japan, Canada, Switzerland and two others (probably the Netherlands and Sweden). The U. S. study will be done by Professor Solomon, and each of the others will be made by a leading business economist in that country.

The second project is a study of real estate finance in the 1980s, to be directed by Dr. Anthony Downs, Senior Fellow at The Brookings Institution. This project will be a comprehensive analysis of the financing of commercial and other real estate in the United States, including the impact of financial arrangements, inflation, regulation, and taxation on the resources devoted to real estate. The study will also aim to improve the data available on investment in real estate of various types. The project is being funded jointly with the Ford Foundation and the Federal National Mortgage Association.

The third project is a study of the level and composition of household saving, including an analysis of the financial-asset components of saving and the impact of recent events on saving flows. The study will be concerned in part with problems of definition and measurement and in part with the determinants of household saving. This project will be directed by Professor Patric Hendershott of Ohio State University.

New Departmental Research

The economics staff of the Council is engaged in many forms of financial research and writing in the fields of insurance and financial markets. One such activity was the preparation of the chapter on insurance companies in the textbook on *Financial Institutions and*

Markets, edited by Polakoff and Durkin, which was published in its second edition this past year. This classic compendium is widely used in both undergraduate and graduate courses in finance. Dr. George A. Bishop, CLU, Director of Economic Research, and Dr. Thomas R. Robinson, Senior Economist, were responsible for the preparation of this contributed chapter.

The economics department developed a number of short papers in 1981 for the series released under the title "Economic Perspectives." These are designed for investment officers, company planners, and others both inside and outside the business. Topics dealt with this year were the following: (1) crosscurrents in personal saving, (2) Reagan's business tax cuts compared with Kennedy's, (3) indexed federal spending, (4) perspectives on defense spending, and (5) the economic outlook for 1982.

Beginning in the second half of 1981, the economics department has carried on monthly surveys of major items affecting liquidity conditions of a sample of companies representing about three quarters of total general account assets of U. S. life insurance companies. The nature and extent of liquidity pressures within the business during the first half of 1980 had been examined in detail by the Task Force on Liquidity Problems, established by the Council's Board of Directors in March 1980 when cash flow problems of some companies were severe. The 1981 monthly surveys were undertaken to meet the needs of the Task Force for a monitoring system providing timely information on liquidity conditions. The responses of reporting companies indicated that a small number of companies experienced liquidity pressures for successive months in 1981 but most companies had found ways of mitigating or dealing with such problems.

Continuing Staff Activities

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 source of current financial information for 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 commitment yields of directly placed securities, quarterly data on interest rates and other characteristics of income-property mortgage loans, annual data on gross yields of new investments, and annual data on the quality of

bond and preferred stock portfolios are tabulated by the economic research staff. Some of the information developed in these studies is presented in later sections of this report.

A major function of the economics department is its work with various policymaking committees of the Council. For example, the economics department provides staff support to the Economic Policy Committee and its Subcommittee on Fiscal and Monetary Policy. 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. A new development in late 1981 was the establishment by the Council's Board of Directors of a Task Force on Financial Services Integration, to deal with the rapid changes taking place in financial services and in the relations among different types of financial institutions.

The economics department also provides staff support to the Subcommittee on Investment Aspects of Valuation Problems. The department produces an annual report on 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. During the past year, staff has been involved in such issues as a proposed NAIC-industry study of the adequacy of the MSVR, a proposal to report market values for bonds in the annual statements required by state insurance departments, and a proposal to extend to directly placed securities the identification system (CUSIP numbers) used for most publicly issued securities.

Activities of the Investment Section of the Council and the annual Life Officers Investment Seminar also receive staff support from the economics department. The Investment Section holds an annual meeting each fall and a spring meeting in March or April in conjunction with the Council's regional meetings. 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.

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, speaking to outside groups, describing current investment attitudes and policies, and reviewing research manuscripts by academic authors working in the investment field. 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 AND FINANCIAL DEVELOPMENTS IN 1981

The United States economy exhibited considerable volatility during 1981 as in 1980—especially in financial sectors—with activity dropping abruptly into recession during the latter part of the year, and interest rates showing related net declines. On average, the level of real economic activity posted little net growth for the year—the third year in a row of minimal net change.

This continued failure of the economy to achieve any sustained real growth reflected the dampening impact on spending of persistently high real interest rates. Through most of the year high rates exerted special constraints on categories of spending that rely heavily on credit—particularly housing and automobiles. Then during the late summer and fall, weakness in credit-dependent sectors spread to the economy more generally, forcing businesses to make widespread cutbacks in production in order to trim inventories.

The economy showed its greatest strength in the initial months of the year, generating first quarter growth in real GNP at a surprising 8.6% annual rate. In the three succeeding quarters, however, final demand for products other than motor vehicles experienced a general decline, as can be seen in Table 1. Sales incentive programs temporarily boosted final demands for autos in both the first and third quarters, and real GNP showed a modest bounce-back in the third. However, the improved auto sales borrowed heavily from future demand, and the third quarter pickup in real GNP was more a sign of weakness than strength, since it was attributable largely to an involuntary accumulation of inventories.

The more favorable side of the general slackening in economic activity is that it contributed to a noticeable moderation of inflation. The GNP deflator slowed from a 9.7% rise in 1980 to an 8.6% increase in 1981. However, although progress on inflation was achieved with no increase in the unemployment rate during the first three quarters, by the end of 1981 the recession had boosted the unemployment rate from about 7.5% to nearly 9.0%.

Average interest rates remained high in 1981, due in large measure to the resolute efforts of the Federal Reserve to slow inflation through continued restraint on the growth of money and credit. From the fourth quarter of 1980 to the fourth quarter of 1981, expansion in the basic money supply (M1-B) was limited to 5% (2-1/4% after adjustment for shifts to NOW accounts)—a significant reduction from the expansion

rates of about 7-1/2% experienced in each of the two preceding years.

In addition to the Fed policy of restraint and the continuing underlying (albeit damped) effects of inflation, the high levels of interest rates in 1981 reflected the large continuing buildup in actual and prospective deficit financing by the federal government. As money and credit growth was brought under more stringent control, this huge federal financing need loomed increasingly large as a share of total credit supplies. It generated growing concerns that private borrowers would have to bid for a shrinking proportion of total credit and in the process keep interest costs at unusually high levels.

At the end of 1981—as would be expected in a period of general recession—short-term interest rates were at levels well below the highs reached in late 1980. This pattern of change is illustrated by the representative rate series plotted in Chart 1. Within the year, as the chart also shows, short rates fluctuated over a wide range, continuing the pattern of increased variability that has been evident since the fall of 1979 when the Federal Reserve shifted to its current policy of targeting open market operations on reserves rather than the federal funds rate.

Table 1

Contribution of Motor Vehicle Industry to 1981 Changes in Real GNP, Final Sales, and Business Inventories

(Quarter-to-quarter changes, billions of 1972 dollars, seasonally adjusted annual rates)

	1981			
	Q1	Q2	Q3	Q4p
Real GNP	$30.8	$-6.0	$ 5.4	$-20.2
Motor vehicles	0.0	1.5	0.5	-9.0
GNP less motor vehicles	30.8	-7.5	4.9	-11.2
Final sales	25.1	-18.2	1.3	-13.8
Motor vehicles	7.6	-10.7	6.3	-7.8
Final sales less motor vehicles	17.5	-7.5	-5.3	-6.0
Change in business inventories[1]	5.8	12.2	4.1	-6.4
Motor vehicles	-7.6	12.3	-5.9	-1.2
Change, less motor vehicles	13.4	-0.1	10.0	-5.2
Memo:				
Unit auto sales (millions, SAAR) Total	10.0	7.8	9.1	7.2
Domestic	7.3	5.6	6.9	5.2

[1]Figures are quarter-to-quarter changes in the net accumulation (or change) in inventories.

p-Preliminary.

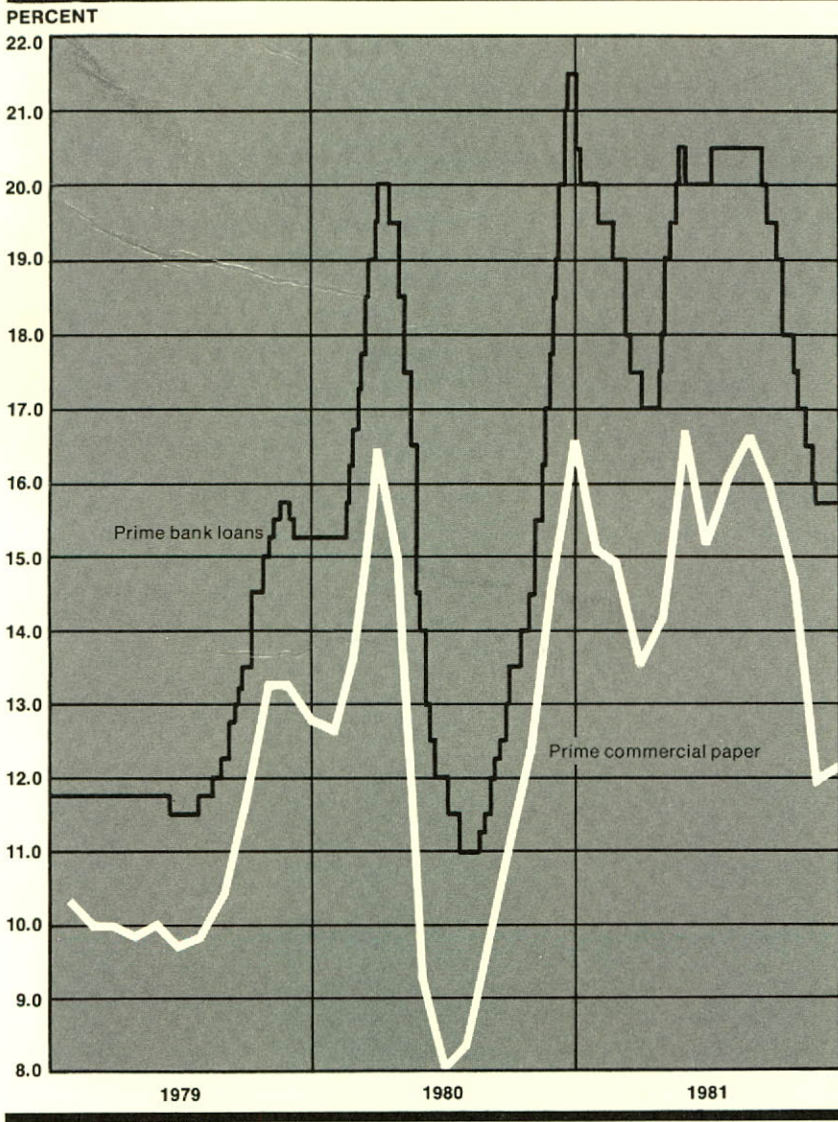
Source: U.S. Department of Commerce.

At their intra-year highs, short rates generally did not exceed the peaks they had reached in late 1980.

Long-term interest rates, on the other hand—while showing their usual damped response to major swings in short-term rates—also posted sizable further net advances through early October, before

Chart 1

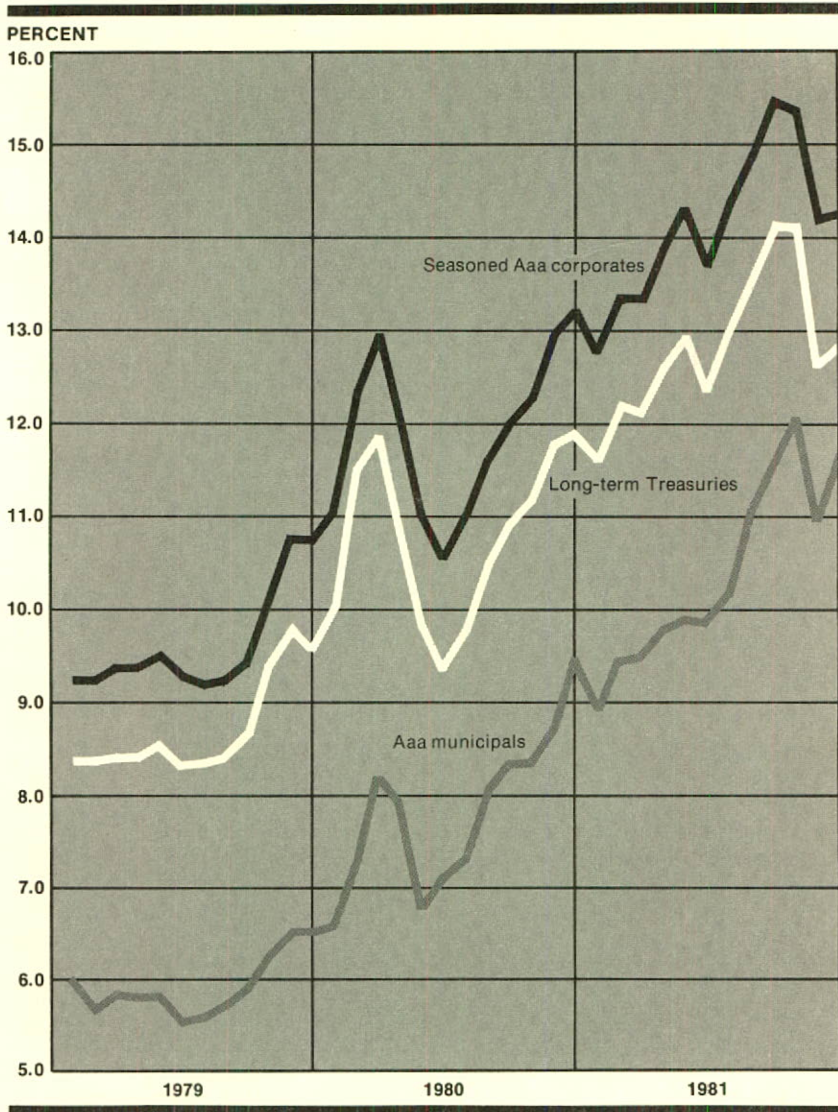
SHORT-TERM INTEREST RATES



turning down. At their October peaks, long rates were at new record levels, generally 2 to 3 percentage points above the highs of late 1980, as shown in Chart 2. Moreover, even at year-end, long rates were still well above the highs, reached in late 1980.

In the closing weeks of 1981, a sizable part of the fall downturn in

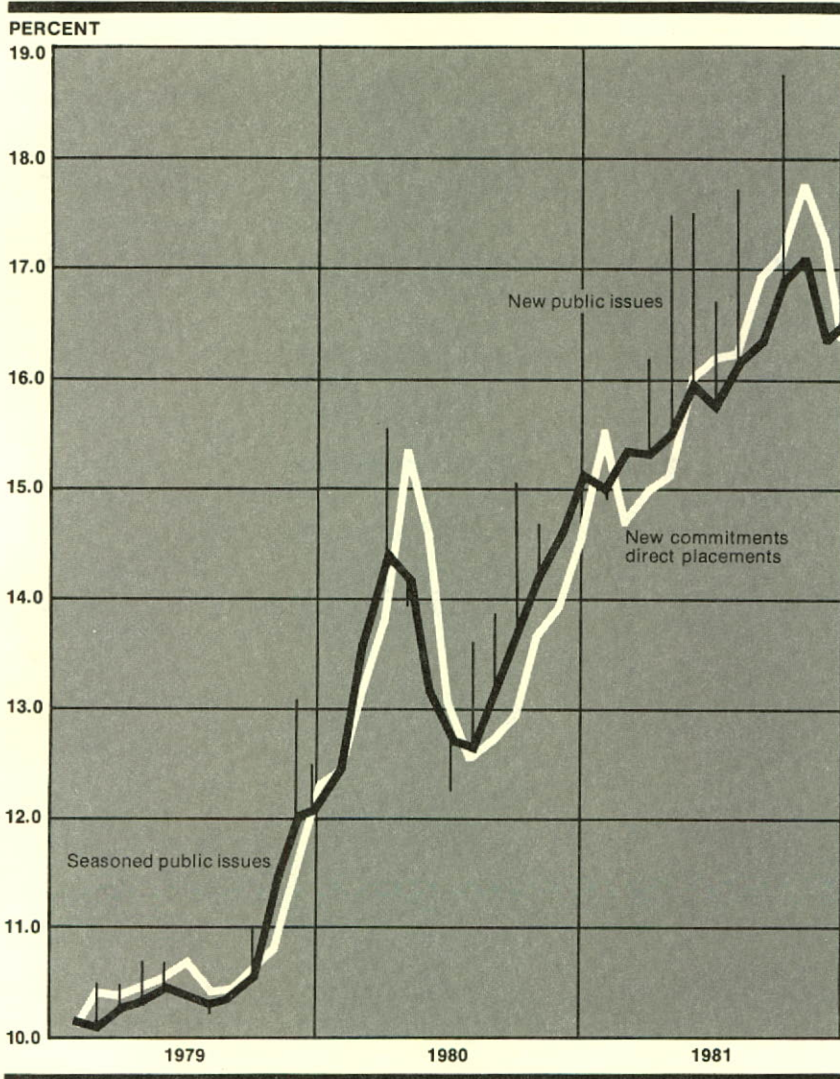
Chart 2
YIELDS ON PRIME BONDS



market rates induced by the recession was retraced. This reversal developed largely because a November-December pickup in the pace of monetary growth raised doubts among market participants whether Federal Reserve operations could be expected to contribute to the further near-term declines in money market rates that most analysts

Chart 3

YIELDS ON Baa CORPORATES



had been predicting. Because these questions developed at a time when the Treasury was an unusually heavy borrower and when many investors had moved to the sidelines (due to year-end tax strategies), dealers were reluctant to underwrite such a heavy volume of new debt without some upward adjustment in market rates from the reduced levels reached at the start of December.

Looking to early 1982, a majority of market participants still anticipated some additional weakness in the economy, and at least some modest seasonal easing in interest rates. But there were appreciable differences of opinion as to how soon advances in real GNP and interest rates might begin to occur thereafter, and how large they might be.

Transition to Recession

The 8.6% spurt in real economic activity during the first quarter reflected a combination of influences. Several key categories of spending (federal outlays, business investment, and consumer outlays) posted significant gains in the quarter, as can be seen in Table 2. In addition, several spending categories that later became significant sources of weakness (residential construction, state and local government outlays, and net exports) were either temporarily stable or improved a little. Finally, the general contraction of business inventories that had been so sharp in the fourth quarter of 1980 became

Table 2

Constant Dollar Gross National Product

(Percentage changes; quarterly data, seasonally adjusted annual rates)

				1981			
	1979	**1980**	**1981p**	**I**	**II**	**III**	**IVp**
Real GNP	3.2%	-0.2%	1.9%	8.6%	-1.6%	1.4%	-5.2%
Final sales	3.5	0.7	1.2	6.9	-4.7	0.3	-3.6
Personal consumption expenditures	2.9	0.5	2.6	5.8	-2.1	3.3	-1.8
Residential construction outlays	-5.2	-18.6	-6.0	3.6	-23.4	-36.2	-26.9
Business fixed investment	6.5	-3.0	2.0	13.3	-2.1	6.9	-10.9
Federal government purchases	1.9	6.3	2.7	14.8	-8.4	3.1	19.4
State and local government purchases	1.2	1.0	-0.9	0.2	-3.8	-4.2	0.1
Memo:							
Net exports (billions of dollars)	$37.7	$52.0	$44.3	$50.9	$46.2	$43.2	$36.7

p-Preliminary.

Source: U.S. Department of Commerce.

significantly less so in early 1981, thus providing a marked algebraic boost to GNP growth in the first quarter.

Auto sales rose substantially in the early months of the quarter because of the attractive price rebates and other special sales incentives being offered to buyers. But these stepped-up sales were accommodated entirely from inventories; auto output for the quarter actually declined slightly.

By the end of the first quarter, evidence had accumulated suggesting that the unexpected initial strength of the economy was only a temporary fillip. This impression was then confirmed in the second quarter when the change in real GNP, as well as changes in most of its key components, all showed at least modest declines. Residential construction, net exports, and the combination of federal plus state and local government outlays, all dropped off sharply, while personal consumption and business investment outlays showed smaller declines. The key exception to this general slackening was inventories, which expanded at nearly an $11 billion annual rate.

Second-quarter inventory growth was attributable primarily to an expansion of auto stocks. Factors accounting for this increase were essentially the reverse of those that had developed in the first quarter, as was shown in Table 1.

While auto sales received a renewed fillip in the third quarter from the reintroduction of sales-incentive programs and accounted for most of the pickup in overall personal consumption spending, final sales of other items generally slowed further. Expenditures for housing were especially weak; additional cutbacks in state and local government spending more than offset renewed expansion in federal spending; and net exports weakened substantially further. While real GNP did show a modest overall expansion in the third quarter, this was more than accounted for by a sharp increase in inventories for products other than autos.

The drop-off in business fixed investment spending in the second quarter, relative to the first and third, was essentially a reflection of variations in demand for autos, as businesses, like consumers, responded to the introduction and rescission of sales-incentive programs. Outlays for nonresidential structures trended higher through all three quarters, with commercial building activity and outlays for petroleum drilling continuing to expand.

A classic recession began to develop in the late summer and rapidly gained momentum during the fourth quarter. In the fourth quarter, personal consumption spending slowed—showing weakness in outlays for autos as well as other items. Businesses generally curtailed production to try to reduce excess inventories and also cut back outlays for plant and equipment. Residential construction expenditures weak-

ened still further—dropping monthly housing starts into the historically low range of 700 to 900 thousand units at an annual rate. And unemployment rose nearly to the rate reached in the deep recession of 1974-75. In the face of these across-the-board reductions in demand, business inventories continued to grow. While some scattered evidence at year-end suggested that the downward momentum of the recession might be slackening, few analysts were expecting an upturn to get underway in the initial months of 1982.

Progress on Inflation

The Administration's decision to opt for full decontrol of oil prices at the start of its tenure boosted energy prices at nearly a 36% annual rate during the first quarter of 1981. The effects of this increase on the overall GNP deflator were more than offset, however, by a significant slowing of price pressures in other sectors—chiefly retail food and housing markets.

During the second quarter, upward pressures on food prices virtually ceased; increases in energy prices slackened appreciably relative to the first quarter; and housing markets continued to be less inflationary than at the end of 1980. Taken all together, these influences damped the increase in the GNP price deflator (shown in the first column of Table 3) to the slowest pace achieved since the first quarter of 1978.

Table 3

Measures of Inflation

(Percentage changes; quarterly data, seasonally adjusted annual rates)

		GNP Deflator	Producer Price Index (Finished Goods)	Consumer Price Index	CPI Core[1]
Calendar years					
1979		8.5%	11.1%	11.3%	7.6%
1980		9.0	13.4	13.5	9.4
1981		9.1	9.2	10.4	8.6
1980	I	9.3	16.7	16.5	11.3
	II	9.8	10.5	13.1	10.3
	III	9.2	14.1	7.8	8.9
	IV	10.7	8.8	12.8	7.7
1981	I	9.8	10.7	10.9	8.1
	II	6.4	9.1	7.5	8.9
	III	9.9	4.1	11.9	10.2
	IV	8.4	6.7	7.9	7.6

[1]Consumer price index less food, energy, home purchases, and used cars.

Source: U.S. Department of Commerce and Bureau of Labor Statistics.

Unfortunately, the slackening effect of these special factors ceased during the third quarter. Even though energy costs receded substantially further, food prices rose from the low 1% annual rate of increase in the second quarter to a little over a 7% annual rate in the third, and the costs of mortgage financing also turned up sharply late in the second quarter. Overall, the CPI rose at nearly a 12% annual rate, while the GNP deflator rose at just under a 10% annual rate.

Looking through these special factors to the so-called core index of the CPI (which excludes prices for food, energy, home purchases, and used cars), the quarter-to-quarter changes in this core (column four of Table 3) suggest that no real progress was achieved in slowing the underlying rate of inflation during the first nine months of 1981. The producer price index (column two of the table) did show a marked improvement in the third quarter, however, and this progress was continued in the fourth. Also, by the fourth quarter the GNP deflator, the CPI, and the CPI core were all showing a significant deceleration.

A general weakening of price pressures is, of course, what would be expected during a period of sharp recession. Whether this evident slackening leads over time to more permanent progress in the fight against inflation will depend in large measure on the extent to which it works through into smaller increases in unit labor costs. There were some signs in 1981 that increases in the costs of labor compensation were being slowed. The President's action on the air traffic controllers strike and the limitation of the federal pay increase to less than 5% represented a significant tactical change at the national level. Likewise, the evident willingness of some unions to preserve jobs in troubled industries by agreeing to defer benefits already gained in existing contracts suggests that downward adjustments in employment costs in the face of changing economic realities may be a bit less inflexible than economists have often assumed.

It is too early to make a confident prediction of how the costs of compensation are likely to be affected by labor settlements once the economy starts to recover. Although the moderating effects of a recession on labor negotiations typically persist through the initial stage of the recovery, a period in which labor productivity typically improves, the critical test for compensation costs will come after the recovery has proceeded far enough for unemployment to recede and for productivity increases to begin to taper off.

Money, Federal Reserve Policy, and Interest Rates

Short-term market rates in 1981 continued to exhibit the accentuated intra-year volatility that has characterized their movement since the fall of 1979 when the Federal Reserve first shifted to its present policy of targeting open market operations on bank reserves. With Federal

Reserve operations no longer constraining week-to-week movements in the federal funds rate within a narrow range, dealers and other market professionals are now more vulnerable than before to abrupt, unexpected adjustments in the cost of financing trading positions. To try to cope with this added rate risk, they have become close students of the relationship between weekly movements in the monetary aggregates and the Federal Reserve's published longer-run money growth targets. Through such comparisons they hope to anticipate when deviations of the money data from target will lead the Fed to adjust the supply of bank reserves (through open market action) and in the process induce changes in the federal funds and other market interest rates.

Market professionals have experienced considerable difficulty, however, in judging when and how much the Fed will, in fact, adjust its reserve targets, and how much such adjustments are likely to affect interest rates in the short run. As a result, they have become more tentative than before in their positioning strategies and are quick to change course when money growth and the costs of financing positions move counter to their expectations. This has had the effect of increasing both the day-to-day volatility of market rates and the amplitude of interest cost swings within the year. This intensified variability of interest rates is graphically illustrated by the 1980 and 1981 swings in short-term rates shown in Chart 1. The precise dimensions of these changes are quantified in Table 4.

A good example of the way in which market uncertainties about monetary policy targets can accentuate interest rate volatility is provided by the large March drop in short-term interest rates, shown in Chart 1. When federal funds in March traded persistently at rates below 15%—the lower limit of the Fed's previously reported (15 to 19%) range of tolerance—market participants concluded that the Federal Reserve had decided to ease the supply of reserves a bit. A modest policy modification of this type seemed reasonable at the time, because growth in M1-B (adjusted for shifts to NOW accounts) had for some time been running below the lower limit of the Fed's published target range, and incoming data were suggesting a general slackening in economic activity.

The sustainability of these sharp March rate reductions was quickly called into question, however, when publication (in early April) of the Fed's February policy record suggested that the lower limit of its range of tolerance for the funds rate had not been reduced below 15%. In addition, as April progressed, a sharp pickup in growth of the monetary aggregates led the Federal Reserve to force the banking system to obtain an increased share of its required reserves through borrowing at the discount window. Individual banks in need of reserves sought to avoid the administrative discipline of the discount window by turning

Table 4

Interest Rate Comparisons

(Weekly averages—Percent per annum)

	Late 1980 Highs (1)	March 1981 Lows (2)	Summer/ Fall Highs (3)	(Date)	End of 1981 (4)	Changes in basis points Col. 1 to 2	Col. 2 to 3	Col. 3 to 4
Short-term Rates								
Federal funds	20.06%	13.48%	19.93%	(7/10)	12.54%	-658	+645	-739
Commercial paper	17.57	12.76	16.72	(8/21)	12.78	-481	+396	-394
Prime bank loans	21.50	17.00 (4/2)	20.50	(9/11)	15.75	-450	+350	-475
Long-term Rates								
Treasury bonds	12.25	11.77	14.59	(10/2)	13.26	- 48	+282	-133
Corporate bonds								
Seasoned Aaa	13.49	13.06	15.85	(10/2)	14.50	- 43	+279	-135
Seasoned Baa	15.36	15.20	17.25	(10/2)	16.86	- 16	+205	- 39
Municipal bonds								
High-grade	9.80	9.20	12.60	(10/30)	11.95	- 60	+340	- 65
Home mortgages								
(FHLMC series)[1]	14.95	15.40	18.63	(10/9)	17.04	+ 45	+323	-159

[1]Contract interest rates on commitments for conventional first mortgage loans.

Sources: Federal Reserve, Moody's Investors Service, and the Federal Home Loan Mortgage Corporation.

first to the federal funds market. In the process, they bid the federal funds rate sharply higher. This upward rate pressure then spread more generally to other markets. To reinforce the constraint being exerted on banks by their expanded use of the discount window, the Federal Reserve (at the start of May) raised its basic discount rate from 13% to 14% and increased the discount rate surcharge (then applicable to extended use of the window by large banks) from 3 to 4 percentage points.

The general interest rate advance triggered by these various policy actions carried short-term rates back about to their end of 1980 highs. As May progressed, however, it became apparent that this rate adjustment too had been overdone. Data on the monetary aggregates for May and June showed that the sudden escalation of monetary growth in April was just a temporary uptick. With new statistics tending to confirm a cessation in real economic growth as well, a sizable part of the April-May advance in rates was soon reversed.

The move of short-term rates back to their spring highs during July and August (shown in Chart 1), and the associated sharp, further increases in long-term rates (shown in Chart 2), were attributable primarily to the interaction of a stringent monetary policy with heavy Treasury borrowing. Not only was the Treasury involved in a large volume of current financing in this period, there was also a sharp escalation in market estimates of the additional financing it was likely to require in the fourth quarter of 1981 and the initial quarter of 1982. In

addition, the dimensions of the federal tax cut enacted in August suggested that even larger federal deficits would probably have to be financed in the period after fiscal 1982.

During the latter part of June and through most of July the federal funds rate had fluctuated in a range of 18-1/2 to 20%. This kept short rates generally at the high end of a steeply declining yield curve and made it very costly for market professionals to finance underwritings of the frequent new longer-term Treasury offerings that were then coming to market. While dealers were at first hopeful that the observed tendency for growth in M1-B to fall below the Fed's stated target range would soon lead to an easing of their high financing costs, they became increasingly discouraged about this possibility as the funds rate persisted at levels close to 19%. About the middle of July, when reports circulated that the Federal Reserve was content to tolerate growth of M1-B (adjusted) at the low end, rather than the midpoint, of its 3-1/2 to 6% target range, the reason for the continued high funds rate became clearer. Then as July data suggested less weakness in the economy than many had anticipated, market participants became concerned that short-term interest rates might remain high and seriously complicate the task of underwriting the huge fourth-quarter supply of new Treasury debt—with more serious consequences for other types of borrowers.

These market concerns began to moderate during the latter part of the third quarter when short-term interest rates did finally turn down. This rate decline began in the federal funds market. In effect, with money growth falling short of the Fed's target, the demands of depository institutions for reserves declined relative to the supply of nonborrowed reserves the Fed was supplying to implement this target. As a result, demands for borrowing by depository institutions in both the federal funds market and at the Fed discount window dropped off sharply. By late September the declines in short rates began to spill over into a levelling off of bond yields, and then in October most long-term rates also turned down.

This general turn in market rates and the dimensions of the subsequent general decline were reinforced by a series of Federal Reserve actions on discount rates. On September 21 the Fed reduced the surcharge on frequent borrowing by large depository institutions from 4 to 3 percentage points. Then at the end of October it reduced the basic discount rate from 14% to 13% and lowered the surcharge from 3 to 2 percentage points. On November 16, the surcharge was removed entirely. Finally, in early December—when the federal funds rate began to trade below the discount rate and adjustment borrowing at the discount window had dropped to negligible levels—the discount rate was reduced to 12%.

Capital Market Developments

At a number of points during the summer of 1981, analysts gloomily reported that capital markets had virtually ceased functioning. With long-term rates pressing to new highs, private borrowers showed considerable reluctance to lock in such elevated rates for extended periods. At the same time, investors were chary about committing funds for long periods when the odds seemed to suggest that yields would shortly move higher and when no current yield sacrifice was required to stay short, given the pattern of yields then prevailing, with short rates above long. For the year as a whole, however, even though the total volume of capital market financing was well below 1980, borrowing in key sectors was still large. In the federal sector, net new debt financing of all types totaled more than $85 billion, an increase of about $8 billion relative to 1980. Net borrowing by U.S. sponsored agencies rose about $5 billion to nearly $30 billion, and gross offerings of new corporate securities (including stocks) were only about $5 billion below the record of nearly $74 billion issued in 1980—even when low coupon offerings are measured in terms of cash raised, rather than final maturity value.

Not surprisingly, the sector of capital markets in which new financing suffered the greatest attrition was the market for home mortgages, where net borrowing appears to have dropped by one quarter from the 1980 volume of about $80 billion—which itself was already down appreciably from 1979. Next to home mortgages, year-to-year shrinkage in the volume of financing was greatest in the market for state and local government securities—where net new offerings apparently contracted by roughly 15%.

Because net securities market financing by the U. S. Government totaled more than $90 billion in 1981, Treasury officials had to continue tapping all maturity sectors to accommodate their growing needs. While the volume of new offerings floated in the Treasury bond market was slightly smaller than in 1980, new offerings of medium-term debt exceeded the comparable 1980 figure by more than $15 billion. In addition, federally sponsored credit agencies had to increase the volume of their debt offerings, with some of this borrowing also being channeled into markets for medium- and long-term issues. Total offerings by sponsored credit agencies were especially large during the early summer, when a buildup in credit demands from member thrift institutions facing liquidity strains forced the Federal Home Loan Bank System to go to the market with an unexpectedly large volume of new debt.

The overall financing needs of nonfinancial corporations expanded in 1981 because the gap of business capital outlays over internally generated funds widened, and because business inventories grew on

balance instead of contracting slightly as they had in 1980. Businesses financed heavily in short-term markets over most of the year—particularly at times when interest rates were under general upward pressure. Consequently, their uses of domestic bank credit, bankers acceptances, and commercial paper all showed sizable increases for the year, although rate relationships in the first quarter made it attractive for them to substitute borrowing in Euro-dollar markets for a sizable part of their domestic short-term financing.

Because this heavy volume of short-term borrowing exerted added pressure on already low corporate liquidity ratios, businesses moved quite aggressively to finance in capital markets whenever declines in long rates from earlier highs appeared to provide somewhat more favorable conditions for bond financing. Special efforts of this type were initiated at several points in the first quarter, during much of May and June, and then again over most of the fourth quarter. To facilitate the underwriting of bond offerings, investment bankers expanded their use of innovative financing techniques—such as low coupon and zero coupon issues—as a means of broadening investor interest. As a result, deep discount issues of this type accounted for approximately one tenth of the actual proceeds of corporate bond offerings in 1981, including offerings of financial as well as nonfinancial corporations.

While new issues of corporate stock showed a year-to-year increase of nearly \$3-1/2 billion in 1981—due in part to the expanded issuance of new equities in corporate takeovers—the volume of new bonds offered publicly and in direct placements appears to have dropped off by more than \$8 billion, with the reduction split about equally between public and direct offerings. Many issuers of corporate bonds, while acknowledging a pressing need to fund short-dated debt, were still reluctant to lock in the unprecedentedly high cost of financing long-term. To resolve this dilemma, they often opted to borrow in the intermediate-term maturity area. As a result, the share of bond offerings with maturities in excess of 20 years dropped from about half of the total in 1980, and nearly five eighths in 1979, to only about one third in 1981. On the other hand, the share with maturities of 10 years or less rose to a little over half in 1981, from about three eighths in 1980 and only a little over one quarter in 1979. The share of total new bond offerings falling within the various Moody's quality rating categories showed relatively small changes between 1980 and 1981.

The severe cutback in home mortgage financing during 1981 reflected the widespread earnings and liquidity squeeze on key types of mortgage lenders, as well as the difficulties home buyers were experiencing in qualifying for credit in the face of weakening labor markets, high interest rates, and the legacy of previously inflated home prices. Although mortgage market professionals developed new instru-

ments—such as wrap-around mortgages—to facilitate the distribution of backed-up home inventories, these were not sufficient to forestall the sharp overall cutback in home sales. Mortgage debt creation for the financing of multifamily housing also dropped off quite sharply relative to 1980—due partly to reduced support from federal programs.

In markets for commercial mortgages there was also an appreciable cutback in the net issuance of new debt relative to 1980, but the change was much less abrupt than in home mortgage markets. Financing of office buildings and retail shopping centers held up more strongly than that for some other types of commercial properties. As in bond markets, innovative terms were typically included in loan contracts to help lenders cope with inflation risks and at the same time keep initial financing costs to borrowers within manageable bounds. Among the approaches used were such things as lender participation in rising rental income; participation in the capital appreciation of projects; indexed interest rates; renegotiable rates; and lenders' call options.

Fiscal strains at the state and local government level were aggravated substantially by the 1981 recession—particularly in the midwestern region of the country where heavy industry represents such an important share of total activity. In searching for new sources of funds to cover such needs, many governmental units were constrained by the limits imposed on their tax bases by the taxpayer revolts of the 1970s. In addition, state and local governments were facing a reduction in federal grants growing out of the Administration's new budget initiatives. Finally, the investment appeal of their securities was being significantly eroded by the cut, from 70% to 50%, in the top-bracket rate of the federal personal income tax schedule.

These financing difficulties at the state and local level were reflected in a marked narrowing of the spread of yields on taxable bonds over those on tax-exempt municipals. At the end of 1981, for example, the yield on 30-year Treasury bonds exceeded that on high-grade municipals by only a little over 1 percentage point, substantially less than the roughly 2-1/2 percentage point spread that had prevailed one year earlier. Moreover, the level of yields on high-grade municipals was at a new record high at the end of 1981, more than reversing the sizable declines that had developed between late October and early December.

INVESTMENT OPERATIONS OF U.S. LIFE INSURANCE COMPANIES IN 1981

The life insurance business made further advances in 1981 in response to the problems raised by volatile financial markets, continuing inflation, and high interest rates. Investments carrying real rates of return, after adjustment for inflation, were increasingly emphasized, while the development of new insurance and pension products also gave impetus to changes in new investments. For some purposes, the earlier focus on income return gave way to a total return concept. Efforts to diversify insurance products and other financial services frequently involved purchases of other companies, either life or nonlife companies. As in 1980, cash flow and liquidity needs continued to be closely monitored, and forward committing was constrained. The interdependence of insurance and investment operations, long recognized, came in for deeper and broader study than ever before, and a number of companies devoted considerable efforts to the problem of improving the match between invested assets and liabilities.

Major Investment Outlets

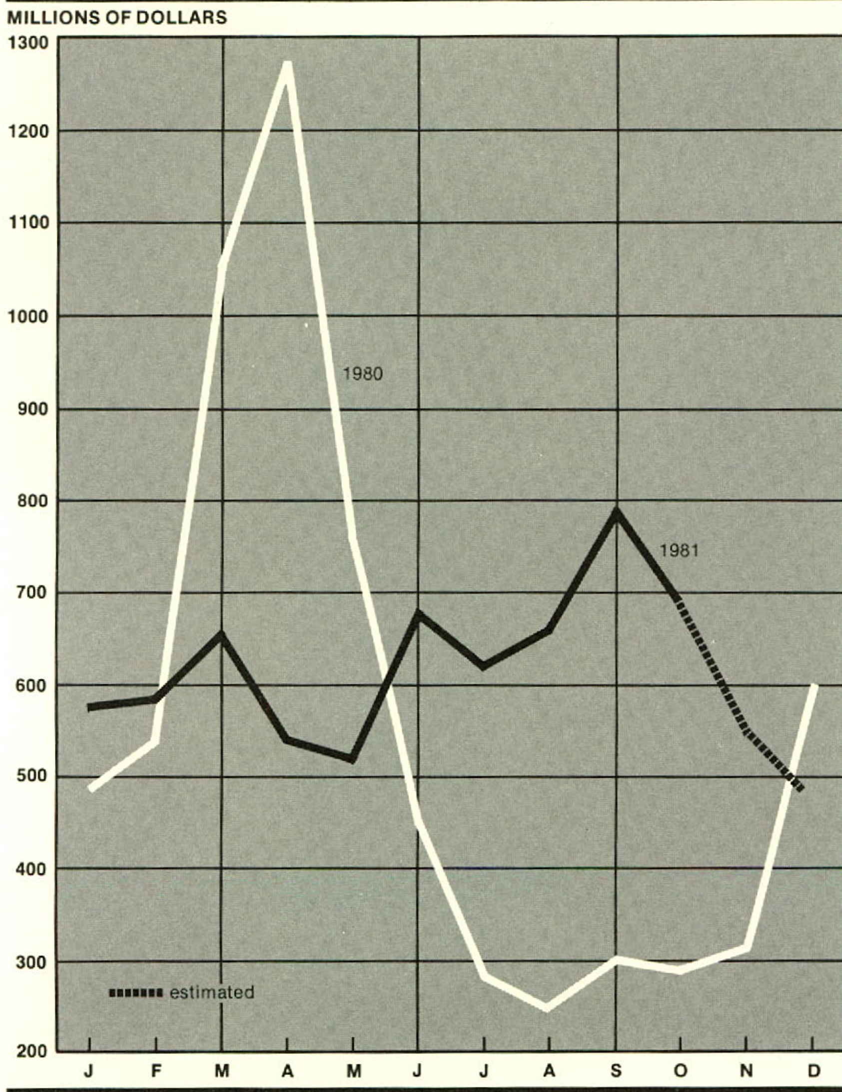
Life insurance companies shifted the emphasis in the longer-term investments made in 1981, and the total invested picked up from 1980. Net long-term investments, estimated at $39 billion in 1981, increased 12% from 1980, following a modest gain of 2% in the previous year. The total included a record growth in policy loans accompanied by unusually large net investments in readily marketable debt securities, notably Treasury and federal agency issues. Net investing in corporate bonds was sizable, particularly in the public market, but mortgage lending was markedly reduced from 1980 while equity investments, especially real estate and joint ventures, took a growing share of funds. In addition to longer-term investments, holdings of cash and short-term debt issues were built up further in 1981.

Estimates of year-end 1981 assets of U.S. life insurance companies, together with the final figures for 1979 and 1980, are given in the Appendix tables that follow. Appendix Table A-1 shows the asset distribution of the combined totals of the general and separate accounts of the companies, and Table A-2 sets out annual changes in assets as well as the net long-term investment totals of the latest three years. In Appendix Table A-3 the focus is on general account assets, the major component of Table A-1.

Policy loans. Outflows on policy loans were consistently high month after month during 1981, in contrast with the peak and valley pattern of 1980 (Chart 4). For the third consecutive year, outstanding policy loans increased by a record amount, an estimated $7.5 billion in 1981, compared with $6.6 billion in 1980 and $4.7 billion in 1979. The increase of

Chart 4

MONTHLY CHANGE IN POLICY LOANS OUTSTANDING U.S. LIFE INSURANCE COMPANIES



$7.5 billion represented 19% of the estimated $39 billion of net long-term investments made in 1981, similar to the share in 1980. These prior claims on investment funds, accompanied by increasing policy surrenders, not only reduced the funds available for other forms of investments but also brought changes in the other investments made. In particular, outflows on policy loans and surrenders heightened the emphasis on liquidity, marketability, and shorter maturities of investments, reflecting greater efforts by many companies to match assets and liabilities.

Policy loans outstanding increased 18% during 1981, on top of a 19% growth in 1980, to total $48.9 billion at the end of the year, or 10.2% of general account assets, up from a 9.3% share at the end of 1980. Of more significance, as shown in Table 5, the ratio of outstanding policy loans to ordinary life insurance reserves climbed to 27.5% at year-end 1981 from 24.5% at the end of 1980 and 19.8% only three years earlier. The rise was the steepest and most prolonged on record, the result of relatively slow growth in ordinary life insurance reserves coupled with the rapid growth in policy loans.

Corporate bonds. Corporate bonds attracted the single largest share of 1981 investment funds, regaining the lead from mortgage loans, which were sharply cut back from 1980. Net corporate bond investments of an estimated $10.5 billion accounted for 27% of the $39 billion total of net long-term investments made in 1981, compared with $9.8 billion and a 28% share in 1980. (The dollar figures reflect adjustment for net capital losses in both years, estimated at about $800 million in 1981 and nearly $1.4 billion in 1980.) Portfolio holdings of domestic and foreign corporate bonds increased 6% during 1981 to total $179 billion, or 34% of total assets at the end of the year. The asset share slipped further, from 35% at year-end 1980 and the recent high of 38% at year-end 1978.

Table 5

Policy Loans Outstanding Relative to General Account Assets and Ordinary Life Insurance Reserves

End of Year	General Account Assets	Ordinary Reserves	End of Year	General Account Assets	Ordinary Reserves
1971	8.0%	16.5%	1977	8.2%	19.3%
1972	7.8	16.5	1978	8.2	19.8
1973	8.3	17.5	1979	8.6	21.7
1974	9.0	18.8	1980	9.3	24.5
1975	8.9	19.0	1981	10.2e	27.5e
1976	8.5	19.1			

e-Estimated.

Life insurers stepped up corporate bond purchases in the public bond market, where new offerings were in heavy volume and discount issues and intermediate maturities were readily available. Emphasis on marketability and investment policies that limited advance committing of funds again, as in 1980, reduced purchases of direct placement bonds. Closings of direct placement loans dropped by an estimated 25% from 1980, reflecting the reduced pace of forward committing that got under way early in 1980 as well as the limited volume of new commitments made in 1981. A large part of direct placement commitments made in 1981 were structured with equity links, other provisions for additional return, or maturities of ten years or less.

U.S. Treasuries and federal agency issues. The emphasis on marketability of assets was further evidenced by the net investment in the longer-term issues of the U.S. Treasury and federal agencies. From a modest $0.6 billion in 1980, net investment in Treasury notes and bonds climbed to an estimated $2.2 billion in 1981. The net investment in Treasuries took about 5.5% of the total of net long-term investments made in 1981 as against less than 2% in 1980. Portfolio holdings increased about 43% during 1981 to an estimated $7.2 billion, the result of steady growth in virtually every month throughout the year.

Federal agency issues attracted net investments of an estimated $3.1 billion from life insurers in 1981, 8% of the total of net long-term investments made in the year, up from $1.7 billion and a 5% share in 1980. These portfolio holdings, estimated at $13.9 billion at the end of 1981, increased 28% during the year, compared with 18% during 1980.

In addition to these longer-term issues of the Treasury and federal agencies, the companies held an estimated $1.3 billion in short-term issues, little different from the $1.1 billion at the end of 1980 but up from $600 million two years earlier.

Other government securities. Net investment in state and local government securities of an estimated $0.6 billion in 1981, compared with $280 million in 1980, accounted for 1.5% of the 1981 total of net long-term investments, up from 0.8% in 1980. The upward tilt was associated with a greater rise in tax-exempt than taxable bond yields in 1981. Nevertheless, for many companies the tax-adjusted yields of municipals continued less attractive than the return on alternative investments. Portfolio holdings of state and local government securities of an estimated $7.2 billion at the end of 1981 represented 1.4% of total assets, unchanged from the asset share at the end of 1980.

Foreign government and international agency securities showed net investments by life insurance companies of an estimated $375 million in 1981, little different from the $300 million in 1980. Holdings of longer-term issues of foreign governments and international agencies in-

creased 4% during 1981 to an estimated $9.6 billion at the end of the year; in addition, the companies held $100 million in short-term securities of foreign governments. Over 70% of the $9.7 billion portfolio was in issues of Canadian governments and 8% was in issues of international agencies.

Mortgages. Mortgage lending was sharply curtailed in 1981, a direct reflection of the cutback in forward committing in 1980 and the low level of outstanding commitments at the start of 1981. The net investment in mortgages fell to an estimated 21% share of net long-term investments made during the year from a 36% share in 1980 and was heavily concentrated in commercial and industrial mortgages. Farm mortgage holdings increased slightly, the portfolio of multifamily property mortgages was virtually flat over the year, and 1-4 family mortgage holdings declined, resuming the downtrend that prevailed in 1967-78. In total, mortgage holdings increased 6% in 1981, to an estimated $139.3 billion, compared with a rise of 10.7% in 1980, essentially the results of the general accounts. Mortgages held in the separate accounts more than doubled during 1981, from a low base, to reach $1.5 billion at the end of the year, or 3% of separate account total assets. In the general accounts, mortgage holdings dipped to just under 29% of total assets at the end of 1981 (Appendix Table A-3).

Income-property mortgages. Loans on commercial, industrial, and institutional properties accounted for nearly all of the net investing by life insurers in mortgages during 1981, absorbing 21.5% of the $39 billion total of net long-term investments made during the year, compared with a 28% share of net investments in 1980. Holdings of these nonresidential property mortgages increased by an estimated $8.3 billion, or nearly 11%, to total $86.8 billion at the end of 1981. This growth compares with a rise of $9.6 billion, or 14%, in 1980.

Both the disbursements on nonresidential mortgage loans and the volume of new commitments made for such loans fell back about 15% from 1980. The decline in loan closings was from a 1980 peak of $13.2 billion, while the decrease in new commitments was from a low 1980 total, $7.9 billion, which had been cut about 55% from 1979 (Appendix Table A-4). Office buildings represented an unusually heavy share, about two thirds, of the limited volume of new commitments made for income properties in 1981, according to the reporting of a sample of companies, and retail stores, largely shopping centers, made up another 10% of the total. Commitments made on virtually all other properties, such as hotels, motels, and industrial plants, were lower than in 1980.

A large part of the commitments made in 1981 represented loans to new or existing joint ventures of the companies, and nearly all of the rest

were structured with flexible lending terms: participation in the rising rental income or the capital appreciation of projects, indexed interest rates, renegotiable rates, a lender's call option, or short maturities. While record high market rates of interest precluded long-term, fixed-rate financings, loans with an equity link, involving below-market contract rates, and those with short maturities permitted the financing arrangements for some projects. But relatively few deals were made, reflecting changes in the investment strategies and policies of life insurers, many of whom continued to face uncertain cash flows. Concerns about overbuilding in some markets, particularly as the economy moved into recession, also held down new commitment volume, since lending officers were not unmindful of earlier difficulties in real estate markets and the rise in mortgage delinquencies in the mid-1970s (Appendix Table A-5).

The backlog of outstanding mortgage commitments on nonresidential properties dropped about 25% further in 1981 to an estimated $12 billion at the end of the year, the result of 1981 loan disbursements of some $11 billion running well ahead of new commitments made during the year. The year-end level, the lowest in four and a half years, foreshadows a slower growth in the portfolio of nonresidential mortgages during 1982 than the 11% rise estimated for 1981.

One-to-four family mortgages. Holdings by life insurers of 1-4 family mortgages turned down in 1981, in contrast with the increases in the preceding two years. This part of the mortgage portfolio declined about $0.5 billion, or 3%, to an estimated $16.8 billion at the end of 1981, as against a net increase of $1.8 billion, or 11.5% in 1980. Despite a sharp drop in loan disbursements in 1981, the portfolio decline was moderated by a remarkably slow pace of loan repayments, since the turnover in property ownership that generates prepayments of existing loans was at a low ebb.

Disbursements on 1-4 family mortgages dropped about 80% below the $3.2 billion total in 1980. The drop paralleled the 1980 reduction in new commitments and reflected the minimal backlog of commitments outstanding at the start of 1981 (Appendix Table A-4). Forward commitments made in 1981 for 1-4 family mortgages were even lower than in 1980, down about one third. Some of the companies making 1-4 family mortgage loans in recent years were averse to the use of adjustable rates and short maturities with large balloon payments in lending to homeowners, confining such features to their income-property lending. The shortfall of new commitments from loan disbursements in 1981 worked down the backlog of outstanding commitments to about the $100 million level at the end of the year, an indicator of a further runoff of the 1-4 family mortgage portfolio in 1982.

Multifamily mortgages. The net investment by life companies in mortgage loans on apartment buildings was negligible in 1981, an estimated $0.1 billion, compared with $0.4 billion in 1980. Holdings of multifamily mortgages were estimated to total $19 billion at the end of the year, an annual rise of less than 1%. Gross loans made on apartment properties declined 40% from the $1.5 billion of loan acquisitions in 1980 to an estimated $900 million, an amount insufficient for portfolio growth under ordinary conditions. But at the same time, loan repayments dropped to the lowest total in eleven years as prepayments dried up with the withering of the resale market for apartment properties. To illustrate the extent of the slowdown, at the 1981 rate of repayment, it would require nearly 24 years to turn over the portfolio of apartment loans, as against 16-1/2 years in 1980 and 12-1/2 years in 1979 at the repayment rates of those years.

Life insurance companies made less than $0.3 billion in new commitments for apartment loans in 1981, down 35% from the already low 1980 total. The backlog of outstanding commitments was worked down from $1.2 billion at the start of the year to less than $0.5 billion at the end of 1981. The outlook is for a net decline in the portfolio of multifamily mortgage loans in 1982.

Farm mortgages. Farm mortgage lending was another area of limited investing in 1981. Holdings of these loans increased an estimated $0.25 billion, or about 2%, to total $13.2 billion at the end of 1981, compared with a rise of nearly $0.8 billion, or 6%, in 1980. The net growth of the portfolio in the latest two years combined fell far short of the one-year rise of $1.7 billion, or 16%, in 1979. Gross loans were made in steady, low amounts each quarter and for the full year decreased 20% from 1980. New commitments, which slowed noticeably in the last half of the year, fell an estimated 35% from 1980 to the lowest total in nine years, and the backlog of commitments outstanding at the end of 1981 offered no prospect for growth in the farm mortgage portfolio in 1982.

Real estate. Among their investment outlets, real estate ownership was particularly favored by life insurers in 1981. These equities were viewed as an inflation hedge, offering the prospect of high real rates of return surpassing those on other investments. The value of real estate wholly owned by the companies increased an estimated $4.1 billion during 1981, compared with a rise of $2 billion in 1980. The 1981 growth was especially marked in general account holdings of real estate, up $2.5 billion as against $0.8 billion in 1980. In the separate accounts, real estate holdings increased an estimated $1.6 billion, compared with $1.2 billion in 1980. At the end of 1981, real estate held in the general accounts was valued at $14.2 billion, 3% of the total of general account assets, while separate account holdings of an estimated $4.9 billion

accounted for 11% of the total of separate account assets.

When adjusted for valuation changes during the year, the increase in real estate holdings of the combined accounts translated into a net investment of an estimated $3.8 billion in 1981, nearly 10% of the total of net long-term investments made in the year, and $1.7 billion in 1980, or 5% of net investments of that year. Forward committing for real estate investing continued in good volume in 1981, as in 1980, and the backlog of commitments outstanding at the end of the year assured further growth in real estate holdings during 1982.

Corporate stocks. Life insurers made net purchases of common stocks for both the general and separate accounts in 1981, in contrast with a net disinvestment in one or the other or both of the accounts during the preceding three years. The net investment for the combined accounts of an estimated $1.8 billion accounted for nearly 5% of the total of net long-term investments made in 1981, compared with $296 million and a scant 1% share in 1980. The 1981 net investment was the largest since 1976 when net purchases of common stocks amounted to $2.2 billion, 8% of long-term investments made in that year. During 1981 a decline in market prices decreased the carrying value of stock holdings an estimated $2.7 billion, compared with a valuation gain of over $7 billion in 1980.

Net purchases of common stocks for the separate accounts of the companies were estimated at $1 billion, up from $826 million in 1980. Common stocks held in the separate accounts were valued at about $17 billion at the end of 1981, reflecting a valuation loss of an estimated 10%, or $1.8 billion, from year-end 1980. Common stocks accounted for 38% of total separate account assets at the end of 1981, down from a 49% share at the end of 1980 and 75% five years earlier.

General account net investments in common stocks of an estimated $800 million marked a turnaround from net sales of $530 million in 1980. After an allowance of $900 million for the reduction in carrying values during the year, common stocks held in the general accounts amounted to $17.8 billion, or 3.7% of total general account assets at the end of 1981, down from $17.9 billion and a 4% asset share at the end of 1980 (Appendix Table A-3). These holdings include the growing capital investments in subsidiaries through which life insurers are able to diversify their products and services.

Net investing in preferred stocks in 1981 was the lowest since 1970, contracting to about $200 million from the already low $484 million in 1980. These stocks with their fixed yields suffered by comparison with alternative investments, whether of higher quality or of higher prospective total return. Preferred stock holdings were estimated at $11.95 billion at the end of 1981, nearly all held in the general accounts where they accounted for about 2.5% of the total of such assets.

Other investments. Joint ventures, mineral interests, oil and gas royalties, timberlands, transportation equipment, and similar investments involving equity positions make up a large part of the remaining invested assets of life insurers. This residual category of invested assets increased an estimated $1.2 billion, or some 25%, during 1981 to total $6 billion at the end of the year, compared with increases of $0.7-0.8 billion in the preceding two years. This rapidly rising, if still small, part of assets serves as an indicator of the interest in investments with an ownership position, rounding out the information on real estate and corporate stock investments of life insurers.

Measures of Investment Performance

The 1981 net rate of income on the investments held in the general accounts of life insurers is estimated at 8.40%, and the corresponding rate for total invested assets, including separate accounts, is estimated at 8.41%. As shown in Table 6, the 1981 estimates reflect increases from 1980 of 34 basis points in the rate for the general accounts and 39 basis points in the rate for the combined accounts.

The rise of an estimated 34 basis points in the general account rate in 1981 picked up from the increase of 28 basis points in 1980 but still lagged behind the gains of 39 basis points in 1978 and 1979. A buildup in liquidity holdings at 1981 money-market rates, and higher rates than in 1980 on the longer-term investments added to the portfolios, accounted for the stepup in the improvement in the net income rate. But the same dampening influences prevailed as in the previous year: the low net rate

Table 6

Ratio of Net Investment Income to Invested Assets
U.S. Life Insurance Companies

Year	Net Investment Income (Including Separate Accounts) $000,000	Rate	General Accounts Rate
1971	$11,031	5.44%	5.52%
1976	18,758	6.55	6.68
1977	21,713	6.89	7.00
1978	25,294	7.31	7.39
1979	29,562	7.73	7.78
1980	33,928	8.02	8.06
1981	38,950e	8.41e	8.40e

e-Estimated.

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

of return from a growing share of policy loans, the slight weight of new investments as against the existing portfolio, the high cost of borrowed funds, and the slow turnover of the portfolio. The total of net investment income, about $39 billion, increased an estimated 15% above the 1980 total, similar to the 1980 annual rise.

The "new money" rate on long-term investments added to portfolios in a year is understandably of more direct interest to current management than the rate of income on total holdings of invested assets. Gross yields on new investments made for the general accounts are available for a number of recent years through annual surveys of a sample of companies. The reporting provides the gross annual yields at purchase of the bonds, mortgages, and preferred stocks added to the general account portfolios during the year, and thus takes no account of the additional returns that may be expected from income or equity participations provided for in the loan agreement. (Equity investments, short-term securities, and policy loans are excluded from the reports, which are focused on the investments made by lending officers.)

In 1980, the specified new investments were made at annual yields averaging 11.15% on a dollar-weighted basis, and the mean of individual companies' results came to 11.43%. In 1981, gross yields on these fixed-income investments are estimated to average about 13-3/4% on a dollar-weighted basis, reflecting a larger share than usual in loans purchased at current market rates; in 1980, the results were dominated by the closings of loans committed earlier at lower prevailing rates. Loans with yield-enhancing features or relatively short maturities are expected to comprise a larger share of loan disbursements than in 1980, when they represented about one fifth of the investments made in bonds and mortgages by the sample group.

New investments made by life insurance companies in a year typically 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 investments which came to market in the current year. Accordingly, new investment yields do not provide an accurate gauge of market conditions in a single year or the investment decisions made in the current year.

More direct measures of current market trends are provided by the interest rates and other terms at which new forward commitments are made for corporate bonds and mortgages. Average yields on commitments made by life insurance companies for directly placed corporate bonds in 1981 far surpassed the high levels of 1980, and the counterpart of high yields was a limited commitment volume. Monthly yield averages usually ran above those in the corresponding period of 1980 by 145 to 375 basis points. On average for the year, direct placement

commitment yields were up an estimated 240 basis points over the 1980 annual average. A striking feature was the wide range of yields within the same month, e.g., under 13% on one loan to over 17% on another. Loans with an equity link or with an adjustable rate were more frequently reported than in 1980, and about 40% of commitments were for loans with maturities of ten years or less.

Average commitment rates on income-property mortgages increased moderately during 1981. During the first nine months of 1981, mortgage interest rates averaged about 13-3/4% on a dollar-weighted basis, 135 basis points above the average for the same period of 1980, according to the reporting of a sample group (Appendix Table A-6). Based on preliminary indications for the fourth quarter, these mortgage rates are estimated to increase 150 basis points from the 1980 average. But flexibility of lending terms was a basic ingredient of nearly all income-property mortgage commitments made in 1981, with some deals focused on total returns and others on provisions for changing the interest rate or maturity of loans. Joint venture loans and other loans with an equity link predominated, accounting for two thirds of the amount committed, and nearly all of the balance of commitments provided adjustable rates, short maturities, or a lender's call option.

The heavy weight of equity-linked loans in 1981 commitments showed up primarily in interest rate averages and to a lesser extent in loan size, maturities, and loan-to-value ratios. Equity-linked loans typically involved sizable projects, a give-up in interest rate for the high total return expected, maturities of fifteen years or more, and, with respect to joint ventures, a relatively low loan-to-value ratio, given the equity investment of the lender.

Another measure of portfolio returns of life insurers is provided by annual surveys of the income and costs of the mortgages held by life insurers. The results of these surveys provide rates of gross income, operating costs, and net income for companies grouped by portfolio size and type of organization for loan servicing, distinctions that help to account for variations among companies, particularly with respect to mortgage portfolio costs. In 1980, the composite net income rate of the mortgage portfolio, as shown in Appendix Table A-8, averaged 8.63%, a rise of 34 basis points over 1979 and a favorable contribution to the 1980 net income rate on total invested assets shown in Table 5.

The mortgage portfolio surveys have long provided gross contract rates on mortgage loans disbursed each year, a good proxy for yields on conventional mortgages. The average interest rate of 10.48% for all mortgage loans closed in 1980 included rates of about 10-1/4% for income-property mortgages, a record high for loan-closing rates but far below the 1980 commitment rates shown in Appendix Table A-6. The harsh reality of such discrepancies in periods of rising interest rates has

effected a variety of responses: shorter commitment lives, reduced forward committing, adjustable or indexed rates, and loans with equity links.

Cash Flow for Investment

Cash flow of life insurance companies for market investments increased modestly in 1981, to an estimated $63 billion, 4% above the 1980 total. As in 1980, the growth was fully accounted for by separate account funds, while general account cash flow turned down, by an estimated 3%.

The cash flow estimates in Table 7 are based on quarterly reports of a sample group of companies that show the sources of funds for investment. Results of the reporting group for recent quarters are given in Appendix Table A-9. As shown there, cash flow includes the net new funds from insurance operations and investment income (labeled the ledger asset increase) plus the amounts for reinvestment from maturities, prepayments, calls, and sales of existing investments. These funds may be augmented by borrowings or a drawdown of holdings of cash and cash equivalents; they are reduced by the net outflow on policy loans, net repayments of borrowings, and additions to liquidity holdings. By this definition, the cash flow total is a measure of gross funds disbursed for longer-term market investments.

During the first three quarters of 1981 combined, the ledger asset increase of the reporting group showed limited growth, 3%, over the 1980 comparable total. At the same time, the growth in these funds from operations was eroded by an acceleration in the net increase in policy loans. In this setting, companies sought to maintain or build up liquidity positions, thus constraining the flow into longer-term market instruments for the general accounts. A further downturn in mortgage prepayments was more than made up by larger asset sales and the gradually growing repayments of bonds and other investments. Net

Table 7

Estimated Cash Flow for Market Investments
U.S. Life Insurance Companies
(In billions of dollars)

Year	Amount	Year	Amount
1970	$16.6	1976	$46.2
1971	25.3	1977	52.6
1972	30.8	1978	57.2
1973	31.0	1979	58.5
1974	26.0	1980	60.4
1975	33.5	1981	63.0p

p-Preliminary.

borrowings augmented investment funds in each of the first three quarters of 1981, and in the final quarter, contrary to the usual seasonal pattern, further net borrowing was planned. Some of the addition to borrowing liabilities in 1981 was associated with corporate acquisitions made for diversification of services and accordingly involved a longer time horizon than the borrowings utilized to smooth the seasonal variations between inflows and outflows of funds.

For the sample group, the net increase in policy loans during the first three quarters of 1981 diverted 16% of general account investment funds from market investments, a share that is expected to hold for the full year. The ratio was up from 13% in 1980 and is scheduled to set a record, topping the previous high of 15.9% in 1969, when the dollar amounts involved were considerably lower. The 1981 downturn in general account cash flow was accompanied by increased emphasis on separate account products and growth in these cash flows for investment. For the reporting group, the separate accounts comprised 34% of the total cash flow of the combined accounts in the first three quarters of 1981, up from 26-1/2% in the full year 1980.

Asset Growth in Perspective

Assets of U. S. life insurance companies, estimated at $523.2 billion at the end of 1981, increased 9.2% during the year, compared with 10.9% in the two preceding years. The growth rates reflected a net capital loss in 1981 as against net capital gains in the two earlier years. When adjusted to exclude these variations, which arise largely from fluctuations in stock market prices, assets increased an estimated 9.8% in 1981, compared with 9.4% in 1980 and 10.0% in 1979.

In dollar terms, the 1981 asset increase came to an estimated $44 billion including the capital loss and $46.8 billion excluding the capital loss. The adjusted increase compares with $40.8 billion in 1980 and, more strikingly, with $28.9 billion in 1976 and $13.3 billion in 1971. In a different view of the changed asset base, a 1/10 percentage rise in industry assets represented $480 million in 1981, compared with $290 million five years earlier and about $200 million ten years ago.

Rising net investment income, noted earlier, and the growing annuity and pension business again provided the impetus to asset growth in 1981. Annuity income increased by an estimated 26% to $30 billion in 1981 from $24 billion in 1980. In contrast, life insurance premium income increased by an estimated 5% to $43 billion from the $40.8 billion total in 1980, and the net premium inflow, after benefit payments, surrenders, and policy dividends, is expected to be less than in 1980.

A broader perspective of the asset growth of life insurance companies in the latest two years is provided in Table 8, which shows the average growth by five-year periods for the preceding fifteen years, along with

similar data for four other types of institutional investors. The annual average growth rate for life insurers in 1980-81, 9.7% adjusted for valuation changes, was off from the 9.9% pace in the last half of the 1970s. But with the exception of state and local government retirement funds, life insurers fared better in the latest two years than the other institutions shown. Despite a slowdown in 1981, the two-year average growth rate of state and local government retirement funds, 14.5%, continued a steady upward trend. The growth rate of noninsured pension plans in the latest two years, estimated at 9.5%, slowed noticeably from the rate of over 11% in the 1975-79 period.

The drop in the two-year average growth rates for the depository institutions was severe, reflecting a further downturn in 1981 from the already slowed pace in 1980. Savings and loan associations showed an annual growth averaging 7% in the last two years, less than half the 14.4% average for 1975-79. In parallel, the recent growth of mutual savings banks fell to 4.2%, about half the rate in the 1975-79 period and the lowest for the time spans covered by the table. These depository institutions suffered from the high costs of funds in the competition to retain and attract savings deposits while a large part of assets was locked into lower-yielding mortgage loans and securities. A number of failing savings associations and banks were merged with stronger institutions in 1981, under arrangements worked out by the regulatory authorities concerned with limiting the drain on deposit insurance funds.

The adverse effects of inflation and accompanying high interest rates showed in varying degrees in the growth rates of most financial institu-

Table 8

Average Annual Rates of Asset Growth

	Five-year period			Two-year period
	1965-69	1970-74	1975-79	1980-81e
Life insurance companies	5.7%	6.6%	9.9%	9.7%
Noninsured pension funds	9.9	7.7	11.2	9.5
State and local government retirement funds	11.4	12.0	13.4	14.5
Savings and loan associations	6.3	12.8	14.4	7.0
Mutual savings banks	6.6	8.0	8.3	4.2

e-Estimated.

Note: Growth rates of life insurance companies, noninsured pension funds, and state and local government retirement funds reflect adjustment to exclude valuation changes.

Source: Securities and Exchange Commission, flow of funds accounts of the Federal Reserve Board, Federal Home Loan Bank Board, Federal Deposit Insurance Corporation, National Association of Mutual Savings Banks, and American Council of Life Insurance.

tions in the latest two-year period. Some were able to act more quickly than others in offering more attractive products and in adapting investment strategies. Life insurance companies made good progress along both these avenues in 1981 but still face statutory and regulatory impediments that require concerted efforts for needed changes. Such changes are slow to effect, and meanwhile competitive pressures will intensify. The impetus to saving provided in the 1981 tax legislation holds the prospect for recovery in the growth of depository institutions in 1982 and further improvement for life insurers.

APPENDIX TABLES

Table A-1

ASSETS OF U.S. LIFE INSURANCE COMPANIES

(Dollar amounts in millions)

Asset Class	Dec. 31, 1979		Dec. 31, 1980		Estimated Dec. 31, 1981	
	Amount	%	Amount	%	Amount	%
Debt securities						
U.S. Treasury	$ 4,888	1.1	$ 5,838	1.2	$ 8,200	1.6
U.S. federal agency	9,381	2.2	11,144	2.3	14,200	2.7
U.S. state and local	6,428	1.5	6,701	1.4	7,250	1.4
Foreign government and international	9,022	2.1	9,332	1.9	9,700	1.9
Total government	**29,719**	**6.9**	**33,015**	**6.9**	**39,350**	**7.5**
Corporate—1 year or less	7,957	1.8	10,142	2.1	14,700	2.8
U.S. corporate—over 1 year	152,793	35.3	160,871	33.6	170,200	32.5
Foreign corporate—over 1 year	8,240	1.9	8,590	1.8	9,000	1.7
Total corporate	**168,990**	**39.1**	**179,603**	**37.5**	**193,900**	**37.1**
Stocks						
Preferred	11,596	2.7	11,795	2.5	11,950	2.3
Common	28,161	6.5	35,571	7.4	34,700	6.6
Total stocks	**39,757**	**9.2**	**47,366**	**9.9**	**46,650**	**8.9**
Mortgage loans						
Farm	12,184	2.8	12,958	2.7	13,200	2.5
Nonfarm	106,237	24.6	118,122	24.6	126,100	24.1
Total mortgages	**118,421**	**27.4**	**131,080**	**27.4**	**139,300**	**26.6**
Real estate	13,007	3.0	15,033	3.1	19,100	3.7
Policy loans	34,825	8.1	41,411	8.6	48,900	9.3
Other investments	3,960	0.9	4,777	1.0	6,000	1.1
Cash	2,670	0.6	3,210	0.7	3,500	0.7
Other assets	20,933	4.8	23,715	4.9	26,500	5.1
Total assets	**$432,282**	**100.0**	**$479,210**	**100.0**	**$523,200**	**100.0**

Each asset class is the combined total of general and separate account assets. General account assets are shown in Table A-3. The valuation basis is admitted asset (statement) value. Because of rounding, percentages may not add to totals shown.

Table A-2

NET CHANGES IN ASSETS

(In millions of dollars)

Asset Class	1979	1980	Estimated 1981
Debt securities — over 1 year			
U.S. Treasury and federal agency	$ 2,860	$ 2,227	$ 5,203
U.S. state and local	27	280	556
Foreign government and international	227	300	374
Corporate — U.S. and foreign	11,338	8,428	9,739
Total — Over 1 Year	14,452	11,235	15,872
Stocks	4,239	7,609	-716
Mortgage loans	12,254	12,659	8,220
Real estate	1,243	2,026	4,067
Policy loans	4,679	6,586	7,489
Other investments	678	817	1,223
Short-term debt issues and cash	1,964	3,214	5,050
Other assets	2,849	2,782	2,785
Increase in assets	$42,358	$46,928	$43,990
Memorandum:			
Increase in assets excluding net capital gain or loss	$38,928	$40,823	$46,800
Net long-term investments*	$34,100	$34,825	$38,950

*Defined as the net increase in assets adjusted for capital gain or loss, less the net change in short-term debt issues, cash, and other (non-invested) assets.

Table A-3

GENERAL ACCOUNT ASSETS OF U.S. LIFE INSURANCE COMPANIES

(Dollar amounts in millions)

Asset Class	Dec. 31, 1979 Amount	%	Dec. 31, 1980 Amount	%	Estimated Dec. 31, 1981 Amount	%
Debt securities						
U.S. Treasury	$ 4,426	1.1	$ 4,831	1.1	$ 6,900	1.4
U.S. federal agency	8,632	2.1	9,830	2.2	11,900	2.5
U.S. state and local	6,418	1.6	6,673	1.5	7,200	1.5
Foreign government and international	8,812	2.2	9,031	2.0	9,250	1.9
Total government	**28,288**	**7.0**	**30,365**	**6.8**	**35,250**	**7.4**
Corporate—1 year or less	4,424	1.1	6,421	1.4	9,200	1.9
U.S. corporate—over 1 year	148,704	36.6	155,011	35.0	162,000	33.8
Foreign corporate—over 1 year	8,106	2.0	8,429	1.9	8,600	1.8
Total corporate	**161,234**	**39.7**	**169,861**	**38.3**	**179,800**	**37.5**
Stocks						
Preferred	11,562	2.8	11,755	2.7	11,900	2.5
Common	15,293	3.8	17,906	4.0	17,800	3.7
Total stocks	**26,855**	**6.6**	**29,661**	**6.7**	**29,700**	**6.2**
Mortgage loans						
Farm	12,151	3.0	12,852	2.9	13,050	2.7
Nonfarm	105,860	26.0	117,541	26.5	124,750	26.0
Total mortgages	**118,011**	**29.0**	**130,393**	**29.4**	**137,800**	**28.8**
Real estate	10,910	2.7	11,692	2.6	14,200	3.0
Policy loans	34,820	8.6	41,406	9.3	48,900	10.2
Other investments	3,271	0.8	3,972	0.9	4,700	1.0
Cash	2,620	0.6	2,903	0.7	3,150	0.7
Other assets	20,629	5.1	23,185	5.2	25,600	5.3
Total assets	**$406,638**	**100.0**	**$443,438**	**100.0**	**$479,100**	**100.0**

The valuation basis for each class is admitted asset (statement) value. Because of rounding, percentages may not add to totals shown.

Table A-4

FORWARD INVESTMENT COMMITMENTS FOR MORTGAGES ON U.S. PROPERTIES U.S. LIFE INSURANCE COMPANIES

(In millions of dollars)

Year or Quarter		Farm	Nonfarm			Total
			1-4 Family	Multifamily	Nonresidential	
			New Commitments			
1975		$ 981	$ 239	$ 322	$ 5,342	$ 6,884
1976		1,518	304	899	8,286	11,008
1977		2,547	598	1,587	15,415	20,147
1978		2,713	2,402	2,466	18,181	25,762
1979		2,797	4,630	2,036	17,323	26,786
1980		1,272	643	429	7,934	10,278
1980	I	383	250	110	1,805	2,548
	II	136	177	30	1,289	1,632
	III	333	135	135	2,530	3,133
	IV	420	81	154	2,310	2,965
1981	I	280	87	110	1,540	2,017
	II	325	125	50	2,025	2,525
	III	110	115	40	1,580	1,845
End of Period			Outstanding Commitments			
1975		475	191	722	7,483	8,870
1976		580	175	880	8,460	10,095
1977		800	220	1,735	13,525	16,280
1978		935	1,215	2,420	19,725	24,295
1979		1,020	2,385	2,510	23,080	28,995
1980		590	190	1,225	16,840	18,845
1980	I	670	1,340	2,120	21,105	25,235
	II	415	630	1,760	19,250	22,055
	III	540	275	1,500	18,435	20,750
	IV	590	190	1,225	16,840	18,845
1981	I	485	140	1,020	15,100	16,745
	II	480	135	760	14,505	15,880
	III	305	118	605	13,515	14,543

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

Table A-5

MORTGAGE LOAN DELINQUENCY RATES
REPORTING LIFE INSURANCE COMPANIES

End of Period	Nonfarm Mortgages by Type of Financing						
	FHA	VA	Canadian NHA	Conventional	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	1.90	1.29	1.11	4.02	3.68	1.27	3.47
1976	2.40	1.29	.80	3.57	3.37	2.07	3.25
1977	2.03	1.40	.73	2.49	2.41	1.16	2.28
1978	1.64	1.48	.70	1.67	1.65	2.59	1.76
1979	1.34	1.83	2.03	.69	.76	1.45	.84
1980 June	1.47	1.54	.58	.74	.79	2.82	1.03
December	1.82	2.09	.22	.83	.89	2.00	1.02
1981 June	1.50	1.55	.08	.69	.73	4.04	1.10

	Nonfarm Mortgages by Property Type		
	1-4 family	Multi-family	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	1.22	5.87	3.56
1976	1.24	4.97	3.26
1977	1.34	3.94	2.10
1978	1.24	2.41	1.48
1979	1.09	1.01	.61
1980 June	.91	1.00	.69
December	1.09	.80	.88
1981 June	.88	.55	.75

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% of the mortgages held by U.S. life insurance companies.

Table A-6

COMMITMENTS OF $100,000 AND OVER FOR MULTIFAMILY AND NONRESIDENTIAL MORTGAGES MADE BY REPORTING LIFE INSURANCE COMPANIES

Year or Quarter		No. of Loans	Total Amount Committed	Averages				
				Loan Size	Interest Rate	Interest Rate	Loan/ Value	Term
			$000,000	$000	by #	by $		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
1977		1,854	5,831	3,145	9.34	9.31	73.7	21/5
1978		2,286	7,362	3,220	9.59	9.57	73.3	21/0
1979		2,637	10,762	4,081	10.36	10.36	74.1	21/5
1980		656	4,180	6,372	12.69	12.53	73.3	18/6
1980	I	194	1,021	5,264	12.32	12.10	73.6	20/8
	II	83	635	7,649	13.20	12.95	73.6	17/7
	III	214	1,531	7,156	12.58	12.40	74.3	18/3
	IV	165	993	6,018	13.04	12.90	71.6	16/8
1981	I	155	693	4,470	13.90	13.48	72.3	14/3
	II	144	1,206	8,378	14.28	13.48	69.0	17/8
	III	107	916	8,561	14.47	14.34	71.4	17/3

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.

The reporting group was expanded to 20 companies in 1979 from 15 companies in earlier years and currently accounts for 67% of nonfarm mortgages held by U.S. life insurance companies.

Table A-7

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	1977	1978	1979	1980	1980		1981		
					III	IV	I	II	III
U.S. PROPERTIES**	9.23%	9.56%	10.35%	12.52%	12.39%	12.89%	13.48%	13.48%	14.33%
Conventional apartments	9.33	9.59	10.50	12.55	12.55	12.45	12.95	*	*
Office buildings	9.11	9.47	10.25	12.45	12.16	12.91	13.34	13.25	14.17
Commercial retail	9.08	9.49	10.18	12.55	12.92	12.93	13.45	13.59	13.39
Commercial services	9.32	9.60	10.31	12.52	12.33	12.97	13.58	14.31	13.64
Institutional and recreational	9.62	9.91	10.89	13.39	*	*	—	—	—
Industrial	9.28	9.56	10.27	12.87	12.65	13.30	13.87	14.25	14.54
Hotels and motels	9.74	9.91	10.78	12.61	12.96	12.75	13.87	14.05	15.00
FOREIGN PROPERTIES	10.44	10.49	10.94	13.46	12.74	13.33	*	*	*
TOTAL**	9.31	9.57	10.36	12.53	12.40	12.90	13.48	13.48	14.34

*Data not shown for a limited number of loans.

**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 group was expanded to 20 companies in 1979 from 15 companies in earlier years and currently accounts for 67% of nonfarm mortgages held by U.S. life insurance companies.

Table A-8

INCOME AND COSTS OF MORTGAGE PORTFOLIOS AND CONTRACT INTEREST RATES ON NEW LOANS REPORTING LIFE INSURANCE COMPANIES

	1970	1977	1978	1979	1980
Gross accrual income	6.14%	7.90%	8.22%	8.57%	8.89%
Operating costs—total	.34	.30	.30	.28	.26
Originating fees and premiums	.01	*	*	*	*
Servicing fees	.14	.08	.08	.07	.07
Home and branch office costs	.18	.21	.21	.21	.19
Net accrual income	5.80	7.60	7.92	8.29	8.63
Contract interest rate on new loans disbursed	8.23	9.31	9.43	9.88	10.48

*Less than .005%.

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 0.38% in 1980.

Reporting companies accounted for 85% or more 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-9

INFLOW OF INVESTMENT FUNDS OF REPORTING LIFE INSURANCE COMPANIES, QUARTERLY

(In millions of dollars)

Sources of Investment Funds	1980 I	1980 II	1980 III	1980 IV	1981 I	1981 II	1981 III
Net change in:							
Ledger assets, adj. ...	$6,459	$5,614	$7,470	$6,754	$6,480	$6,393	$7,288
Cash position*	1,284	-951	-1,599	-574	- 95	107	-2,172
Mortgages—total	1,364	1,186	1,234	1,258	1,323	1,233	1,035
Amortization and partial prepayments .	919	788	822	828	935	834	730
Prepayments in full ..	407	374	394	404	296	379	285
Sales	39	23	18	25	92	19	20
Securities total	4,233	5,099	4,291	5,249	4,315	4,993	4,956
Maturities	1,279	1,401	1,416	1,685	1,290	1,474	1,411
Calls	203	274	257	336	426	319	265
Outright sales—bonds	839	1,695	978	1,404	1,000	1,133	1,260
Outright sales—stocks	1,911	1,729	1,639	1,824	1,598	2,067	2,021
Real estate and other asset sales and repayments	133	113	295	273	167	129	126
Net change in liability for borrowed money	2,202	208	-1,405	-981	425	500	417
Total investment funds	**15,675**	**11,268**	**10,287**	**11,978**	**12,614**	**13,354**	**11,651**
General account investment funds	13,309	8,414	7,231	8,525	8,705	9,521	8,078
Net increase (-) in policy loans	-1,561	-1,868	-630	-897	-1,345	-1,339	-1,603
General account cash flow	11,749	6,547	6,602	7,628	7,360	8,182	6,475
Separate account cash flow	2,366	2,854	3,055	3,453	3,909	3,833	3,573
Total cash flow ...	**$14,115**	**$9,400**	**$ 9,657**	**$11,082**	**$11,269**	**$12,015**	**$10,048**

*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.

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

Reporting companies represent 74% of the total assets of U.S. life insurance companies.

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

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