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CHAPTER 5

The Economic Significance of Federal Lending and Loan Insurance

AT THE END of 1953 there was outstanding in the public's hands nearly \$43 billion of credit extended or underwritten by federal or federally sponsored agencies (Table 13). About two-thirds of this amount consisted of the insured or guaranteed portions of federally protected private loans. About 69 percent of the \$43 billion total loaned or insured or guaranteed had been extended to homeowners, 12 percent to farmers and farm financing institutions, and 10 percent to business enterprises. This vast pool of obligations represented the accumulated flow—net of debt retirements and repayments—of over thirty-five years of federal credit activity. During most of this period the trend of the annual volume of loans made or insured by federal agencies has been strongly upward; federal credit activities have grown faster than the value of gross national product or the credit activities of private financial institutions. The volume of operations reached a new high during 1953, the last year under study, when loans made, insured, or guaranteed by federal and federally sponsored agencies totaled nearly \$14 billion.

If one aggregates the amount of credit extended since 1917, without deduction of repayments or retirements, it is found that the gross volume of loans made, guaranteed, or insured, and stocks and shares purchased by federal and federally sponsored agencies amounts to \$138.7 billion. Of this sum, the share of federal agencies consists of \$37.5 billion of direct loans, \$62.9 billion of loan insurance or guarantee commitments, and \$1.5 billion of stocks purchased; \$36.8 billion of direct loans and stock purchases were made by federally sponsored agencies.

What have been the effects upon the American economy of these large federal lending and loan insurance and guaranty operations? Their magnitude suggests that their influence has been profound, though the analysis of these effects is complicated by the fact that the programs have operated under widely varying economic conditions and differed widely as to objectives and administration.¹

¹ Federal credit has not been the subject of extensive economic analysis. Apart from discussions of particular agencies, and incidental references to federal lend-

TABLE 13

Volume of Federal Lending and Loan Insurance Extended during 1953, and Amount Outstanding at Year End, by Type of Agency and Sector of the Economy
(*dollar figures in millions*)

	AGRICULTURE		BUSINESS		HOUSING		OTHERS ^a		TOTAL	
	Amt.	Percent	Amt.	Percent	Amt.	Percent	Amt.	Percent	Amt.	Percent
EXTENDED DURING 1953										
Federal agencies										
Loans	\$ 458	15.4%	\$ 821	28.9%	\$ 723	11.0%	\$ 835	53.4%	\$ 2,838	20.3%
Loan ins. & guaranty	12	0.4	1,996	70.3	5,851	89.0	b	b	7,860	56.3
Stock & share purch.	..	..	..	..	..	..	..	..	..	..
Federally sponsored										
agencies										
Loans	2,509	84.2	22	0.8	..	..	728	46.6	3,258	23.3
Stock purchase	1	c	..	..	..	..	..	..	1	c
Total	2,980	100.0	2,839	100.0	6,575	100.0	1,562	100.0	13,957	100.0
Percent of total	21.4%		20.3%		47.1%		11.2%		100.0%	
OUTSTANDING END OF 1953										
Federal agencies										
Loans	2,790	55.1	3,755	83.0	3,003	10.2	965	24.8	10,514	24.5
Loan ins. & guaranty	124	2.4	765	16.9	26,504	89.8	1,933	49.7	29,327	68.2
Stock & share purch.	..	..	..	..	..	..	41	1.1	41	0.1
Federally sponsored										
agencies										
Loans	2,148	42.4	2	c	..	..	952	24.4	3,102	7.2
Stock purchase	5	0.1	..	..	..	..	..	..	5	c
Total	5,068	100.0	4,522	100.0	29,508	100.0	3,891	100.0	42,988	100.0
Percent of total	11.8%		10.5%		68.6%		9.1%		100.0%	

Computed from Tables A-1 and A-8. For amounts included under the several categories of credit activity, see Chapter 2, footnote 1. Amounts will not always add to totals due to rounding; percentage distributions were computed before rounding.

^a Includes financial institutions, minor governmental units, and miscellaneous groups.

^b Not available.

^c Less than 0.05 percent.

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Some programs have been designed to stimulate economic recovery generally; others have been intended to divert resources to particular segments of the economy. Many have had unforeseen and unintended economic consequences. In the wake of all of them have followed material changes in the credit practices of, and markets served by, private financial institutions. The present chapter seeks to analyze these relationships, grouping them into three broad categories:²

First, aggregative economic relationships, or the relations between federal lending and loan insuring on the one hand and the general level of prices and the over-all physical volume of production on the other. In this analysis, the policies implied by federal lending and loan insuring operations will be compared with federal policy in expenditure and fiscal operations, with monetary policy, and with private credit activities.

Second, resource-allocational effects, by which is meant changes in the patterns of resource-use that have been induced by federal credit activities, both as between and within major sectors of the economy. For present purposes it is convenient to distinguish between the agricultural, housing, and business sectors, which appear to have been the segments most profoundly affected by federal lending and loan insuring activities. An attempt has been made to appraise the influence of the federal programs on the physical volume of production, the level of costs and prices, and the debt-equity relationships within each of these sectors.

Third, the institutional effects of federal credit programs on the private financial system, by which is meant the effects on the volume of credit extended and methods of operation of private financial institutions, their credit practices, and the economic functions that they perform.

ing and loan insurance in treatments of monetary and fiscal policy, the articles by Neil H. Jacoby on "Government Loan Agencies and Commercial Banking," *American Economic Review* (Vol. XXXII, No. 1, March 1942, pp. 250-260), and by Robert Friedman, Jr. on "Federal Credit Agencies and the Structure of Money Markets, Interest Rates, and the Availability of Capital," *Quarterly Journal of Economics* (Vol. LXIX, No. 3, August 1955, pp. 421-444), appear to be the only efforts to assess its over-all economic effects, and they have focused attention only upon the relation between federal lending and the banking system.

² For brevity, the phrase "loan insuring" will often be used to cover guarantees as well as insurance; also for simplicity of presentation, stock and share purchases are grouped with and treated as similar to long-term direct loans. For more exact definition of terms and of amounts included, see Chapter 2, footnote 1.

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Aggregative Economic Relationships

PROBLEMS OF MEASUREMENT

The difficulty of determining the precise effect of federal loans and loan insurance on gross national product is readily seen if one poses the question: How much would GNP have been in recent years if there had been no federal lending or loan insurance programs? Clearly, the effect of a given volume of federal lending or loan insurance on GNP will depend upon where and how the funds involved were obtained, and how they influenced the expenditures of the borrowers. To simplify the analysis and the exposition, possible differences in the effects of loan insurance and of direct lending will for the moment be disregarded.

The effect on GNP of a net increase of, say, \$1 million in the outstanding credit of federal agencies will depend principally on the following: (1) the extent to which the net change in total public and private credit outstanding is different than it would have been had not an increase in public credit occurred; that is, the extent to which the new public credit substituted for, augmented, or reduced private credit;³ (2) the extent to which aggregate federal expenditures were different than they would have been in the absence of an increase in public credit; that is, the degree to which federal credit substituted for federal grants, subsidies, or other expenditures (as when a guaranteed loan finances defense plant construction that would otherwise have involved federal outlays); (3) the extent to which the federal credit was financed by taxes, by a reduction of federal deposit balances, by the sale of securities to the banking system, or by sales of securities to the public, and, if the latter, what the public would have done with its funds if it had not utilized them to purchase federal securities; (4) the degree to which borrowers from federal agencies utilized the proceeds of loans to refund outstanding indebtedness or to increase their deposit balances, rather than to acquire additional noncash assets; and (5) the degree to which borrowers repaid loans by liquidating noncash assets, instead of drawing on idle balances.

Since it is not possible to obtain accurate and comprehensive measures of these factors, any simple comparison of the magnitude of federal credit operations with gross national product is subject

³ Although federal credit is at times extended to borrowers who would otherwise obtain it from private sources, private agencies sometimes grant additional credit on the basis of federal loans.

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to serious qualification if it be taken to measure directly the effect of these operations on GNP. Yet certain inferences can reasonably be drawn from such a comparison, and we shall proceed along that line. First, however, it is necessary to consider (a) whether it is essential in this connection to differentiate between direct federal lending and loan insurance, and (b) whether the volume of credit should be measured in terms of net or gross flow.

There are a number of reasons for believing that, in some circumstances, the expenditure-generating effects per dollar of federal loan insurance have been at least equal to those of direct federal lending. For example, if the Reconstruction Finance Corporation stood ready to make a direct loan to a business enterprise, it would also be willing to guarantee the major part of a similar or larger loan made by a commercial bank. Loan guarantees were administered by RFC strictly as alternatives to direct loans. Indeed, the expansionary effects on expenditures per dollar of loan guaranty usually exceeded those of direct lending by RFC, because the amount disbursed by a private lender under RFC protection was often larger than what would have been loaned directly by RFC without the participation of a commercial bank.⁴

With respect to the federal guaranty under Regulation V of loans to businesses engaged in war production, the similarity of the effects of federal loan guarantees and direct federal loans is less clear. There was no legal requirement in this case that the credit should be unavailable to a business before the guaranty could be extended; and there is evidence that a considerable fraction of V-loan credit would have been extended by commercial banks in the absence of a federal guaranty.

A similar observation may be made with respect to the home mortgage loans insured by the Federal Housing Administration and the Veterans' Administration, which have composed the bulk of all federal loan insurance activities. Federal loan insurance has undoubtedly increased the volume of home mortgage lending,⁵ and its expansive influence upon aggregate housing expenditures has been at least as much as, and probably more than, it would have been if federal

⁴ In addition, federal loan guaranty or insurance does not require the immediate disbursement of federal funds and cannot, therefore, have a deflationary effect on expenditures by impinging on tax funds.

⁵ Our data show only the amount of the liability of each federal agency on an insured loan, thus understating the economic impact of loan insurance by ignoring the part of such credit carried at private risk.

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agencies had stood ready to make home mortgage loans directly.⁶ Yet the influence on housing expenditures per dollar of federal insurance has probably been less than the impact on business and agricultural spending per dollar of direct federal lending or of loan insurance in those sectors of the economy, because a larger proportion of home mortgage lending would have occurred in the absence of any federal action. For this reason, it is probably incorrect to add federal home loan insurance to direct federal loans, in attempting to determine the impact of federal credit programs on GNP, unless one reduces somehow the amount of home mortgage loan insurance involved. Unfortunately, we have not been able to develop a satisfactory method of determining how, or to what extent, the figures should be deflated; our series will include the uncorrected amounts.

Regarding the relative merits of measures of the net or gross flow of credit: there is strong support for the view that the net flow, or change in the level of outstandings, provides the best gauge of the impact of federal credit on the economy. The argument is that only the net difference (positive or negative) between loan disbursements and repayments exerts a thrust (expansive or contractive) upon aggregate expenditures.⁷ On the other hand, it is sometimes argued that the gross flow, i.e., the annual volume of loans made, and of loan insurance granted, is a superior measure of economic impact, because disbursements of loans may be expected to increase business and consumer expenditures, whereas repayments of direct or insured loans are unlikely to entail a proportionate reduction. In other words, it is more likely that borrowers contracting new loans will add to their expenditures than that those making repayments on old loans will reduce them.⁸ There is the further consideration that repayments are usually scheduled by existing contracts, and are not susceptible to immediate alteration, so that public control of federal

⁶ Federal loan insurance probably resulted in larger expenditures on housing than direct federal loans of the same type would have produced, in so far as competition among private lenders resulted in greater promotional effort and in expansion of the market.

⁷ See Gottfried Haberler's *Consumer Instalment Credit and Economic Fluctuations* (National Bureau of Economic Research, Financial Research Program, 1942), Chapter 3, p. 79, especially.

⁸ Repayments undoubtedly exert some contractive influence on the expenditure rates of debtors, especially when loans are repaid in lump sums rather than amortized over a period of years. Because the timing of the reductions in the expenditures of borrowers will differ from the timing of their repayments, loan disbursements in a given period cannot be compared with repayments in the same period to determine the net effect of credit operations on aggregate expenditures in that period.

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lending or loan insurance in the interest of economic stability must rely mainly on adjustments in the volume of credits extended.

Each of the two measures—volume of credits extended and change in outstandings—possesses validity for particular purposes, with the choice between them turning principally on what one believes to be the effects of repayments on the expenditures of borrowers. In recent years repayments have grown so large (nearly \$10 billion in 1953) that it would be difficult to ignore them.⁹ We shall, therefore, utilize both measures in our analysis, and consider the relationship of each to GNP. In addition we shall treat a rise in net lending, in the same way as a rise in gross lending, without regard to whether the net rises from a negative to a smaller negative figure, from a negative to a positive figure, or from a positive to a larger positive figure; likewise with declines.

RELATION OF FEDERAL CREDIT PROGRAMS TO GROSS NATIONAL PRODUCT

The most generous measure of the importance of federal lending and loan insurance programs in the national economy is the annual ratio of the gross volume of these operations to GNP. By this measure, federal credit activities were less than 1 percent of GNP in every year from 1919 through 1930, rose to 3.7 percent in 1932, and continued (except in 1934, when they rose to nearly 9 percent of GNP) to hold about that relative position through 1953 (Table 14). Although its high level in the early thirties was never subsequently regained, the ratio has shown no tendency to decline secularly and may be said to have been a factor of considerable importance relative to the aggregate expenditures of the economy for nearly two decades.

The conclusions reached are not greatly different when one employs the more conservative measure of the importance of federal credit activities in the economy, the ratio to GNP of the net change in outstandings of federal loans and loan insurance. Through 1931,

⁹ Over the whole period 1917–1953, loan repayments and expirations of insurance have amounted to 69 percent of the volume of credit extended: the ratio of repayments and other reductions in outstandings to advances has been much lower during years of rapid rise in credit operations (for example, 13 percent in 1920 and 27 percent in 1934) than in years of shrinking operations (for example, 114 percent in 1944 and 136 percent in 1945). For each dollar of net increase in outstandings over a given period, federal agencies typically have extended about three dollars of credit services, concurrently receiving around two dollars in repayments.

TABLE 14
Federal Loans and Loan Insurance in Relation
to Gross National Product, 1919-1953
(*dollar figures in millions*)

YEAR	GROSS NATIONAL PRODUCT	VOLUME EXTENDED DURING THE YEAR		NET CHANGE IN OUTSTANDINGS		REPAYMENTS OF LOANS AND EXPIRA- TIONS OF INSURANCE	
		<i>As Percent-</i>		<i>As Percent-</i>			
		<i>Amount</i>	<i>age of GNP</i>	<i>Amount</i>	<i>age of GNP</i>		
		\$	%	\$	%	\$	%
1919	\$ 75,027	386	0.51	395	0.27	205	0.27
1920	86,815	733	0.84	1,034	0.74	639	0.74
1921	71,081	379	0.53	1,260	0.32	226	0.32
1922	71,825	506	0.70	1,303	0.06	43	0.06
1923	83,711	382	0.46	1,431	0.15	128	0.15
1924	84,954	325	0.38	1,487	0.07	56	0.07
1925	88,530	294	0.33	1,476	-0.01	-11	-0.01
1926	95,021	320	0.34	1,527	0.05	52	0.05
1927	93,409	292	0.31	1,474	-0.06	-53	-0.06
1928	95,537	258	0.27	1,438	-0.04	-36	-0.04
1929	104,436 ^a	250	0.24	1,486	0.05	48	0.05
1930	91,105	667	0.73	1,779	0.32	293	0.32
1931	76,271	943	1.24	2,031	0.33	252	0.33
1932	58,466	2,175	8.72	3,324	2.21	1,293	2.21
1933	55,964	2,550	4.56	4,574	2.23	1,250	2.23
1934	64,975	5,827	8.97	8,830	6.55	4,256	6.55
1935	72,502	2,827	3.90	10,019	1.64	1,189	1.64
1936	82,743	2,031	2.45	10,101	0.10	82	0.10
1937	90,780	1,746	1.92	10,106	0.01	5	0.01
1938	85,227	2,250	2.64	10,215	0.13	109	0.13
1939	91,095	2,781	3.05	10,832	0.68	617	0.68

(continued on next page)

TABLE 14 (continued)
(dollar figures in millions)

YEAR	GROSS NATIONAL PRODUCT	VOLUME EXTENDED DURING THE YEAR		OUTSTANDINGS AT YEAR END		NET CHANGE IN OUTSTANDINGS		REPAYMENTS OF LOANS AND EXPIRA- TIONS OF INSURANCE
		Amount	As Percent- age of GNP	Amount	As Percent- age of GNP	Amount	As Percent- age of GNP	
1940	100,618	3,260	3.24	11,749	917	0.91		2,343
1941	125,822	3,663	2.91	12,534	785	0.62		2,878
1942	159,183	4,522	2.84	13,598	1,064	0.67		3,458
1943	192,513	7,440	3.86	13,958	360	0.19		7,080
1944	211,393	6,482	3.07	13,079	-879	-0.42		7,361
1945	213,558	4,775	2.24	11,345	-1,734	-0.81		6,509
1946	209,246	5,658	2.70	12,520	1,175	0.56		4,483
1947	232,228	7,438	3.20	15,699	3,179	1.37		4,259
1948	257,325	8,108	3.15	19,636	3,937	1.53		4,171
1949	257,301	8,603	3.34	23,559	3,953	1.54		4,650
1950	285,067	11,154	3.91	28,936	5,377	1.89		5,777
1951	328,232	12,234	3.73	34,620	5,684	1.73		6,550
1952	346,095	13,144	3.80	38,817	4,197	1.21		8,947
1953	364,857	13,957	3.83	42,988	4,171	1.14		9,786

Volume of loans (including stock purchases) and loan insurance extended by federal and federally sponsored agencies, and amounts outstanding at year end, from Tables A-1 and A-2. Gross national product (in current dollars) for 1929-1953 from *National Income Supplement, 1954, Survey of Current Business* (Department of Commerce), Table 2, p. 162; for 1919-1928 estimated by Simon Kuznets in *Supplement to Summary Volume on Capital Formation and Financing* (unpublished), Part A: Annual Estimates, 1919-1953, Variant III. a Kuznets' figure, comparable with earlier years, is \$101,465 million.

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annual net changes in outstandings amounted to well under 1 percent of GNP, but the percentage rose in 1932 to 2.2 and reached a peak of 6.6 percent in 1934. Thereafter the ratio fell, stood for a decade at less than 1 percent, and then increased to between 1 and 2 percent in the years 1947-1953. However, the increase during this last period should be discounted at least in part, and the ratios for 1936-1943 and for 1946 regarded as rather lower than those given, since in those years the net increase in FHA (and VA) home mortgage loan insurance was large in relation to the net increase in outstandings. The figures on net flow bear out the previous observation that the year 1934 probably witnessed the peak of the influence of federal credit programs on the economy.

Have federal lending and loan insuring activities tended to amplify or to dampen business fluctuations in the past twenty years? The analysis may begin with the thirties, since federal credit programs were too small in the twenties to have an appreciable weight in general economic conditions. The major economic decline of the early thirties extended from a peak in June 1929 to a trough in March 1933, according to the National Bureau's business cycle chronology. On a calendar-year basis, GNP fell sharply in each year of the period 1930-1932 (Chart 6). Although the gross and net annual volume of federal loans¹⁰ began to rise steeply in 1930, in absolute terms the increase was not sharp until 1932. Between 1931 and 1932 GNP declined \$17.8 billion, while the gross flow of federal credit increased \$1.2 billion and the net \$1.0 billion. The gross and net flow did not change much between 1932 and 1933, while GNP declined only \$2.5 billion. Between 1933 and 1934 an expansion in GNP of \$9.0 billion was realized. It is significant that the 1933-1934 increase in gross volume of federal loans and loan insurance, \$3.3 billion, was more than a third as large as the increase in GNP, and the figure is not much smaller when taken net of repayments. Federal credit programs appear to have been an important instrument for the revival of the economy in these years, operating influentially as a counter-cyclical measure.

The stimulating effect of federal credit programs diminished after 1934, as both the gross and net volume of loans and loan insurance declined. In 1936 and 1937 repayments virtually equaled new loans

¹⁰ Unfortunately, not enough quarterly data on federal loans and loan insurance programs are available to make the more precise study of their cyclical influence that such materials would permit.

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and in 1937-1938 the increase in new loans barely exceeded the increase in repayments. This withdrawal, on net balance, of federal credit supports to spending may have contributed to, though it could not have been a principal cause of, the short but severe downturn in general economic activity from mid-1937 to mid-1938. Furthermore, although the revival in 1938 and the subsequent economic upswing, which lasted through World War II, coincided with an expansion of federal lending and loan insurance programs, neither could have been much affected by it. The economy during these years was dominated by the enormous rise in federal military expenditures. The net flow of funds from the federal loan and loan insurance programs reached a peak in 1942, the gross flow in 1943. The decline to 1945 was due, in the main, to the tapering-off of federal guarantees of war production loans under Regulation V.

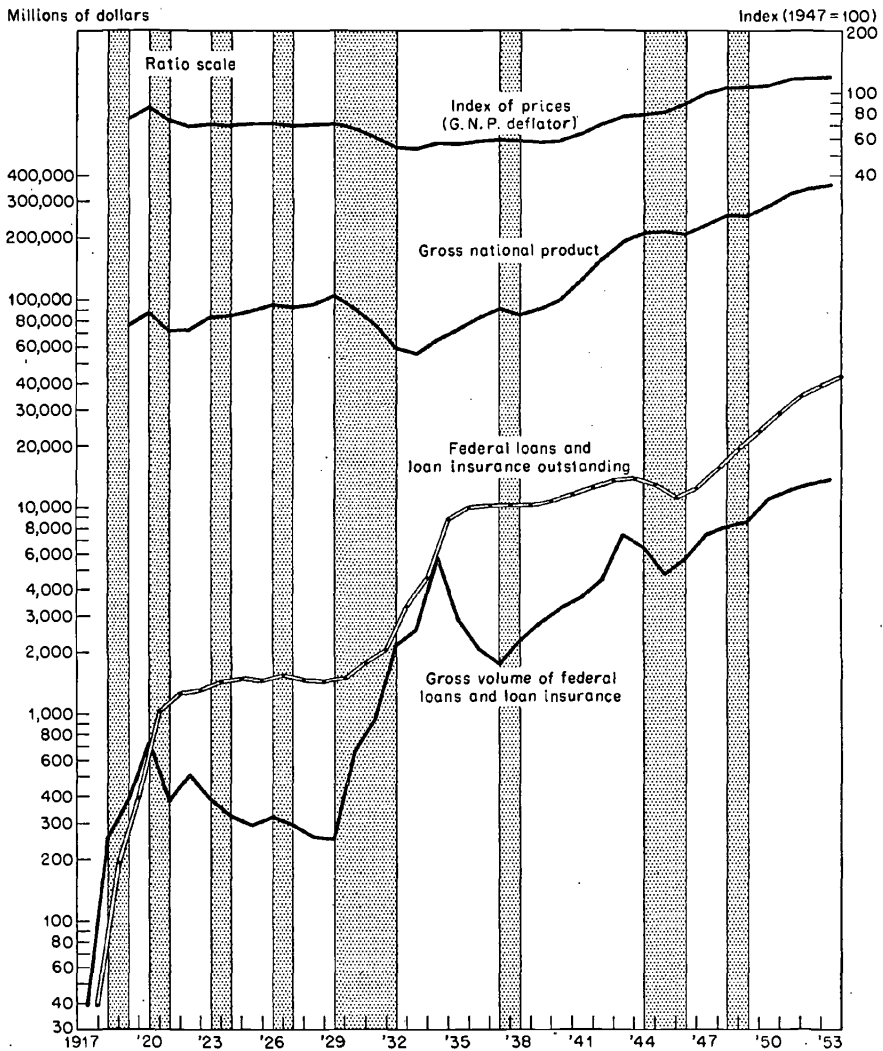
By 1946, however, the postwar readjustment had been completed and a construction boom was under way. In every year since 1946 the net flow of federal loans and loan insurance has been substantial, and in 1950-1953, despite a rapidly rising volume of repayments, the annual dollar volume approached or exceeded that of 1934, the peak depression year. Coming as they did in a period of high-level employment of economic resources due principally to other causes, these increases in federal credit programs, while relatively small compared with the increases in GNP, nevertheless must have contributed appreciably to the price inflation of that period.

Additional light may be shed on the relation of federal credit programs to general business conditions by considering the extent to which the directions of change in GNP, on the one hand, and in gross and net credit flow, on the other, have been concurrent or divergent (Table 15). It appears that the gross volume of federal credit has increased not only in every year that GNP declined, but also in a substantial majority of the years when GNP increased. On the average, the annual increase in gross volume was about the same when GNP rose as when it fell, and in any case small relative to the changes in GNP. However, the gross volume of credit has frequently increased substantially during the initial year of revival (i.e., 1933-1934, 1938-1939, 1946-1947, and 1949-1950) and it is reasonable to call such increases counter-cyclical. On this basis the gross volume moved in a counter-cyclical direction 15 years out of 24 since 1929, and the average annual increase during the 11 years of contraction or initial revival in GNP was \$1.12 billion, or ten

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CHART 6

Annual Volume and Year-End Outstandings of Federal Loans and Loan Insurance, and National Product, 1917-1953

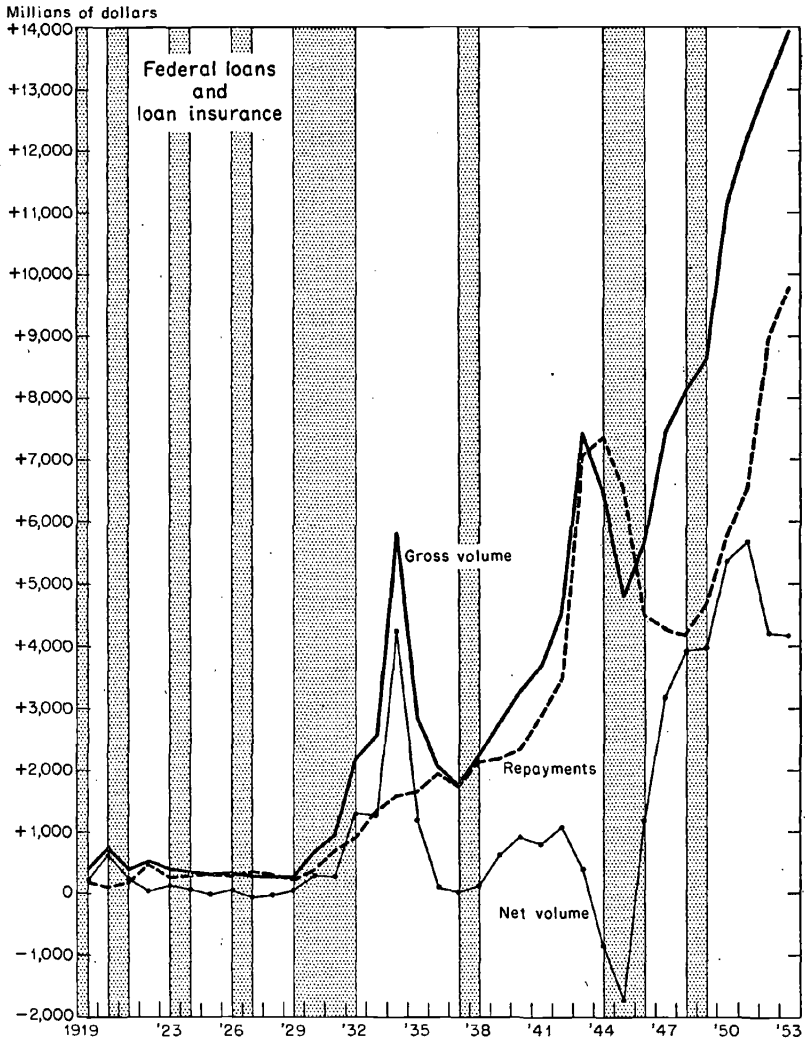


For data of lending and loan insuring by federal and federally sponsored agencies, and of gross national product, see Table 14. Price index is from the sources cited there for GNP, with the Kuznets series, 1919-1928, lowered by its 1929 ratio to the Commerce series (the latter, from Table 41 of the 1954 Supplement referred to).

Shaded areas denote periods of contraction in business activity, as defined by National Bureau of Economic Research reference dates.

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CHART 6 (concluded)



times the average annual increase during the remaining 13 years of expansion in GNP (\$0.12 billion).

In terms of the *net* volume of loans and loan insurance the counter-cyclical record is somewhat better. Net volume rose more often than not when GNP declined and fell more often than not when GNP rose. Like gross volume, it rose during each of the four years of initial revival in GNP, and especially rapidly in three of them. On the average the net volume increased one billion dollars per year during years of contraction or initial revival, declined one-half billion dol-

TABLE 15

Year-to-Year Change in Volume of Federal Loans and Loan Insurance,
in Relation to Changes in Gross National Product, 1929-1953
(billions of dollars)

YEARS WHEN GNP DECLINED ^a				YEARS WHEN GNP INCREASED ^a			
Change in Federal Credit				Change in Federal Credit			
Change in GNP	Gross Volume	Net Volume		Change in GNP	Gross Volume	Net Volume	
1929-30	-13.33	+0.42	+0.24	1933-34	+9.01	+3.28	+3.01
1930-31	-14.83	+0.28	-0.04	1934-35	+7.53	-3.00	-3.07
1931-32	-17.80	+1.23	+1.04	1935-36	+10.24	-0.80	-1.11
1932-33	-2.50	+0.38	-0.04	1936-37	+8.04	-0.28	-0.08
1937-38	-5.55	+0.50	+0.10	1938-39	+5.87	+0.53	+0.51
1945-46	-4.31	+0.88	+2.91	1939-40	+9.52	+0.48	+0.30
1948-49	-0.02	+0.50	+0.02	1940-41	+25.20	+0.40	-0.13
Average	-8.33	+0.60	+0.60	1941-42	+33.31	+0.86	+0.28
Number of				1942-43	+33.38	+2.92	-0.70
Increases	0	7	5	1943-44	+18.88	-0.96	-1.24
Decreases	7	0	2	1944-45	+2.16	-1.71	-0.86
				1946-47	+22.98	+1.78	+2.00
				1947-48	+25.10	+0.67	+0.76
				1949-50	+27.77	+2.55	+1.42
				1950-51	+43.16	+1.08	+0.31
				1951-52	+17.86	+0.91	-1.49
				1952-53	+18.76	+0.81	-0.03
				Average	+18.75	+0.56	-0.01
				Number of			
				Increases	17	12	8
				Decreases	0	5	9

Source: Table 14.

^a With two exceptions (1932-1933 and 1944-1945) respectively, according to the National Bureau's business cycle chronology, these correspond to years of contraction and expansion, respectively, according to the National Bureau's business cycle chronology.

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lars per year during years of expansion. It would seem therefore that loan repayments, which constitute the difference between gross and net, have imparted some degree of counter-cyclical behavior to the lending programs—presumably by increasing more rapidly in good times than in bad.¹¹ Consequently, it is difficult to credit more than a part of this modest record to the conscious management of the program. But this was hardly to be expected, in view of the fact that unified management of the programs to promote economic stabilization has not been a major objective.

To summarize: Before 1932, neither the annual volume, nor the net change in outstandings, of federal loans and loan insurance was large enough, relative to GNP, to have exerted a significant influence on the general business situation; however, they appear to have imparted an upthrust to economic activity during the revival from the Great Depression. They were about neutral in their effects from 1936 to the end of World War II, but thereafter they contributed appreciably to the postwar inflationary boom. In the aggregate, federal programs of lending and loan insurance have a mixed record in their influence on business cycles; they have operated at times in a stabilizing, and at other times in a destabilizing, direction.¹² On balance, however, the programs have operated more often than not to offset a contracting or depressed level of economic activity and to give a stimulus to economic activity in the early stages of recovery movement, especially when account is taken of the volume of loan repayments as well as new loans made.

MOVEMENTS OF THE MAJOR COMPONENTS OF FEDERAL LOANS AND LOAN INSURANCE

It may be useful to inquire also whether broad components of federal credit services—for example, the activities of direct federal

¹¹ The difference in the counter-cyclical record of the gross and net figures is due primarily to the large volume of repayments during World War II (1940-1946) and the Korean War (1950-1953). It is interesting, however, to note W. Braddock Hickman's similar finding in his study of corporate bond financing. New money offerings exhibit a moderately regular inverse conformity to business cycles, repayments a fairly regular positive conformity; as a result the difference, the net change in outstandings, shows a markedly inverse association with business cycles. See *The Volume of Corporate Bond Financing since 1900* (Princeton University Press for the National Bureau of Economic Research, 1953), pp. 116-123, 152-154.

¹² These conclusions regarding the cyclical effects of federal loans and loan insurance correspond in most respects to those reached by Beryl W. Sprinkel regarding the credit operations of the RFC. See his "Economic Consequences of the FRC," *Journal of Business*, Vol. XXV, No. 4, October 1952, pp. 218f.

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agencies as distinct from those of federally sponsored agencies, or direct lending regarded separately from loan insuring, or programs directed to different major sectors of the economy—have been mutually reinforcing or offsetting in their relationship to business fluctuations.

Loans by direct federal agencies have passed through five rather well-defined cycles. The first reached a peak at a volume of \$666 million in 1920, in the post-World War I readjustment period; the second reached a peak at \$4.6 billion in 1934; the third peak occurred at \$1.4 billion in 1940, following the sharp recession of 1937–1938; the fourth peak was \$1.6 billion in 1947, the immediate post-World War II readjustment period; after dropping in 1948, the volume rose steadily and stood at \$2.8 billion in 1953 (Chart 7).

Loan insurance activities of direct federal agencies date only from 1934, and reveal two major peaks in volume. The first occurred during 1943 at a level of \$5.1 billion, and reflected principally the V-loan guarantees extended by federal military procurement agencies. The second was reached during 1953, with a volume of \$7.9 billion, largely in consequence of FHA and VA insurance or guarantee of home mortgage loans. Until 1949 the gross volume of the two types of credit services of direct federal agencies moved oppositely as often as concurrently; thereafter, they rose together. The net volumes have, if anything, been less closely correlated than the gross.

Federally sponsored agencies have not offered loan insurance services, and their annual volume of direct loans has fluctuated less widely than that of federal agencies. For the federally sponsored agencies, which have been managed more like private financing institutions, there were two definite peaks in loan volume. The first came during 1934, when \$1.2 billion was loaned, mainly by federal land banks; the second came in 1952, with a figure of \$3.3 billion, largely as a result of loans to farmers and farmer cooperatives.

Since 1930, the gross volume of credit services furnished by the two types of agencies have moved concurrently in seven of every ten years, but the net volumes moved in opposite directions in six out of ten years. When loans and loan insurance are compared without regard to type of agency, both their gross and net volumes show movements of similar direction in about two years of every three in the period after 1934 (when federal loan insurance began).

Thus in many years the activities of federal and federally sponsored agencies diverged, and there were frequent divergencies, too,

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in the movements of direct loans and loan insurance. In such instances, of course, the programs tended to offset rather than to reinforce one another's economic effects. Can we then discern any differences among them in the degree to which they may have promoted economic stability? Tables 16 and 17 summarize the evidence. Of the three major categories of activity, direct lending by direct agencies of the federal government has shown the strongest tendency to rise during contractions and early expansions; indeed, loans by federally sponsored agencies and loan insurance have moved in a pro-cyclical direction more often than not. The net volumes show a more consistent counter-cyclical behavior; loans by federal agencies, and even the loans of federally sponsored agencies and loan insurance, taken on a net basis, show a preponderance of counter-cyclical movements.

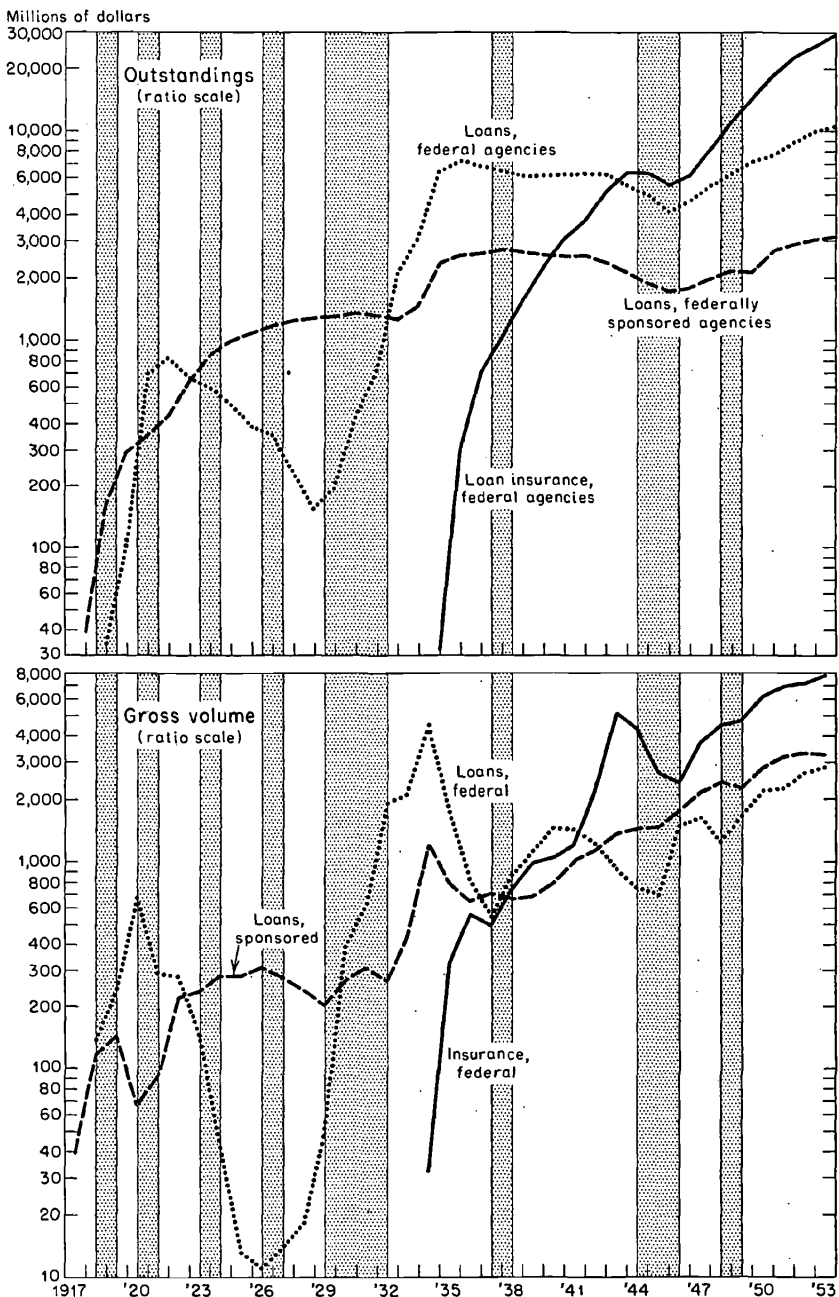
Attention is now turned to the movements of the federal credit services directed to different sectors of the economy—agriculture, business, finance, and housing. Up to 1930, the preponderance of all federal programs served agriculture; hence any intersector comparison can begin only with the thirties. During 1930–1934 the annual volumes of federal credit to all sectors reached peak levels, that for business coming in 1932, for other sectors in 1934 (Chart 8). After general declines through 1936, the patterns vary markedly: in credit aid to agriculture, an almost uninterrupted growth; to business, violent swings, with high peaks early in World War II and in the Korean conflict; to housing, rises through 1941, declines during the war, and then steep rises through 1950; to financial institutions, an irregular flow except for sustained rises from 1943 through 1948. After the counter-cyclical effort of the early thirties, the relationship between business fluctuations and the course of federal credit aids to the several sectors is rather mixed. Most notable from a counter-cyclical standpoint were the increases in the volume of credit for housing during the recessions of 1937 and 1945–1946, an increase in lending to business antedating and accompanying the 1937 recession, and an increase in lending to financial institutions following the contraction in 1949. Taking the record as a whole, it is the gross volume of credit aid to housing that has most often moved counter-cyclically, while aid to agriculture, business, and financial institutions has moved in pro-cyclical fashion about as often as not (Tables 17 and 18).

The net volume of credit extended to the several sectors shows

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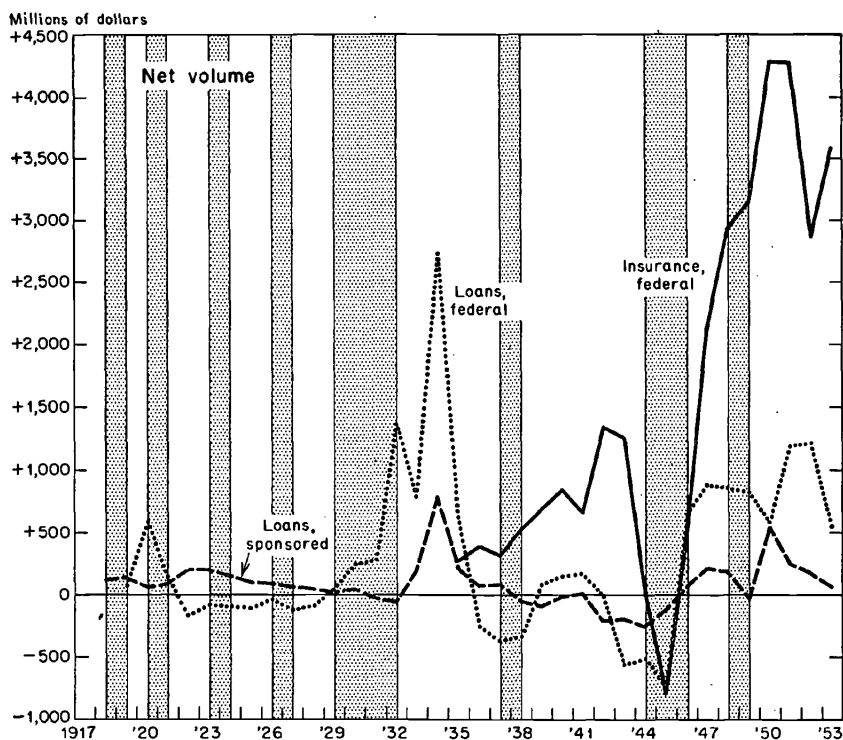
CHART 7

Lending and Loan Insuring by Federal and by Federally Sponsored Agencies: Annual Volume and Year-End Outstandings, 1917-1953



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CHART 7 (concluded)



From Tables A-1 and A-2. Stock purchases identifiable as primarily credit aid are included; for other details, see Chapter 2, footnote 1.

Shaded areas denote periods of contraction in business activity, as defined by National Bureau of Economic Research reference dates.

more consistent counter-cyclical performance than the gross volume. Indeed, in the case of housing, when we allow increases in the first year of a recovery to be reckoned as counter-cyclical, only three instances of "pro-cyclical" movement appear in the twenty-year record, the three being increases in 1939-1940, 1947-1948, and 1952-1953. On this basis, too, counter-cyclical changes outnumber pro-cyclical three to one in the agricultural sector, and nearly three to two in the business sector. In the financial sector the pro- and counter-cyclical changes are equally divided.

RELATION TO FEDERAL EXPENDITURES

Expenditures of the federal government, including grants, subsidies, and investments, are often alternative methods of achieving

TABLE 16
 Year-to-Year Change in Volume of Federal Credit, by Type of Agency or Activity,
 in Relation to Changes in Gross National Product, 1929-1953
(billions of dollars)

	CHANGE IN FEDERAL CREDIT									
	Gross Volume			Net Volume						
	CHANGE IN GNP	Loans, Federal	Loans, Sponsored	Loans, Insurance	Loans, Federal	Loans, Sponsored	Loans, Insurance			
								<i>Years When GNP Declined^a</i>		
1929-30	-13.33	+0.35	+0.06	..	+0.20	+0.04	..			
1930-31	-14.83	+0.23	+0.04	..	+0.04	-0.08	..			
1931-32	-17.80	+1.27	-0.04	..	+1.08	-0.03	..			
1932-33	-2.50	-0.07	+0.17	..	-0.57	+0.26	..			
1937-38	-5.55	+0.37	-0.04	+0.23	+0.30	-0.13	+0.20			
1945-46	-4.31	+0.80	+0.31	-0.22	+1.36	+0.19	+1.40			
1948-49	-0.02	+0.41	-0.19	+0.27	-0.03	-0.21	+0.22			
Average	-8.33	+0.48	+0.04	+0.09 ^b	+0.34	+0.01	+0.61 ^b			
Number of Increases	0	6	4	2	5	3	3			
Decreases	7	1	3	1	2	4	0			

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TABLE 16 (continued)

CHANGE IN FEDERAL CREDIT									
CHANGE IN GNP	Gross Volume			Net Volume			Years When GNP Increased ^a		
	Loans, Federal	Loans, Sponsored	Loan Insurance	Loans, Federal	Loans, Sponsored	Loan Insurance			
1933-34	+9.01	+2.05	+0.68	..	+1.94	..			
1934-35	+7.53	-2.34	-0.34	+0.29	-2.11	..			
1935-36	+10.24	-0.86	-0.13	+0.24	-0.87	+0.12			
1936-37	+8.04	-0.25	+0.06	-0.06	-0.12	-0.08			
1938-39	+5.87	+0.27	+0.02	+0.26	+0.43	+0.17			
1939-40	+9.52	+0.31	+0.11	+0.05	+0.05	+0.16			
1940-41	+25.20	+0.04	+0.21	+0.17	+0.03	+0.18			
1941-42	+33.31	-0.23	+0.13	+0.97	-0.18	+0.67			
1942-43	+33.38	-0.27	+0.25	+2.95	-0.56	-0.08			
1943-44	+18.88	-0.18	+0.05	-0.82	+0.04	-1.26			
1944-45	+2.16	-0.05	+0.03	-1.69	-0.20	-0.81			
1946-47	+22.98	+0.10	+0.38	+1.29	+0.24	+1.56			
1947-48	+25.10	-0.36	+0.25	+0.79	-0.02	+0.79			
1949-50	+27.77	+0.51	+0.60	+1.44	-0.26	+1.13			
1950-51	+43.16	+0.06	+0.38	+0.64	+0.62	-0.01			
1951-52	+17.86	+0.42	+0.12	+0.37	+0.02	-1.42			
1952-53	+18.76	+0.19	-0.05	+0.67	-0.67	+0.73			
Average	+18.75	-0.03	+0.16	+0.47 ^c	-0.10	+0.002			
Number of Increases	17	9	14	13	8	8			
Decreases	0	8	3	3	9	9			

Source: Tables A-1 and A-2; for GNP, Table 14.

^a See note a, Table 15.

^b Based on 3 items.

^c Based on 16 items.

^d Based on 15 items.

TABLE 17

Pro- and Counter-Cyclical Changes in Federal Lending and Loan Insurance,
Federal Expenditures and Deficit, and Federal Reserve Bank Credit,
1929-1953

	NUMBER OF YEAR-TO-YEAR CHANGES THAT ARE:				
	<i>Counter-</i>	<i>Pro-</i>	<i>Counter-</i>	<i>Pro-</i>	TOTAL
	<i>Cyclical</i> ^a	<i>Cyclical</i> ^b	<i>Cyclical</i>	<i>Cyclical</i>	
	(1)	(2)	Modified ^c	Modified ^c	(5)
All loans and loan insurance					
Gross volume	12	12	16	8	24
Net volume	14	10	18	6	24
Loans and loan insurance, by type					
Gross volume					
Loans, federally sponsored agencies	7	17	11	13	24
Loans, federal agencies	14	10	18	6	24
Loan insurance, federal agencies	5	14	8	11	19 ^d
Net volume					
Loans, federally sponsored agencies	12	12	14	10	24
Loans, federal agencies	14	10	16	8	24
Loan insurance, federal agencies	10	8	13	5	18 ^e
Loans and loan insurance, by economic sector					
Gross volume					
Housing	12	8	16	4	20 ^f
Agriculture	10	14	14	10	24
Business	14	10	12	12	24
Financial institutions	8	13	10	11	21 ^g
Net volume					
Housing	13	7	17	3	20 ^f
Agriculture	14	10	18	6	24
Business	14	10	14	10	24
Financial institutions	10	11	10	11	21 ^g
Federal expenditures					
Full period	11	13	11	13	24
Excluding war period ^h	10	7	10	7	17
Federal deficit					
Full period	13	11	13	11	24
Excluding war period ^h	11	6	11	6	17
Federal Reserve Bank credit					
Full period	8	16	10	14	24
Excluding war period ^h	6	11	8	9	17

Source: Tables 15, 16, 18, and 20.

^a Increase when GNP declined and decrease when GNP increased.

^b Increase when GNP increased and decrease when GNP declined.

^c Same as columns (1) and (2) except that during first year of expansion in GNP (1933-1934, 1938-1939, 1946-1947, 1949-1950) increases are counter-cyclical and decreases are pro-cyclical.

^d 1933-1953 only.

^e 1934-1953 only.

^f 1933-1953 only.

^g 1932-1953 only.

^h I.e. excluding 1940-1945, and 1950-1952.

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the same results that may be brought about by loans or loan insurance or guaranty. The Public Works Administration, for example, employed loans and grants during the thirties to finance public works in the interests of expanding employment. Both devices may stimulate increased production and employment during periods of unemployment; both may tend to inflate prices during periods of full employment. The effect on GNP of a dollar of federal loans or loan insurance is probably greater in most instances than that of a dollar of outright federal expenditure, because the loan or loan insurance is more likely to be accompanied by an equity investment by the borrower. (However, federal grants to states or municipalities, if conditioned upon matching expenditures by the grantee, also have a multiplied effect upon aggregate GNP.) Hence, it is pertinent to inquire into the importance of federal credit programs relative to federal expenditures, and to determine the extent to which the lending and loan insuring activities and the federal expenditure programs have reinforced or offset each other in their cyclical effects. Two types of comparison may usefully be made; first, between the gross flow of federal loans and loan insurance and the annual amount of federal expenditures; second, between the net flow of federal loans and loan insurance and the amount of surplus or deficit in the conventional federal budget.¹³ The first is a comparison of gross amounts of funds injected into the economy; the second, a comparison of their net impact, when repayments of loans are assumed to have effects on private expenditures analogous to payments of federal taxes.

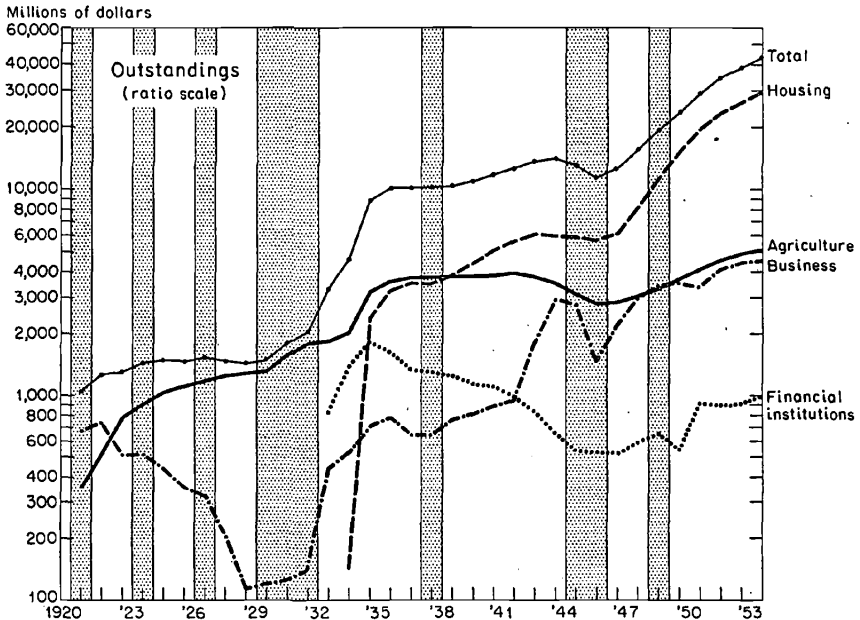
A comparison of the annual volume of loans extended and loan insurance commitments made with the annual volume of budget expenditures indicates that credit programs have been a factor of material importance in the financial activities of the national government since 1920, and that they were of vital importance during the depression years 1933 and 1934 (Table 19). Credit volume amounted to 51 percent of federal budget expenditures during 1933 and 78 percent during 1934. During the remainder of the thirties, annual extensions of loans and loan insurance were about one-fifth to three-tenths the amount of federal expenditures, and they main-

¹³ Expenditures and surpluses or deficits in the conventional federal budget are used, despite their many ambiguities, in preference to (1) the consolidated cash budget, or (2) federal purchase of goods and services and surplus or deficit on income and product transactions, because only the conventional budget provided, throughout the period under study, a widely known measure of fiscal policy.

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CHART 8

Major Sectors of the Economy: Annual Volume of Federal Loans and Loan Insurance Utilized, and Year-End Outstandings, 1920-1953



Covers lending and loan insuring by federal and federally sponsored agencies, from Tables A-1 through A-8. Total includes loans to minor governmental units and loans for miscellaneous purposes, as well as the components shown. Stock purchases identifiable as primarily credit aid are included; for other details, see Chapter 2, footnote 1.

Shaded areas denote periods of contraction in business activity, as defined by National Bureau of Economic Research reference dates.

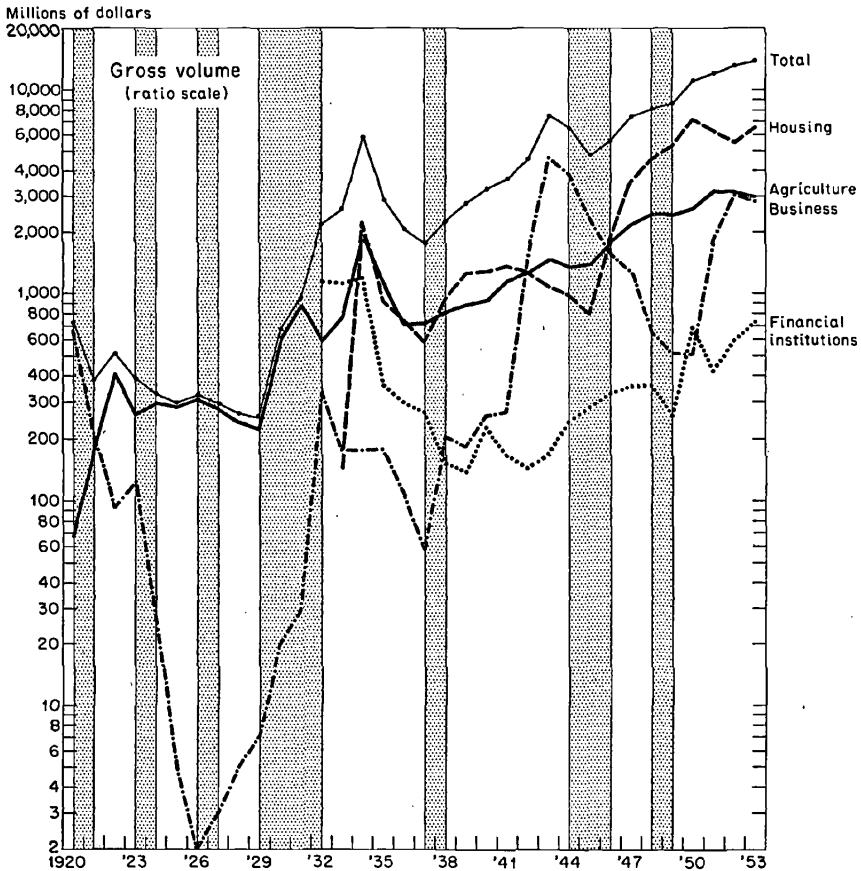
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tained this level of relative importance again during the postwar years 1947-1953.

If the annual changes in the amounts of federal loans and loan insurance outstanding at year ends are compared with the annual surpluses or deficits in the conventional federal budget, on the assumption that the net deficit and the net flow of credit are more meaningful measures of their relative importance to the economy, federal credit programs assume an even greater significance. During the 36-year period 1918-1953 there were six years during which the net flows of credit were significantly greater than the amount of surplus or deficit in the federal budget. Ignoring the years before

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CHART 8 (continued)

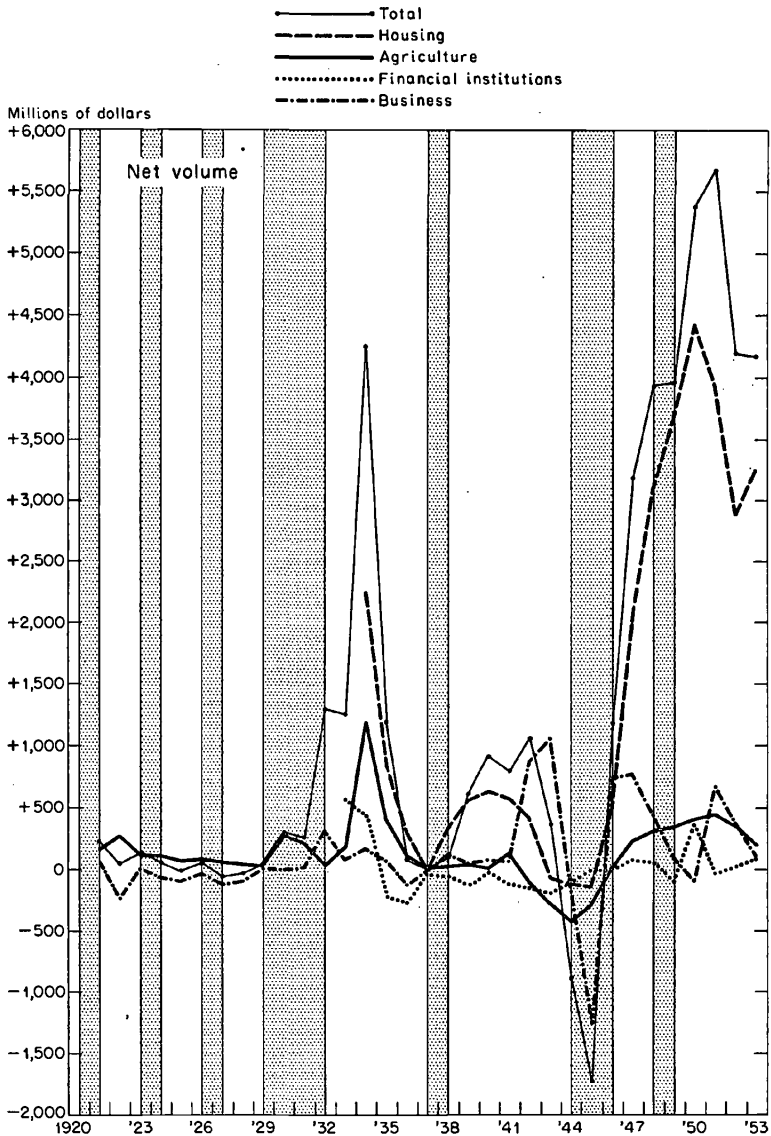


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1930, in which both magnitudes were too small for meaningful comparison, it is found that during the depression years 1932–1935 the net flow of credit equaled about half the amount of budget deficits and in the single year 1934 the net flow exceeded the amount of the budget deficit (Table 19). This suggests that during 1934 federal credit programs may have made a greater contribution to economic recovery than did federal fiscal operations. In the postwar years 1947–1951 outstanding federal loans and loan insurance (mainly the latter) increased by amounts that were as large as, and sometimes larger than, the budgetary surpluses or deficits, suggesting that credit programs may have made a major contribution toward the postwar inflationary boom; in 1952 and 1953 the increases in

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**CHART 8 (concluded): Federal Loans and Loan Insurance
Utilized by Major Sectors**



See notes placed with first panel of chart.

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outstanding federal credit were smaller than, but nevertheless substantial relative to, the current budgetary deficits.¹⁴

Have federal lending and loan insuring activities been harmonious with federal fiscal policies in their cyclical impact upon the economy? Although an over-all counter-cyclical policy was not deliberately pursued before the Great Depression and since then has not always been the major criterion in either the fiscal policy or the credit programs of the federal government, it is instructive to observe whether federal activities have tended to help or hinder stability. A strategy of general economic stabilization would call for concurrent reductions or concurrent increases, at appropriate times, in both federal expenditures and the volume of loans and loan insurance extended. Thus one test of past experience is to determine the number of years in which the directions of annual change in the gross flows of federal credit aids and of federal expenditures matched or diverged. Over the 36-year period 1918–1953 such changes were concurrent in 22 years and divergent in 14 years. Although concurrent movements outnumbered divergent movements, the degree of concurrence is not impressive. During the contraction of 1929–1932 and the beginning of recovery afterward, federal credit volume and federal expenditures rose together; but while expenditures rose irregularly from 1934 through 1937, credit programs contracted (Chart 9). In the 1937–1938 recession, federal credit and expenditures both rose, and by roughly the same amount. After the war, the gross volume of federal credit rose not only in the brief contractions but through the entire expansionary period, while expenditures contracted at first, then rose, mainly under defense requirements.

An illuminating comparison may be made between net credit flow and the size of the budgetary surplus or deficit. If federal credit programs were to contribute to economic stability, reductions in the net flow of loans and loan insurance simultaneous with reductions in the budgetary deficit (or increases in the surplus) would occur at appropriate times (e.g., when GNP was at a “high” level and rising), and increases in the net credit flow would coincide with increases in the deficit at other times (e.g., when GNP was falling or at a “low” level). Tables 15 and 20 enable us to observe how frequently the

¹⁴ Use of the consolidated cash budget, instead of the conventional budget, would not significantly alter the findings. The difference between the two was not considerable until after 1935, when social security trust funds began to build up; and federal deficits were sizable in most years thereafter, whether measured on a conventional or a consolidated cash basis.

TABLE 18

Year-to-Year Change in Volume of Federal Credit, by Economic Sector,
in Relation to Changes in Gross National Product, 1929-1953
(billions of dollars)

	CHANGE IN FEDERAL CREDIT EXTENDED TO:									
	Gross Volume					Net Volume				
	Housing	Agri- culture	Busi- ness	Finan- cial Insti- tutions	Housing	Agri- culture	Busi- ness	Finan- cial Insti- tutions		
1929-30	..	+0.40	+0.01	..	..	+0.24	-0.002	..		
1930-31	..	+0.26	+0.01	..	..	-0.05	+0.01	..		
1931-32	..	-0.30	+0.31	..	..	-0.18	+0.30	..		
1932-33	..	+0.17	-0.16	-0.003	..	+0.15	-0.23	-0.28		
1937-38	+0.35	+0.10	+0.14	-0.11	+0.34	+0.01	+0.12	-0.02		
1945-46	+1.12	+0.40	-0.72	+0.05	+0.59	+0.30	+1.99	+0.001		
1948-49	+0.75	-0.01	-0.13	-0.10	+0.58	+0.03	-0.35	-0.15		
Average	+0.74b	+0.15	-0.08	-0.04c	+0.50b	+0.07	+0.26	-0.11c		
Number of										
Increases	3	5	4	1	3	5	4	1		
Decreases	0	2	3	3	0	2	3	3		

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TABLE 18 (continued)

CHANGE IN FEDERAL CREDIT EXTENDED TO:											
Gross Volume						Net Volume					
			Financial Institutions						Financial Institutions		
			Business	Housing	Agri- culture				Business	Housing	Agri- culture
Years when GNP Increased ^a											
1933-34	+2.13	+1.18	+0.001	+0.08	+2.11	+1.02	+0.09	-0.12			
1934-35	-1.35	-0.85	-0.001	-0.84	-1.44	-0.80	-0.10	-0.65			
1935-36	-0.20	-0.39	-0.07	-0.06	-0.52	-0.30	-0.20	-0.06			
1936-37	-0.14	+0.01	-0.05	-0.03	-0.31	-0.09	+0.12	+0.24			
1938-39	+0.34	+0.07	-0.02	-0.01	+0.23	+0.01	-0.07	+0.06			
1939-40	+0.02	+0.05	+0.07	+0.09	+0.07	-0.03	+0.02	+0.09			
1940-41	+0.08	+0.25	+0.01	-0.06	-0.06	+0.13	-0.01	-0.09			
1941-42	-0.08	+0.09	+1.28	-0.02	-0.15	-0.24	+0.81	-0.03			
1942-43	-0.21	+0.19	+3.09	+0.02	-0.49	-0.17	+0.19	-0.03			
1943-44	-0.09	-0.10	-0.75	+0.07	-0.05	-0.14	-1.24	+0.07			
1944-45	-0.20	+0.03	-1.59	+0.04	-0.02	+0.13	-1.08	+0.11			
1946-47	+1.65	+0.40	-0.32	+0.03	+1.64	+0.22	+0.04	+0.07			
1947-48	+1.03	+0.25	-0.62	+0.004	+1.02	+0.08	-0.34	-0.02			
1949-50	+1.86	+0.18	-0.001	+0.42	+0.74	+0.07	-0.18	+0.47			
1950-51	-0.93	+0.59	+1.36	-0.25	-0.48	+0.03	+0.77	-0.40			
1951-52	-0.79	-0.02	+1.19	+0.16	-1.07	-0.10	-0.32	+0.05			
1952-53	+1.10	-0.19	-0.23	+0.14	+0.38	-0.15	-0.24	+0.06			
Average	+0.25	+0.10	+0.20	-0.01	+0.09	-0.02	-0.10	-0.02			
Number of	8	12	7	10	7	8	7	8			
Increases	9	5	10	7	10	9	10	9			
Decreases											

Source: Tables A-1 through A-8.

^b Based on 3 items.

^a See note a, Table 15.

^c Based on 4 items.

TABLE 19
Federal Loans and Loan Insurance, Federal Expenditures,
Budgetary Surpluses or Deficits, and Federal Reserve Bank Credit, 1918-1953

YEAR	FEDERAL EXPEN- DITURES (million dollars)	FEDERAL SURPLUS (+) OR DEFICIT (-) (million dollars)	VOLUME OF FEDERAL CREDIT AS A PERCENTAGE OF FEDERAL EXPENDITURES	NET CHANGE IN			FEDERAL RESERVE BANK CREDIT	Outstanding at Year End (million dollars)	Net Change
				FEDERAL CREDIT OUT- STANDING AS A PER- CENTAGE OF BUDGET SURPLUS OR DEFICIT					
				Years of Surplus	Years of Deficit				
1918	18,127	-13,420	1.4%	..	-1.1%	2,498	+1,327		
1919	11,730	-4,960	3.3	..	-4.1	3,292	+794		
1920	5,064	+1,368	14.5	+46.7%	..	3,355	+63		
1921	4,705	+267	8.1	+84.6	..	1,563	-1,792		
1922	3,553	+113	14.2	+38.1	..	1,405	-158		
1923	3,718	+387	10.3	+33.1	..	1,238	-167		
1924	3,345	+567	9.7	+9.9	..	1,302	+64		
1925	3,600	+220	8.2	-5.0	..	1,459	+157		
1926	3,614	+470	8.9	+11.1	..	1,381	-78		
1927	3,605	+483	8.1	-11.0	..	1,655	+274		
1928	3,755	+165	6.9	-21.8	..	1,809	+154		
1929	3,798	+445	6.6	+10.8	..	1,583	-226		
1930	3,809	+145	17.5	+202.1	..	1,373	-210		
1931	5,001	-2,383	18.9	..	-10.8	1,853	+480		
1932	5,083	-3,145	42.8	..	-41.1	2,145	+292		
1933	5,017	-2,543	50.8	..	-49.2	2,688	+543		
1934	7,495	-4,064	77.7	..	-104.7	2,463	-225		
1935	6,646	-2,854	42.5	..	-41.7	2,486	+23		
1936	8,539	-4,206	23.8	..	-1.9	2,500	+14		
1937	7,635	-1,888	22.9	..	-0.3	2,612	+112		
1938	8,220	-2,670	27.4	..	-4.1	2,601	-11		
1939	9,151	-4,300	30.4	..	-14.3	2,593	-8		

(continued on next page)

TABLE 19 (continued)

YEAR	FEDERAL EXPEN- TURES (million dollars)	FEDERAL SURPLUS (+) OR DEFICIT (-) (million dollars)	VOLUME OF FEDERAL CREDIT AS A PERCENTAGE OF FEDERAL EXPENDITURES	NET CHANGE IN			FEDERAL RESERVE BANK CREDIT	
				Years of Surplus	Years of Deficit	Outstanding at Year End (million dollars)	Net Change (million dollars)	
1940	9,645	-3,934	33.8	..	-23.3	2,274	-319	
1941	20,229	-11,762	18.1	..	-6.7	2,361	+87	
1942	57,542	-41,461	7.9	..	-2.6	6,679	+4,318	
1943	89,918	-55,691	8.3	..	-0.6	12,239	+5,560	
1944	96,896	-53,650	6.7	..	+1.6	19,745	+7,506	
1945	87,271	-43,594	5.5	..	+4.0	25,091	+5,346	
1946	41,080	-2,512	13.8	..	-46.8	24,093	-998	
1947	37,955	+2,434	19.6	..	..	23,181	-912	
1948	35,623	+5,241	22.8	+130.6	..	24,097	+916	
1949	41,106	-3,592	20.9	+75.1	..	19,499	-4,598	
1950	37,728	-422	29.6	..	-110.1	22,216	+2,717	
1951	56,337	-3,358	21.7	..	-1274.2	25,009	+2,793	
1952	70,682	-5,842	18.6	..	-169.3	25,825	+816	
1953	72,997	-9,157	19.1	..	-71.8	26,880	+1,055	

^a *Minus sign* indicates positive change over a deficit, or negative change over a surplus. *Plus sign* indicates positive change over a surplus, or negative change over a deficit.

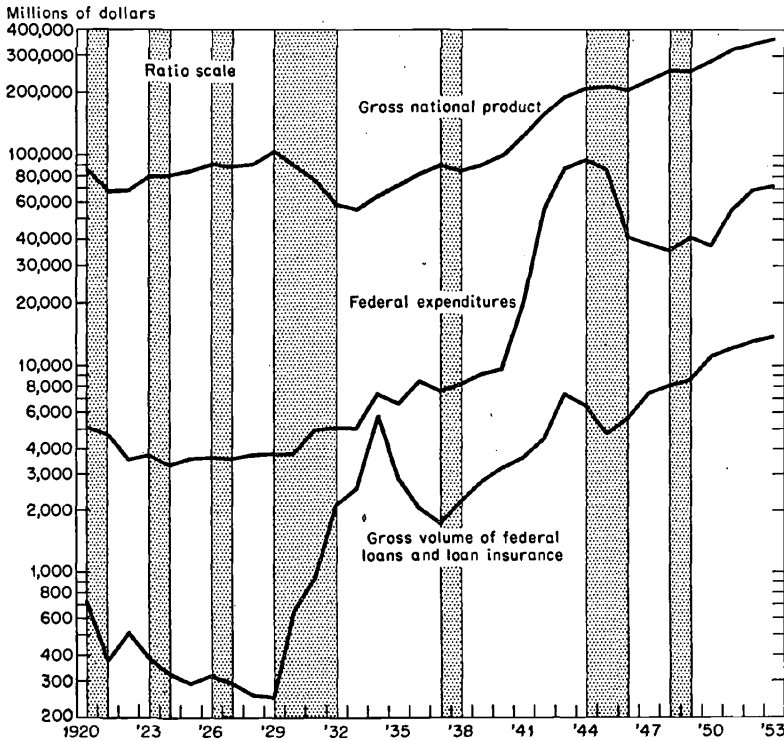
Source: Federal credit series computed from Tables A-1 and A-2. Federal expenditures and budgetary surplus or deficit for 1918-1932 (estimated on a calendar-year basis from monthly figures) are from the *Annual*

Reports of the Secretary of the Treasury; and for 1933-1953 (calendar years) are from the *Treasury Bulletin*, February 1954, p. 5, and April 1954, p. 1. Federal Reserve Bank credit through 1941 is from *Banking and Monetary Statistics* (Board of Governors of the Federal Reserve System, 1943), Table 102, pp. 373-377; for 1942-1953, from *Federal Reserve Bulletins*.

ECONOMIC SIGNIFICANCE

CHART 9

Annual Volume of Federal Lending and Loan Insuring, Federal Budget Expenditures, and National Product, 1920-1953



Series on gross and net volume of lending and loan insuring by federal and federally sponsored agencies, and gross national product, are from Table 14; on federal expenditures and budgetary deficit or surplus, from Table 19.

Shaded areas denote periods of contraction in business activity, as defined by National Bureau of Economic Research reference dates.

changes in net loan volume and in the deficit have moved in like direction, and to judge at least roughly whether the movements were favorable or unfavorable for economic stability. The results are tallied in the following scheme, in which an increase in net lending or in the deficit is termed counter-cyclical if it occurs when GNP is falling or is in the initial year of recovery, while decreases are counter-cyclical when GNP is rising (beyond the initial recovery year). The two factors have moved together in a "counter-cyclical" direction somewhat less than half the time, and on the occasions

ECONOMIC SIGNIFICANCE

CHART 9 (concluded)

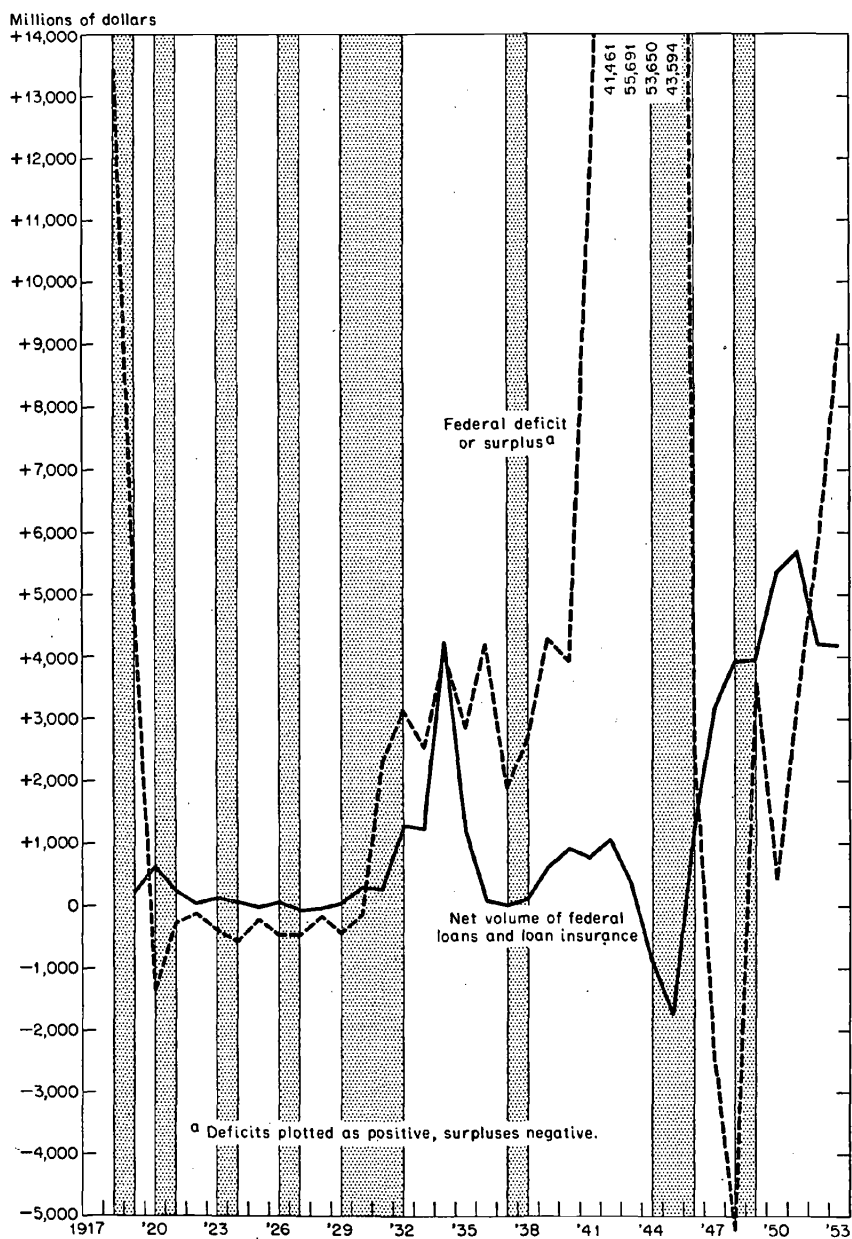


TABLE 20
 Year-to-Year Change in Federal Expenditures, Federal Deficit, and
 Federal Reserve Bank Credit, in Relation to Changes in
 Gross National Product, 1929-1953
(billions of dollars)

	YEARS WHEN GNP DECLINED ^a			YEARS WHEN GNP INCREASED ^a		
	Change in:			Change in:		
	Federal Expendi- tures	Federal Deficit ^b	Federal Reserve Bank Credit ^c	Federal Expendi- tures	Federal Deficit ^b	Federal Reserve Bank Credit ^c
1929-30	+0.01	+0.30	+0.02	1933-34	+1.52	-0.77
1930-31	+1.19	+2.48	+0.69	1934-35	-0.85	+0.25
1931-32	+0.08	+0.81	-0.19	1935-36	+1.35	-0.01
1932-33	-0.07	-0.60	+0.25	1936-37	-0.90	+0.10
1937-38	+0.58	+0.78	-0.12	1938-39	+0.93	+0.003
1945-46	-46.19	-41.08	-6.34	1939-40	+0.49	-0.31
1948-49	+5.48	+8.83	-5.51	1940-41	+10.58	+0.41
Average	-5.56	-4.07	-1.60	1941-42	+37.31	+4.23
Average,				1942-43	+32.38	+1.24
excl.				1943-44	+6.98	+1.95
1945-46	+1.21	+2.10	-0.81	1944-45	-9.62	-2.16
				1946-47	-3.12	+0.09
				1947-48	-2.33	+1.83

(continued on next page)

TABLE 20 (continued)
(billions of dollars)

YEARS WHEN GNP DECLINED ^a				YEARS WHEN GNP INCREASED ^a			
Change in:				Change in:			
Number of Increases Decreases	Federal Expendi- tures	Federal Deficits	Federal Reserve Bank Credits	Federal Expendi- tures	Federal Deficits	Federal Reserve Bank Credits	
	5	5	3	1949-50	-3.38	-3.17	+7.32
	2	2	4	1950-51	+18.61	+2.94	+0.08
				1951-52	+14.34	+2.48	-1.98
				1952-53	+2.32	+3.32	+0.24
				Average	+6.36	+2.24	+0.74
				Average, excl. 1940-45 & 1950-52	-0.25	-0.70	+0.87
				Number of Increases ^d	11(5)	9(4)	12(7)
				Decreases ^d	6(5)	8(6)	5(3)

Source: Table 19.

^a See note a, Table A-15.

^b I.e., an increase (+) means an increase in the deficit, or a decrease in the surplus, or a change from surplus to deficit. A decrease (-) means a decrease in the deficit, or an increase in the surplus, or a change from deficit to surplus.

^c I.e., an increase (+) means an increase in the net change in credit outstanding.

^d Numbers in parentheses exclude war periods, i.e. 1940-1945 and 1950-1952.

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YEAR-TO-YEAR CHANGE IN NET FEDERAL LENDING AND LOAN INSURANCE AND IN FEDERAL DEFICIT	PEACETIME: 1929-1939 1945-1949, 1952-1953				WARTIME: 1940-1945, 1950-1952		
	<i>Years</i>	<i>Years When :</i>		<i>Total</i>	<i>Years When</i>	1929-	
	<i>When</i>	<i>GNP Increased</i>					<i>GNP</i>
	<i>GNP</i>	<i>Initial</i>	<i>Other</i>				
	<i>Declined</i>	<i>Year^a</i>	<i>Years</i>		<i>Increased</i>	1953	
Lending rose, deficit rose	4	2	-	6	2	8	
Lending fell, deficit fell	1	-	2	3	2	5	
Lending fell, deficit rose	1	-	2	3	3	6	
Lending rose, deficit fell	1	2	2	5	-	5	
Lending and deficit counter- cyclical	4	2 ^b	2	8	2	10	
Lending and deficit pro-cyclical	1	-	-	1	2	3	
Lending counter-, deficit pro-cyclical	1	2 ^b	2	5	3	8	
Lending pro-, deficit counter-cyclical	1	-	2	3	-	3	
Total	7	4	6	17	7	24	

^a 1933-1934, 1938-1939, 1946-1947, 1949-1950.

^b Rise in lending or in deficit is termed counter-cyclical.

when the two moved in opposite directions, net lending moved "counter-cyclically" more frequently than the deficit did.

RELATION TO FEDERAL RESERVE CREDIT

An inquiry into the economic repercussions of federal credit activities should examine the relationships between such programs and monetary policies. Of special interest is the question whether movements in federal credit-granting activities and movements in credit made available by the central banking system have been reinforcing or divergent. A pertinent comparison lies between the annual net flow of federal credit and the annual net change in Federal Reserve Bank credit outstanding, because the latter provides the best objective measure of central bank influences upon the availability of credit from the commercial banking system. If economic stabilization were a major objective, central banking policy would normally require a progressive reduction in Federal Reserve Bank credit during advanced stages of economic upswings, and sharp increases in the net volume of such credit during the early stages of downswings; and federal credit policy would require concurrent changes in the net volume of loans and loan insurance. Actually, the directions of change in the two series were concurrent in only one-third of the 36 years embraced within the period 1918-1953 (Chart 10). Cyclical

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movements in the net volume of federal loans and loan insurance since 1929 may be compared with movements in the net volume of Federal Reserve Bank credit in Tables 15 and 20.

The net volume of federal agency credit rose markedly during and after World War I 1917-1920, but declined sharply in 1921 (Chart 10). The net volume of central bank credit reached a peak in 1918, and was cut back drastically during 1918-1921, rising sharply the following year. Thereafter, changes in both series were comparatively minor until the onset of the Great Depression, when both series rose. Beginning in 1934, central bank credit was reduced and little change was experienced until the exigencies of financing World War II brought a vast increase during the years 1942-1944. The net volume of agency credit diminished sharply in 1935, rose again during 1938-1941. During the years 1943-1945 it declined, principally in response to a reduction of guarantees of defense loans, and by roughly the same amount that reserve bank credit increased. There was a sharp contrast between the reduction in the net advances of central banking credit in 1945-1946 and 1948-1949, in an effort to curb price inflation, and the large annual increases in federal agency credits outstanding. Since 1949 the two types of credit have followed quite similar courses.

On the whole, as the accompanying tabulation illustrates, federal

YEAR-TO-YEAR CHANGE IN NET FEDERAL LENDING AND LOAN INSURANCE AND IN NET FEDERAL RESERVE BANK CREDIT	PEACETIME: 1929-1939 1945-1949, 1952-1953				WARTIME: 1940-1945, 1950-1952	
	<i>Years When GNP Declined</i>	<i>Years When GNP Increased</i>		<i>Total</i>	<i>Years When GNP Increased</i>	1929- 1953
		<i>Initial</i>	<i>Other</i>			
		<i>Years^a</i>	<i>Years</i>			
Lending rose, bank credit rose	1	3	1	5	2	7
Lending fell, bank credit fell	-		1	1	2	3
Lending fell, bank credit rose	2		3	5	3	8
Lending rose, bank credit fell	4	1	1	6	-	6
Lending and bank credit counter- cyclical	1	3 ^b	1	5	2	7
Lending and bank credit pro- cyclical	-	-	1	1	2	3
Lending counter-, bank credit pro-cyclical	4	1 ^b	3	8	3	11
Lending pro-, bank credit counter-cyclical	2	-	1	3	-	3
Total	7	4	6	17	7	24

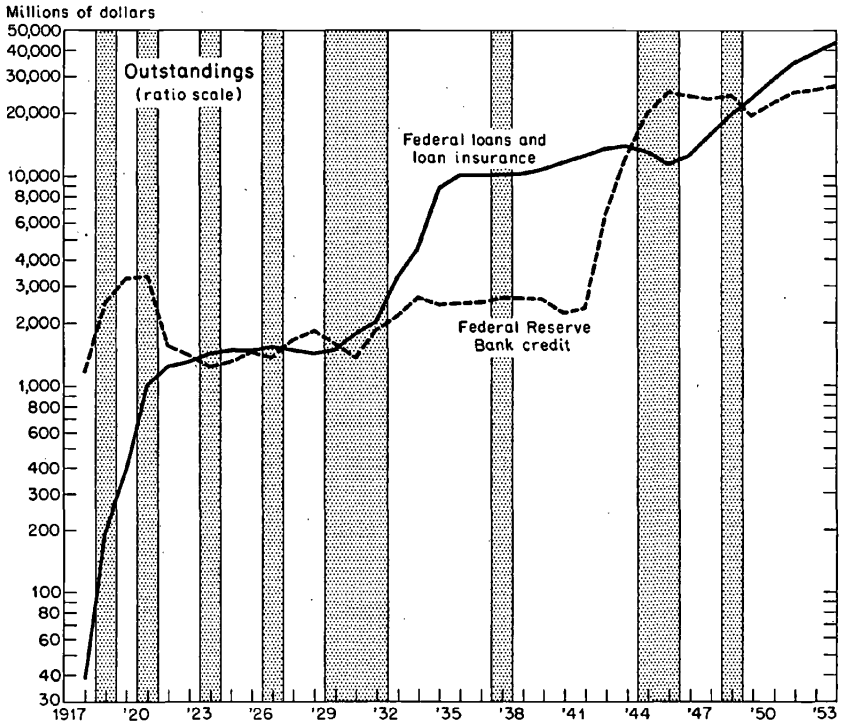
^a 1933-1934, 1938-1939, 1946-1947, 1949-1950.

^b Rise in lending or in bank credit is termed counter-cyclical.

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CHART 10

Federal Loans and Loan Insurance, and Federal Reserve Bank Credit: Outstandings at Year Ends, and Net Volume during Year, 1917-1953



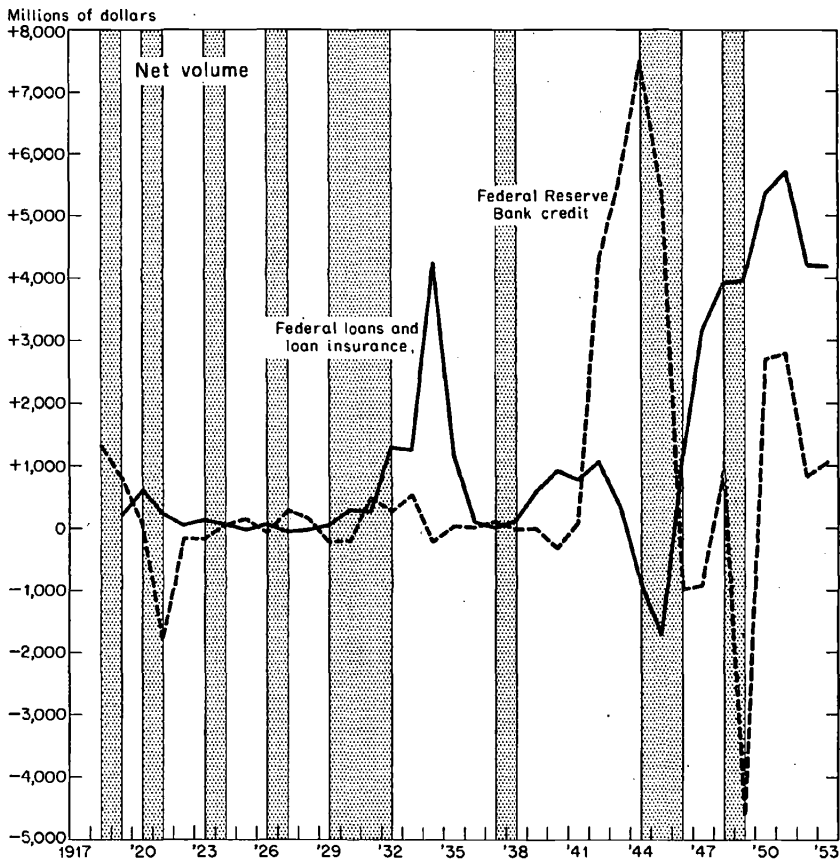
Series on loans and loan insurance by federal and federally sponsored agencies are from Table 14; on Federal Reserve Bank credit, from Table 19.

Shaded areas denote periods of contraction in business activity, as defined by National Bureau of Economic Research reference dates.

loan and loan insurance policy shows less correlation with monetary policy than with fiscal policy. Indeed, counter-cyclical movements have been appreciably more frequent in the behavior of federal lending and loan insurance than of federal reserve bank credit, during both expansions and contractions in Gross National Product. Divergence between these policies under some circumstances may be defended, of course, but the record reflects defects in federal monetary policies as well as inadequacies in the management of the credit programs of federal agencies.

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CHART 10 (concluded)



SUMMARY

A summary of the foregoing materials on the relations of federal credit programs to aggregate economic activity may be convenient. Gauged by its relation to gross national product, federal credit first became a significant factor in the economy in 1932. In that year the volume of federal credit extended rose from under 1 percent to 3.7 percent of GNP; in no subsequent year up to 1953 did it decline to less than 2 percent. Federal loans emerged as a major economic force, consciously and deliberately employed to affect the level of economic activity, during the Great Depression. The combined lending operations of public agencies during the early thirties apparently made a positive contribution to reemployment which matched, if it did not outweigh, the contributions of federal expenditures.

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This appears to have been the only period in American history in which federal credit aids were consciously used as the instrumentality, pre-eminent over both fiscal and monetary measures, to combat depression.

The annual volume of federal loans and loan insurance ran between one-fifth and three-tenths of the amount of federal expenditures during most of the thirties and during the postwar years 1947-1953; in 1933 and 1934, on the other hand, it reached 51 and 78 percent, respectively, indicating the vital role of credit in the New Deal effort to restore prosperity. During the Great Depression and in the postwar years 1947-1953, federal credit operations appear to have been at least as influential as determinants of total demand as were federal fiscal operations. However, the record does not reveal effective counter-cyclical coordination between federal financial policy in the two spheres; reductions in the net flow of loans and loan insurance have accompanied increases in budgetary deficits nearly as often as not, and conversely.¹⁴ Similarly, federal credit programs do not appear to have been effectively meshed with federal monetary policies to assist economic stabilization, a result which of course may be due to errors or to emphasis on aims other than stabilization in the management of either program. Stabilization would appear to require concurrent changes in both the net flow of Reserve Bank credit and in the net flow of loans and loan insurance by federal agencies; however, the record reveals more years of divergent than of concurrent movement.

The relations of federal lending and loan insurance operations to other federal financial activities—expenditures, budgetary surpluses or deficits, and central bank credit—and the relations of all of these magnitudes to general economic activity, represented by GNP and by the business cycle chronology, have been considered. The salient figures for such comparisons are summarized in Table 21, which presents net changes in the various series during the expansion or contraction phases of business cycles over the period 1927-1953. They reveal vividly how checkered has been the record of consistency between federal credit activities and fiscal and central banking activities, on the one hand, and between all these operations and business cycle behavior, on the other hand. The principal generalization

¹⁵ Occasionally, of course, there may be good reasons for such inconsistency. For example, at the end of World War II (1945-1946) a decline in the federal deficit was almost inevitable, and the increase in lending that occurred then can easily be reconciled with the requirements of economic stability.

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TABLE 21

Changes in Federal Lending and Related Series
during Business Cycles, 1927-1953
(billions of dollars)

RISE OR FALL IN						
BUSINESS CYCLE	GNP ^a	Federal Lending		Federal Re-	Federal Ex-	Federal
		Gross ^b	Net ^c	serve Bank Credit ^d	penditures ^e	Deficit ^f
EXPANSIONS						
1927-1929	+8.06 _g	-0.04	+0.10	-0.50	+0.19 _g	+0.04 _g
1932-1937	+32.31	-0.43	-1.29	-0.18	+2.55	-1.26
1938-1944	+126.17	+4.23	-0.99	+7.52	+88.68	+50.98
1946-1948	+48.08	+2.45	+2.76	+1.91	-5.46	-7.75
1949-1953	+107.56	+5.35	+0.22	+5.65	+31.89	+5.57
CONTRACTIONS						
1929-1932	-45.97	+1.93	+1.24	+0.52	+1.29 _g	+3.59 _g
1937-1938	-5.55	+0.50	+0.10	-0.12	+0.59	+0.78
1944-1946	-2.15	-0.82	+2.05	-8.50	-55.82	-51.14
1948-1949	-0.02	+0.49	+0.02	-5.51	+5.48	+8.83

^a Data for 1927-1929 represent change in GNP as estimated by Simon Kuznets in *Supplement to Summary Volume on Capital Formation and Financing* (unpublished), Part A: Annual Estimates, 1919-1953, Variant III; other data represent changes in Department of Commerce estimates of GNP as given in *National Income Supplement, 1954, Survey of Current Business*, Table 2, p. 162.

^b Represents changes in volume of direct loans and of stock and share purchases made by federal and federally sponsored agencies, and in amounts of loan insurance or guaranty extended annually by federal agencies; from Tables A-1 and A-2.

^c Represents changes in the net flow of direct loans and of stock and share purchases made by federal and federally sponsored agencies and of loan insurance or guarantees extended by federal agencies; from Tables A-1 and A-2.

^d Represents change in the net flow of Federal Reserve Bank credit. Basic figures for 1927-1941 are from *Banking and Monetary Statistics* (Board of Governors of the Federal Reserve System, 1943) Table 102, pp. 375ff., and for 1942-1953, from *Federal Reserve Bulletins*.

^e Data for 1927-1932 represent changes in calendar-year expenditures for general, special, and trust accounts (as compiled from unrevised monthly Daily Statement figures given in the *Annual Reports* of the Secretary of the Treasury) and are not strictly comparable with data from 1933 forward, which represent changes in calendar-year expenditures for general and special accounts (as given in *Treasury Bulletin*, February 1954, p. 5, and April 1954, p. 1).

^f Positive quantities indicate a rise in the deficit or fall in surplus; negative quantities, a fall in the deficit or rise in surplus. Figures were obtained from sources cited in note e above, and therefore the data for 1927-1932 have somewhat broader coverage than those for subsequent periods.

^g Not comparable with data for other periods.

that appears to be warranted from this record is that diversity of movement and a lack of counter-cyclical coordination has characterized federal financial operations in the past.

One characteristic of federal credit programs has been that, once set in motion, they have tended, in the aggregate, to expand irre-

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spective of general economic conditions. Consequently, aggregate federal loans and loan insurance continued to rise through the late thirties and early forties, through economic recession and expansion alike. The most important unstabilizing effects were experienced during the post-World War II boom, when, largely as a result of federal insurance and guaranty of home mortgage loans, federal credit operations were working counter to federal fiscal and monetary policies. The reason, perhaps, is that some programs have objectives apart from stabilization and also that aggregate federal credit is a mosaic of many pieces: each particular program has been designed to accomplish some special purpose and has been managed with that end in view, often without regard to its effects on over-all economic stability. Yet in the aggregate the programs have at times exerted a profound influence on prices and production.

Resource-Allocational Effects

Federal programs of lending, loan guaranty, and loan insurance have undoubtedly influenced the pattern as well as the aggregate amount of investment in the American economy. Yet the identification and measurement of this influence is exceedingly difficult. The availability of credit service is only one of many factors that determine the structure of resource use; underlying conditions of demand and supply, including technological changes, have had a far greater weight. Equally important, federal credit aids have formed only a minor fraction of aggregate available financial services, private financial enterprise having supplied the preponderance of this service in all major sectors of the economy, especially in the business sector. The influences of federal credit aids upon the structure of investment are therefore subtle and difficult to trace clearly.

Nevertheless, it is possible to point to certain changes in the physical activities of the economy presumably due to the operation of federal credit programs. These are now described briefly for the agricultural, business, and housing sectors of the economy (fuller treatments being reserved for Part II), with emphasis upon employment and physical output, the prices of products, the incomes and financial position of producers, and regional shifts in economic activity.

AGRICULTURE

Although the relationship cannot be rigorously demonstrated,

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federal agricultural credit programs appear to have lowered the cost and increased the supply of credit to agriculturists. Thus they have tended to bring about a somewhat greater allocation of economic resources to farming than would otherwise have occurred. There is some reason for believing that the effects of the consequent expansion in the supply of agricultural products were such, given the relatively inelastic demand for farm products, as to reduce somewhat the percentage of the national income received by farmers, especially during the thirties, when nonagricultural employment opportunities were relatively unfavorable.

Apart from their effects upon agriculture's relative position in the economy as a whole, public farm credit aids have produced internal adjustments within this sector of the economy. Thus, the policies of the federal agencies worked toward greater uniformity throughout the nation in the costs of both mortgage and production credit. They reduced farm credit costs, especially in the South and West where loan rates have traditionally been the highest. The fact that the largest proportions of delinquencies and foreclosures on farm loans took place in the Old South and the West (particularly, the northern Great Plains) during the thirties suggests that federal credit aids were particularly potent in promoting the shift of economic resources into farming enterprises in these regions.

BUSINESS

Relative to the total amount of credit utilized by business enterprises, loans and loan insurance by public agencies directly serving businesses have been of minor importance. It follows that federal credit programs for business probably have not had important direct effects upon the aggregate amount of business employment and production.¹⁵ Yet federal agencies of business credit have had significant selective effects in stimulating investment in business firms of particular types and industries, notably the following: ocean shipping, railroad transport, and foreign trade enterprises; new enterprises, firms in comparatively unfamiliar lines of trade, and concerns which were "marginal" from a banking point of view. However, whether these resource-allocational effects have been socially beneficial is an issue beyond the scope of this study.

¹⁵ Federal credit aids to agriculture and housing have probably had more influence, indirectly, on business markets and employment than have the programs directly serving businesses.

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HOUSING

The principal objective of federal housing credit programs since 1934 has been to increase the volume of construction activity. The weight of evidence regarding Title I insurance of loans for home repair and modernization during the thirties is that the program had little influence in initiating the recovery of such expenditures, although it contributed in some degree to their increase once recovery was under way. This conclusion also appears to stand in reference to the federal home loan insurance program, which was launched in earnest in 1935.

An analysis of the effects of the liberal credit terms made available to home buyers after World War II through FHA and VA home mortgage insurance, and Federal National Mortgage Association purchases of home mortgages from private lenders, is more complex. A comparison of the physical dimensions of the home building booms that followed World Wars I and II, after allowance for changes in population and rates of family formation, strongly suggests that residential construction was actually less during the years following World War II than would have been expected on the basis of post-World War I experience. Moreover, comparisons of the post-World War II movements of indices of residential construction costs with those of commercial and industrial construction and of prices of semimanufactured goods generally leads to a conclusion that a considerable part of the effect of federal credit aid programs in this period was to raise the cost of home construction and the prices of existing homes above the levels that would otherwise have prevailed. Thus, it would appear that a material part of the impact of federal credit aids on housing was dissipated after 1946 in price inflation rather than being utilized in the generation of increased physical activity.

Apart from their resource-allocational effects, federal housing credit aids appear to have done the following: first, promoted a decrease in the average size of homes and in the number of rooms per home, a trend in keeping with urbanization and the decline in average family size up to World War II; second, stimulated multi-unit projects developed on a cooperative ownership basis; and third, increased the scale of operations of home building enterprises, thus promoting production efficiency.

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Effects on Credit Markets and Lending Practices

It appears probable that the institutional effects of federal credit programs have exceeded in their importance either the aggregative or resource-allocational effects of these programs upon the American economy. Even at those times or in those sectors of the economy where federal credit aids seem to have had but slight direct influence upon the physical volume of activity, they often have modified the markets, practices, and economic functions of the private financial system in profound and enduring ways.

AGRICULTURE

Federal land banks have tended not only to lower the price of mortgage credit to farmers but also to liberalize maturity provisions and loan size. In many years they have functioned as leaders in farm mortgage markets, setting terms and conditions which private lenders were compelled to meet if they were to retain their relative market positions. Also in farm production credit, though to a lesser degree, the production credit associations have been market leaders, in a field formerly served exclusively by commercial banks. The result has been, in part, that commercial banks and life insurance companies have yielded market position to the publicly sponsored agencies; in part, that they have lowered the interest charges and lengthened the maturities of their farm loans. These effects of federal agencies on farm credit markets occurred mainly during a long period of decline in the structure of interest rates. Events might, of course, have taken a quite different direction if federal agencies had pursued the same policies in an economic environment marked by a stable or rising structure of investment returns.

BUSINESS

Federal credit and capital were used with dramatic effects during the thirties to maintain the solvency and enhance the risk-taking ability of private institutions financing business, notably through the RFC bank loans and capital programs. Although federal credit activities have undoubtedly exerted a net expansive influence upon the loan markets of banks and insurance companies, they have also operated in certain respects to compete with, and to restrict, the markets of private credit institutions by making relatively high-risk loans at rates less than those necessary to cover the full costs of such operations. They have often set rates which private institutions were

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unable to meet, mainly because of the tendency of public agencies to standardize their charges, irrespective of the size, term to maturity, risk, or administrative cost involved in a business loan. On the other hand, federal business credit programs have involved mainly a use of amortized, term loans, and they have promoted the use of this kind of credit by commercial banks. Public lending agencies serving business have thus tended to influence private business credit practices in the same way that federal programs for housing finance have tended to lengthen maturities and to promote the use of amortized loans in the home mortgage market.

HOUSING

Federal housing credit agencies have exerted a persistent downward pressure on mortgage loan rates, one of their principal objects having been to reduce the costs of home mortgage credit. Yet a comparison of the trend of mortgage interest rates with the yields of corporate bonds suggests that the influence of federal housing credit programs has been minor in comparison with the long-term decline in the whole interest rate structure. The facts also show that regional differences in rates charged on home mortgage loans have diminished markedly; since this does not appear to be true of regional differences in the rates carried by bank loans to business, the trend to greater regional uniformity may perhaps be attributed to federal home loan insurance programs. It is much clearer that federal credit programs in the housing field have lengthened the terms to maturity of mortgage loans, have helped to increase their loan-to-value ratios, and, as noted previously, have greatly encouraged the practice of periodic amortization, although they did not originate that practice.

When the influence of federal guarantees and insurance on the volume of nonfarm home mortgage debt is tested by comparing the movement of such debt with the movement of consumer installment sales credit, it is found that between 1935 and 1941 and again in the postwar years, uninsured installment sales credit rose more rapidly. The stimulative influence of federal insurance on mortgage loan volume was substantial; but it is easily exaggerated. Broadly speaking, federal loan insurance has not much influenced the distribution of mortgage lending among types of institutions, as is demonstrated by the minor shifts since 1935 in the relative positions

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of commercial banks, mutual savings banks, life insurance companies, and savings and loan associations.

In conclusion, federal credit programs have displayed, during a long period of falling interest rates, a pervasive tendency to reduce the costs of credit to borrowers, to increase the ratio of debt to equity, to lengthen the final maturities of loans, and to promote the principle of periodic amortization of loans. Thus, they have tended on the whole to cause private lending agencies to liberalize their credit terms and to readjust their credit practices.

