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Part II

The Postwar Structure of Financial Claims

DANIEL H. BRILL

*Division of Research and Statistics, Board of Governors of the
Federal Reserve System*

“... a great block of liquid claims and assets stand as the immediate and first objective within the range of depression and panic processes.” Berle and Pederson, *Liquid Claims and National Wealth* (1934), p. 179.

This paper represents only the personal views of the author.

THE SPECIFIC CONCERN OF THIS PAPER IS THE PRIVATE DEBT STRUCTURE developed during three years of peak rates in private expenditures and borrowing, 1946-48, and the degree to which this structure of claims and obligations might intensify a future decline in income. We abstract from the problem of the influence of financial stocks in *initiating* economic fluctuations, to which Parts VI and VII are addressed. It is difficult, however, to chart the course of a prospective economic disturbance without specifying its origin. To stay within the limits of our objective — the effect of *private* debt on declining *private* incomes — let us assume that the decline starts from high, but not full, employment levels and is set off by a process exogenous to the private area under consideration, say, a decrease in government transfer payments.

A DEBT SERVICE AND INCOME

The effect of the debt structure on income is most immediate through the flow of debt service charges — interest and amortization payments. Both the origin and terminus, as well as the magnitude, of the flow must be considered. The effects of debt service in competing with other dispositions of debtors' funds and the effects of the flow as a component of creditors' receipts are separate problems for study. Further, the effects may vary, and debtor and creditor response to the flow may coincide or diverge under different conditions of income and price change. The often used measure of the burden of debt on the economy — the ratio of net interest paid to national income — does not convey the significance of debt service charges as both receipts and expenditures.¹ Moreover, it ignores the largest component of the burden, amortization charges. While a substantial portion of debt is usually deemed to be continuous — renewable upon maturity or allowed to remain open and payable upon demand — it is the break in this continuity, the demands for repayment and refusal of renewals at the inception of a decline, that aggravates the difficulties of adjustment. An analysis of the effect of debt on declining incomes must include some measure of the amortization schedule.

Moreover, the analysis must take into account the dual role of most economic units: they both contribute to and receive debt service flows. To speak of debtor and creditor groups implies that all units can be classified in one category or the other. Yet the usual statistical bases for classification

¹ See, for example, the Report of the Subcommittee on Investment of the Joint Congressional Committee on the Economic Report, *Volume and Stability of Private Investment*, 81st Cong., 2d Sess., Sen. Doc. 149, p. 10; and earlier, the Findings and Recommendations of the Committee on Debt Adjustment, *Debts and Recovery* (Twentieth Century Fund, 1938), p. 246.

are unsatisfactory; neither the net balance of financial claims held, nor the net balance of debt service flows, nor the size of the respective flows relative to other receipts and disbursements yields groups that agree with the intuitive focus of concern over debt burden. For example, households' cash receipts of interest in 1948 were more than half again as large as their cash payments of interest. At the end of the year demand balances owned by households — currency, bank deposits, United States government securities, and shares in savings and loan associations and credit unions — were almost three times the total of their liabilities. Nevertheless, concern over households' reaction when incomes are declining tends to focus on their role as debtors rather than creditors. The focus is well directed, for primary consideration when incomes are declining must be given to debtors with fixed or determinable service requirements on contractual obligations. The analysis can go on to the effect of different adjustments debtors can make to maintain debt service out of declining incomes, and then to the response of creditors. Before examining data on the present debt structure, it may be profitable to pursue some of the alternative courses open to debtors and creditors under varying income and price changes.

First, when incomes decline, debtors may choose to maintain dollar rates of current saving and dollar stocks of past saving and meet interest and debt repayment charges by reducing rates of current dollar consumption or investment expenditures.² If the dollar decline in income is accompanied by a decline in prices of sufficient proportions,³ debtors could maintain *real* rates of expenditures at previous levels, increase the *real* value of current savings, and meet the fixed dollar amount of debt service from their reduced incomes. Since creditors' dollar receipts of debt service proceeds would remain at previous levels, creditors could contribute to an increase in employment and/or recovery in prices merely by maintaining their previous dollar levels and patterns of expenditure.

The probability of such coordination and precision in debtor and credi-

²The Department of Commerce defines consumption expenditures to include payments of interest on personal debt. For the purpose of this paper 'consumption' excludes such interest payments, and 'income' excludes interest receipts. In general, three categories of disbursements and receipts are used. Disbursements include expenditures (purchases of consumption and investment goods and services, and transfer payments), debt service (interest and debt repayment), and saving (acquisition of financial claims on others, including increases in claims against banks but net of decreases in claims on others). Receipts include income (receipts from sales of goods and services and transfer payments), debt service proceeds (interest and debt repayments), and dissaving (net increases in financial claims due others but net of decreases in claims due others).

³The percentage decline in prices required would exceed that in income, and the spread increases the further income declines.

tor response diminishes the further incomes and prices decline. For one thing, expectation of further declines may encourage larger holdings of liquid assets rather than commitment of funds to assets less easy to convert. The probabilities diminish still further if debtor and creditor disbursements have been, in the main, for investment (or the financing of investment by others) rather than for consumption goods, and rates of addition to their stocks of investment goods have been high during the periods before incomes began to decline. Finally, if the price changes are such that the value of the collateral decreases faster than the debt amortization schedule, debtors' equities may be wiped out and the costs of default diminished.

On the other hand, price declines equal to or less than the percentage changes in debtors' money incomes will require decreases in their real as well as their dollar rates of expenditures if debt service is to continue and dollar rates of savings do not change. Assuming that debtors adjust expenditures precisely, i.e., only as far as necessary to meet debt service payments, the degree to which creditors adjust the volume and pattern of their disbursements depends not only on the changes in income and price but also on the type and term of debt involved. If, for example, the debt instrument being serviced is short term consumer debt to a retailer, the short run effect of the decrease in debtors' expenditures would probably be to increase business inventories. The retailer creditor's decision on disbursement of the proceeds from debt service, i.e., whether to maintain or curtail rates of operation, would hinge on his response to greater liquidity due to the conversion of accounts receivable into cash, less liquidity due to the increase in inventories, and declining current sales. In view of the lag in appraising the situation and adjusting operations, inventories might continue to accumulate (and hence employment remain stable) for a short time.

If, however, the debt being serviced is long term, or is owed to nonbank financial intermediaries such as insurance companies or savings and loan associations, the pattern may be different. The debt service flow is not directed toward the retailer whose sales are decreasing, and the possibility that the retailer may obtain inventory financing from the institutions receiving the flow is more remote. Nonbank intermediaries have traditionally been minor factors in short term business financing. The retailer would therefore have to finance inventory accumulation from cash or other asset balances, or through banks. The former may not seem profitable if incomes have declined extensively; the latter may prove difficult when prices are declining. The point at which rates of operation would be cut and incomes resume their decline would probably come much sooner than in the earlier example cited of debts owed to merchants.

What would be the effect of other courses of action debtors might take to service debt from declining income? In particular, what are the consequences if debtors utilize their stocks of existing assets? The assets need not be sold but could be offered as collateral for loans — further borrowing to finance the service of existing debt. How far debtors can use this technique depends upon the availability of assets to be hypothecated and their acceptability to lenders as security. Such borrowing will soon increase service charges, and consequently the need for debtors to adjust other expenditures. While it may be used to forestall immediate default, the problems are substantially those mentioned in preceding illustrations.

If debtors choose to sell their assets, the initial impact is on the price levels of such assets. Creditors receiving the debt service charges may well be reluctant to increase or even maintain previous rates of investment expenditures when stock and bond prices are declining, or when a large volume of tangible assets, such as houses and business equipment, are being offered for resale. They are more likely to hold the debt service proceeds in cash or other liquid form and await further price declines.

Creditors' expenditures are less likely to change if debtors draw upon cash balances to meet debt service requirements. Since we postulated that, initially, the income decline affected debtors' incomes only, and we now postulate that debtors' expenditures and stocks of assets other than cash are maintained, there is little reason to expect prices to change in such a way as to induce creditors to withhold the debt service proceeds or to adopt radically different patterns of expenditures. The circumstances would be somewhat the same when debtors draw upon their stocks of federal securities to meet debt service costs if government bond prices are supported by Reserve System operations.

The final case considered is one in which debtors maintain current rates of expenditures and stocks of assets, but reduce the rate of additions to holdings of financial claims, e.g., bank deposits, securities, equity in insurance companies. If prices have fallen with income, real levels of debtors' expenditures will rise. If this increase is sufficiently extensive, the gains in employment may be sufficient to halt or level off the downward movement in incomes. If prices do not change, the cumulative force of the decline will depend on creditors' response to a situation of stable rates of dollar expenditures, stable prices and rising employment, maintenance of debt service receipts, but decreases in the flow of funds through financial channels. On the whole, the situation seems conducive to maintenance of creditors' spending. The extent to which they can carry out their decisions will depend upon whether creditors' incomes and asset holdings are adequate or whether creditors require additional financing. Interest rates may rise because a smaller volume of funds is being channeled to financial uses and

the types of saving curtailed by debtors may dry up the sources creditors had planned to tap. However, even if the decline in saving operates so as to curtail direct lending or lending through nonbank financial intermediaries, funds may be obtained through the banking system.

B DEBTS AND DEFAULT

It is not my intention to enumerate all possible patterns of behavior deriving from debt service out of declining incomes, but rather to indicate the nature of the criteria to be applied in analyzing the present debt structure in terms of the burden of servicing it. Obviously, the analysis must go beyond mere measurement of the flow, and include the flow in relation to other disbursements and receipts of debtors and creditors. It must consider also the ability of debtors to adjust other disbursements or to draw upon other resources, the likelihood that debtors will select any particular course of action, and the present and probable disposition of funds by creditors. The interaction of these variables must be viewed in the context of income and price decreases differing in origin and extent.

These considerations are pertinent mainly in situations where debt service flows are maintained despite changes in prices and in debtors' incomes. Additional criteria are needed in evaluating any particular structure of debt for the phase when these service flows cease and the debts are liquidated by default rather than repayment. From the borrower's viewpoint, debt has enabled him to conserve his assets while adding to them. Declining incomes may have diminished both the inducement to and the feasibility of asset conservation. A price decline accompanying the decrease in incomes may wipe out the debtor's equity in a pledged asset, thereby reducing the current value of his loss in case of default (assuming he does not have other free assets creditors can attach). On the other hand, the existence of debt beyond his equity increases the difficulty of obtaining further financing which might stave off default. The analysis must be extended, therefore, to include such questions as: What is the specific collateral underlying loans? Of what value is the collateral likely to be under varying degrees of income and price change? What free assets do debtors own that can be seized to satisfy debt instruments when servicing ceases, and what is their market value likely to be? What devices can debtors adopt to relieve themselves of stringent debt service requirements that might lead to default early in the income decline, and what do these devices guarantee for creditors? What devices can creditors adopt to avoid foreclosure after default?

C STATISTICAL BASES

The factual material available for applying the criteria noted in preceding

sections is far from adequate. Our knowledge of the patterns of debtor and creditor disposition of funds is based, for the most part, on gross aggregates. Information is scant on such key points as debt amortization schedules, interest charges on different types of debt, cross-classifications of debt and credit by economic groups, debt-equity relations, and the value of tangible assets held by debtors and creditors.

However, some data are available upon which a partial analysis can be built. The Department of Commerce has compiled estimates of public and private debt that cover more than three decades, distinguishing between corporate and other debt, between long and short term corporate debt, and between mortgage and various types of non-real estate debt owed by individuals and noncorporate business. This Department provides also the most commonly used aggregates on incomes and expenditures for final product. The income series distinguish corporate from individual and noncorporate net incomes; with some manipulation, it is possible to separate personal, noncorporate, and corporate expenditures for final product. Further, by arranging components of these series, the flow of interest payments can be traced among economic sectors.

Changes in financial claims held by individuals and business can be estimated by minor additions to the data compiled by the Securities and Exchange Commission; a series covering 16 years can be constructed. Valuation problems complicate the use of these data for the purpose at hand; some of the difficulties are discussed in the Technical Appendix.

From the moneyflows study conducted at the Board of Governors of the Federal Reserve System a more detailed picture can be painted of the structure of financial assets held and debts owed by major economic groups, including the asset and debt position of the chief financial intermediaries. In compiling the balance sheets used for this study, a special attempt was made to cross-classify debtor and creditor relationships in as much detail as existing data afford. The results are still highly tentative, but worth presenting if for no other reason than to indicate how balance sheet reporting by financial institutions should be modified to yield the kind of data needed to evaluate the debt structure better.

The Consumer Finances Surveys, also conducted at the Board of Governors of the Federal Reserve System, provide detailed information on debt, credit, income, and expenditures for one sector of the economy. These data, however, are available for only the postwar years and it will be some time before the outlines of patterns during various cyclical phases can be traced. Some information, which can be related to both debtor and creditor balance sheets, is available on the participation of the federal government as a guarantor of debt.

In using these various sets of data it is important to recognize their con-

ceptual incomparabilities. The series differ in scope as well as internal consolidation, and even when there are no conceptual differences the measures may not agree. For the most part, each set of data is most consistently used in comparisons over time, not in comparison with higher or lower degrees of aggregateness. The series used in this paper are discussed in more detail in the Technical Appendix.⁴

D CHANGES IN MAIN CHARACTERISTICS OF DEBT AFTER WORLD WAR II

At the end of 1949 total private debt was estimated at \$203 billion, the largest on record (Table 1). Almost a third, \$62 billion, had been incurred since the end of the war.

Rates of change among components of debt differed widely, but changes in the debt structure were smaller. For example, individual and noncorporate debt increased more than twice as rapidly as corporate debt from 1945 to 1949, but as a percentage of the total, it rose only from 39 to 45 in these four years. Consumer debt outstanding almost tripled, but as a percentage of private debt, it rose only from 5 to 9. Mortgage debt outstanding rose about 75 percent, and as a percentage of the total, from 26 to 31. The wide participation in the increase — only one major category, loans for purchasing or carrying securities, decreased in absolute amount between 1945 and 1949 — and the size of the debt in being at the end of the war tend to obscure the significance of the structural changes.

Debt owed by consumers, farmers, and other noncorporate business (referred to in this section as noncorporate debt) increased over 65 percent; consequently, noncorporate debt reverted to its pre-depression importance relative to total private debt.⁵ At the end of 1929 it constituted 45 percent of total private debt. In the collapse following 1929 it was liquidated more rapidly, and in a larger dollar amount, than corporate. As a percentage of total debt it fell to about 40 by 1933. Neither corporate nor noncorporate debt changed much during the recovery: corporate continued to decline slowly while noncorporate remained fairly stable. During the war corporate debt rose more rapidly, principally because of increased short term liabilities to the federal government on account of income tax liabilities, prepayments and advances, and renegotiation of procurement contracts. Most of the wartime increase in noncorporate debt was apparently attributable to borrowing for the purchase of government securities.

⁴ Many of the basic data used in accompanying tables have been revised since this paper was prepared. It was not possible to incorporate these revisions throughout.

⁵ In Sections E, F, and G an attempt will be made to deconsolidate noncorporate debt and present separate estimates for each component. These estimates, however, will not be strictly comparable with the totals used here, which cover a much longer period than the deconsolidated figures.

Table 1

Private Debt in the United States, December 31, 1929, 1933, 1939, and 1945-49

	I BILLIONS OF DOLLARS							
	1929	1933	1939	1945	1946	1947	1948	1949 ^a
A <i>Total private debt</i>	161.5	128.8	125.6	140.7	155.4	177.4	196.7	202.5
B <i>Corporate debt</i>	88.9	76.9	73.5	85.3	93.5	104.7	112.1	110.7
C Long term	47.3	47.9	44.4	38.3	41.3	44.8	49.6	53.6
D Mortgage	5.7	4.2	4.0	3.9	4.6	5.4	6.2	6.7
E Short term	41.6	29.1	29.2	47.0	52.2	59.9	62.5	57.1
F Notes & accounts payable	29.2	19.6	18.5	21.5	26.4	29.7	30.9	27.5
G Other	12.4	9.4	10.7	25.5	25.8	30.2	31.6	29.6
H <i>Individual & noncorporate debt</i>	72.6	51.8	52.0	55.4	61.8	72.7	84.6	91.8
I Mortgage	41.3	35.3	32.9	32.5	38.2	44.8	51.5	56.9
J Farm	9.6	7.7	6.6	4.7	4.8	4.9	5.1	5.5
K 1- to 4-family houses	18.5	15.9	16.7	18.2	22.4	27.1	31.7	35.3
L Other	13.2	11.7	9.6	9.5	11.0	12.7	14.7	16.1
M Commercial & farm non-real estate			5.3	6.4	7.9	9.7	11.8	10.8
N Financial	31.2	16.6	5.8	9.9	5.6	4.6	5.0	5.4
O Consumer			8.0	6.6	10.2	13.7	16.3	18.7

II PERCENTAGES

Line in
Part I

<i>% of total private debt</i>										
A	Corporate	B/A	55.0	59.7	58.5	60.6	60.2	59.0	57.0	54.7
B	Individual & noncorporate	H/A	45.0	40.2	41.4	39.4	39.8	41.0	43.0	45.3
C	Mortgage debt	(D+I)/A	29.1	30.7	29.4	25.9	27.5	28.3	29.3	31.4
D	Short & medium term debt*	(E+M+N+O)/A	45.1	35.5	38.5	49.7	48.8	49.5	48.6	45.4
<i>% of corporate debt</i>										
E	Long term	C/B	53.2	62.3	60.4	44.9	44.2	42.8	44.2	48.4
F	Short term	E/B	46.8	37.8	39.7	55.1	55.8	57.2	55.8	51.6
<i>% of individual & noncorporate debt</i>										
G	Mortgage	I/H	56.9	68.1	63.3	58.7	61.8	61.6	60.9	62.0
H	Commercial & farm non-real estate	M/H	10.2	12.8	13.3	11.6	12.8	13.3	13.9	11.8
I	Financial	N/H	43.0	32.0	11.2	17.9	9.1	6.3	5.9	5.9
J	Consumer	O/H	15.4	11.5	16.5	11.5	16.5	18.8	19.3	20.4
<i>% of individual & noncorporate mortgage debt</i>										
K	Farm mortgage	J/I	23.2	21.8	20.1	14.5	12.6	10.9	9.9	9.7
L	1- to 4-family nonfarm mortgage	K/I	44.8	45.0	50.8	56.0	58.6	60.5	61.6	62.0
M	Multifamily & commercial mortgage	L/I	32.0	33.1	29.2	29.2	28.8	28.3	28.5	28.3

Based on the debt series compiled by the Department of Commerce (Survey of Current Business, Oct. 1949, p. 8). Estimates for 1949 based on my extrapolation. Total private debt includes all obligations of domestic individuals and business except bank liabilities a/c of deposits and notes, the value of policies and annuities issued by life insurance companies, money borrowed by life insurance companies, and the short term debts outstanding between individuals

and unincorporated nonfinancial businesses. Debt between corporate affiliates has been eliminated.

Because of rounding, columns may not downtown.

* Preliminary.

** See text note 6.

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In the first three postwar years noncorporate debt increased far more rapidly than corporate. In 1949 corporate debt declined while noncorporate debt continued to rise; by the end of the year noncorporate was 45 percent of total private debt.

Most of the postwar increase in noncorporate debt was in long term obligations; mortgage debt accounted for 67 percent. In the four years after the end of the war mortgages owed on owner-occupied dwellings, farms, and rental dwellings owned by unincorporated landlords rose from \$32.5 billion to \$56.9 billion. Almost three-fourths of the increase was in debt secured by 1- to 4-family houses. Mortgages outstanding on these properties are estimated to be about \$35 billion at the end of 1949, \$18.2 billion in 1945, and \$16.7 billion in 1939. Mortgages secured by multifamily and commercial properties also increased rapidly — to approximately \$16 billion at the end of 1949. The increase in farm mortgage debt — less than a billion dollars — was minute in comparison.

While other forms of consumer and noncorporate borrowing rose rapidly, the increases on the whole were not as large as those in long term mortgage borrowing. Consumer debt rose from \$6.6 billion in 1945 to \$18.7 billion in 1949 — but the increase in commercial debt owed by farms and other noncorporate business, \$4.4 billion, most of which is short term, was offset by an equal decline in borrowing for the purpose of acquiring securities. At the end of 1949 over three-fifths of noncorporate debt was long term debt secured by real property.⁸

Most of the increase in corporate debt too was in long term obligations. During the war corporations reduced their long term debt approximately a seventh from 1939 levels, but postwar expansion plans calling for long term financing caused an increase of \$15 billion, or 40 percent, in obligations outstanding whose original maturity was more than a year. The ratio of long term to total corporate debt rose from 45 percent in 1945 to 48 percent in 1949.

In general, then, the major shift in the postwar debt structure was the

* It is difficult to distinguish sharply between maturities of debt owed by consumers, farmers, and other unincorporated businesses. For convenience we classified all mortgage debt owed by this group as long term, and all other types of noncorporate debt as short term. In view of the extension of maturities in instalment credit after the relaxation of consumer credit controls and the increase in term lending by banks, this classification undoubtedly overstates short term debt. However, statistics for more precise classification are not available.

The accuracy of the distinction between long and short term maturities in corporate debt should not be exaggerated. It is common accounting practice to transfer debt with original long term maturity but that will mature within the next fiscal period into the short term category. Corporate debt statistics for years when Internal Revenue data are available (through 1946) undoubtedly reflect this practice. However, estimates for later years probably do not take this shift fully into account.

increase in the relative importance of noncorporate and of long term debt to total private debt. Debt secured by real property increased most rapidly, accounting for over 44 percent of the rise in total debt, and at the end of 1949 was almost a third of all private debt outstanding. While the ratio of short term debt to the total declined it is still substantially higher than before the war.

A conspicuous feature of postwar borrowing has been the relatively low interest costs. Comparing the monetary interest payable on noncorporate debt with the average noncorporate debt outstanding (average of the debt at the beginning and end of the year), we note a steady increase in the effective interest rate from 5.2 in 1945 to 5.8 percent in 1949 (Table 2).⁷ However, the rate payable on noncorporate debt was almost a tenth lower than in 1939, and more than a third lower than in 1929. Effective interest rates on corporate debt remained relatively constant during the postwar period at 2.2 percent, well below 1939 and 1929 rates. The low yields reflect the availability of loan funds due to high rates of saving, direct government efforts to restrict interest costs on the main category of noncorporate debt, home mortgages, as well as the indirect effects of support of government bond markets through Reserve System operations.

Relative to incomes available for debt service, interest costs increased somewhat more rapidly than disposable personal income, but much more slowly than disposable corporate income.⁸ In 1945 monetary interest payable by individuals and unincorporated businesses was 1.9 percent of disposable personal income. By 1949 the percentage was up to 2.7, but was still substantially below the proportion in 1939 and 1929. The relative stability of corporate interest costs and the rise in corporate disposable income reduced the ratio of interest payable to income from 22.8 percent in 1945 to 11.7 percent in 1949. The ratio in 1939 was almost 40 percent, and in 1929, 32 percent.

We have previously emphasized that interest costs were only part of the debt service burden and that in periods of declining incomes, when renewal of debt is far from automatic and unexpected repayment requirements must be met, amortization schedules are of critical importance. Unfortunately, quantitative information is scarce. It is known that the average term of mortgage debt is substantially longer than the prewar, and that

⁷ 'Monetary interest payable' excludes the imputed interest payments that are part of the Department of Commerce interest component of national income. For certain debt items, farm mortgages in particular, interest payable is calculated by applying an average rate to debt outstanding. This results in overstating interest payments during the depression.

⁸ Corporate profits after federal and state income and excess profits taxes and after inventory valuation and adjustment, but before dividend and interest payments. Profits of banks and insurance companies are excluded.

Table 2

Private Debt, Income, and Interest Payments, 1929, 1933, 1939, and 1945-49

	BILLIONS OF DOLLARS							
	1929	1933	1939	1945	1946	1947	1948	1949 ^a
<i>Net debt outstanding (av. beginning & end of year)^b</i>								
A Corporate	87.5	78.5	73.4	89.7	89.4	99.1	108.4	111.4
B Individual & noncorporate	71.5	54.8	51.6	53.5	58.6	67.3	78.7	88.2
<i>Disposable income before interest payments</i>								
C Corporate ^b	12.0	0.5	6.3	9.2	9.9	14.3	20.3	21.3
D Individual & noncorporate ^c	82.5	45.2	70.2	151.1	158.1	172.0	190.8	191.2
<i>Monetary interest paid</i>								
E Corporate ^d	3.9	3.0	2.5	2.1	2.0	2.2	2.3	2.5
F Individual & noncorporate ^e	6.5	3.8	3.2	2.8	3.2	3.8	4.4	5.1

RATIOS

G Corporate debt to income	7.29	157.00	11.65	9.75	9.03	6.93	5.34	5.23
H Individual & noncorporate debt to income	.87	1.21	.74	.35	.37	.39	.41	.46
I Corporate interest to debt	.045	.038	.034	.023	.022	.022	.021	.022
J Individual & noncorporate interest to debt	.091	.069	.062	.052	.055	.056	.056	.058
K Corporate interest to income	.325	6.000	.397	.228	.202	.154	.113	.117
L Individual & noncorporate interest to income	.079	.084	.046	.019	.020	.022	.023	.027

^a Based on *Survey of Current Business*, Oct. 1949, except for 1949 figures, which are my estimates.

^b Corporate profits after taxes and after inventory valuation adjustment, plus monetary interest paid. Banks and insurance companies are excluded.

^c Disposable personal income.

^d Corporate monetary interest paid, excluding payments by banks and insurance companies, plus monetary interest paid to the rest of the world.

^e Total monetary interest paid minus corporate monetary interest payments and monetary interest paid by rest of the world.

^f Preliminary.

Except when otherwise noted, figures are based on Department of Commerce data.

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since the relaxation of consumer credit controls, some instalment credit would more appropriately be classed as medium than short term debt. However, from the fragmentary data available, a reasonable schedule of required repayments could not be constructed.

It is necessary, therefore, to investigate the situation in terms of extreme assumptions. Let us assume that all new lending ceases, that no debts maturing within the year are refunded, and that all interest charges payable within the year are met. To approximate this extreme situation, all short term debt and one-seventh of the long term liabilities outstanding at the beginning of the year are added to the interest paid during the year. In 1949 this extreme debt service requirement on individuals and non-corporate businesses amounted to \$45.6 billion, or 24 percent of the disposable income of individuals and unincorporated business for the year. The burden to be met out of 1950 incomes (assuming a rise of about \$1 billion in interest costs) was \$49.1 billion. Assuming no change from the preceding year's disposable personal income, the ratio of these hypothetical service requirements to income would rise to 26 percent. The comparable burden at the end of the war was slightly less than 20 percent of 1946 incomes.

Despite this increase during the four postwar years, the current ratio is substantially below the extreme burden on prewar and predepression incomes. Applying the computations outlined above to individual and noncorporate debt outstanding at the beginning of 1939, the burden represented about 37 percent of disposable personal incomes for that year; in 1929 the burden was over half of 1929 income. Income would have to fall 30 percent from 1949 levels or the debt burden would have to rise more than 40 percent before this extreme service charge would constitute as high a proportion of disposable income as in 1939.

Since corporate income available for debt service (see note 8 above) has increased more rapidly than corporate debt, such an extreme service requirement as calculated above constitutes a smaller multiple of current corporate income than did the comparable burden on 1946 and 1939 incomes. The sum of interest paid during the year, short term debt, and a seventh of long term debt outstanding at the beginning of the year was 3.4 times corporate disposable income for 1949. Since short term obligations declined more than long term debt increased during 1949, the burden on 1950 income became lighter. Assuming constant income, the service requirement would be 3.2 times 1950 income. The comparable ratios were 5.5 times 1945 income, 5.9 times 1939 income, and 4.2 times 1929 income.

The ratio of this extreme service requirement to available income does not measure the full extent of adjustments debtors would have to make in

expenditure patterns if they were forced to repay all maturing debts and could not obtain new financing. The total adjustment required without drawing on existing stocks of assets would include the elimination of current expenditures financed by borrowing, as well as curtailment of other expenditures by an amount equal to the difference between the extreme repayments postulated above less the preceding year's repayments. To calculate the change in expenditures that would be involved under the extreme assumptions is difficult, since the grouping used in compiling data on final product expenditures is not the same as the grouping of available debt information. At this juncture it will be helpful to turn to another statistical compilation, the moneyflows study, where a more consistent arrangement of data, for both balance sheet and income and expenditure items, has been attempted.

E HOUSEHOLD DEBT

Basic equipment for the moneyflows study is a set of financial statements recording the inflow and outflow of funds for each of 10 economic groups — households, farms, nonfinancial unincorporated business, nonfinancial corporations, banks, insurance companies, other financial businesses, the federal government, state and local governments, and the rest of the world. Annual financial statements, recording the moneyflows for each sector in standard categories of transactions, have been compiled for 1939 through 1948.⁹ The flows are not limited to transactions in final product; all purchases of goods and services, whether final or intermediate, all transfer payments, and all tax payments are included as far as the data permit. Similarly, all receipts from sales of goods and services (not only the net profit on sales) are recorded, as are all receipts of transfer payments, taxes, etc. While the accounts record only *money* flows, they are not confined to *cash* transactions. Thus, imputed transactions, such as food produced and consumed on farms, are excluded, but goods purchased by the issuance of an account payable are included.

Nonfinancial transactions, such as those involved in purchases and sales of goods and services, are directly recorded in the accounts as flows. In calculating financial transactions it was found preferable to prepare partial balance sheets — partial in that only financial claims and obligations are included, and tangible assets excluded — and compute most financial flows from balance sheet changes, after adjustment for writeups and writeoffs of financial assets and liabilities.

⁹ Since the preparation of this paper, a number of the estimates incorporated in the moneyflows accounts have been revised, and the accounts have been extended to cover 1949 and 1950. The revisions and the current data were not completed in time for incorporation here.

We are particularly concerned here with the income and expense statements and balance sheets for households (single person and family consuming units and personal trusts), farms (farm businesses, excluding the financial accounts of farm households), incorporated businesses (excluding banks and insurance companies), and unincorporated businesses (sole proprietors and partnerships, excluding mutual financial institutions).¹⁰ The separation of household and business accounts in the case of proprietorships represents, in many instances, an imputation of accounting procedures where none exist — the farmer who does not divide his bank balance into reserves held for family contingencies and those needed for business purposes, the small proprietor who mortgages his house to provide working capital for his business, etc. The social accountant is faced with the choice of merging the activities of the business and the owner, thereby blurring the outlines of any response patterns otherwise discernible in the data, or performing what has been labeled 'accounting vivisection' and imputing certain bases for response patterns. For example, by including in consumer receipts only net withdrawals of funds from unincorporated businesses instead of the entire net income of the business, the assumption is forced on the analyst that proprietors' patterns of consumer expenditures stem from the income left after business requirements have been met instead of from the entire income earned by the business. Neither course is completely satisfactory, but we chose to separate household and business activities as the better alternative for studying financial flows, even though the statistical bases are weak in many respects.

Household receipts in Table 3 include, therefore, withdrawals of funds from unincorporated businesses (net of new money invested), not their total net income. They include also cash pay, interest,¹¹ dividends, insurance benefits, tax refunds, public and private charitable grants, and receipts from sales of tangible assets such as cars and furniture. In 1948 these receipts totaled \$205 billion.¹² After payment of federal, state, and

¹⁰ The sectors used in this paper do not follow exactly those in the moneyflows study, nor do the transactions and balance sheet definitions follow precisely those employed there. The adaptations were made partly for convenience and partly to supplement the moneyflows accounts with items pertinent to a study of debt and asset relationships but not to a study of payment flows, e.g., household equity in insurance reserves are included among household assets, as is the value of accrued interest on U. S. savings bonds in the accompanying tables. Neither appears in the moneyflows balance sheet for households.

¹¹ In addition to cash interest receipts, the interest accrued on U. S. savings bonds was included in order to bring the receipt account to the same basis as the balance sheet. Household portfolios are shown inclusive of the accrued interest earned on these bonds.

¹² Excluding receipts from sales of real property, estimates of which were not completed in time for use in this paper.

Table 3: Household Receipts, Financial Assets and Liabilities, 1939 and 1945-48
Preliminary

	I TOTALS AND PERCENTAGE INCREASE			
	BILLIONS OF DOLLARS			
	1939	1945	1947	1948
A Total receipts*	68.5	158.6	188.6	204.9
B Interest receipts ^b	3.2	3.4	4.1	4.2
C Interest expenditures	1.4	1.3	1.9	2.4
D Taxes paid	3.2	23.4	24.9	24.7
E Disposable receipts (A-D)	65.3	135.1	146.3	180.1
F Financial assets, year end	178.8	295.5	310.4	332.5
G Demand assets, total	48.8	148.1	157.8	166.8
H Cash	35.3	83.8	92.1	94.5
I U. S. gov. securities ^c	8.8	55.6	57.6	59.9
J Savings & loan & credit union shares	4.3	7.7	9.0	11.6
K Credit balances with brokers	.4	.9	1.1	.8
L Other assets, total	130.0	147.4	152.6	165.6
M Equity in private insurance assets ^d	30.9	45.6	49.0	52.7
N Equity in gov. insurance assets ^e	1.0	5.6	7.4	8.2
O State & local gov. securities	8.0	6.9	6.7	8.0
P Mortgages	6.1	5.9	6.7	7.1
Q Corp. & other securities ^f	84.0	83.4	82.8	83.0
R Financial liabilities, year end	27.5	34.6	42.0	50.5
S Short and medium term, total ^g	14.5	17.3	20.3	23.9
T Accounts payable to merchants ^h	3.5	3.4	4.9	6.1
U Debt to banks	3.5	4.3	5.2	6.8
V Loans for purchasing securities	.8	1.9	1.1	1.0
W Consumer loans	2.7	2.4	4.1	5.7
X Debt to insurance companies	3.3	2.0	2.0	2.0
Y Debt to security dealers & brokers	1.1	1.4	.7	.7
Z Fed. & state income tax liabilities ⁱ	1.2	5.3	6.2	6.3
a Other short & medium term debt ^j	1.8	.9	1.4	2.0
b Mortgage debt	13.0	17.3	21.7	26.6
				31.7
				143.8
				33.1
				83.2
				27.4
				13.4
				12.3
				108.0
				25.8
				75.9
				19.3
				65.3
				47.4
				199.1
				131.5
				29.2
				631.3
				5.6
				175.8
				106.9
				33.3
				86.0
				65.3
				12.5
				241.8
				203.5
				12.6

II PERCENTAGES

Line in Part I	1939	1945	1946	1947	1948
A Interest paid as % of total receipts	2.0	0.8	1.0	1.0	1.2
B Interest paid as % of disposable receipts	2.1	1.0	1.1	1.2	1.3
C Interest paid as % of total liabilities	5.1	3.8	3.8	3.8	4.2
D Total liabilities as % of disposable receipts	42.1	25.6	28.7	30.9	31.8
E Short & medium term debt as % of disposable receipts	22.2	12.8	13.9	14.6	14.2
F Short & medium term debt as % of total	52.7	50.0	48.3	47.3	44.6
G Short & medium term debt as % of demand assets	29.7	11.7	12.9	14.6	15.3
H Total liabilities as % of demand assets	56.4	23.4	26.6	30.8	34.3
I Total liabilities as % of total financial assets	15.4	11.7	13.5	15.7	17.2

See the Technical Appendix for estimating procedures.

- * Includes all household moneyflows receipts (except receipts from sales of existing real property, which have not as yet been estimated) plus accrued interest received on U. S. savings bonds.
- † Includes accrued interest on U. S. savings bonds.
- ‡ Includes U. S. savings bonds at current redemption values and excludes Armed Forces Leave bonds. Redemption of latter bonds are included as nonfinancial receipt in line A.
- § Total assets of life insurance companies and fraternal benefit societies allocable to domestic policyholders. Equities in insurance reserves, public or private, are not included in regular moneyflows balance sheets, since all premium payments and benefit receipts are treated as nonfinancial flows.
- ¶ Total assets of Government Life Insurance and National Service Life Insurance funds. Excludes reserves of Social Security funds and various government employee retirement funds, since these cannot

be considered as assets available to individuals at their option to meet debt service requirements.

‡ A crude approximation based on estimates of holdings for 1939 plus annual net acquisitions of corporate securities. The level is closer to the obligor value of the securities than to holder or market values, and is therefore *least* appropriate to the problem under consideration, i.e., debtors' ability to meet debt service requirements by selling assets.

¶ All nonmortgage debt is classified here as short and medium term; year end liabilities for federal and state income taxes included.

‡ Includes charge accounts, service credit, and other sales credit owed directly to retailers.

¶ Includes instalment loans from other than banks, debt to finance companies on automobile purchases, and single payment loans from pawnbrokers.

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local taxes (including real property taxes) disposable receipts were \$180 billion, or 176 percent more than in 1939. (Disposable personal income as measured by the Department of Commerce was \$70 billion in 1939 and \$191 billion in 1948, an increase of 173 percent.) The rise in household debt was far less rapid: from \$27.5 billion in 1939 to more than \$57 billion at the end of 1948. Most of the increase in debt, however, was concentrated in the postwar years, whereas household receipts rose most rapidly before the end of the war. From 1939 to 1945 disposable receipts increased over 100 percent; total household debt 26 percent. From 1945 to 1948 receipts increased 33 percent; debt 65 percent.

The wartime increase in household debt was attributable to increases in mortgages, loans to finance the purchase of securities, and year end income tax liabilities to federal, state, and local governments. The curtailment of new construction and the imposition of rent controls resulted in a substantial transfer of residential property from the tenant to the owner-occupied classification; most of the mortgage debt incurred by households during this period reflects transfers of existing properties. Most of the borrowing to finance security purchases was directed toward the purchase of United States government securities.

Since the end of the war household mortgage debt has continued to increase rapidly, but borrowing for the purchase of consumer goods has increased even more rapidly. Household accounts payable to retailers, charge accounts and other forms of sale credit more than doubled from the end of 1945 to the end of 1948. Short and medium term debt to banks and finance companies, excluding debt for purchases of securities, almost tripled. Tax liabilities increased through 1947, but the reduction in federal income tax rates in 1948 reduced liabilities outstanding at the end of 1948 to about the level of 1945. The structure of household debt, then, at the end of 1948 was approximately as follows: 56 percent due on mortgages, principally to financial institutions, 23 percent due on short term debt to financial institutions, finance companies, and security dealers, 12 percent due on short term debt to merchants, and 9 percent due to federal, state, and local governments on account of income taxes. In contrast, the prewar (1939) distribution was 47, 36, 13, and 4 percent respectively.

The increasing importance of mortgages has been a major factor in easing the burden of debt service on household disposable receipts, for interest rates on mortgages are well below the rates on most other types of household debt. Effective interest rates (the ratio of interest paid to total liabilities outstanding) have remained relatively constant since the war, and are about a sixth lower than in 1939 (although total household interest expenditures have increased over 70 percent). As a proportion

of disposable receipts, household interest expenditures were 1.3 percent in 1948, 1.0 percent in 1945, and 2.1 percent in 1939.

Again, measurement of the total service burden of household debt must be in terms of an extreme assumption — no debt renewals and no new borrowing. The sum of short and medium term liabilities, a seventh of long term debt outstanding at the beginning of 1948, and interest paid during the year, \$30 billion, was about 17 percent of disposable household receipts for 1948. The comparable burden on 1949 incomes was \$33 billion. Assuming no change from 1948 to 1949 in disposable receipts (disposable personal income, as measured by the Department of Commerce increased less than a quarter of 1 percent), the extreme service requirement would be over 18 percent of 1949 household receipts after taxes. In contrast, the extreme burden to be met out of 1939 receipts was \$15 billion, or 23 percent of disposable receipts.

To meet the extreme conditions postulated above, without changing current saving rates or previously accumulated stocks, expenditures financed by borrowing would have to be eliminated and other expenditures adjusted to make up the difference between the service charge as calculated and the actual service payments in the preceding period. Data on actual flows of gross borrowing and repayment are not available, except for isolated areas of household debt. However, a rough order of magnitude can be calculated from balance sheet data. Household debt outstanding (exclusive of tax liabilities) increased at an annual rate of about \$8 billion in the early postwar years, and the moneyflows expenditures account shows interest payments averaging slightly below \$2 billion per year. The change in 1948 expenditures required by the conditions assumed above would then be approximately the \$30 billion extreme service requirement plus the \$8 billion of average net borrowing minus the \$2 billion of average interest previously paid, or about a sixth of estimated household moneyflows expenditures for 1948. Debt repayment rates since the war may have been higher than the rates required under terms of the debt instruments. To the extent that they were, the extreme burden assumed above would have less effect on expenditure totals for goods and services. On the other hand, a decline in incomes together with the extreme debt service requirements would entail greater curtailment of expenditures.

As households added over \$10 billion to financial assets in 1948, almost a third of the extreme burden could apparently be met without reducing cash expenditures for goods and services or drawing on assets. If, however, households wished to maintain rates of current additions to financial claims (and the urge to continue contractual savings, such as insurance, is undoubtedly strong) existing stocks of assets were more than adequate to meet any debt amortization requirements and to be a substitute for

the previous borrowing rates. Total household liabilities outstanding at the end of 1948 were just over a third of household demand assets, i.e., cash and assets convertible into cash at the holder's option within a reasonable period and for an amount that can reasonably be expected to be close to their original cash values. Under this definition, demand assets include holdings of cash, United States government securities, savings and loan association and credit union shares, and credit balances with security brokers. Cash surrender values on insurance policies would qualify under this definition, but it was not possible to estimate these separately from the value of individuals' total equity in private and government insurance assets.¹³ This equity was classed, therefore, with other non-demand assets. The ratio of debt burden to demand assets is further overstated by the assumption that all nonmortgage household debt matures within one year. Average maturities on consumer goods debt exceeded this even when controls were in effect; since the expiration of controls, maturities have increased significantly.¹⁴

Even under these extreme assumptions concerning maturities of debt and the ready convertibility of particular assets, the sum of interest charges, short term debt, and a seventh of long term debt outstanding constituted less than a fifth of demand assets at the end of 1948. This assumed service burden has increased more rapidly than demand asset holdings since the war; at the end of 1945 it was only a seventh of demand assets; the prewar (1939) ratio was over a third.

Further, the debt burden must be considered in relation to the increased security of assets available to households and the easing in terms of debt households owe. The federal government stands between the household sector and many of its creditors, and to an increasing extent secures households in their capacity as creditors. For example, household portfolios of direct and guaranteed obligations of the government were about \$9 billion in 1939, or less than a fifth of household demand assets; by 1948 they totaled \$60 billion, or over a third. The currency and coins held by households increased fivefold, representing less than 9 percent of household demand assets in 1939 but almost 12 percent in 1948. Household bank deposits have increased about 2.5 times since 1939. The proportion of household bank balances protected by government insurance cannot be calculated precisely, for business and personal deposits are commingled in

¹³ The last compilation of amounts subject to withdrawal in cash by policyholders that could be discovered was that prepared for the Temporary National Economic Committee (Hearings, Part 10-A, p. 275). It, however, did not include the withdrawal values on policies issued by several of the largest companies in the industry.

¹⁴ Milton Moss, 'A Study of Instalment Credit Terms', *Federal Reserve Bulletin*, Dec. 1949.

the statistics. However, total insured deposits at insured commercial banks rose from \$21.7 billion in 1938 to \$62.4 billion in 1949.¹⁵ As of September 30, 1949, 96 percent of the deposit accounts at insured commercial banks were insured in full. This is a smaller percentage than prevailed in 1938, 98.4 percent, since the average balance has increased substantially. Probably most business balances are in the uninsured portion of deposits, and the fully insured demand accounts represent, in the main, household balances. Savings accounts, predominantly held by households, were more completely covered by insurance than demand deposits; in 1949, 86 percent of savings accounts at insured commercial banks and 40 percent of demand deposits were covered in full. On the whole, more household deposits in terms of dollar amounts and number seem to be fully insured than before the war, but the coverage is proportionately no more of total household balances than it was.

Household claims against banks are not only protected directly but are indirectly safeguarded by the increasing proportion of government securities in banks' portfolios and by government guarantees and insurance of private loans made by banks. At the end of 1948, 56 percent of the total loans and investment of commercial and mutual savings banks were in federal securities (including not fully guaranteed issues). At the end of 1939 such holdings were only 39 percent of their loan and security portfolios. At the end of 1948 guarantee and insurance programs of government agencies protected in whole or in part some \$7.1 billion of commercial bank loans.¹⁶ The guaranteed portion, \$5.0 billion, was almost 12 percent of all loans and discounts held by commercial banks.

Similarly, the portfolios of other institutions in debt to households have been strengthened by increases in their direct holdings of government securities or by government guarantees of private loans. Government insurance reserves (National Service and U. S. government life insurance) plus the government securities held by private life insurance companies and fraternal benefit societies were \$6.4 billion in 1939, or a fifth of household insurance equities. By the end of 1948 these government insurance reserves plus government securities held by private companies were almost \$26 billion, or about 40 percent of household equity in insurance reserves (see Table 3, lines M and N). In addition, about \$3.5 billion of mortgage loans held by life insurance companies were insured in whole or in part by the government. These insured mortgages represented about a third of all mortgage loans held by life insurance companies, and more than 6 percent of their total assets.

The government loan guarantee and insurance programs that enhance

¹⁵ 'Insurance of Commercial Bank Deposits', *ibid.*, Feb. 1950.

¹⁶ *Annual Report of the Federal Deposit Insurance Corporation, 1948*, p. 37.

the security of household assets are, for the most part, the programs that protect households in their capacity as debtors. At the end of 1948 FHA and VA insurance and guarantee programs protected some 16 percent of total household liabilities.¹⁷ Almost all these guarantees cover household mortgage debt; some 29 percent of mortgage balances owed by households at the end of 1948 were covered by FHA and VA programs. About \$200 million of home repair and modernization loans was covered by FHA insurance provisions. Only 7 percent of total household liabilities and 15 percent of household mortgage balances owed were protected under government insurance programs at the end of 1939.

While these programs are designed to protect households as creditors they afford numerous advantages to households as debtors. The most immediate advantages are the controls over interest rates chargeable on insured or guaranteed loans, the longer amortization periods allowed, and the minimum construction standards established. Further, insured loans must be amortized regularly—a somewhat mixed blessing, since the period of grace during which debtors may adjust expenditures or convert assets to meet repayment dates is shorter. However, recognition of the regular service burden tends to make for sounder appraisal by debtor and creditor of ability to undertake debt, and the amortization of principal reduces total interest costs on the loan. Finally, the insurance programs should ease the difficulties ensuing from defaults. The general policy of the government as guarantor is probably best stated in the following quotation from the *Lenders Handbook*, Veterans Administration Pamphlet 4-3 (rev. Dec. 1948), paragraph 5011:

“It is the policy of the VA, consistent with the beneficial nature of the legislation, to encourage lenders to extend all reasonable forbearance in the event a borrower becomes unable to meet his obligations under the loan. Accordingly, the regulations have given the lender broad discretion in extending the terms of repayment in order to cure a default or to avoid imminent default.”

Summarizing the position of household debtors as revealed by aggregative data, it is evident that debt service requirements grew heavier in relation to household receipts and assets during the first three postwar years, but are still relatively lighter than the prewar burden, and that the security of household assets as well as of their debts is to an increasing degree the ultimate responsibility of the federal government. The service burden as measured above has been in terms least favorable to households' status as debtors. Immediately payable debts are overstated, and immediately available assets understated; moreover, the assets exclude, because of the

¹⁷ VA insurance or guarantees other than on home loans and FHA insurance other than on 1-family dwelling mortgages are considered here as insurance of business, rather than household, debt.

lack of statistical bases for estimation, tangible assets owned by households.

We have considered above only the initial impact of the extreme conditions postulated, and the magnitude of the adjustments these conditions would impose on expenditure and saving rates, or on stocks of assets. The conditions assumed are not plausible, nor is it likely that all households will adjust in the same way. It should be kept in mind, therefore, that the calculations yield results not likely to be encountered in the actual flow of debt and credit. On the other hand, the secondary effects of even smaller adjustments — less curtailment of debtor expenditures or current saving — may be even more disastrous for the economy if other groups respond as adversely as households and their creditors. Hence the measurements are of value in historical comparisons but cannot, without further information than is now available on probable patterns of debtor behavior, forecast the course of events if the flow of credit to household debtors were stopped.

Information readily available on distributions of household income, assets, and debt tends to confirm the aggregate picture. The partial data available from the FRB Survey of Consumer Finances indicate a fairly strong position at most points along the income scale. For example, over half the units surveyed in early 1949 reported no debt, whereas only 29 percent reported no liquid asset holdings. (In the Survey liquid assets include government bonds, checking and savings accounts, and savings and loan association shares, but not currency.) About half the units with debts reported that the total owed was less than \$500, whereas some 60 percent of those owning liquid assets reported holdings of over \$500. Even in the lowest income bracket (annual money income before taxes of less than \$1,000) 20 percent of all spending units reported liquid asset holdings of \$500 or more; 11 percent had total debts of \$500 or more (Table 4).

Table 4

Spending Units Reporting Liquid Assets or Total Debts of \$500 or More as a Percentage of All Spending Units in Income Class, Early 1949

1948 Annual Money Income before Taxes	Liquid Assets	Total Debts
Under \$1,000	20	11
1,000- 1,999	29	10
2,000- 2,999	37	19
3,000- 3,999	43	29
4,000- 4,999	52	38
5,000- 7,499	71	45
7,500 & over	91	36
All cases	43	25

In a paper presented to the Eleventh Annual Minnesota Bankers Conference, February 14, 1950, 'Consumer Credit and the Financial Position of Consumers', Homer Jones reported that at the beginning of 1949 about a third of families with some consumer credit obligations possessed liquid assets at least as large as their total debt, whatever its size. So far the Surveys have uncovered little evidence of any tendency for persons with few assets or with low incomes to incur substantial consumer debts.

As for nonfarm mortgage debt on owner-occupied houses, the amount outstanding in relation to the current market value of the properties (as estimated by owners) is so low that it would take very large price declines to wipe out owners' equities in most cases. Some 55 percent of all owner-occupied houses were free of debt; over half of the home owners having mortgage balances outstanding early in 1949 had equities of 50 percent or more in their homes. The median mortgage debt outstanding was just over \$3,000 (the 1940 Census reported a median debt for 1- to 4-family nonfarm properties of about \$2,000).

Average mortgage service costs cannot be compared with average mortgagor incomes in terms of Survey data. However, data compiled by the FHA on mortgages on 1-family dwellings insured under Section 203 of the National Housing Act give some indication of the service burden. The costs included in the FHA calculations are interest, principal, FHA insurance premiums, hazard insurance, taxes, special assessments, ground rents, and miscellaneous expenses, if any. These costs are shown as a proportion of the mortgagor's effective annual income (an estimate of the mortgagor's earning capacity before deducting income taxes) that is likely to prevail during the first third of the total term of the mortgage. The cost-income ratio was 16.1 percent in 1948 for mortgagors purchasing new 1-family houses and 14.4 percent for purchasers of existing houses. In 1946 costs were 15.3 percent of income for purchasers of FHA-insured new houses and 14.3 percent on insured existing dwellings. The rise has been significant since World War II, but the ratio is still below the 1940 average — 17.2 percent for new and 15.1 percent for existing houses. The comparison with prewar periods must not be given much weight, however, since personal income tax levies have changed materially, whereas these FHA data relate to prospective incomes before taxes.

F FARMS

The burden of debt on other sectors cannot be discussed as fully as that of household debts. Fewer data are available bearing on the aggregate and distribution of debt for most business groups. However, data for farm businesses have been more fully developed and analyzed so often and so

thoroughly that little can be added here. The Balance Sheet of Agriculture and the accompanying income and expense statements developed by the BAE, Division of Agricultural Finance, provide almost all the data needed.

Some adaptations must be made to fit the Balance Sheet into a framework such as that used in analyzing household debts since the war. As indicated above, the data on households included farm households as well as those of other proprietors of unincorporated businesses. It is necessary, therefore, to separate from the aggregates in the BAE Balance Sheet the financial assets and debts the proprietors held and owed as business men from those they held and owed as households. The procedure rests on arbitrary assumptions, for few data have as yet been developed to serve as benchmarks.¹⁸ We assumed that farm business proprietors hold only cash and investments in cooperatives; i.e., these were their sole financial assets. The holdings of United States government bonds shown in the BAE Balance Sheet are assumed to be those of farm households. Farm business cash was estimated as a fixed proportion of total farm demand deposits (as reported in FRB Demand Deposit Surveys) and currency holdings as a proportion of farm business deposits. The BAE data were adjusted in two other respects. First, farm receipts shown in Table 5 include cash receipts from marketings of agricultural products, but proceeds of loans obtained from the Commodity Credit Corporation are excluded until the loan is canceled by surrender of title to the products to the CCC. CCC loans still outstanding are included in the balance sheet in Table 5. Second, an attempt was made to eliminate the activities of nonfarm landlords; approximate deductions were made for mortgages owed as well as for interest and taxes paid by them. In general these deductions do not greatly alter the picture.

There are valid objections to excluding financial assets held by farm households in comparing farm business debts with the resources available for meeting them. Obviously these assets can and will be used when required by business exigencies: no farm family will suffer foreclosure on a mortgage just because a social accountant has segregated part of its cash balance into a nonbusiness use category. However, the comparison of business debts and assets has value in that it may establish the range at which the burden of debt begins to bear on proprietor families' patterns of expenditure, saving, or utilization of assets. In contrast to the analysis of household debts in the preceding section, the analysis here does not indicate the danger areas where default may occur, but rather the point at which the proprietor must decide whether to use family-held assets in meeting business obligations.

¹⁸ For a more complete discussion, see R. J. Burroughs, 'Uses and Misuses of the Balance Sheet of Agriculture', *USDA Agricultural Finance Review*, Nov. 1949.

Table 5: Farm Business Receipts, Financial Assets and Liabilities, 1939 and 1945-48
Preliminary

	1939	1945	1946	1947	1948	PERCENTAGE CHANGE			
	BILLIONS OF DOLLARS					1939-48	1939-45	1945-48	
A Total receipts ^a	9.2	23.5	26.8	31.5	31.0	237.0	155.4	31.9	
B Interest paid ^b	.5	.4	.5	.4	.5	0	-20.0	25.0	
C Taxes paid ^c	.4	.5	.4	.6	.7	75.0	25.0	40.0	
D Farm disposable receipts (A - C)	8.8	23.0	26.3	30.9	30.3	244.3	161.4	31.7	
E Financial assets, year end	2.4	9.5	11.0	11.4	10.9				
F Business cash ^d	1.6	8.1	9.4	9.5	8.9				
G Investments in cooperatives	.8	1.4	1.6	1.9	2.0				
H Financial liabilities, year end	8.0	6.6	6.9	7.4	9.4				
I Short term, total	2.6	2.8	3.0	3.5	5.3	17.5	-17.5	42.4	
J Accounts payable	.7	.7	.9	1.2	1.5	103.8	7.7	89.3	
K Debt to banks	1.1	1.3	1.4	1.6	2.8				
L (Memo: bank loans guaranteed by CCC)	.2	.1	.1	.1	.9				
M Debt to CCC	.2	.1	.1	.1	.2				
N Debt to other federally sponsored agencies	.6	.6	.7	.7	.8				
O Mortgage debt, total ^e	5.4	3.9	3.9	3.9	4.1				
P To banks	.6	.6	.8	.9	1.0				
Q To federally sponsored agencies	2.2	1.2	1.0	.9	.9				
R To life insurance companies	.8	.7	.7	.7	.8				
S To others	1.8	1.4	1.4	1.4	1.5				
		PERCENTAGES							
T Interest paid as % of total debt	6.3	6.1	5.8	5.4	5.3				
U Total debt as % of disposable receipts	90.9	28.7	26.2	23.9	31.0				
V Short term debt as % of total	32.5	42.4	43.5	47.3	56.4				
W Total debt as % of business cash	500.0	81.5	73.4	77.9	105.6				

See the Technical Appendix for procedures.

Because of rounding, columns may not downtownal.

To the extent that they are separately reported or could be estimated, receipts, financial assets and liabilities of farm household and non-

farm landlords were excluded from the farm business account.

^a Excludes net loans made or guaranteed by CCC under price support programs.

^b Interest payable rather than interest paid. Excludes mortgage inter-

est payable by nonfarm landlords.

^c Excludes estimated property taxes paid by nonfarm landlords.

^d Rough estimate of currency and deposits held by farmers in their business capacity.

^e Less than \$50 million.

^f An estimate of mortgage debt owed by nonfarm landlords (based roughly on mortgage interest paid) was excluded from the mortgage data shown above.

During the war when farm incomes were increasing rapidly farmers reduced debt substantially. Total liabilities decreased over a sixth, while receipts after taxes increased to more than 2.5 times the 1939 annual rate. Farm debt outstanding at the end of 1939 was 91 percent of disposable receipts for the year and five times as large as our rough approximation of the business cash held by farm proprietors. At the end of 1948 it was only 31 percent of disposable receipts and only 6 percent larger than farm business cash balances.

The wartime reduction affected mortgage debt principally; short term obligations increased in the early war years, then declined until 1945 when the year-end total was about the same as total short term debt at the end of 1939. Most of the postwar increase was in short term debt, which almost doubled from 1945 to 1948. Mortgage debt rose 5 percent. The interest costs of farm debt have remained fairly constant; the effective rate declined from 6.3 percent in 1939 to 5.3 percent in 1948.

Estimating the extreme repayment requirements for farm debt calls for somewhat different assumptions than were used for other sectors. The federal government is a major creditor of farm businesses; at the end of 1948 farm debt owed to or guaranteed by the government totaled \$2.8 billion, or almost 30 percent of total farm liabilities (it was \$3.2 billion, or 40 percent of total liabilities at the end of 1939). Even if repayments were required on other types of government loans, CCC price support loans would probably be canceled by the declining prices accompanying the extreme conditions we hypothesized earlier. Therefore, the more realistic assumption of the service burden would be the sum of short term debts minus loans held or guaranteed by the CCC plus some fraction — say, roughly an eighth — of mortgages outstanding at the beginning of the year plus interest paid during the year. This calculation yields an hypothetical service charge of \$4.4 billion, or approximately 15 percent of farmers' disposable receipts for 1948. In 1939 the comparable burden was \$4 billion, or 45 percent of disposable receipts. To restore the 1939 ratio, the service burden would have to be double that outstanding at the end of 1948, or disposable farm receipts fall almost half from the 1948 rate.

Current information is too scanty for many comparisons among sectors of debt-equity relationships. We shall not, therefore, encumber the argument with the information compiled by the BAE on the value of tangible assets held by farmers except to indicate that farm proprietors' equities have increased 2.5 times since 1939 — with business assets, excluding household equipment on farms, but including farm dwellings, valued at current prices. Valuing the assets at 1940 prices, the increase in equities has been roughly 50 percent.

G NONCORPORATE BUSINESS

The noncorporate business sector considered here includes proprietorships and partnerships except farm, but excludes nonprofit institutions and mutual financial institutions such as insurance companies, savings and loan associations, and credit unions. It includes also all unincorporated lessors of real property, whether or not this occupation is the main source of their income. As in the case of farms, the financial statement for noncorporate business in Table 6 excludes the proprietor's personal transactions. Thus the payments in Part I, line C, exclude income taxes paid by proprietors, the asset holdings in lines F-K exclude their personal holdings, and the liabilities exclude the personal debt of proprietors and their families. The rough allocation between household and business accounts of proprietors is based on the assumption that any asset holding or any debt that cannot be identified in available statistics as a business asset or liability is held or owed by the proprietor in his capacity as a household.

Total noncorporate liabilities changed only slightly during the war. The shift from tenant to owner-occupancy enabled noncorporate realtors to reduce their mortgage liabilities substantially; despite an increase in non-mortgage long term debt to banks, total noncorporate long term liabilities were a fifth lower by 1945. Over half of the rise in short term debts was due to increased bank loans to security dealers, which quadrupled between 1939 and 1945. These loans were used chiefly to finance purchases of United States government securities during war loan drives. As the increase in short term debt offset the decrease in mortgages due, total noncorporate liabilities were about 2 percent above the 1939 level by the end of the war. In contrast, disposable receipts of unincorporated enterprises more than doubled, and holdings of demand assets — business cash and United State government securities — tripled. If we calculate the extreme potential debt service burden by the formula used above (short term debt plus a seventh of long term debt due at the beginning of the year, plus interest paid during the year), the ratio of the service burden to 1946 disposable receipts was 11 percent; it was 23 percent in 1939.

Noncorporate debt has risen rapidly since the war — almost \$10 billion or 38 percent from the end of 1945 to the end of 1948. Almost half was in mortgages on commercial and multifamily residential properties. Short term debt rose about as much — \$4.8 billion, or 33 percent.

At the end of 1948 mortgages were over 40 percent of all noncorporate liabilities; other long term debts accounted for only 4 percent. The high ratio of mortgage to total debt reflects the importance of the noncorporate form of organization in the lessor industry and the frequent pledging of noncorporate business properties to obtain loans for working capital

Table 6: Noncorporate Business* Receipts, Financial Assets and Liabilities, 1939 and 1945-48
Preliminary

	I TOTALS AND PERCENTAGE CHANGE					PERCENTAGE CHANGE		
	BILLIONS OF DOLLARS					1948	1939-45	1945-48
	1939	1945	1946	1947	1948	1945	1939-45	1945-48
A Total receipts ^a	61.6	131.8	156.7	173.2	181.4	194.5	114.0	37.6
B Interest paid ^b	1.0	.8	.7	.9	1.0	121.7	65.2	34.2
C Taxes paid ^c	2.3	3.8	4.3	4.9	5.1	197.3	116.0	37.6
D Disposable receipts (A - C)	59.3	128.1	152.4	168.3	176.3	121.9	112.6	4.4
E Financial assets, year end ^d	21.5	45.7	48.2	49.1	47.7	298.4	341.3	-9.7
F Demand assets, total	6.3	27.8	27.2	26.3	25.1			
G Cash	5.2	17.8	18.3	18.3	17.6			
H U. S. gov. securities	1.1	10.0	8.9	8.0	7.5	48.7	17.8	26.3
I Other assets, total	15.2	17.9	21.0	22.8	22.6			
J Accounts & notes receivable	7.6	10.5	12.4	12.7	12.2			
K Other loans & securities	7.6	7.4	8.6	10.1	10.4			
L Financial liabilities, year end ^e	25.3	25.9	31.1	33.9	35.7	41.1	2.4	37.8
M Short term, total	10.5	14.0	17.5	18.4	18.8	79.0	33.3	34.3
N Accounts payable to nonfinancial business	6.4	8.5	10.8	9.9	9.7			
O Debt to banks	1.9	4.3	4.8	5.7	6.0			
P Other short term debt	2.2	1.2	1.9	2.8	3.1			
Q Long term debt	14.8	11.9	13.6	15.5	16.9	14.2	-19.6	42.0

II PERCENTAGES
Line in Part I

	1939	1945	1946	1947	1948
A Interest paid as % of total receipts	1.6	.6	.4	.5	.6
B Interest paid as % of disposable receipts	1.7	.6	.5	.5	.6
C Interest paid as % of total debt	4.0	3.1	2.3	2.7	2.8
D Total debt as % of disposable receipts	42.7	20.2	20.4	20.1	20.2
E Short term debt as % of disposable receipts	17.7	10.9	11.5	10.9	10.7
F Short term debt as % of total	41.5	54.1	56.3	54.3	52.7
G Short term debt as % of demand assets	166.7	50.4	64.3	70.0	74.9
H Total debt as % of demand assets	401.6	93.2	114.3	128.9	142.2
I Total debt as % of total financial assets	117.7	56.7	64.5	69.0	74.8

^a See the Technical Appendix for procedures.

^b Because of rounding, columns may not downtownal.

^c Includes all proprietors and partnerships and unincorporated landlords; excludes nonprofit and financial institutions.

^d Excludes receipts from sales of existing real assets, estimates for which are in preparation.

^e Includes interest paid on mortgages on tenant-occupied properties owned by unincorporated landlords.

^f Includes property taxes paid on tenant-occupied properties owned by unincorporated landlords.

^g Excludes estimated personal holdings of financial assets and the personal debts of proprietors of unincorporated businesses.

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rather than to acquire property.¹⁹ The classification of all noncorporate mortgage debt as long term probably overstates the ratio of long term to total noncorporate liabilities, but how much we do not know.

Short term debt constituted over half of all noncorporate liabilities in 1948; slightly less relatively than in 1945 but still substantially more than in 1939. Almost a third of noncorporate short term debt was owed to banks, half to other nonfinancial businesses, and about a sixth to financial organizations other than banks — commercial factors, finance companies, etc.

Service on noncorporate debt outstanding at the beginning of 1948, under the extreme conditions of no refunding and no new borrowing, represented about 13 percent of 1948 disposable receipts. To restore the 1939 ratio of extreme service charges to disposable receipts, 23 percent, the burden of servicing debt outstanding at the end of the year would have to rise about 80 percent, or disposable receipts fall more than 50 percent from 1948 levels.

The proportion of noncorporate debt protected by government guarantee and insurance programs cannot be calculated precisely. Most of the protection is of noncorporate mortgage debt, for the other guarantee programs are quite small. VA insured business loans, for example, were only \$123 million at the end of 1948, and RFC and Export-Import Bank guarantees, only a small part of which probably cover noncorporate debt, totaled about \$400 million. Almost all the government guarantees affecting this sector are in the mortgage area, but the data do not indicate the insured debtors' legal form of organization. If we assume that all VA real estate guarantees covered households, it might be appropriate to prorate FHA insured loans (those not previously considered as guarantees of household debt) between the corporate and noncorporate sectors on the basis of their total mortgage liabilities. This crude approximation indicates that about 6 percent of noncorporate mortgage debt and 2½ percent of all noncorporate liabilities were insured by the federal government.

H CORPORATE BUSINESS

We discussed certain aspects of the corporate debt structure in Section D (see especially Table 2 and accompanying text), but compared only debt and net incomes after taxes. It is profitable to consider also the changes in debt in relation to total corporate receipts, after taxes. This comparison

¹⁹ The survey of member bank loans conducted by the Federal Reserve Board in November 1946 (*Federal Reserve Bulletin*, March, May, June, July, and August 1947) indicates that small business firms pledge their plant and equipment as security for business loans more frequently than large enterprises.

puts the consideration of corporate and of household debt, which was compared with both disposable receipts and disposable personal income, on a par. The household disposable receipt and income concepts differ somewhat,²⁰ but both are gross flow concepts in that they represent total inflows of money, or money values, before deduction of most of the costs of producing them. The gross flow concept is appropriate in considering the business debt structure too, for opportunities exist — perhaps not as numerous as are available to households but nevertheless of some significance — for adjusting business costs to maintain debt service, just as households may choose among various consumption expenditures that must be reduced to service personal debts. To measure the business debt burden in terms of net income alone is to assume implicitly that the cost-sales ratio is fixed, and to ignore the possibilities of servicing from depreciation reserves, whereas we have abundant evidence of substantial variations in the cost-sales ratio. Tables 2 and 7, Part I indicate that in 1939 corporate disposable income (income after taxes but before dividend and interest payments) was 5.2 percent of total receipts after taxes. In 1945 the ratio dropped to 4.0 percent but by 1948 had risen to 5.2 percent.

The extreme potential debt service burden that might have been levied on 1949 corporate incomes was slightly over \$72 billion — \$62.5 billion of short term corporate debt plus \$7 billion, or a seventh of total corporate long term liabilities, plus \$2.5 billion estimated interest payments due. This sum was 3.4 times the preliminary estimate of corporate disposable income for 1949, \$21.3 billion. Estimates of disposable receipts for 1949 have not been completed. If net income represented a 6 percent return on disposable receipts (an increase over the 1948 rate which averages the increase from 1946 to 1947 and 1947 to 1948), disposable receipts would have fallen some \$34 billion from 1948 to 1949. If, however, the rate of return declined the same amount (and substantial declines in the profits-sales ratio were noted in the first three quarters of the year for a sample of manufacturing corporations reporting to the SEC), disposable receipts would have increased more than \$84 billion. In one case the burden of debt service on receipts will have increased from about 18 percent in 1948 to over 20 percent in 1949; in the other, it will have dropped from 18 to 15 percent. The difference in 1949 disposable receipts between a 4.5 and a 6 percent return is almost \$120 billion, a substantial range of costs on which operating economies might be made in the extreme circumstances postulated by our initial assumptions. The ability to adjust expenditures

²⁰ The main differences are the exclusion, from the receipts total, of imputed income items and of the net income retained in noncorporate business, and the inclusion of benefits from life insurance companies and from private charitable and relief organizations.

Table 7: Corporate Business Receipts,^a Financial Assets and Liabilities, 1939 and 1945-48
Preliminary

	I TOTALS AND PERCENTAGE CHANGE				PERCENTAGE CHANGE		
	BILLIONS OF DOLLARS				1939-48	1939-45	1945-48
	1939	1945	1947	1948	1939-48	1939-45	1945-48
A Total receipts ^b	129.6	254.1	288.2	369.1	219.7	96.1	63.0
B Interest paid	2.5	2.0	1.9	2.1			
C Taxes paid ^c	7.5	25.9	23.7	22.7	238.7	245.3	-1.9
D Disposable receipts (A - C)	122.1	228.2	264.5	346.4	218.5	86.9	70.4
E Financial assets, year end	60.6	90.6	92.1	97.5	66.0	49.5	11.0
F Demand assets, total	14.3	42.6	38.9	38.2	167.8	197.9	-10.1
G Cash	10.8	21.7	22.8	24.1			
H U. S. gov. securities	3.5	20.9	16.1	14.1			
I Other assets, total	46.3	48.0	53.2	59.3	34.6	3.7	29.8
J Accounts & notes receivable	22.1	25.9	30.7	36.4			
K Other loans & securities	24.2	22.1	22.5	22.9			
L Financial debt, year end	73.5	85.3	93.5	104.7	52.5	16.1	31.4
M Short term, total	29.2	47.0	52.2	59.9	114.0	61.0	33.0
N Accounts & notes payable, excl. short term debt to banks	17.5	18.5	23.8	27.1			
O Short term debt to banks	4.4	7.2	7.8	8.5			
P Federal & state income tax liabilities	1.4	10.9	9.0	11.1			
Q Other short term	5.9	10.4	11.6	13.2			
R Long term debt	44.4	38.3	41.3	44.8	11.7	-13.7	29.5
	II PERCENTAGES						
	Line in						
	Part I						
A Total debt as % of disposable receipts	L/D	1939	1945	1946	1947	1948	
B Short term debt as % of disposable receipts	M/D	60.2	37.4	35.3	30.2	28.8	
C Short term debt as % of total	M/L	39.7	20.6	19.7	17.3	16.1	
D Short term debt as % of demand assets	M/F	204.2	110.3	55.8	57.2	55.8	
E Total debt as % of demand assets	L/F	514.0	200.2	240.4	274.1	163.2	
F Total debt as % of total financial assets	L/E	121.3	94.2	101.5	107.4	111.4	

See the Technical Appendix for procedures.

^a Excludes the receipts, interest payments, tax payments, assets, and most liabilities of banks and insurance companies. However, the bonded indebtedness of these financial institutions, a relatively small

item, is included with other corporate long term liabilities, which are in preparation.

^b Excludes receipts from sales of existing real assets, estimates for which are in preparation.

^c Includes property, sales, income, and all other taxes paid by corporate business.

to meet debt service requirements must be appraised in the light of all funds available and all costs, not only in relation to funds available for capital expenditures.

For the ten years 1939-48 the two concepts yield approximately the same result. The debt service burden in relation to both disposable incomes and receipts fell about 50 percent. However, most of the decline in the debt-income ratio occurred after the war, while most of the decline in the debt-receipts ratio occurred during the war. This difference reflects the changes cited above in the profits-sales ratio. The potential burden was 3.4 times corporate disposable income in 1948, and 17.6 percent of disposable receipts.

We did not discuss in Section D the relation of the debt service to available assets. Confining the comparison to the extreme potential debt service requirement and to corporate holdings of demand assets — cash and government securities — service requirements were more than 2.5 times demand assets in 1939, dropped to 1.25 times in 1945, then increased to almost twice demand assets by the end of 1948. While holdings of demand assets have declined about 10 percent since the war, stocks of other financial claims, chiefly accounts and notes receivable, increased 30 percent. The 1948 year-end ratio of total liabilities to total financial assets is well below 1939 levels. Data on debt-equity relationships in the corporate area have not been examined, nor has it been possible to develop the information on an industry or size of firm basis.

I FINANCIAL INTERMEDIARIES

Only a partial attempt has been made to indicate the main creditors of the four debtor groups whose balance sheets are presented in preceding sections. Debtor-creditor relationships cannot be analyzed fully here, but we can indicate, from several approaches, the importance of some of the principal financial institutions in the flow of credit — commercial and mutual savings banks, life insurance companies, fraternal benefit societies, savings and loan associations, and credit unions. The importance of institutional credit has grown rapidly since the war. At the end of 1948 these institutions held 44 percent of the liabilities of households, farms, corporate and noncorporate business; the total was 37 percent in 1945 (Table 8). Commercial and mutual savings banks were the chief lending institutions to the four private sectors. About a quarter of the liabilities owed by these sectors at the end of 1948 were held by banks, about a seventh by life insurance companies, and 5 percent by savings and loan associations. Fraternal orders and credit unions held negligible proportions.

Institutional holdings were most important in long term private liabili-

Table 8

Private Liabilities Held by Financial Intermediaries, 1939, 1945, and 1948

Preliminary

<i>Type of Liability and Holder</i>		1939	1945	1948
A	Total private debt (\$ billion) ^a	134.3	152.5	214.4
B	Private debt held by financial intermediaries (\$ billion) ^b	46.4	56.6	93.5
C	<i>Percentage held by financial intermediaries</i>	34.5	37.1	43.6
D	Banks	18.7	20.8	23.6
E	Life insurance companies	12.6	12.3	14.8
F	Savings & loan associations	2.8	3.5	4.8
G	Fraternal benefit associations	.3	.4	.3
H	Credit unions	.1	.1	.1
I	Total private short & medium term debt (\$ billion) ^a	56.8	81.1	112.1
J	Private short & medium term debt held by financial intermediaries (\$ billion) ^b	14.3	19.2	28.0
K	<i>Percentage held by financial intermediaries</i>	25.2	23.7	25.0
L	Banks	19.2	21.1	22.9
M	Life ins. cos. & credit unions	6.0	2.6	2.1
N	Total private long term debt (\$ billion)	77.6	71.4	102.3
O	Private long term debt held by financial intermediaries (\$ billion) ^b	32.1	37.5	65.4
P	<i>Percentage held by financial intermediaries</i>	41.4	52.5	63.9
Q	Banks	18.4	20.6	24.3
R	Life ins. cos. & frat. benefit associations	18.1	24.4	29.5
S	Savings & loan associations	4.9	7.5	10.1

See the Technical Appendix for procedures.

Because of rounding, columns may not downtown.

^a Liabilities of households (Table 3), farms (Table 5), noncorporate business (Table 6), and corporate business (Table 7).

^b Financial intermediaries include commercial and mutual savings banks, life insurance companies, savings and loan associations, fraternal benefit associations, and credit unions.

^c Allocation of bank loans and securities is tentative. Policy loans of life insurance companies and credit union loans outstanding were considered here to be short term assets. Other private domestic loans of life insurance companies, plus mortgages and private bonds held by fraternal orders and mortgages held by savings and loan associations were classed as long term assets.

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ties. While their holdings of short term debt decreased slightly as a proportion of the total owed by households and businesses, their holdings of these sectors' long term debts increased from about two-fifths in 1939 to over three-fifths in 1948. Life insurance companies have supplanted banks as the chief suppliers of long term credit to households and business. In 1939 commercial and mutual savings banks had the edge; by 1948 life insurance company holdings were definitely larger, accounting for almost 30 percent of total long term debt of the four private sectors.

In terms of their own portfolios, long term debt accounted for 70 percent of the total private liabilities held by financial institutions. Most of

the long term holdings were in mortgages; real estate loans of banks, and mortgages held by life insurance companies and savings and loan associations totaled about \$38 billion in 1948, or 58 percent of their portfolios of long term household and business debt. Government insurance and guarantee programs have been an important factor in encouraging institutional investment in real estate debt; almost half of the credit extended by these institutions to the four private sectors since the war has been in mortgages. At the end of 1948 about 45 percent of all commercial bank real estate loans and 33 percent of life insurance mortgage holdings were guaranteed in whole or in part under FHA and VA programs.

The increasing emphasis on long term assets, particularly holdings of debt secured by real estate, has changed the pattern of institutional debt in terms of the owing sectors. It is difficult to measure the change precisely, chiefly because we do not know what part of institutional mortgage portfolios should be attributed to home-owners and to landlords. Further, it is difficult to divide residential mortgage debt into that owed by corporate and by noncorporate landlords. Finally, the benchmarks for allocating the burden of commercial mortgages to corporate and to noncorporate debtors are inadequate. With the aid of some rough assumptions, however, a tentative allocation indicates that institutional credit is most important in the case of households, whose liabilities to banks, insurance companies, and other financial intermediaries were almost three-fifths of their total liabilities in 1948. The current proportion, however, is not very much higher than the prewar.

While institutional-held debt is still a smaller proportion of business debt than of personal liabilities, it has grown more rapidly since 1939. Thus, farm debt to financial intermediaries was about a third of total farm liabilities in 1939, but rose to over a half by the end of 1948. Corporate debt to institutions rose from 30 percent of prewar total corporate liabilities to almost 40 percent at the end of 1948; noncorporate debt to financial institutions rose from a fifth to over a third of total noncorporate liabilities.

Banks were the chief institutional creditors of households, farms, and noncorporate business. At the end of 1948 over a quarter of total household liabilities, over two-fifths of farm debt, and about a third of noncorporate debt were held by commercial and mutual savings banks. Life insurance companies, however, were the principal institutional creditors of corporate business; at the end of 1948 insurance holdings of corporate debt were a fifth of all corporate liabilities; slightly more than a sixth of total corporate debt was owed to banks; 37 percent of the postwar increase in corporate debt has been absorbed by life insurance companies.

Refinement of this very rough allocation of institutional portfolios is in progress as part of the work in developing moneyflows accounts, but it is

doubtful that estimates of the major shifts noted above will have to be modified greatly. Until the basic reporting of institutional portfolios, particularly bank call reports, is substantially improved, debtor groups can be only approximately identified.

J CONCLUSIONS

This completes the survey of data that can readily be brought to bear on the problem initially posed — the extent to which the present debt structure might aggravate a decline in debtors' incomes. The data are patently inadequate for a decisive answer. Lack of specific information on debt maturity schedules makes it necessary to use rough estimates of the maximum annual debt burden, not the average. Further, inadequate valuation bases for debtors' holdings of financial assets and omission of valuations for the tangible assets owned by debtors have understated the resources available to meet debt service charges. Finally, the data assembled are for broad economic units. Information indicating the distribution of the debt burden within each sector for which partial balance sheets have been compiled is fragmentary.

Yet some inferences can be drawn concerning the security of the present debt structure:

1) Given regular amortization schedules, the lengthening of maturities allows total debt to rise more rapidly than the annual repayment load. An increasing proportion of the debt incurred in postwar years had long term maturities, and regular amortization schedules have been provided for in most residential mortgages written since the end of the war. For all sectors debt with an original maturity longer than one year rose from 50 percent of total debt owed at the end of the war to about 55 percent at the end of 1949.

The distribution of total private debt on a sector basis is available only through 1948. The shift toward long term obligations was especially important in the case of households. Of the net increase in household liabilities from 1945 to 1948, over three-fifths was in long term (mortgages); of that in nonfarm business liabilities roughly half. Only in the case of farm debt was the proportion reversed — 93 percent of the rise was in short term and only 7 percent in long term.

2) Debt secured by real property represented an increasing proportion of all debt owed by the four sectors. At the end of 1948 mortgages accounted for 27 percent of all private liabilities; just after the end of the war 24 percent. Of all liabilities owed by households at the end of 1948 they represented 55 percent, and of all debts owed by unincorporated farm and nonfarm enterprises, 44 percent. While real property might seem some-

what suspect collateral in terms of probable cyclical fluctuations in values, a substantial proportion of the mortgage debt incurred since the war was secured by government guarantee and insurance programs. The FHA and VA programs directly protected 29 percent of the mortgage debt owed by households at the end of 1948 (considering only the guaranteed or insured portions of the loans) and approximately 6 percent of the mortgage debt of noncorporate business.

3) The cost of carrying debt has been substantially lower since the war. The effective rate of interest (monetary interest paid as a percentage of total liabilities) paid by households and noncorporate business rose somewhat from 1945 to 1948, but that for farms decreased and that for corporate business remained relatively constant. For all sectors the rate was substantially lower in 1948 than in 1939.

4) For all sectors the 1948 ratio of total debt owed to disposable receipts was still well below the prewar ratio. Since we cannot calculate the actual annual debt service requirement, we compared changes in the requirements in terms of the extreme burden that would be realized if no refunding of maturing debt and no new borrowing were possible. Relative to the flow of disposable receipts, all sectors could have met this burden in 1948 with relatively smaller adjustments in other expenditure patterns than in 1939. Since the war, the ratio of extreme burden to disposable receipts increased slightly for households, farms, and other noncorporate enterprises, but decreased for corporate business.

5) With respect to the assets that could readily be drawn upon, all sectors were in a better position at the end of 1948 than in 1939. The ratio of the extreme service burden (as defined above) to demand assets — principally cash and government securities — has been rising rapidly since the war, but at the end of 1948 was still well below the 1939 ratio for all sectors.

In aggregate terms, therefore, the rapid rise in private debt since the war has not been alarmingly disproportionate to changes in other economic magnitudes, such as the flow of receipts to debtors and the stocks of financial assets held by debtors. Debt service is a far lighter burden on current than it was on prewar income and the most stable financial claims owned by debtors — cash and government securities — are currently much higher proportions (and in some cases much higher multiples) of the debts owed. Finally, the security of postwar creditors is enhanced by the increasing proportion of private debt guaranteed by the government.

However, the favorable comparison of the present with the prewar situation should not obscure the fact that a reversion to prewar ratios of debt burden to income that is initiated by a decline in incomes would be catastrophic. One cannot visualize with equanimity a 40 percent decrease in corporate disposable receipts or a decline in disposable personal income

such as to cause a \$40 or \$50 billion decrease in consumption expenditures, although decreases of these magnitudes would be required to restore the 1939 ratios of debt burden to receipts. The strength of the present financial situation rests, rather, on the wider range of choice available to debtors in deciding how to maintain debt service without reducing expenditures for goods and services, as well as on government guarantees against extensive redistributions of the properties securing debt, if present debt amortization rates cannot be met.

TECHNICAL APPENDIX

It is impossible, in a short appendix, to present detailed derivations of the moneyflows statistics used in this paper. The magnitude of the task is indicated by the statistical appendix to Morris Copeland's *A Study of Moneyflows in the United States, 1936-1942* (to be published by the NBER), which runs to over 200 pages. We therefore confine this discussion to a summary of the principal sources of data, and the major operations applied to them in compiling the sector income and expense statements and balance sheet accounts presented. This will hardly satisfy the needs of economists who would like to use these figures in exploring the debt problem more intensively. However, readers interested in the detailed procedures used in estimating any specific figure can obtain the information by addressing a request to me, c/o Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington 25, D. C. As was noted earlier, many of the figures cited have been revised since the original preparation of this paper and data for 1949 and 1950 have been compiled, but neither the revisions nor the more recent data have been incorporated.

Before discussing the individual sector accounts, it will be profitable to note some of the basic definitions that apply to all. These are not, in every instance, the definitions that were employed in setting up the moneyflows accounts. Some of the restrictions entailed in creating an integrated system of accounts to record the flow of money and credit are not necessarily applicable in using segments of the accounts for specific analyses. For example, the moneyflows accounts record the current flow of tax payments and receipts. Government receipts include current tax collections; the expenditure account for each sector records the current payment of the tax. Moneyflows balance sheets, therefore, do not record the accrual of tax liabilities. However, measurement of the debt service burden in relation to the asset and income resources of various debtor groups requires more comprehensive coverage of debt, and accrual tax liabilities have been included in the various sector balance sheets shown here. Similarly, the moneyflows accounts record the payment of life insurance premiums as a

current expense.²¹ Accrual of equities in life insurance reserves is excluded from moneyflows balance sheets for households and for insurance companies. Again, the purpose of this paper was better served by including these equities in household assets.

Moneyflows accounting is not cash accounting. Transactions in most goods and services are recorded at the time title to the goods has been transferred or when the services have been rendered, not when cash payments are finally made. Thus, the purchase of a household appliance on 'time' is recorded in the household account when the sale is recorded in the business account. The liability for the balance due is recorded in the household account as a short term debt to merchants; the corresponding asset is simultaneously recorded in the business balance sheet. Trade credit, therefore, is an accrual entry appearing in both the regular moneyflows balance sheets and in the sector accounts used in this paper.

Although certain accrual aspects of the moneyflows study have been retained, the sector accounts, as well as the moneyflows statements, include only accrual entries that reflect exchanges between two transactors. Transactions that are essentially bookkeeping entries for the time-allocation of costs, in which no money or loanfund changes hands are excluded. Thus depreciation and depletion charges do not appear as moneyflows expenditures by business, and the reserves accumulated from such charges do not appear in the balance sheets of the business sector. The 2-transactor requirement applies to current as well as accrual transactions. Thus, imputed transactions in which farmers consume food and fuel produced on their own farms, or home-owners receive net income from their residences, are not regarded as moneyflows transactions, and are not included in the receipts totals shown in the sector accounts.

The 2-transactor requirement was applied also to the balance sheet computations. Therefore, the only assets shown in the balance sheet of any sector are those for which corresponding liabilities exist in the account of another sector. Tangible assets such as plant and equipment, houses, and inventories are not recorded in the moneyflows balance sheets or in the sector accounts used in the paper. (However, the purchase of these capital items is included in moneyflows expenditures.) For an analysis of the asset and income resources available to meet debt service charges, it would have been desirable to include the current value of tangible wealth owned by debtors. But data on tangible wealth are inadequate. Further,

²¹ In the Department of Commerce national income and product accounts, only part of these premiums — the part equivalent to the current service rendered by insurance companies — appears as current or consumption expenditures by households. The remainder of the premium, minus the benefits received, is regarded as a net capital use of funds, i.e., a use of personal saving.

limitations of the basic statistics yield values for some financial claims that are not always the most appropriate for the purpose of this paper. The total assets shown in the sector accounts in the text should therefore be used with utmost caution.

So much for general definitions underlying the text tables. The principal sources of data were published and unpublished materials compiled by the National Income Division of the Department of Commerce, tabulations of corporate tax returns by the Bureau of Internal Revenue, Federal Reserve Board series on liquid asset holdings and on bank assets and liabilities, Securities and Exchange Commission reports on corporate financial transactions, and *Spectator* insurance manuals. These data, together with many other statistics, were recast into income and expense statements and balance sheets for the various sector groups used in the paper. In many instances the recasting involved heroic assumptions going far beyond the scope of the original statistics. In no sense, therefore, should the sector accounts be taken as official statistics.

Households

The recasting process can best be illustrated in the derivation of household receipts, assets, and liabilities in Table 3, Part I. Total receipts for households can be derived from the Department of Commerce series on personal income by applying the following adjustments:

- a) Deduct pay in kind, such as food, clothing, and shelter furnished to employees.
- b) Deduct imputed property income, such as the net rent on owner-occupied residential buildings, and the imputed value of services rendered by financial intermediaries.
- c) Deduct income received by nonhouseholds, such as employer contributions to private pension plans, corporate gifts to nonprofit organizations, and interest and dividend receipts flowing to unincorporated businesses and nonprofit organizations.
- d) For the net income of farms and other unincorporated businesses substitute net withdrawals by the proprietors. The calculation of these net withdrawals is crude. They are estimated as the residual item in a sources and uses of fund statement for noncorporate business. The sources include the net income (excluding imputed income) of such enterprises plus other current receipts retained in the business (depreciation and other charges) plus business funds borrowed plus business assets drawn down. From this sum is subtracted the funds used for capital purposes, such as accumulation of inventories, purchases of plant and equipment, and additions to business financial assets. The difference is assumed to be the net amount withdrawn by proprietors.

- e) Add gross private insurance benefits, charitable and relief payments received by households.
- f) Add the tax refunds received by households (instead of offsetting these refunds against personal taxes as is done in the Department of Commerce computation of disposable personal income).
- g) Add gross receipts from sales of automobiles, furniture, clothing, etc. (instead of offsetting these receipts against purchases of used assets, as is done in the Department of Commerce computation of personal consumption expenditures).

Most of the items on the household balance sheet were derived from regularly published series of the FRB and the SEC:

- a) Cash balances, holdings of government securities, and holdings of savings and loan association and credit union shares were based on the FRB series, Estimated Liquid Asset Holdings of Individuals and Businesses. These were adjusted to remove estimated farm business holdings of currency and demand deposits from the totals shown in the series as 'personal holdings'.
- b) Estimates of household credit balances with brokers were based on *Federal Reserve Bulletin* series for member firms of the New York Stock Exchange, blown up to represent the level of such balances held with all security brokers.
- c) Equities in government and private insurance reserves were based on tabulations underlying the SEC series, Liquid Saving of Individuals.
- d) Household holdings of mortgages and of state and local securities were based on rough allocations of data compiled by the Department of Agriculture, the Home Loan Bank Board, and the Treasury.
- e) Household portfolios of corporate securities were based upon SEC and BIR statistics. Two adjustments were applied to the component of the SEC liquid saving series which relates to changes in individuals' ownership of corporate securities. First, the series was put on a gross basis by replacing the bank loans for the purchase of securities which the SEC deducted. Second, rough estimates of the changes in holdings by non-households — security brokers, nonprofit organizations, etc. — were deducted. The resultant series of annual changes were then tied into an arbitrary level for 1939, based on the book value of corporate bonds and stocks as reported in *Statistics of Income*, Part 2. This procedure was adequate in accounting for financial flows, where levels of holdings were of secondary importance. It is not, however, an adequate measure of household financial resources available for servicing debt, and the data are presented only because the substantial increase in security prices since 1939 would tend to make them a minimum estimate of household wealth held in the form of claims against corporate business.

- f) Calculation of household liabilities was relatively straightforward. Consumer credit statistics compiled by the FRB were allocated to the various types of short term debt in Table 3, and FRB data on balances owed to security brokers who are members of the New York Stock Exchange were blown up to a national level on the basis of fragmentary information.
- g) Tax liabilities were calculated from tax collections in the first quarter of the subsequent year, as reported in the *Treasury Bulletin*.
- h) The mortgage debt series in Table 3 includes only the debt owed on owner-occupied 1- to 4-family dwellings. The allocation of mortgages as between owner occupants and tenant occupants was based on extrapolation of Census reports and data obtained in the Survey of Consumer Finances.

Farms

The sector statement for farms, Table 5, is based almost entirely on the BAE accounting for farm income, expenditures, assets, and liabilities. The main adjustments applied to the BAE series on gross income from agriculture are:

- a) Net receipts from loans made or guaranteed by the CCC under price support programs were deducted from farm income. (Borrowing and repayments of debt are recorded on the sector's balance sheet instead of the income and expense account. The sector account records the sale to CCC of the farm product underlying the loan at the time title is transferred to CCC, not when the loan is made.)
- b) Imputed rental values of farm dwellings and the value of produce retained for home consumption were deducted.
- c) Gross rent received by farmer landlords was added.
- d) Estimated insurance benefits received by farm operators were added.
- e) Estimated government payments to nonfarm landlords were deducted.

The balance sheet for farms, Table 5, is also based on BAE statistics. The adjustments to the BAE Balance Sheet of Agriculture, other than those designed to eliminate farm household assets or liabilities or to remove the liabilities owed by landlords who do not reside on farms, are:

- a) The currency and deposit holdings in the sector account are a rough approximation of the cash held by the farm enterprise rather than the farm household.
- b) All investments in cooperatives were assumed to be business (although it is evident that cooperatives are used to meet family living requirements as well as business needs).
- c) The non-real estate debt reported in the Balance Sheet of Agriculture was adjusted to eliminate estimated consumer debt incurred in farm household purchases. Estimated mortgages owed by nonfarm landlords were deducted from the total farm mortgage debt reported by BAE.

Noncorporate Business

Accounting for the business activity of unincorporated enterprises is necessarily an imaginative process, for basic statistics are few. The estimates in Table 6 were derived from many sources. For example, sales were estimated by deducting corporate from total sales in manufacturing and trade, then adjusting the retail sales component by a rough blow up to allow for underreporting in the level of the reported series. Estimates for other industry groups were constructed in some instances by applying payroll-sales ratios for small corporations to the payroll statistics for unincorporated firms in the same industry group. In addition to sales receipts, the total receipts shown for the noncorporate sector include estimates of commissions received by insurance agents and security and realty dealers, rents received by unincorporated lessors, interest, dividends, and insurance benefits received by unincorporated businesses, and refunds of business taxes paid by such enterprises. (The tax series in Table 6, Part I, line C, record current tax payments, not accrual of tax liabilities.)

Noncorporate holdings of cash and government securities were based upon the FRB series, Estimated Liquid Asset Holdings of Individuals and Businesses. Accounts and notes receivable were computed by applying the receivables-sales ratio for small corporations in each industry group to the estimated sales receipts for unincorporated enterprises in the same industry. Various sources were used in estimating noncorporate holdings of mortgages, corporate securities, and state and local issues (other loans and securities, Table 6, Part I, line K). In general, information on security ownership is scarce and the few tabulations available do not distinguish noncorporate holdings, which are usually buried in an 'individual and other' category. Whenever benchmark data were available to indicate the extent of noncorporate ownership, the category was allocated between households and unincorporated business. When they were not available, all ownership was assumed to be vested in individuals in their capacities as households, not entrepreneurs.

On the liability side of the sector account, short term trade debt was computed by applying the payables-inventory ratio for small corporations in each major industry group to the inventory holdings of unincorporated businesses in comparable industry groups. Debt to banks was obtained by allocating bank loans and investments.²² Other short term debt, which includes customer credit balances with security brokers and estimated short term debt to commercial sectors and finance companies, was based

²² The classification of bank loans and investments now in use permits direct identification of debt to banks owed by some sectors, but requires the use of a good deal of supplementary material to complete even an approximate distribution of all banking assets by debtor sectors.

on corresponding assets on creditors' balance sheets. The long term non-corporate liabilities in Table 6 consist entirely of mortgages. The mortgage debt on tenant-occupied 1- to 4-family dwellings was assumed to be owed largely by unincorporated lessors. The debt owed on multifamily and commercial properties was estimated by extrapolating series published by the Department of Commerce in its annual tabulation of public and private debt in the United States. Finally, farm mortgage debt owed by nonfarm landlords was included in this category.

Corporate Business

The corporate sector account, Table 7, depends largely on BIR tabulations of corporate tax returns. Four adjustments were applied to total compiled corporate receipts as published in *Statistics of Income*, Part 2.

- a) Capital gains were eliminated.
- b) Insurance benefits and tax refunds received by corporations were added.
- c) Receipts from sales to the government that were subsequently eliminated by renegotiation of war contracts were added. Such corporate refunds to the government are shown as expenditures in the year they are actually paid.
- d) Sales taxes collected by corporations were added because these tax receipts are included in sales receipts on some corporate tax returns, then shown as an allowable deduction. The amounts added to the BIR total are an estimate of the difference between total taxes collected on corporate sales and the amounts reported on corporate tax returns. The taxes paid series, line C, includes all sales taxes levied on corporate sales.

The corporate sector balance sheet is based on BIR and SEC data. Corporate holdings of cash, government securities, accounts and notes receivable are derived from SEC tabulations on the working capital of corporations. The series on corporate holdings of other loans and securities is another hybrid — fairly adequate data on annual changes (chiefly SEC series on corporate holdings of marketable securities and on investment trust portfolios) linked to an arbitrary base level (an adjustment of 1942 BIR data to eliminate corporate investment in affiliated companies).

The totals for short and long term corporate debt come from data published annually by the Department of Commerce on public and private debt in the United States. The segregation of short term bank debt from other corporate short term liabilities is the result of the allocation of bank assets referred to above. Federal tax liabilities are reported in the SEC working capital tabulations, and state income tax liabilities were obtained from Department of Commerce data.

Conclusion

This brief description does not, of course enable the reader to reconstruct any of the series presented in the paper. Only the most important sources of information have been noted. The summary of adjustments applied to the basic data has not pointed out differences in technique required in preparing estimates for recent years, for which many of the basic series are not available. Further, it was impossible to provide detail on the various expedients used to allocate particular series on receipts or expenditures among the various sectors. It was our intention here to indicate only in general terms the kinds of data used and the obvious adjustments that were applied to integrate the statistics into a particular system of economic accounts. Detailed discussion of statistical procedures must await the publication of Copeland's manuscript (for earlier years' estimates) and the completion of work now in progress on current moneyflows accounts.

COMMENT

A. G. Hart, *Columbia University*

Brill's analysis of the claims structure to gauge the vulnerability of the economy to deflation is an excellent idea. It would be more effective if more clearly related to business cycle theory (for instance to Homer Jones' recent effort to rehabilitate Fisher's debt-deflation theory), and to the history of the great deflation of 1929-33.

My main worry is about what seems to me inadequate analysis of the debt contract. The concept of scheduled amortization may conceal a trap. When debts go wrong, it is because expectations of refinancing are upset and maturities are 'accelerated'. As Brill points out, mortgage arrangements under Federal Housing Administration and Veterans Administration are a safeguard; but a survey of the debt structure as a whole is called for to see how far creditors are in a position to squeeze debtors unexpectedly. I am inclined to share Brill's apparent belief that the debt structure is now fairly depression-proof; but I would feel better if this were more a finding from the evidence and less an intuition (or a farfetched inference from ratios for large sectors of the economy). A clear diagnosis of the meaning of debt contracts would emphasize also the damage debtors can do by their efforts to avoid default — cessation of investment, under-maintenance, inventory dumping, etc. — and would ask how far they are in a position to stop activity by such a struggle if they get in difficulty.

Brill has plainly avoided the temptation to assume that these data are adequate to his problem just because they are all he has. But I wish he had been bold enough to specify what evidence he would need to answer his basic questions. Plainly his major sectors are so large and heterogeneous that inference from sector figures is chancy. The huge mass of liquid assets held by households is not necessarily available to meet mortgage debts, for instance. It would be interesting to use, for example, Michigan-Federal Reserve data to make up a rough picture of the balance sheets of the 10 percent of owner-occupants with the heaviest mortgages. Is there any evidence whether those heavily in debt have volatile or steady types of income? In short, we need evidence on the dispersion of individual positions as well as on their average.

James S. Earley, *University of Wisconsin*

Mr. Brill's paper is an impressive demonstration of the currently strong financial position of debtors, despite the rapid postwar rise in private indebtedness. Moreover, by classifying the over-all data into economic sectors, it makes a valuable contribution to our knowledge of the network of claims and assets in our economy. Finally, it gives a hint of the wide potential fruits of the new 'moneyflow accounting'. This technique may eventually give us a conceptual apparatus and sets of related statistical data comparable with those already developed in national income accounting proper.

I agree with most of Professor Hart's cautions concerning the conclusions derivable from the data in their present form, although I am inclined to put somewhat more confidence in the inferences that can be drawn from broad sector analyses.

Let me add a few points that occur to me in studying the paper.

I wonder whether quantitative measures of the degree debtors would have to compress other expenditures to maintain debt service should their incomes fall are really of first rate significance in judging the stability of a current economic situation. More important, it appears to me, is the stability of the on-going processes of investment. This may be undermined by factors quite unrelated to debtors' financial positions or their reactions to lower incomes. Independent factors which may influence unfavorably the processes of *new* lending and borrowing, such as 'catching up' on consumer and business requirements and changing outlooks concerning market opportunities, seem to me the ones to which prime attention must be given in assessing deflationary dangers.

Indeed the whole picture presented in the paper casts considerable doubt on theories that booms are self-reversing and downward-cumulating because of the 'over-indebtedness' that develops during them. The stronger financial position of debtors in 1948 than in 1939, while partly explainable by special factors, is so marked as to compel reconsideration of much of our thinking along these lines. During a boom it appears that, while debts increase much faster than incomes, liquidity positions and debt-service-to-receipts relationships are not too adversely affected — as long as the boom continues. It would be instructive to see how Mr. Brill's indices of 'over-indebtedness' and 'debt-repayment burden' stood in the late 1920's, just before the great depression.

Even if deflationary developments are not caused primarily by 'lent-up' conditions, much less by the stifling effects of debt-servicing, the *trend* of debt-to-assets and debt-service-to-receipts indices may be indicative of

later troubles. As Professor Hart suggests, analysis along these lines would require closer integration of the statistical material with business cycle and employment theory.

I am inclined to put even more emphasis than Mr. Brill upon the salutary effect of guarantees, insurance, and scheduled amortization in improving the quality of the debt structure. These developments have certainly reduced markedly the danger of races for liquidity and financial panics. The strengthening of the financial structure by virtue of government guarantees and insurance is fairly self-evident; as for scheduled amortization practices, while they reduce somewhat the postponability of debt repayments, they undoubtedly improve appreciably the quality of debts by helping ensure that obligations too far out of line with debtors' capacity to repay are not undertaken. Indeed the whole matter of the changing character of debts deserves careful independent study, especially with reference to that large and rapidly growing segment of indebtedness Mr. Brill shows is held by our financial institutions.