Household Sector Borrowing and the Burden of Debt

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The household sector incurred substantial amounts of home mortgage and consumer installment debt during the economic expansion of 1983–89. Household debts grew considerably faster than income, and aggregate debt outstanding relative to disposable personal income rose from 56 percent to 78 percent, which at that time was a record high. During the next three years, a time of recession and subdued recovery, debt accumulation slowed sharply. It began to pick up again in 1993 and by year-end 1994 had climbed to 81 percent of disposable income. At that point, home mortgage debt outstanding stood at $3.15 trillion and consumer installment credit exceeded $900 billion.[1]

The earlier buildup of debt and the recent resurgence have prompted questions about the financial strength of the household sector—its vulnerability to economic slowdowns and its ability to sustain spending levels that support economic growth. Aggregate statistics, such as measures of the household sector's loan-payment performance and balance sheet ratios, shed some light on these issues. Their usefulness is limited, however, because they provide no information on how debt is distributed among households that differ economically and demographically and how these distributions change over time. To enhance the interpretation of the aggregate debt statistics, this article draws on data on the debt obligations and characteristics of individual households at various points from 1983 to 1992, obtained through the Federal Reserve Board's periodic Survey of Consumer Finances.

The aggregate data show that after the surge of debt accumulation from 1983 to 1989 had elevated some indicators of debt payment problems, the household sector's financial condition began to strengthen: Ratios of scheduled debt payments to household income declined after 1989, and delinquency rates on mortgage and consumer debt dropped markedly. The household survey data, collected in 1983, 1989, and 1992, generally show the same broad trends. They also indicate that debt is concentrated among higher-income households and those with greater net worth and that between 1989 and 1992, the share of debt owed by households with high ratios of debt payments to income declined sharply. The surveys further suggest that for many households with high ratios, the condition is transitory: Most households with high payments-to-income ratios appear to reduce them over time.

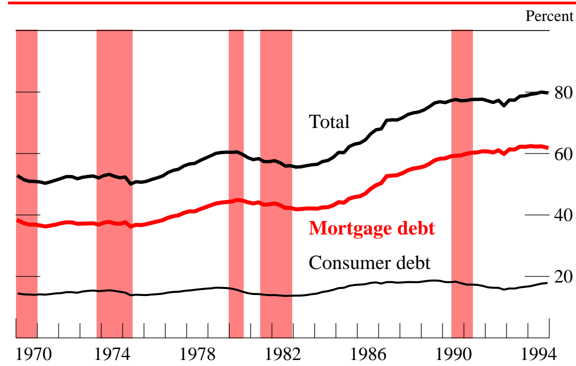
Aggregate Statistics

Appraising the size and growth of household indebtedness is difficult without reference to other economic aggregates. The ratio of the stock of debt to disposable personal income, for example, is a common measure that serves to "rescale" debt relative to one indicator of the resources available to households for debt management (chart 1).

The aggregate debt-to-income ratio has several analytical limitations, however. For instance, it has serious shortcomings as an indicator of the drain on current income imposed by debt obligations, as discussed below. Also, by taking account of only debt and income, it excludes information on asset holdings, which also affect the ability of households to service debt. In addition, the debt-to-income ratio provides no direct indication of actual

1. The composition of the debt aggregates as well as the household survey data discussed in this article are described in the appendix.

1. Household debt as a proportion of disposable personal income, by type of debt, 1970–94



NOTE. In this and subsequent charts, shading indicates periods of recession as defined by the National Bureau of Economic Research.

loan-payment performance.[2] Examination of other aggregate measures is essential to a better understanding of the household sector's financial situation. Three such measures are discussed below.

Debt-Service Burden

Because debt maturities generally range beyond several months—often to five years for automobile loans and to as long as thirty or even forty years for home mortgages—a relatively small portion of the stock of debt is payable within a one-year period. As maturities for specific types of loans change over time or the composition of debt by maturity class shifts, the near-term payments associated with a given level of the debt-to-income ratio will vary as well. Also, fluctuations over time in the average interest rate payable on the stock of debt can greatly affect the degree of burden implied by that debt. Thus, the amount of interest and principal due annually relative to income would be a better measure of the burden of debt payments than is the stock of debt relative to income. Unfortunately, no comprehensive data series on debt-service payments is available, necessitating reliance on rough estimates that can be derived from available data on debt stocks, interest rates, and loan maturities.

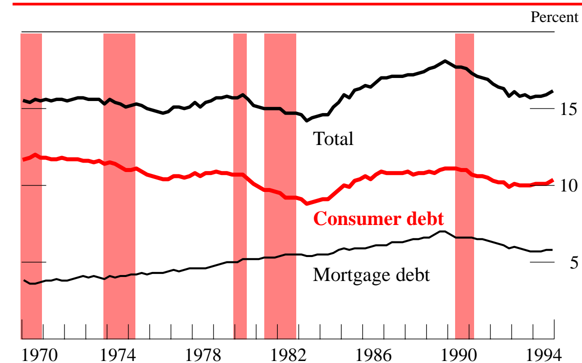
One such estimate—a measure of required debt-service payments relative to disposable personal income developed at the Federal Reserve Bank of New York—is regularly updated by staff at the Federal Reserve Board. The measure targets scheduled rather than actual payments and includes both interest and principal. Payments for consumer and mortgage debt are calculated separately and then combined into a total measure.[3]

The ratio of scheduled total debt-service payments to disposable personal income (chart 2) gives a picture of household debt burden somewhat different from that suggested by the ratio of the stock of debt relative to disposable personal income. Both measures rose substantially during

2. Moreover, because the widely used measure of disposable personal income constructed by the Department of Commerce includes income not directly available to households—employer contributions to pension plans, for example—and because it excludes other income received—payments from pension plans, for example—changes in the ratio may sometimes reflect movements in income that seem unrelated to the ability of households to service their debts in the short run.

3. For both consumer and mortgage debt, the first step in estimating scheduled payments is to generate historical quarterly estimates of gross loan originations. From data on interest rates and average maturities for loans made in each quarter, schedules are derived of payments flowing from loan originations in each quarter that are due in subsequent quarters. Total scheduled payments for any one quarter are then obtained by summing across the appropriate segments of the scheduled payment streams associated with each previous quarter. A necessary adjustment is to alter the scheduled payment streams to reflect estimated loan prepayments, by subtracting the amount of prepaid loans from the initial loan volume for its quarter of origination and then recalculating the stream of scheduled payments associated with that quarter. As new data on loan volume, interest rates, and maturities become available each quarter, estimates of scheduled payments for the current quarter are made. For a detailed description of the methodology, see Lynn Paquette, "Estimating Household Debt Service Payments," Federal Reserve Bank of New York, *Quarterly Review* (Summer 1986), pp. 12–23.

2. Scheduled household debt-service payments as a proportion of disposable personal income, by type of debt, 1970–94



the 1983–89 expansion, but the payments-to-income ratio dropped back over the next three years to a level in 1992 well below its high point in 1989.

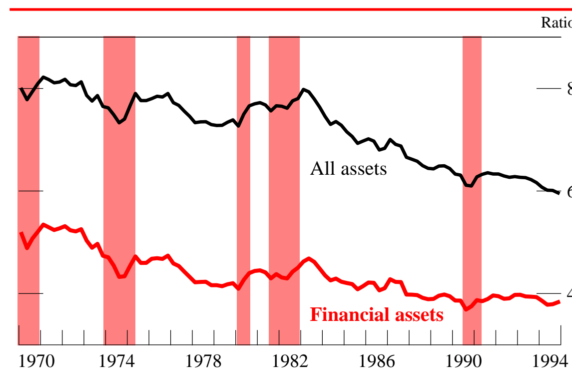
Although outstanding debt has risen relative to income since 1992, the debt payments-to-income ratio has changed very little. One reason for the recent stability is that the average interest rate on the stock of debt has continued to decline, offsetting the effect of the recent more rapid growth in outstanding debt. Even though interest rates on newly originated loans rose through most of last year, rates on many new loans were still below the average rate on existing loans being paid down, so the replacement of old debt by new debt had the effect of lowering the average rate paid. In the consumer credit market, rate increases for new lending have lagged increases in interest rates generally, partly reflecting aggressive marketing efforts in auto loans and credit cards. In the mortgage market, homebuyers last year opted more frequently for adjustable rate mortgages (ARMs), on which initial rates were typically well below those on fixed rate mortgages, thus helping to hold down the average rate on the stock of mortgage debt even as rates on originations of both types of mortgage were rising.

Assets and Net Worth

Looking at the assets held by the household sector also helps clarify the sector's financial situation. Much of the sector's debt is used for investment in physical assets (mainly homes) or, to a lesser extent, for direct investment in financial assets. Debt also supports financial investments indirectly, as many households that use debt to make major purchases could instead draw down financial assets if they so chose. When households accumulate assets alongside debt, the burden of that debt is mitigated to the extent that the assets can be readily liquidated to retire some or all of the debt.[4]

4. Not all assets, particularly tangible assets such as homes, or even some financial assets, can be easily liquidated. Funds in retirement accounts, for example, are generally not available for use without substantial penalty. Likewise, the selling of assets that would establish taxable capital gains would be disadvantageous, in effect reducing the liquidity of such assets. In any case, including them in measures of available assets at their full market value would overstate (by the amount of the tax liability) the degree of debt coverage they afford.

3. Ratio of household assets to debt, by type of assets, 1970–94



As household debt surged in the mid-1980s, asset holdings increased sharply as well. The household sector as a whole has considerably more assets than debt, and although debt grew at a faster rate than assets from 1983 through 1989, the dollar increase in assets was larger. As a result, the net worth (assets less debt) of the household sector grew significantly. Financial net worth (that is, excluding tangible assets) nearly doubled from the end of 1982 through 1989 as assets increased from $7.3 trillion to $13.8 trillion and liabilities rose from $1.6 trillion to $3.5 trillion. Households became somewhat more leveraged in the process: Financial assets were about four and one-half times as large as household debt at the start of the period and slightly less than four times as large at the end of the period (chart 3). With the market value of real estate and other tangible assets added in (about $5.3 trillion at the end of 1982 and $8.7 trillion at the end of 1989), the pattern remained the same: Net worth recorded a large dollar increase even as the amount of assets per dollar of debt declined.

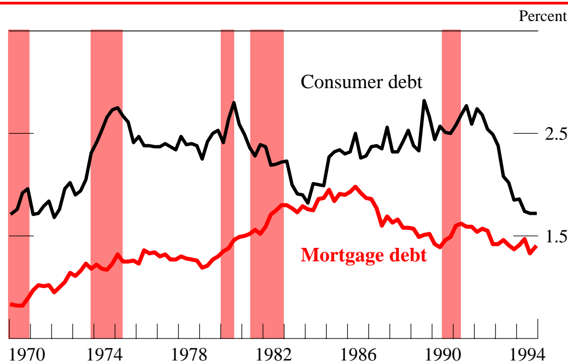
During the 1990–91 recession and the next few quarters, the increase in total debt was quite small. Asset growth also slowed, but it nonetheless was large enough to continue building net worth and to nudge the ratio of financial assets to debt up from its 1990 low. In 1994, the acceleration in the growth of debt pulled the assets-to-debt ratio back down again. On balance, the ratio changed little from 1989 to 1994 while net worth expanded $3 trillion, or about 30 percent.

Loan-Payment Performance

Measures of loan-payment problems, such as delinquency and charge-off rates, are another means of evaluating the financial health of the household sector. Most such measures suggest that households had relatively fewer payment problems in 1994 than at virtually any other time in the past two decades. For example, the proportion of closed-end consumer loans past due thirty days or more, as reported by the American Bankers Association (ABA), had dropped to a twenty-two-year low of 1.7 percent by the third quarter of 1994, from a high of 2.8 percent three years earlier (chart 4). Delinquency rates for consumer credit derived from the Reports of Condition filed by commercial banks, available since 1983, indicate a comparable decline over the past several quarters. Home mortgages past due sixty days or more, tracked by the Mortgage Bankers Association, fell to a fifteen-year low in 1994.

The recent pattern of consumer loan delinquencies deviates from historical patterns. Within two years of the start of the economic expansion that began in 1983, the delinquency rate for consumer loans (ABA series) had begun to rise. The more extended decline in delinquency rates during the current economic expansion may be due partly to the much more gradual upturn in consumer spending and associated borrowing that occurred this time, as both borrowers and lenders were cautious about increasing consumer debt during the first several quarters of the recovery.[5]

4. Delinquency rates on consumer and mortgage debt, 1970–94



NOTE. Delinquency rates are calculated as the number of loans delinquent as a percentage of the number of loans outstanding. For consumer debt, delinquency is defined as past due thirty days or more; source, American Bankers Association. For mortgage debt, delinquency is defined as past due sixty days or more; source, Mortgage Bankers Association.

FINDINGS FROM THE SURVEY OF CONSUMER FINANCES

Aggregate statistics provide an overview of the household sector's financial position but leave unaddressed crucial questions about the distribution of assets and liabilities. Information on how

5. The recent resurgence of consumer debt growth—to a pace close to that at the high points of earlier credit expansions—contributed to the further decline in delinquency rates in 1994. The initial effect of rapid debt growth on delinquency rates is to push them down: Because loans typically do not become delinquent in their first few months, the proportion of delinquent loans tends to fall initially when the number of loans and amount of debt outstanding grow rapidly.

1. Distribution of U.S. households, by selected characteristics, 1983, 1989, and 1992[1]

Percent

Characteristic	1983	1989	1992
Income (1992 dollars)			
Less than 10,000	15.2	16.9	17.6
10,000–19,999	19.9	19.0	19.6
20,000–29,999	17.9	15.9	15.3
30,000–49,999	23.8	21.7	20.8
50,000–99,999	18.6	19.6	19.3
100,000–249,999	3.8	5.8	6.1
250,000 or more	.7	1.1	1.3
Total	100	100	100
Net worth (1992 dollars)			
Zero or less	8.1	11.4	10.0
1–9,999	20.3	17.5	16.8
10,000–24,999	9.6	9.6	10.8
25,000–49,999	12.4	10.7	11.6
50,000–99,999	17.7	14.9	14.1
100,000–499,999	26.1	29.1	27.7
500,000 or more	5.9	6.7	9.0
Total	100	100	100
Age of head (years)			
Less than 35	30.6	27.2	25.9
35–44	19.5	23.4	22.7
45–54	15.5	14.4	16.2
55–64	15.0	13.9	13.1
65–74	12.2	12.0	12.7
75 or more	7.2	9.0	9.4
Total	100	100	100
Housing status			
Owner	63.4	63.8	63.8
Renter or other	36.6	36.2	36.2
Total	100	100	100
Race or ethnicity of head			
Non-Hispanic white	82.3	75.1	77.9
Nonwhite or Hispanic	17.7	24.9	22.1
Total	100	100	100

1. In this and subsequent tables, components may not sum to totals because of rounding. Data in all tables are from the Survey of Consumer Finances.

broadly or narrowly household debt is distributed across various income and asset groups helps in assessing the burden of debt within the sector. The Survey of Consumer Finances, a nationally representative survey of households, makes it possible to examine such questions. The 1983 and 1992 surveys provide a snapshot of household debt distribution at the early stage of two different economic expansions, and the 1989 survey provides a view at the late stage of an expansion.[6] For purposes of comparison, the distribution of all households (regardless of debt status) by income and other characteristics, for each of these years, is shown in table 1.

6. For a more detailed discussion of the types of debts held by households and the amounts owed on such debts, see Arthur B. Kennickell and Martha Starr-McCluer, "Changes in Family Finances from 1989 to 1992: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 80 (October 1994), pp. 861–82.

Incidence of Debt

Most U.S. households have some type of debt, and the proportion with debt has increased since 1983 (table 2). Nearly all the increase took place between 1983 and 1989: The proportion of households with debt of any type increased from 70 percent to 73 percent between 1983 and 1989 but changed little between 1989 and 1992.

Although debt is widely held among the population at large, the proportion of households with debt differs markedly by household financial and demographic characteristics, and in some cases these proportions have changed over time. Lower-income households are much less likely than middle- and upper-income households to have debt of any type: In 1992, fewer than half of households with incomes below $10,000 had debt, compared with more than four-fifths of those with incomes above $30,000. Nevertheless, the differences among income groups were less pronounced in

2. Proportion of all households having debt, by selected household characteristics and type of debt, 1983, 1989, and 1992

Percent

Household characteristic	1983		1989		1992	
	Consumer debt	Any type of debt	Consumer debt	Any type of debt	Consumer debt	Any type of debt
All households	**62.5**	**70.0**	**65.0**	**73.0**	**64.4**	**73.3**
Income (1992 dollars)						
Less than 10,000	36.3	40.3	42.1	45.2	44.5	47.5
10,000–19,999	48.5	53.4	50.3	54.2	61.5	65.6
20,000–29,999	66.0	72.4	68.9	77.7	72.2	79.6
30,000–49,999	74.2	82.7	76.8	84.4	75.5	83.1
50,000–99,999	78.5	89.6	81.2	92.9	69.7	84.6
100,000–249,999	71.7	85.0	71.7	90.4	59.7	85.7
250,000 or more	59.2	77.9	58.7	85.8	50.0	82.0
Net worth (1992 dollars)						
Zero or less	63.7	63.7	64.4	64.4	70.8	71.1
1–9,999	58.0	59.7	59.5	61.4	64.2	65.2
10,000–24,999	67.3	73.5	75.4	78.1	77.6	80.0
25,000–49,999	68.8	75.3	73.8	79.3	69.8	75.9
50,000–99,999	65.7	73.3	69.4	79.2	67.6	75.1
100,000–499,999	60.8	73.7	62.3	76.0	59.1	74.5
500,000 or more	52.3	69.9	53.2	73.4	45.8	73.0
Age of head (years)						
Less than 35	73.9	79.2	76.3	79.7	76.6	82.1
35–44	79.1	87.2	81.0	89.5	77.0	86.5
45–54	71.1	81.1	75.2	85.8	69.3	85.8
55–64	57.0	67.9	57.9	72.3	59.3	69.2
65–74	31.6	38.4	39.4	49.5	43.3	51.9
75 or more	13.7	17.8	18.5	21.9	27.3	30.2
Housing status						
Owner	64.3	75.5	67.0	79.1	64.7	78.1
Renter or other	59.2	60.3	61.6	62.2	63.9	64.9
Race or ethnicity of head						
Non-Hispanic white	62.9	71.1	65.9	74.5	64.2	74.2
Nonwhite or Hispanic	60.6	64.7	62.4	68.5	65.1	70.2

1992 than they were in 1989. Although the overall proportion of households with debt changed little from 1989 to 1992, the proportion with incomes above $30,000 that had debt fell whereas the proportion with incomes below that level that had debt rose.

The use of debt by households is closely linked to their stage in the life cycle. At different stages, a household's current income and desired expenditures may not match. Most households headed by younger individuals, for example, have incomes below their long-term average, yet many such families must bear the costs of housing, child-rearing, or their own higher education. These households often bridge the temporary gap between current income and desired expenditures by borrowing. In contrast, many households near or in retirement have accumulated savings and have eliminated or sharply reduced their debt obligations. Although their incomes tend to decline after retirement, these households can often finance expenditures in excess of their income by drawing on savings rather than by borrowing. The surveys show that most households headed by younger or middle-aged individuals have debt but that the proportion having debt begins to fall off sharply after age fifty-four. The incidence of indebtedness among older households has trended upward since 1983, however, with sizable increases from survey to survey in the proportion of those older than sixty-four having debt.

As might be expected, homeowners are more likely than renters to have debt. Virtually all the difference is attributable to the holding of mortgage debt by homeowners; the proportions of owners and renters with consumer debt are quite close. The differences in the proportions of households with debt grouped by racial or ethnic characteristics of the head of household are relatively small: In 1992, the proportion for non-Hispanic whites exceeded the proportion for nonwhites and Hispanics by 4 percentage points.[7]

Amount of Debt

The rise in the incidence of debt among households has been accompanied by an increase, in real terms, in the amounts owed (table 3).[8] In 1983, the median amount owed by households with debt was $15,200. By 1989, the median amount owed had risen 16 percent, to $17,600. Between 1989 and 1992, the median amount owed remained about the same. The composition of that debt did change, however: The median amount owed on consumer debt decreased, whereas mortgage obligations increased. The shift in the composition of debt reflected the decline in the use of consumer credit associated with reduced outlays for durable goods during the 1990–91 recession; it may also have reflected some shift toward reliance on home equity credit (classified as mortgage debt) in place of traditional consumer loan instruments, especially among higher-income households.[9]

As with the incidence of debt, the amounts owed vary with household characteristics. In particular, the median amounts of debt owed by higher-income households and those with greater net worth far exceed the median amounts owed by lower-income households and those with less net worth. For example, in 1992, indebted households with incomes below $30,000 typically owed less than $10,000 but those with incomes above $100,000 typically owed more than $100,000. Nearly all the larger debt burdens of higher-income households are attributable to their mortgage obligations; differences across income groups in the median amounts of consumer debt owed are relatively small. Changes over the period in the median debt of the various income and wealth groups were mixed.

Although the proportions of non-Hispanic white households and nonwhite or Hispanic households with debt do not differ greatly, the differences in the median amounts owed by these two groups are comparatively large. In 1992, the median amount

7. In the 1983 survey, race was based on the survey interviewer's observation, whereas in later surveys the respondent reported his or her own race, the procedure routinely followed by the Census Bureau. Although the 1989 and 1992 surveys match external estimates, the 1983 data understate the proportion of nonwhites and Hispanics. Because of this difference, comparisons between 1983 and later survey results based on race classifications should be made with caution.

8. All dollar figures from the Surveys of Consumer Finances have been adjusted to 1992 dollars using the consumer price index for all urban consumers.

9. For a discussion of the growth and characteristics of home equity debt, see Glenn B. Canner, Thomas A. Durkin, and Charles A. Luckett, "Home Equity Lending: Evidence from Recent Surveys," *Federal Reserve Bulletin*, vol. 80 (July 1994), pp. 571–83.

3. Median amount of debt owed by households with debt, by selected household characteristics and type of debt, 1983, 1989, and 1992

Thousands of 1992 dollars

Household characteristic	1983		1989		1992	
	Consumer debt	All types of debt	Consumer debt	All types of debt	Consumer debt	All types of debt
All households with debt	**3.4**	**15.2**	**5.5**	**17.6**	**4.4**	**17.6**
Income (1992 dollars)						
Less than 10,000	.9	1.7	1.0	1.5	1.4	2.0
10,000–19,999	1.7	3.5	3.0	4.8	2.1	4.0
20,000–29,999	2.5	8.3	4.0	9.8	4.0	10.0
30,000–49,999	4.2	16.4	6.4	22.8	6.0	25.1
50,000–99,999	6.3	42.2	9.2	49.3	7.2	57.2
100,000–249,999	12.7	84.0	12.3	118.0	10.2	121.0
250,000 or more	35.2	140.8	13.4	184.3	10.0	157.0
Net worth (1992 dollars)						
Zero or less	3.7	3.8	5.7	7.3	7.1	7.2
1–9,999	1.7	2.1	2.3	2.5	2.2	2.5
10,000–24,999	2.8	8.9	5.7	9.7	3.4	12.8
25,000–49,999	3.9	21.4	4.4	19.1	3.9	16.3
50,000–99,999	3.6	22.2	5.7	30.2	4.6	26.9
100,000–499,999	4.8	32.2	7.6	38.1	5.2	36.2
500,000 or more	7.7	67.6	11.1	98.1	8.7	90.0
Age of head (years)						
Less than 35	3.2	9.4	5.1	12.7	4.7	10.2
35–44	4.2	28.7	7.9	37.4	5.4	33.3
45–54	4.4	18.7	7.5	26.5	5.1	30.9
55–64	2.5	11.5	3.5	12.1	4.2	20.8
65–74	1.1	6.0	1.5	5.6	1.9	5.6
75 or more	.5	1.4	1.0	2.4	.8	2.3
Housing status						
Owner	4.4	28.9	6.9	37.5	5.0	38.0
Renter or other	2.2	2.5	3.4	3.5	3.4	3.7
Race or ethnicity of head						
Non-Hispanic white	3.6	17.8	6.1	22.1	5.0	21.1
Nonwhite or Hispanic	2.5	6.3	3.2	8.0	2.9	7.6

of consumer debt owed by non-Hispanic white households with debt was nearly twice the median amount owed by nonwhite or Hispanic households, and the amount of total debt owed was nearly three times as large. The larger gap in total debt compared with consumer debt reflects the higher incidence of homeownership and mortgage debt among non-Hispanic white households and their ownership of generally more expensive homes.

Share of Debt

Survey data on the incidence and median amounts of debt held by households with different characteristics provide perspective on how broadly or narrowly household debt is distributed. Estimates of the shares of outstanding debt owed by households of different types, and of changes in those shares over time, provide additional information on the distribution of debt and some indication of whether debt obligations are shifting among household groups better or less able to service such debt.

Most of the debt of the household sector is owed by upper-income households, by households with greater net worths, by households headed by younger or middle-aged individuals, and by homeowners (table 4). In 1992, two-thirds of the debt was owed by households with incomes above $50,000 (chart 5); a similar proportion was owed by households with net worths exceeding $100,000. Nearly 80 percent of the debt was owed by households headed by individuals younger than fifty-five, and homeowners owed 93 percent of all household debt. In each case the proportion far exceeds the share of all households in the group (see table 1). For example, upper-income households (incomes of $50,000 or more) accounted for only 27 percent of all households in 1992 though they owed two-thirds of the debt, about the same as their share of income.

4. Distribution of debt among households with selected characteristics, by type of debt, 1983, 1989, and 1992

Percent

Household characteristic	1983		1989		1992	
	Consumer debt	All types of debt	Consumer debt	All types of debt	Consumer debt	All types of debt
Income (1992 dollars)						
Less than 10,000	3.3	2.1	3.1	1.6	5.1	2.2
10,000–19,999	7.6	5.1	6.9	3.5	12.2	4.7
20,000–29,999	12.2	9.1	10.6	6.8	14.6	7.7
30,000–49,999	18.9	21.0	25.7	18.1	24.2	19.3
50,000–99,999	26.4	37.0	31.3	32.1	25.2	32.6
100,000–249,999	17.7	17.0	13.8	23.8	12.9	22.9
250,000 or more	13.9	8.8	8.6	14.0	5.7	10.6
Total	100	100	100	100	100	100
Net worth (1992 dollars)						
Zero or less	7.8	2.0	13.5	4.6	14.4	3.3
1–9,999	9.3	4.1	6.2	2.8	9.7	3.0
10,000–24,999	6.1	5.5	8.0	4.4	10.0	6.8
25,000–49,999	9.8	11.0	9.5	7.3	8.8	7.9
50,000–99,999	12.7	16.1	14.1	13.5	13.5	11.9
100,000–499,999	27.0	35.1	29.9	34.7	25.6	36.1
500,000 or more	27.4	26.2	18.7	32.7	18.0	31.0
Total	100	100	100	100	100	100
Age of head (years)						
Less than 35	24.6	25.6	26.7	21.8	28.0	20.5
35–44	28.2	32.3	32.9	36.6	29.4	32.5
45–54	17.4	21.0	21.1	23.1	18.9	26.4
55–64	20.2	15.2	11.8	13.8	13.3	12.5
65–74	5.6	4.4	6.1	3.9	7.8	6.4
75 or more	4.0	1.4	1.3	.7	2.6	1.7
Total	100	100	100	100	100	100
Housing status						
Owner	77.9	92.9	78.4	94.2	72.4	93.3
Renter or other	22.1	7.1	21.6	5.8	27.6	6.7
Total	100	100	100	100	100	100
Race or ethnicity of head						
Non-Hispanic white	88.9	91.5	81.8	82.9	83.6	86.1
Nonwhite or Hispanic	11.1	8.5	18.2	17.1	16.4	13.9
Total	100	100	100	100	100	100

Consumer debt is spread much more evenly across the population than is total debt (table 4). In 1992, households with incomes above $50,000 and those with net worths above $100,000 each held 44 percent of the consumer debt; homeowners had 72 percent of the consumer debt, a few percentage points above their proportion in the population.

The share of total debt held by upper-income households increased rather sharply between 1983 and 1989, from 63 percent to 70 percent, but then fell back some in 1992, to 66 percent. The decrease in share between 1989 and 1992 reflects a large decline in the upper-income group's share of consumer debt. In contrast, the share of total debt held by households with high net worth increased between 1983 and 1989 but changed little between 1989 and 1992.

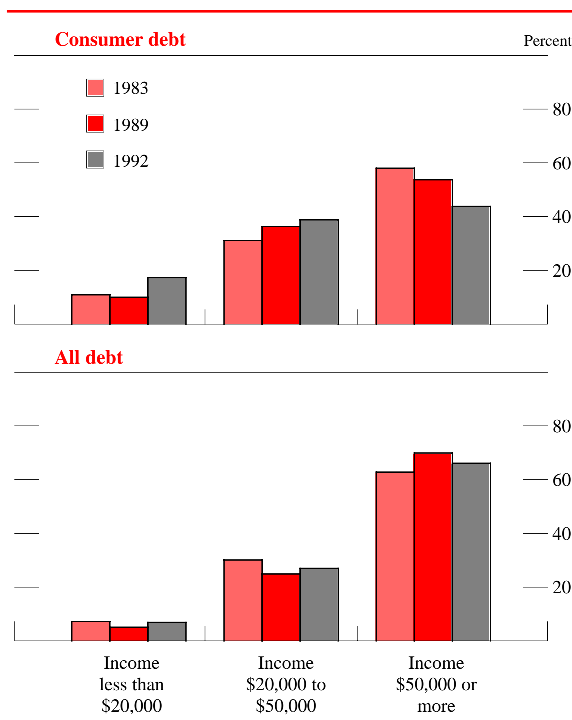
Ability to Repay Debt Obligations

The burden of debt on households is reflected in measures of their ability to repay their loans. This ability can be evaluated indirectly—by examining various ratios of payment obligations to income, changes in those ratios over time, and characteristics of households with high ratios—and more directly—by looking at actual difficulty in handling debt payments.

Ratios of Debt Payments to Income

Scheduled payment obligations were estimated from information provided by survey respondents. Ratios relating debt payments to income were then calculated for each household, for each income and demographic group, and for all households.

5. Distribution of debt among households grouped by income, 1983, 1989, and 1992



Median Ratios. For most groups of households with debt, the median debt payments-to-income ratio falls within a fairly narrow range, although households at the extremes of the income, net worth, and age distributions tend to have lower ratios (table 5). For example, the median debt payments-to-income ratio tends to increase with income for households with moderate incomes and then to decline for the upper-income categories, a pattern that has been fairly consistent over time. A similar relationship holds for households grouped by net worth. Older households have much lower debt payments-to-income ratios than do younger households, a finding that mirrors the incidence of debt and median amounts owed by age category. Reflecting their mortgage obligations, homeowners have substantially higher debt payments-to-income ratios than do renters.[10]

5. Median ratio of debt payments to income for households with debt, by selected household characteristics, 1983, 1989, and 1992

Percent

Household characteristic	1983	1989	1992
All households with debt	**11.8**	**15.2**	**15.4**
Income (1992 dollars)			
Less than 10,000	10.1	13.4	11.6
10,000–19,999	11.8	15.7	14.7
20,000–29,999	12.3	14.5	15.3
30,000–49,999	11.8	15.7	17.1
50,000–99,999	11.8	15.8	16.2
100,000-249,999	9.0	13.8	14.9
250,000 or more	5.1	6.2	6.2
Net worth (1992 dollars)			
Zero or less	7.4	9.0	9.3
1–9,999	8.2	10.0	8.8
10,000–24,999	12.1	16.1	17.2
25,000–49,999	14.7	18.1	18.2
50,000–99,999	13.7	18.4	18.0
100,000–499,999	11.9	15.7	16.2
500,000 or more	10.4	16.9	15.7
Age of head (years)			
Less than 35	12.4	15.0	15.2
35–44	13.4	17.4	18.1
45–54	11.7	16.4	16.5
55–64	8.7	12.4	14.2
65–74	7.4	11.6	9.7
75 or more	3.8	8.5	2.6
Housing status			
Owner	13.9	18.9	19.2
Renter or other	6.5	7.3	6.3
Race or ethnicity of head			
Non-Hispanic white	11.8	15.1	15.9
Nonwhite or Hispanic	11.8	15.3	12.7

The three surveys show that the median debt payments-to-income ratio for indebted households as a group increased markedly between 1983 and 1989 but changed little between 1989 and 1992. The median ratio for each income and demographic group examined increased from 1983 to 1989. The changes between 1989 and 1992 were far less consistent. For example, the ratio increased for households with incomes above $20,000 but fell for lower-income households; changes for households grouped by net worth show no consistent pattern.

Group Ratios. Summing the debt payments owed by all households and dividing by the combined income of all households (including those with no debt) gives a ratio that is conceptually comparable to the aggregate payments-to-income ratio. Although the level of the survey-based ratio for households as a group is lower than the ratio based on aggregate data, in part because of differences in definitions, the trend evident in the survey data follows the aggregate pattern very closely: a sharp

10. Renters, of course, have monthly rental payments that may be comparable in size to the mortgage payments of households with similar age and income characteristics. However, mortgage and rent payments are not entirely comparable because mortgage payments include an investment component.

6. Distribution of income among all households, and ratio of total debt payments to income of all households, by selected household characteristics, 1983, 1989, and 1992

Percent

Household characteristic	Distribution of income			Ratio of debt payments to income[1]		
	1983	1989	1992	1983	1989	1992
All households	**100**	**100**	**100**	**11.5**	**16.5**	**15.1**
Income (1992 dollars)						
Less than 10,000	2.5	2.2	2.4	10.9	15.2	16.0
10,000–19,999	7.6	6.1	6.5	9.4	12.0	14.8
20,000–29,999	11.4	8.8	8.5	11.0	15.8	15.6
30,000–49,999	23.8	18.4	18.1	11.4	16.9	20.4
50,000–99,999	31.8	28.7	29.2	12.8	17.7	15.9
100,000–249,999	13.7	18.0	20.2	11.9	20.5	14.0
250,000 or more	9.3	17.9	15.2	8.7	12.5	8.9
Total	100	100	100	...	...	...
Net worth (1992 dollars)						
Zero or less	3.1	4.1	4.0	9.5	18.2	12.7
1–9,999	10.2	7.3	7.5	7.6	9.1	10.3
10,000–24,999	6.4	5.7	6.9	11.3	14.9	16.6
25,000–49,999	10.0	7.2	7.7	13.7	18.4	16.8
50,000–99,999	15.6	12.5	10.5	12.5	17.9	18.6
100,000–499,999	33.4	34.7	34.2	11.7	16.6	15.8
500,000 or more	21.3	28.6	29.3	11.4	17.4	13.9
Total	100	100	100	...	...	...
Age of head (years)						
Less than 35	23.6	19.4	19.5	13.4	18.9	17.4
35–44	23.9	29.0	26.5	14.9	18.9	17.1
45–54	19.4	22.4	22.4	12.8	18.1	17.6
55–64	18.2	14.7	16.2	9.1	17.3	13.7
65–74	10.9	9.3	9.8	4.2	7.1	8.7
75 or more	4.0	5.2	5.7	2.9	2.6	3.6
Total	100	100	100	...	...	...
Housing status						
Owner	77.4	80.4	78.0	13.1	18.5	17.5
Renter or other	22.6	19.6	22.0	5.9	8.5	6.8
Total	100	100	100	...	...	...
Race or ethnicity of head						
Non-Hispanic white	88.7	85.7	85.5	11.5	16.0	15.1
Nonwhite or Hispanic	11.3	14.3	14.5	11.1	19.6	15.4
Total	100	100	100	...	...	...

1. For each group, ratio is calculated as total debt payments for group divided by total income for group, including households with no debt.

rise over the economic expansion between 1983 and 1989 and a decline between 1989 and 1992 (table 6).

A similar debt payments-to-income ratio was calculated for each of the income groups and demographic groups: For each group, debt payments owed by all households in the group were summed and that total was divided by total income of all households in the group (including those with no debt).[11] These group debt payments-to-income ratios show few consistent patterns. Between 1983 and 1989, debt payments relative to income rose for each income group. Between 1989 and 1992, in contrast, the ratio declined some for higher-income households but continued to rise slightly for lower-income households, a difference reflecting mainly an increased proportion of lower-income households having debt. The declines for the higher-earning households may partly reflect a shift among these groups toward use of home equity and other mortgage loans: The generally longer maturities and lower interest rates on mortgage debt would, other things equal, lower the amount of scheduled payments due within a one-year period, thereby lowering the ratio. Comparing across income groups, no consistent relationship between a group's income level and its debt payments-to-income ratio is apparent, except that the highest income group had a notably lower ratio.

11. The ratio for all households can be calculated from these separate group ratios of debt payments to income by weighting each group's ratio by its share of all household income. Thus, the shares of income, also given in table 6, can be used to gauge the importance of each group in determining the overall ratio.

7. Distribution of debt and assets among households grouped by ratio of debt payments to income, by type of debt, 1983, 1989, and 1992

Percent

Year and type of holding	No debt	Ratio of consumer debt payments to income (percent)			
		Below 10	10–30	Above 30	Total
1983					
Consumer debt	.0	44.3	39.7	16.0	100
Financial assets	49.8	42.3	6.5	1.4	100
All assets	40.0	47.2	10.8	1.9	100
MEMO: Distribution of households	37.5	45.0	15.1	2.4	100
1989					
Consumer debt	.0	44.5	41.5	14.1	100
Financial assets	51.2	40.3	6.5	2.0	100
All assets	39.4	46.4	11.2	3.1	100
MEMO: Distribution of households	35.0	41.5	19.6	3.9	100
1992					
Consumer debt	.0	54.8	36.4	8.9	100
Financial assets	55.6	37.3	5.2	1.7	100
All assets	46.2	43.6	7.7	2.5	100
MEMO: Distribution of households	35.6	44.0	16.7	3.7	100
	No debt	Ratio of total debt payments to income (percent)			
		Below 10	10–40	Above 40	Total
1983					
Total debt	.0	14.3	62.6	23.1	100
Financial assets	35.0	40.6	21.3	3.0	100
All assets	24.5	31.8	35.0	8.7	100
MEMO: Distribution of households	30.0	31.5	33.9	4.6	100
1989					
Total debt	.0	9.5	59.6	30.9	100
Financial assets	33.2	33.1	28.1	5.6	100
All assets	20.1	26.5	38.2	15.2	100
MEMO: Distribution of households	27.0	24.6	40.4	8.0	100
1992					
Total debt	.0	9.7	63.8	26.4	100
Financial assets	33.9	27.4	32.2	6.5	100
All assets	22.7	23.8	40.0	13.5	100
MEMO: Distribution of households	26.7	26.4	38.6	8.3	100

Share of Debt Owed by High-Ratio Households. The overall exposure of households to debt-payment problems can be assessed by looking at how much of the sector's debt is borne by households with high debt payments-to-income ratios and the extent to which such households hold assets that could be drawn upon to supplement income in meeting debt-service requirements. Table 7 presents debt and asset distributions for households with different debt payments-to-income ratios, for both consumer debt and total debt. Households are classified as having no debt, a low debt payments-to-income ratio (less than 10 percent), a moderate ratio, or a high ratio (more than 30 percent for consumer debt and more than 40 percent for total debt). The category boundaries are somewhat arbitrary but roughly correspond to industry guidelines for extending credit.

In the 1983 survey, households with high ratios of consumer debt payments to income accounted for about 16 percent of all such debt covered in the survey. In 1989, such heavily burdened households held only 14 percent of the consumer debt, suggesting that the buildup of consumer debt during the mid- to late 1980s was spread somewhat more broadly over households with low to mid-range payments-to-income ratios. In the 1992 survey, the proportion of all consumer debt owed by the highly indebted households fell further, to 9 percent. Although the shares of debt held by these heavily burdened households are relatively small, at the same time these households also apparently had relatively few assets to support their obligations: All three surveys indicate that these households held 2 percent or less of all financial assets and about 3 percent or less of total assets. More than

90 percent of all financial assets were held by households that had no consumer debt or had low debt payments relative to income.

Changes from survey to survey in the proportion of households with high total debt payments-to-income ratios differed somewhat from the findings for consumer debt. The proportion of households with high ratios for total debt rose between 1983 and 1989, from 23 percent to 31 percent, and then dropped back in 1992, to 26 percent. These households held about 7 percent of the sector's financial assets in 1992 and roughly 14 percent of total assets.

Characteristics of High-Ratio Households. The implications of high debt payments-to-income ratios can also be explored by looking at the characteristics of households with high ratios (table 8). The bulk of the households with high ratios in the 1992 survey were in the low- to moderate-income groups. Seventy-four percent of the households with high consumer-debt ratios, and 50 percent of the households with high total-debt ratios, had incomes below $20,000; in the population as a whole, 37 percent of the households had income below that level in 1992 (table 1).

To follow up questions about household income level in the 1992 survey, each respondent was asked whether the income level reported was unusually high, unusually low, or about normal. Forty-two percent of households with high consumer debt payments-to-income ratios, and nearly 36 percent of households with high total debt payments-to-income ratios, described themselves as having income that was unusually low relative to their "normal" income. Thus, the situation of a substantial portion of the households with high debt-payments ratios might be viewed as transitory, with temporarily low income likely to return to a normal level.

Large proportions of the high-ratio households had total assets of equal or greater value than their debts (nearly 80 percent for consumer debt and more than 90 percent for total debt); for many households, the major asset was a home. In contrast, only 21 percent of the households with high ratios for consumer debt and 14 percent of those with high ratios for total debt had financial assets of equal or greater value than their debts. Thus, generally, the households most heavily indebted relative to their income apparently did not have big cushions of financial assets to help meet their debt-service payments. On the other hand, the proportions of high-ratio households that had missed a scheduled payment within the preceding twelve months—23 percent for consumer debt and 22 percent for total debt—did not differ greatly from the proportions of all debtors making late payments, as discussed later.

8. Selected characteristics of households with high ratios of debt payments to income, 1992

Percent

Household characteristic	High ratio of consumer debt payments to income[1]	High ratio of total debt payments to income[2]
Income (1992 dollars)		
Less than 10,000	41.3	25.2
10,000–19,999	32.4	24.6
20,000–29,999	10.2	14.2
30,000–49,999	13.9	21.8
50,000–99,999	2.1	10.9
100,000–249,999	*	2.7
250,000 or more	*	.5
Total	100	100
Age of head (years)		
Less than 35	44.6	27.8
35–44	18.7	28.0
45–54	10.7	18.7
55–64	11.7	15.1
65–74	9.2	6.9
75 or more	5.0	3.4
Total	100	100
Other		
Income unusually low[3]	41.6	35.6
Unemployed in 1992	8.5	6.5
Total assets at least as large as debts	79.9	92.0
Financial assets at least as large as debts	20.9	14.3
Made at least one late payment on debt in past 12 months		
Thirty days or more late	23.1	21.9
Sixty days or more late	7.0	10.3

1. Debt payments more than 30 percent of income.
2. Debt payments more than 40 percent of income.
3. Relative to "normal," as characterized by survey respondents.
* Five or fewer survey respondents.

Changes in Payment Burdens for Individual Households

Examining the behavior of the same set of households over time can give an indication of the degree of permanence of high payment ratios among individual households. Such information is available from the 1989 survey, which included a group of

9. Changes in households' ratios of total debt payments to income from 1983 to 1989[1]

Percent distribution

1983 group	1989 group				
	No debt	Ratio of payments to income (percent)			All households
		1–9	10–40	40 or more	
No debt	65.6	20.4	11.1	3.0	100
Ratio of payments to income (percent)					
1–9	19.5	29.6	44.4	6.5	100
10–40	8.8	24.5	57.0	9.7	100
40 or more	16.8	15.7	45.9	21.6	100
All households	**27.0**	**24.9**	**40.6**	**7.5**	**100**

1. Based on information from households that participated in both the 1983 and the 1989 Survey of Consumer Finances. Includes only households headed by individuals at least twenty-eight years old in 1989.

households that had participated in the 1983 survey (table 9).[12]

A large majority of the households that had no debt in 1983 still had no debt in 1989. Among the 1983 debtors, however, there was considerable shifting in their payments-to-income ratios. For instance, of the households that had high ratios in 1983, only 22 percent were still in that category in 1989. About 46 percent of the group had shifted into the moderate-ratio group, and almost 17 percent were completely out of debt. Just under 10 percent of the households that were moderately indebted in 1983 had moved into the heavily indebted category by 1989, and a small proportion of those with no debt in 1983 had high ratios in 1989. On the whole, the picture presented by the "transition matrix" of table 9 is one of considerable change over time in the composition of the group with relatively heavy debt burdens.

Late-Payment Measures

Another indicator of the burden that debt payment places on households is their record of making payments on time. Respondents were asked if they had failed to meet a scheduled loan payment during the preceding twelve months (table 10). (In 1989 and 1992, respondents were also asked if they had fallen behind on any payment sixty days or more.)[13]

Not surprisingly, the proportion of households reporting late payments varies over the business cycle. The proportion rose from 17 percent in 1983, the initial year of a recovery from recession, to 21 percent in 1989, near the end of a long economic expansion that saw a substantial increase in household debt. As many consumers cut back on spending and borrowing in the early 1990s—and as lenders tightened credit standards and wrote off bad debts—household financial positions improved, leading to a lower incidence of late payments in 1992. Only 15 percent of the indebted households in the 1992 survey had missed a payment at least once during the preceding twelve months, a period marking the early stage of an economic recovery. It is notable that the proportion of late-paying households was lower in 1992 than in 1983 even though the surveys were conducted at roughly equivalent points in the business cycle. Although the difference between the proportions of late payers is not particularly large—2 percentage points—it nevertheless suggests that households were in at least as good financial shape emerging

12. For a discussion of procedures used to compare results from surveys of the same households over time, see Arthur B. Kennickell and Douglas A. McManus, "Multiple Imputation of the 1983 and 1989 Waves of the SCF," *The 1994 Proceedings of the Section on Survey Research Methods*, American Statistical Association (forthcoming).

13. This measure of late-payment experience differs conceptually from the aggregate delinquency rate statistics in some respects. Whereas the delinquency rates reflect only current-period late payments for only a specific type of loan, the survey-based measure reflects any instance of late payment over a period of time for any loan a household has. A household with several loans that missed only one payment on one loan is counted as a "late payer," even if all loans were paid up at the time of the survey. Given these criteria, it is neither surprising nor inconsistent with aggregate delinquency rate data that the proportions of households with late payments from the survey are much higher than the rates from the various delinquency-rate series.

10. Proportion of households with debt making at least one late payment during the preceding twelve months, by selected household characteristics, 1983, 1989, and 1992

Percent

Household characteristic	1983	1989	1992
All households with debt	**17.3**	**21.4**	**15.3**
Income (1992 dollars)			
Less than 10,000	23.3	32.4	18.2
10,000–19,999	23.2	29.4	20.5
20,000–29,999	19.8	20.5	17.7
30,000–49,999	16.9	18.2	16.1
50,000–99,999	12.9	20.0	10.1
100,000–249,999	5.0	11.3	5.7
250,000 or more	4.1	2.7	14.6
Net worth (1992 dollars)			
Zero or less	36.9	39.1	35.8
1–9,999	25.4	25.8	20.1
10,000–24,999	21.4	28.6	16.4
25,000–49,999	23.0	24.2	13.9
50,000–99,999	14.6	22.5	12.1
100,000–499,999	7.7	12.1	10.0
500,000 or more	3.0	8.9	7.5
Age of head (years)			
Less than 35	23.9	29.9	20.3
35–44	19.4	23.2	18.8
45–54	14.4	16.5	13.6
55–64	8.2	16.1	11.1
65–74	6.5	9.4	2.6
75 or more	*	*	4.4
Housing status			
Owner	14.6	18.8	11.8
Renter or other	23.4	27.3	22.8
Race or ethnicity of head			
Non-Hispanic white	14.5	17.6	13.4
Nonwhite or Hispanic	31.8	33.8	22.3

* Fewer than five survey respondents.

from the most recent recession as they had been just after the 1981–82 recession. This finding appears consistent with the fifteen- and twenty-year lows observed in the aggregate delinquency rates discussed earlier.[14]

Regardless of the year surveyed, larger proportions of lower- and middle-income households had missed a scheduled payment. The smallest changes across the three surveys were for the middle groups—income between $20,000 and $50,000—for which the proportions of late payers fluctuated only about 2 percentage points from survey to survey. The two lowest income groups showed a very high incidence of late payment in 1989 but a sharply lower incidence in 1992, with drops of 14 and 9 percentage points. One striking finding was a significant jump between 1989 and 1992 in the proportion of the highest-income households that missed a payment. Corporate restructuring that eliminated some high-level management positions and the price weakness in many key real estate markets may help account for the group's worsened payment record in 1992.[15]

Households with little net worth recorded the highest incidence of failure to meet a payment, and in each survey the proportion tended to decline as net worth increased; all groups showed declines between 1989 and 1992. Younger households consistently showed a higher rate of late payments than older households, but all age groups reported fairly substantial drop-offs in 1992. Nonwhite and Hispanic households had a higher incidence of missed payments than did non-Hispanic white households, but they also showed more improvement from 1989 to 1992.

Summary and Conclusions

Household sector debt grew substantially during the 1983–89 economic expansion, slowed markedly over the next two years, then began to climb again in 1992 as the economy recovered from recession. Various aggregate measures of household financial positions suggest that the sector emerged from this ten-year cycle of expansion, recession, and recovery on relatively sound footing. Asset holdings had also surged over the period, increasing the sector's net worth. Estimates of households' scheduled debt-service payments relative to disposable personal income had risen to a peak in 1989; the ratio was significantly lower by 1992. Likewise, loan delinquency rates by 1992 had fallen sharply from earlier cyclical peaks and, in fact, continued to decline through 1994.

Data collected from individual households in 1983, 1989, and 1992 generally confirm the observations drawn from the aggregate statistics. At the

14. Although both the aggregate and survey-based measures of delinquency rates paint a fairly positive picture of the financial health of the household sector, the number of personal bankruptcies has risen sharply over most of the period studied here, tending to lower delinquency rates by debt write-offs rather than by debt repayments. Since 1992, the number of personal bankruptcies has been falling, but it is still high compared with the number in the mid-1980s. For a discussion of some causes and effects of personal bankruptcies see Charles A. Luckett, "Personal Bankruptcies," *Federal Reserve Bulletin,* vol. 74 (September 1988), pp. 591–603.

15. Although median home prices did not change much between 1989 and 1992, prices of the most expensive homes fell precipitously in many localities.

all-household level, the surveys show a pattern of rise and subsequent decline over 1983–92 in ratios of debt-service payments to income and indicate that the incidence of late payments on loans was lower in 1992 than in the other survey years.

The distributions of debt and debt payments among households grouped by various economic and demographic characteristics add further perspective on household sector finances. Although the picture is not unambiguously positive, the overall thrust of the evidence from the disaggregated data is that much of the sector's debt is owed by households that have ample resources to service it. Households with high income and substantial net worth account for the bulk of the debt. For some households, required debt payments indeed loom large relative to their income, but between 1989 and 1992 the share of debt owed by these households fell significantly. For many heavily indebted households, the condition apparently is transitory. For instance, most households that had high ratios of debt payments to income in 1983 had substantially reduced their payment burdens by 1989. Many of the households with high ratios in 1992 reported that their income for the year was atypically low. Although most high-ratio households had debts exceeding their financial assets, the proportion of late payers in that group did not differ greatly from the proportion in the population of debtors at large.

Technical Appendix

The analysis in this article is based on information from three major sources: aggregate data from institutional sources; cross-section survey data from the 1983, 1989, and 1992 waves of the Survey of Consumer Finances; and survey data from a panel of respondents to both the 1983 and 1989 waves of the survey. This appendix provides some background on these sources and discusses some of the conceptual differences in what each measures.

Aggregate Data

The aggregate data on the debt of the household sector (that is, all individuals in the economy) derive mainly from the reports of commercial banks and other depository institutions and finance companies. These data are published regularly in statistical releases and as part of the Federal Reserve's flow of funds accounts. In this framework, mortgage debt secured by one- to four-family homes is attributed to the household sector. Such mortgages include both primary home-purchase mortgages and all junior-lien debt, such as borrowing against home equity lines of credit. Consumer debt has two components: consumer installment credit, which covers most nonmortgage loans to consumers repayable in two or more payments, including automobile loans, credit card debt, personal cash loans, and sales finance contracts; and noninstallment consumer credit, mostly very short term credit such as bridge loans sometimes used to facilitate real estate or other transactions. (The amount of noninstallment credit carried by the household sector is relatively small, about $50 billion.)

Survey of Consumer Finances

Since 1983, the Survey of Consumer Finances, a survey of the finances of U.S. households, has been conducted every three years by the Board of Governors of the Federal Reserve System, with the cooperation of the Statistics of Income group at the Internal Revenue Service.[16] Data from the 1986 survey are not cited in this article because they are not strictly comparable to the other cross-sections.[17] The design of the 1983, 1989, and 1992 surveys has been discussed in detail in previous issues of the *Federal Reserve Bulletin*.[18]

16. The Survey of Consumer Finances has been conducted periodically over the past fifty years—annually through 1971, again in 1977, and triennially since 1983.

17. For information on changes in household debt using 1986 survey data, see Robert B. Avery, Gregory E. Elliehausen, and Arthur B. Kennickell, "Changes in Consumer Installment Debt: Evidence from the 1983 and 1986 Surveys of Consumer Finances," *Federal Reserve Bulletin*, vol. 73 (October 1987), pp. 761–78.

18. See Kennickell and Starr-McCluer, "Changes in Family Finances from 1989 to 1992"; Arthur Kennickell and Janice Shack-Marquez, "Changes in Family Finances from 1983 to 1989: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 78 (January 1992), pp. 1–18; and Robert B. Avery and Gregory E. Elliehausen, "Financial Characteristics of High-Income Families," *Federal Reserve Bulletin*, vol. 72 (March 1986), pp. 163–77.

The design of the 1989 sample was particularly complex. The survey provided both cross-sectional information on 3,143 households and longitudinal information on a sample of 1,497 households that participated in the 1983 survey.[19] The longitudinal part of the survey oversampled households headed by individuals more than forty-five years old and households whose residences had not changed since 1983; no attempt was made to obtain a longitudinal interview with households headed by individuals younger than twenty-two in 1983. Because this group of young households excludes a large number of young people who were in college or the military in 1983 or who were living with their parents or in related living arrangements, it is not representative of independent households headed by individuals younger than twenty-eight in 1989.

The survey-based measures of debt are broadly similar to the aggregate measures, but they differ in important ways. The surveys obtain information about types of debt not included in the aggregates, such as loans from individuals or borrowing against 401(k) accounts. Payments data are obtained directly from survey respondents rather than depository institutions; for credit card debt and some other types of loans for which fixed payments are not regularly scheduled, payments were estimated using prevailing market interest rates or rates reported by respondents. In addition, the survey income figures are measures of total cash income before taxes for the full calendar year preceding the survey, whereas the aggregate data include some noncash income as well, for example, employer contributions to pension plans.

For consistency with the terminology commonly used with the aggregate data, the word *household* is used throughout the discussion of the survey data even though past reports on the surveys have used the term *family*. In this article, *household* is used with the same intent as the earlier term to refer to the primary economic unit (PEU) within each of the dwelling units that were included in the sample. The PEU is defined as the economically dominant single individual or pair of individuals (who may be married or living as partners) and all other individuals who are financially dependent on that person or those persons. The term *head* used in this article is an artifact of the organization of the data and implies no judgment about the structure of households. The head is taken to be the central person in a PEU, the male in a mixed-sex core couple, or the older person in a same-sex core couple. □

19. More detailed information on the longitudinal part of the sample is available in Kennickell and McManus, "Multiple Imputation of the 1983 and 1989 Waves of the SCF." The data, along with further technical documentation, are available from the National Technical Information Service, Federal Computer Products, 5285 Port Royal Road, Springfield, VA 22161, (703) 487–4763.