

Rising Household Debt in Perspective

By Douglas K. Pearce

The total debt of U.S. households has increased at a rapid pace during the current economic upturn. With household debt now exceeding two trillion dollars, the increase has rekindled concerns that households have become financially overextended.¹ If households start finding their debt burdensome, credit-financed consumer spending on housing and durable goods could weaken substantially.² In addition, a fragile financial position

for households could worsen the effects of any economic downturn.

This article argues that the recent surge in household borrowing can be explained by historical patterns combined with regulatory changes and that households are not yet seriously overextended. The increase in debt reflects the net impact of several factors affecting the demand for and supply of household credit. The upswing in economic activity has been the main cause of higher demand for credit, while financial deregulation and innovation have increased the supply of credit available to households. Although some indicators of the debt burden faced by households are at historic highs, balance sheet data and other evidence suggest that households are not in a weakened financial position.

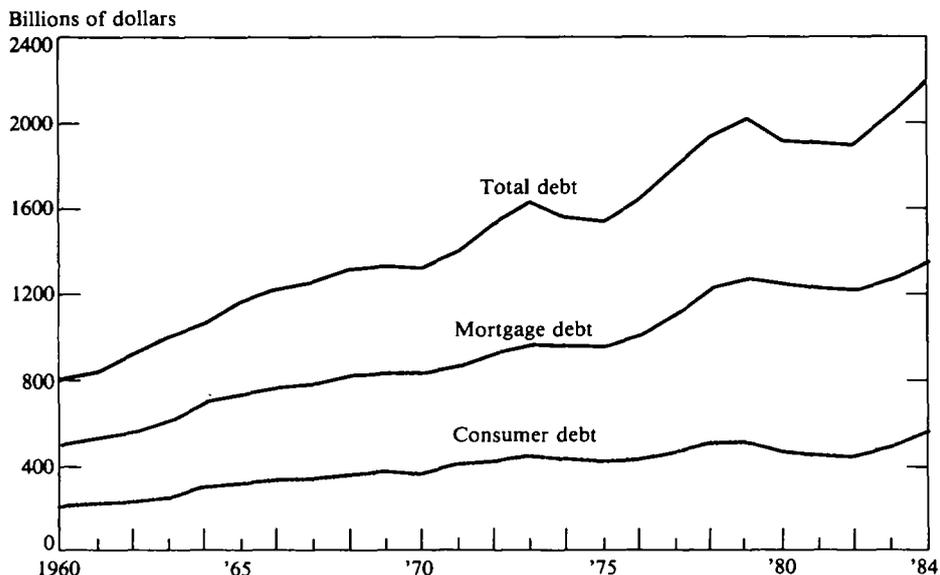
The first section of the article gives a brief overview of the patterns in household borrowing over the past 25 years. The second section looks at the factors underlying changes in the demand for credit by households and the supply of credit to households. The third section

¹ "Will the Weight of Debt Crush Consumer Spending?" *Business Week*, March 18, 1985, p. 20, and Randall Smith, "Soaring Levels of Debt, National and Private, Cause Rising Worries," *Wall Street Journal*, May 9, 1985, pp. 1, 20.

² For empirical evidence that higher debt and lower liquidity depress consumer durable purchases, see Frederic S. Mishkin, "Illiquidity, Consumer Durable Expenditure, and Monetary Policy," *American Economic Review*, September 1976, pp. 642-654.

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CHART 1
Household debt
 (in 1984 dollars)



Source: Flow of Funds, Federal Reserve Board

presents evidence on whether households have become financially overextended.

Overview of household debt

Types of household debt

Household debt is generally divided into mortgage debt and consumer debt. Mortgage debt originates when households borrow to purchase houses or use their current house as collateral for a loan. Traditionally, mortgage loans have been fixed-interest rate, 30-year loans with constant monthly payments over the life of the loan. Adjustable-rate mortgages have become increasingly important, however, and made up more than 60 percent of new mortgage loans in 1984. These loans have monthly payments that vary periodically with market interest rates. The largest source of

mortgage credit to households are the "thrift" institutions, savings and loan associations and mutual savings banks.

Consumer debt is composed of installment and noninstallment loans. Consumer installment debt consists of all household loans with an option to repay in two or more payments. Included in installment debt are the outstanding balances on bank credit cards and revolving charge accounts, even though a substantial part of these balances are paid in full when households receive their monthly statements. Much consumer installment debt arises from households' purchases of automobiles and consumer durables. Although variable-rate installment loans have appeared, fixed-rate loans still dominate. Noninstallment loans include 30-day credit extended through charge accounts and travel and entertainment credit cards as well as single-payment personal

loans. The main sources of consumer credit are commercial banks, finance companies, and credit unions.

Trends in household debt

The nominal value of household debt has grown at an average rate of 10 percent a year since 1960. Adjusted for inflation, however, the annual growth rate has been about 4.3 percent. Chart 1 plots the real (inflation-adjusted) levels of total household debt and its two components—mortgage and consumer debt.³ As the chart indicates, mortgage debt has remained at about two-thirds of total household debt, rising at an annual rate of 4.2 percent since 1960. Real debt per household, though, has increased at a lower rate, 2.3 percent a year, since the number of households has also increased.

The strong procyclic pattern of household borrowing is illustrated by Chart 2 which plots quarterly changes in inflation-adjusted mortgage and consumer debt. Except for the short recovery period between the 1980 and 1982 recessions, growth in both types of debt has accelerated at the start of each business expansion and slowed around the start of each recession (the shaded areas).⁴

The increase in mortgage debt in the first two years of the current expansion, 1983-84, was roughly the same as the increase in the first two years of the 1976-80 expansion.

³ The household sector balance sheets in the Flow of Funds Accounts include the assets and liabilities of personal trusts and nonprofit organizations and, therefore, overstate somewhat the assets and liabilities of households.

⁴ Consumer credit fell more sharply than usual in the 1980 recession due to the credit restraint program of the Carter administration. In March 1980, the Federal Reserve, under provisions of the 1969 Credit Control Act, required lenders to maintain non-interest bearing deposits equal to 15 percent of any increase in their outstanding credit card balances and other unsecured consumer loans. A voluntary credit constraint program was also put into place.

Growth in real mortgage debt was 6.1 percent a year in 1983-84, compared with 7.6 percent in 1976-77. Growth in consumer debt has been unusually rapid over the last two years, however, increasing 11.8 percent a year compared with 7.2 percent in 1976-77.

Although there has been little change in the relative proportions of mortgage and consumer debt, the composition of consumer debt has changed. Installment debt rose from about two-thirds of total consumer debt in 1960 to about four-fifths in 1984. Changes also occurred within the consumer installment debt segment. While automobile loans accounted for more than 40 percent of installment credit in the early 1960s, they accounted for only 33 percent by the mid-1970s. Later, automobile loans rose to about 38 percent of installment credit, and have remained there for the last few years. Revolving credit, including the outstanding balances on bank credit cards and revolving charge accounts at gasoline companies and retailers, increased to over 20 percent of all installment debt by 1984.⁵

Factors affecting household debt

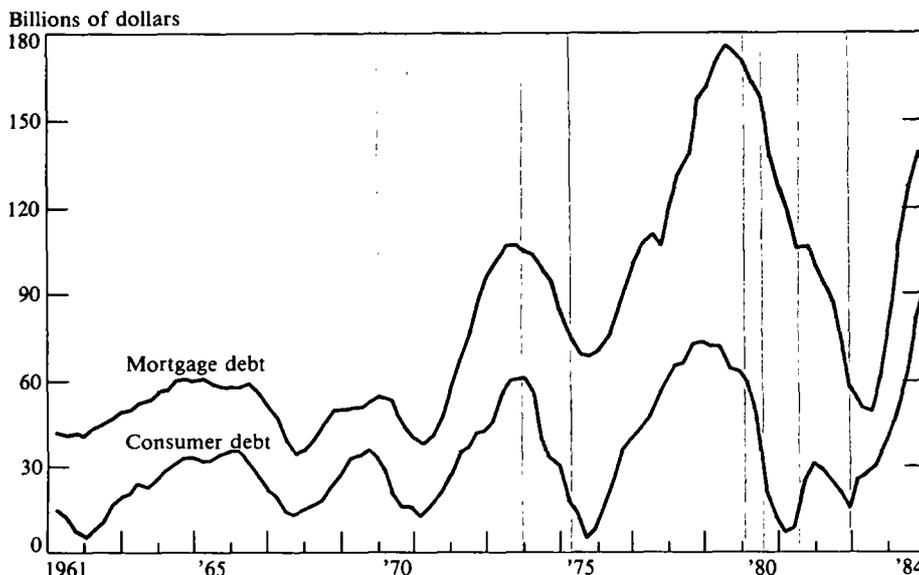
Several factors influence the demand for and supply of household credit. This section discusses the effects on credit demand of demographic changes, the cost of credit, and income expectations, and the effects on credit supply of restrictions on interest rates and changes in the source of credit.

Demand factors

It is generally thought that households try to maintain a fairly smooth pattern of consumption over their lifetimes. This view, called the

⁵ Some of the increase was caused by a change in the classification of revolving credit in 1977 to include retailers' revolving charge accounts.

CHART 2
Changes in household debt
 (over previous four quarters in 1984 dollars)



Source: Flow of Funds, Federal Reserve Board

life-cycle theory of consumption, asserts that households base their spending on the expected flow of income over their lifetimes rather than just their current income.⁶ Credit markets can help households in achieving their consumption objectives in several ways. First, households may want to consume more than their current income by going into debt in anticipation of higher future income. Second, households often prefer to purchase houses and such durable goods as automobiles and household appliances that provide a flow of services over several years rather than rent or buy the services directly. Access to credit

markets allows households to buy such physical assets and start receiving the flow of services without having to reduce spending initially to save for an outright purchase. Third, households can offset some of the spending effects of unexpected declines in income by borrowing. According to the life-cycle theory, a household's borrowing needs decline as the household ages. For that reason, demographic changes should be an important determinant of aggregate credit demand.

Other factors besides life-cycle motives affect the demand for credit by households. Fluctuations in the cost of credit are likely to influence household borrowing, particularly as many credit-related purchases can be postponed until credit terms are more favorable. And as future incomes are uncertain, households may alter their income expectations when general business conditions change.

⁶ See Franco Modigliani and Richard Brumberg, "Utility Analysis and the Consumption Function," in *Post-Keynesian Economics*, ed. by Kenneth K. Kurihara, Rutgers University Press, New Brunswick, N.J., 1954, and Albert Ando and Franco Modigliani, "The 'Life Cycle' Hypothesis of Savings: Aggregate Implications and Tests," *American Economic Review*, March 1963, pp. 55-84.

TABLE 1
Ratios of debt to income and assets
by age of family head, 1983

<u>Age of Family Head</u>	<u>Total Debt to Family Income</u>	<u>Total Debt to Total Financial Assets</u>
Under 25	38.7	198
25-34	70.0	208
35-44	96.1	165
45-54	58.5	72
55-64	42.4	18
65-74	24.3	5
Over 74	4.8	1

Source: Data for these ratios are from Robert B. Avery, Gregory E. Eliehausen, Thomas A. Gustafson, and Glenn B. Canner. *1983 Survey of Consumer Finances*. Board of Governors of the Federal Reserve System, Washington, D.C., forthcoming.

Demographic changes. According to the life-cycle model, borrowing behavior should vary systematically with the age of the household. Younger households should have more debt relative to their assets and income. This is because they expect their incomes to rise and are typically willing to borrow so they can consume some of their future income. Young households are also more likely to have to borrow to acquire houses and consumer durables. This is because they are at the stage where these purchases are most often made and they are not likely to have the financial assets for noncredit purchases. Thus, the life-cycle model predicts that demographic changes influence aggregate household borrowing. All else constant, a larger proportion of young households in the population should raise the average ratios of debt to assets and debt to income.

An extensive survey of household finances conducted in 1983 supports the life-cycle model prediction that younger households will have higher ratios of debt to income and debt to assets. Table 1 gives the average of the ratio of total debt to family income and total debt to total financial assets by age of the family head. These ratios are higher for younger

families and drop off considerably for older families.

Given these borrowing patterns, recent changes in the age structure of the population may have stimulated aggregate borrowing by households. The proportion of the population between 25 and 44—the age bracket with the heaviest borrowing—declined throughout the 1960s, reaching a low of 23.6 percent by 1970. Since then, however, the relative size of this group has grown continuously, reaching 30.4 percent in 1984. The increase in the size of this group should have stimulated credit demand by households over the past decade.

Meanwhile, however, there has also been a steady increase in the proportion of the population over 65. This group increased from 9.8 percent of the population in 1970 to 11.8 percent in 1984. Since older people are least likely to use credit, this trend should have partially offset the effect of the increase in the 25 to 44 age group. Moreover, since the distribution of assets is concentrated more in the older age brackets than the distribution of income, the demographic changes are more likely to have raised the aggregate debt-income ratio than the debt-assets ratio. Relative growth in both groups is expected to continue until

1990, when the size of the younger group should begin declining, depressing credit demand.⁷

Changes in the cost of credit. Changes in the cost of credit also affect household borrowing. While the nominal interest rate is often identified as the cost of credit, households presumably take into account expected inflation and the tax deductibility of nominal interest payments. For a household paying a 25 percent marginal tax rate and expecting an inflation rate of 5 percent, a nominal interest rate of 10 percent implies a real after-tax rate of 2.5 percent.⁸ High nominal interest rates, therefore, need not reduce household borrowing demand if they reflect high expected inflation.

While the real after-tax interest rate is the relevant cost of credit for consumer loans, the cost of credit for mortgage loans involves other considerations. To a considerable degree, the decision to buy a house is an investment decision. If housing prices are expected to rise faster than the general price level, the real cost of mortgage credit is further reduced. As researchers have noted, investment in housing has additional attractions because the implicit rent a homeowner "pays" himself is not taxed and effective capital gains taxes are low.⁹

⁷ See *Projections of the Population of the United States, By Types, Sex, and Race: 1983 to 2080*, U.S. Bureau of the Census, 1984.

⁸ Before taxes, the household pays a nominal rate of 10 percent. Since it can deduct all nominal interest payments in computing its taxable income, the after-tax nominal rate is 10 percent times (1-t) where t is the marginal tax rate. In the example, $t = 0.25$ so the after-tax nominal rate is 7.5 percent. After subtracting an expected inflation rate of 5 percent, the household is faced with a 2.5 percent real after-tax interest rate.

⁹ For a detailed discussion of the rate of return on housing, see Patric H. Hendershott and Sheng Cheng Hu, "Inflation and Extraordinary Returns on Owner-Occupied Housing: Some Implications for Capital Allocation and Productivity Growth," *Journal of Macroeconomics*, Spring 1981, pp. 177-203.

Chart 3 plots estimates of the cost of credit for mortgage loans and consumer loans. The cost of credit for mortgage loans (CCMORT) is approximated by the following equation:

$$\text{CCMORT} = (1-t)\text{MORTRATE} - \text{HPEXP},$$

where MORTRATE = interest rate on fixed-rate 30-year mortgage

t = average income tax rate

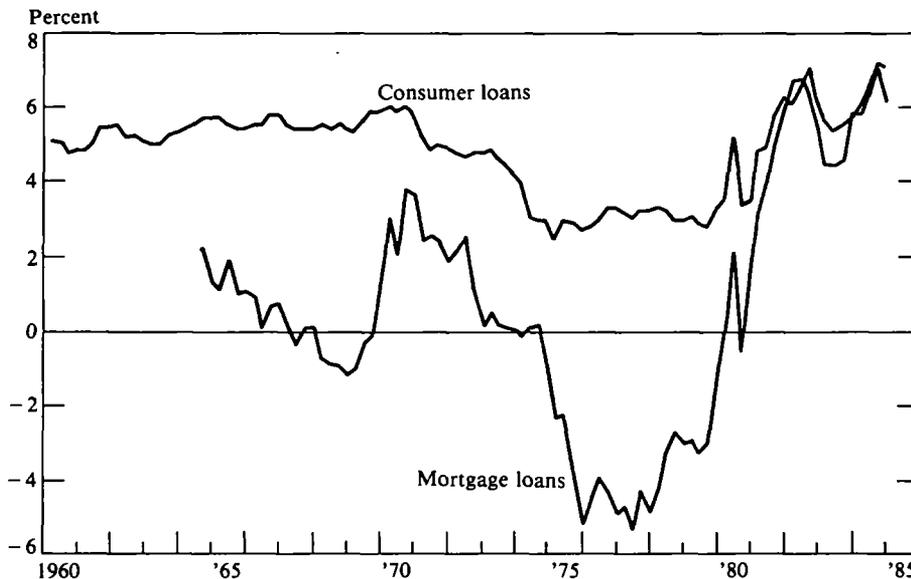
HPEXP = expected rate of increase in house prices, assumed to be a weighted average of past increases

As the chart indicates, this measure of the cost of mortgage credit fell from 1965 to 1969, rose sharply in 1970, and then declined again. From late 1974 to 1980, it was negative as housing prices increased rapidly relative to the nominal mortgage rate. This cost has risen substantially since 1980 and is now about 6 percent, higher than at any time in the 1960s or 1970s. The negative real after-tax cost of mortgage credit in the last half of the 1970s contributed to the large increase in mortgage debt undertaken by households in those years (Chart 2). While the steep increase in this cost since then is consistent with the much slower growth in mortgage debt from 1980 to 1982, the large increase in mortgage debt in 1983-84 occurred without any stimulus from declines in the cost of mortgage credit.

The real after-tax cost of consumer credit, also given in Chart 3, followed a roughly similar pattern to that for mortgage debt.¹⁰ It

¹⁰ The measure of the real after-tax cost of consumer credit follows the calculation described in footnote 7 where the nominal

CHART 3
Real after-tax costs of credit



Source: Data Resources Inc.

declined during most of the 1970s, dropping from the 5-6 percent range in 1970 to about 3 percent in 1975-79. As in the case of mortgage debt, the low cost of consumer credit was accompanied by substantial growth in consumer debt, which declined when the cost of borrowing rose in 1980. And again like mortgage debt, the large increase in consumer debt since 1982 took place despite historically high costs of consumer credit.¹¹

Changes in business conditions. The extent to which household demand for credit follows

rate equals the rate on new automobile loans, the tax rate is the average tax rate, and expected inflation is a weighted average of past inflation (from the Consumer Price Index) with weights declining exponentially.

¹¹ Concern has often been raised in the past about whether consumers understand the credit terms they face. For evidence that households have become more aware of finance rates since the Truth in Lending legislation of 1968, see Thomas A. Durkin, "Consumer Awareness of Installment Credit Terms: Evidence on the Impact of Truth in Lending After the Passage of Time," *Journal of Retail Banking*, March 1981, pp. 21-32.

the business cycle depends on the dominant reason for borrowing. Uncertainty about future incomes tends to make consumers reluctant to take on long-term financial commitments. They prefer to postpone purchases of houses and consumer durables until they are more confident. Household borrowing for houses and consumer durables, therefore, is likely to rise during business expansions when employment and income prospects are bright and fall during recessions. Surveys of consumers buying attitudes usually show evidence of this procyclic pattern. On the other hand, the demand for credit to offset unanticipated shortfalls in income should rise during economic downturns and fall in economic recoveries. The clearly procyclic patterns of both mortgage and consumer debt shown in Chart 1 support the importance of income uncertainty as a factor affecting household borrowing.

Over the longer run, the relative stability of the U.S. economy for most of the post-World

TABLE 2
Attitudes toward installment debt

Question: Is installment buying a good or bad idea?

<u>Response</u>	<u>Percentage Distribution</u>			
	<u>1959</u>	<u>1967</u>	<u>1977</u>	<u>1983</u>
Good	60	48	51	44
Good or bad depending	7	11	32	31
Bad	32	40	15	24
Not ascertained	1	1	3	1

Question: What is an appropriate reason for borrowing?

<u>Reason</u>	<u>Percentage Responding Yes</u>			
	<u>1959</u>	<u>1967</u>	<u>1977</u>	<u>1983</u>
Cover expenses due to illness	86	80	85	82
Finance educational expenses	70	77	80	79
Finance purchase of automobile	67	65	84	82
Finance purchase of furniture	44	52	60	49
Consolidate bills	44	43	47	49
Cover living expenses when income cut	26	40	49	47
Finance boats, snow mobiles, and other hobby items	—	—	23	19
Cover expenses of vacation	5	9	17	13
Finance purchase of fur coat or jewelry	2	4	6	5

Sources: Avery, Elliehausen, Gustafson, and Canner, *1983 Survey of Consumer Finances*, Tables 10-1 and 10-3; Durkin and Elliehausen, *1977 Consumer Credit Survey*, Table 10-3; George Katona, James N. Morgan, Jay Schmiedeskamp, and John A. Sonquist, *1967 Survey of Consumer Finances*, University of Michigan, 1968, Table 7-1.

War II period may have persuaded households that greater use of credit was not imprudent. People that experienced the Great Depression are often thought to be reluctant to incur sizable financial liabilities, while the post-World War II generations, accustomed to rather mild business cycles, may be more confident that credit is useful and manageable. Surveys of household attitudes toward credit use suggest, however, that these basic attitudes have not changed substantially. Table 2 reports the percentage distributions of responses to questions

about the appropriateness of installment buying. The upper part of the table indicates that fewer households in 1983 saw installment buying as unconditionally good than in earlier years. On the other hand, fewer households saw installment buying as unconditionally bad in 1983 than in 1959 or 1967, but more than in 1977.¹² The recent increase in consumer

¹² Variations in household attitudes over time may simply reflect the stage of the business cycle when the survey is conducted. Because none of the survey years were recession years, they should be roughly comparable.

debt does not appear to reflect changing attitudes toward what are suitable uses of installment credit. The lower part of Table 2 gives the percentage breakdown of the reasons for borrowing that households considered appropriate. While there was growing acceptance of different uses of credit from 1959 to 1977, this trend appeared to have reversed somewhat by 1983.¹³ The severity of the 1982 recession and the wide swings in interest rates in recent years may account for this apparent decline in the desirability of borrowing.

Supply factors

The financial intermediaries that supply most of the credit to households have undergone considerable change in recent years. The amount of credit supplied to households depends on the ability of these institutions to borrow and the structure of their assets. The impact of interest rate restrictions faced by these institutions is discussed below. Then the effects of financial deregulation and innovation are considered. Finally, the changes in the sources of household debt that have resulted from these factors are described.

Interest rate regulation. Many of the financial intermediaries that lend to households were restricted until recently in the rates they could offer when borrowing funds. Many states also had usury laws that limited the interest rates they could charge. When market interest rates rose enough to make these

restrictions effective, the supply of credit to households was reduced.

The thrift institutions were particularly susceptible to problems arising from increases in interest rates. Because the revenue from their mortgage holdings did not move with short-term interest rates, it was difficult for them to offer depositors competitive rates. When short-term rates moved above the legal ceilings on deposit rates, many depositors switched to primary securities or money market mutual funds. These factors resulted in slow growth in deposits at thrifts in 1973-74 and 1980-82 and, thus, slow growth in mortgage lending.¹⁴ To the extent that mortgage rates adjusted sluggishly and were not high enough to reduce demand in these periods—and from Chart 3 this appears to have been the case in 1973-74—mortgage credit was rationed through higher downpayment requirements and standards of credit-worthiness. Usury ceilings in many states also reduced the supply of mortgage credit when market rates rose above the ceilings.¹⁵

The supply of consumer credit was probably affected more by usury laws than deposit rate ceilings. When usury ceilings became effective, consumer lenders usually reacted by rationing credit through higher credit standards and diverting more of their funds into other assets. Another possible impact of effective usury ceilings is a change in the proportion of consumer credit originating from retailers. To

¹³ A breakdown of attitudes by age groups indicates that households headed by people under 35 had a more favorable view of credit but that more younger households (43 percent) had a favorable view in 1977 than in 1983 (36 percent). See Table 10-4 in Thomas Durkin and Gregory E. Elliehausen, *1977 Consumer Credit Survey*, Board of Governors of the Federal Reserve System, 1978, and Table 10-4 in Robert B. Avery, Gregory E. Elliehausen, Thomas A. Gustafson, and Glenn B. Canner, *1983 Survey of Consumer Finances*, Board of Governors of the Federal Reserve System, forthcoming.

¹⁴ See, for example, Andrew S. Carron, *The Plight of the Thrift Institutions*, The Brookings Institution, Washington, D.C., 1982.

¹⁵ Reasons for sluggish adjustment of lending rates are discussed in Ernst Baltensperger, "Credit Rationing: Issues and Questions," *Journal of Money, Credit, and Banking*, May 1978, pp. 170-183. For a review of empirical studies on the effects of usury ceilings on the supply of mortgage and consumer credit, see Donna Vanderbrink, "The Effects of Usury Ceilings," *Economic Perspectives*, Federal Reserve Bank of Chicago, Midyear 1982, pp. 44-55.

avoid usury restrictions, retailers can raise the prices of goods that are usually sold on credit. Domestic automakers operate "captive" finance companies that buyers can use in financing their automobile purchases. Through these companies auto dealers can make trade-offs between credit terms and auto prices.¹⁶

Financial deregulation and innovation. General deregulation of the financial sector and certain financial innovations have increased the supply of credit to households. The phasing out of deposit rate ceilings have combined with the acceptance of variable-rate home mortgages to allow thrifts to compete more effectively for funds. As a result, the annual growth rate in deposits at thrifts for 1983-84 was 12 percent, twice the rate for the 1979-82 period. Growth in the secondary market for mortgages also stimulated mortgage lending as thrifts originated loans and then sold them in this market. On the other hand, deregulation also allowed thrifts to hold more diversified portfolios of assets, including both consumer and commercial loans. Thus, while their deposits increased 12 percent a year for 1983-84, their mortgage loans increased only about 7 percent, even though usury ceilings on mortgages had been eliminated.¹⁷

The supply of consumer credit should have been raised by the elimination or substantial raising of usury ceilings on consumer loans in most states. As an indication of how these usury limits reduced the incentive to lend to consumers, Chart 4 plots the difference between the interest rate on auto loans and the prime rate. The difference became negative in

¹⁶ For evidence supporting this argument, see Richard L. Petersen, "Usury Laws and Consumer Credit: A Note," *Journal of Finance*, September 1983, pp. 1299-1304. Also see Donna Vanderbrink, "Did Usury Ceilings Hold Down Auto Sales," *Economic Perspectives*, Federal Reserve Bank of Chicago, September/October 1984, pp. 24-30.

¹⁷ The Depository Institutions Deregulation and Monetary Control Act of 1980 preempted state usury limits on mortgage loans.

1974 and in much of the 1980-82 period, as high market rates made the usury ceilings binding. As general interest rates declined and usury ceilings were relaxed, the difference returned to a more normal positive spread and consumer lending was encouraged.

The elimination of most usury and deposit ceilings has allowed lenders to adjust interest rates more readily as supply and demand conditions change and to rely less on the non-interest rate terms in loan contracts. As previous research has suggested, this should mean that increases in interest rates will have less effect on demand because they are less likely to be accompanied by increases in credit standards. This argument may partly explain the strong credit growth in 1983-84, despite the relatively high cost of credit.¹⁸

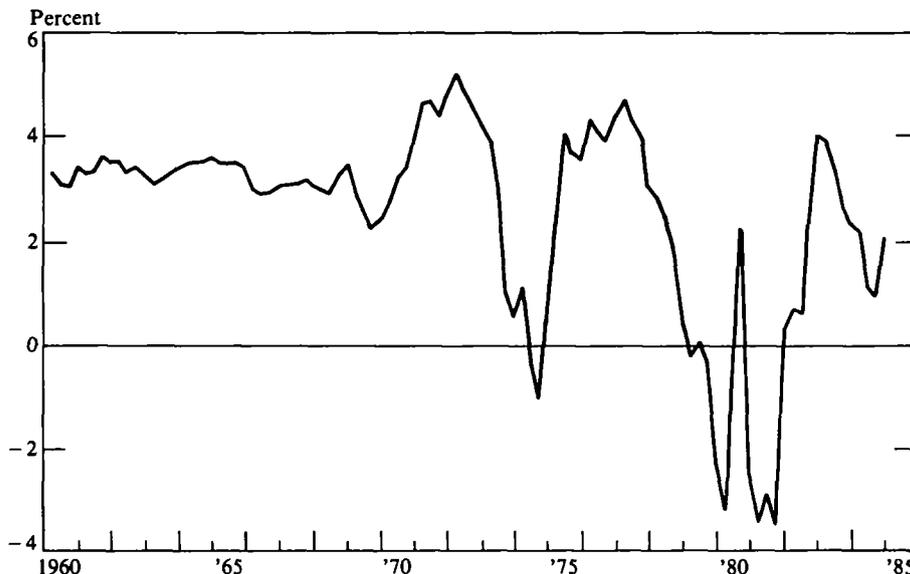
Changes in the sources of household credit

There have been substantial changes in the market shares of the suppliers of mortgage credit to households. The major change has been the declining importance of thrifts and the rising importance of federal government and related agencies. While thrifts had traditionally supplied about 60 percent of home mortgage credit, their share has fallen to about 40 percent. Federal government and related agencies now hold about 30 percent of all home mortgages, up from only 7 percent in 1970. This trend reflects the increased diversification in the asset portfolios of thrifts and the expansion of secondary mortgage markets and mortgage pools.¹⁹

¹⁸ For a detailed discussion of this argument and some supporting empirical evidence, see Raymond E. Lombra, "The Changing Role of Real and Nominal Interest Rates," *Economic Review*, Federal Reserve Bank of Kansas City, February 1984, pp. 12-25.

¹⁹ For a discussion of the rise in secondary mortgage markets and mortgage pools, see James E. McNulty, "Secondary Mort-

CHART 4
Difference between auto loan rate and prime rate



Source: Data Resources Inc.

The most important trend in the consumer credit market has been the decline in the market share of finance companies and the rise in the share of depository institutions. Finance companies held more than 34 percent of all consumer installment debt in 1960 but only 20 percent by 1978. Their market share rebounded to 23 percent by 1982, most likely reflecting gains made by captive automobile finance companies when usury laws discouraged other consumer lenders. The combined shares of commercial banks and credit unions grew from 50 percent in 1960 to 66 percent in 1978 and then fell back to about 61 percent in 1984.²⁰ While thrifts are now allowed to have

more of their assets in consumer loans, they remain relatively small lenders in this market. They held only 8 percent of all consumer loans in 1984.

Assessing the debt burden of households

Although the total debt of households has risen substantially in the past few years, the increase does not necessarily imply that households are overextended. In assessing the overall financial position of households, it is useful to examine the condition of household balance sheets, household debt to income ratios, and the extent of loan delinquencies.

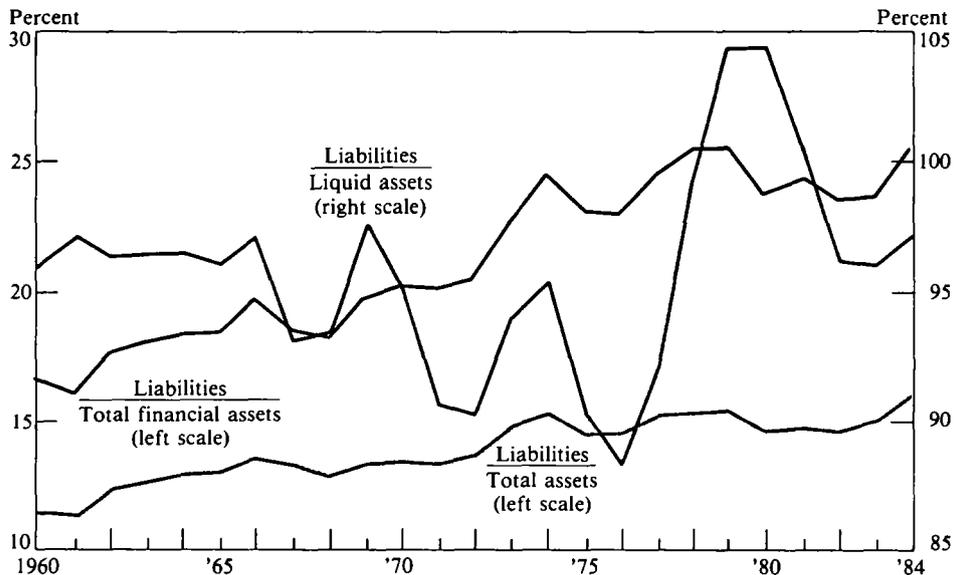
Balance sheet condition

Household balance sheets indicate that households have not increased their financial leverage substantially in recent years, nor have

gage Markets: Recent Trends and Research Results," *Federal Home Loan Bank Board Journal*, April 1984, pp. 10-14.

²⁰ Reasons for the declining market share of credit unions are examined in Douglas K. Pearce, "Recent Developments in the Credit Union Industry," *Economic Review*, Federal Reserve Bank of Kansas City, June 1984, pp. 3-19.

CHART 5
Household debt-asset ratios



Source: Flow of Funds, Federal Reserve Board

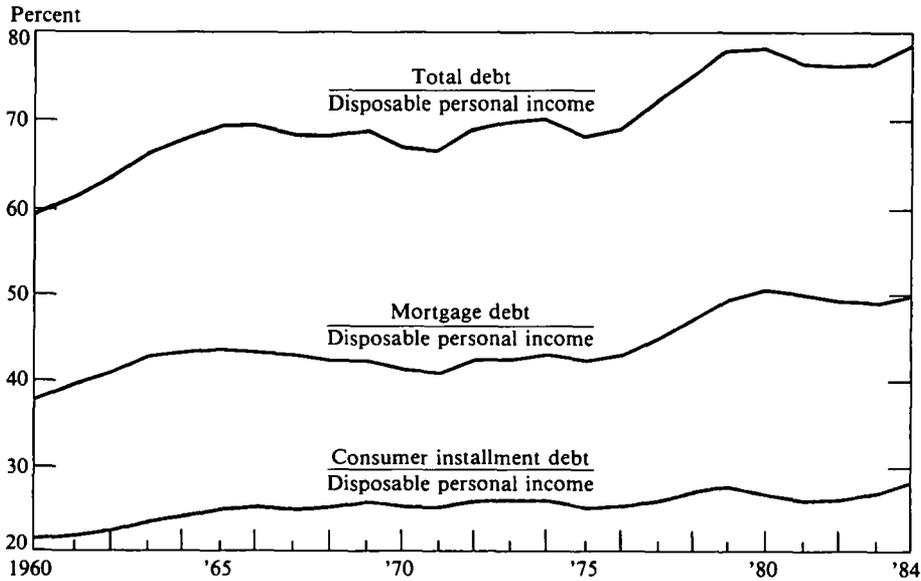
they become less liquid.²¹ Chart 5 plots the ratios of household debt to total household assets, to total household financial assets, and to total household liquid assets. The first ratio, which measures the overall financial leverage households are using, trended upward until 1975 and then stabilized at about 15 percent. It rose to 16 percent at the end of 1984, a little higher than its previous peak in 1978-79, an advance that reflected the slight procyclic nature of this ratio. The second ratio, total debt to financial assets, increased throughout most of the 1970s, a trend that reflected the attractiveness of acquiring houses and consumer durables during this period. It has remained at about 25 percent over the past few years and

is currently at the same level as it was in 1979. Since total debt has risen continuously over the past decade, the relative stability of these ratios implies that both the total net worth and the financial net worth of households rose during this period.

The third ratio, debt to liquid assets, has followed a different time path. Chart 5 shows that it trended downward from 1961 to 1976 as households built up the liquidity of their portfolios. It rose sharply from 1976 to 1980, reflecting both the economic expansion that led to rising debt and the increase in inflation and interest rates that made liquid assets unattractive because of effective interest rate ceilings. Since its peak at 104 percent in 1980, this ratio has fallen to about 97 percent. The decline was likely caused by the two recessions, which discouraged borrowing, and the general deregulation of interest rates at depository institutions, which raised relative returns

²¹ Since the evidence discussed here is based on aggregate data, the distribution of assets and liabilities across households is ignored. Some households may have increased their financial leverage substantially while others may have reduced their leverage.

CHART 6
Household debt-income ratios



Source: Flow of Funds (Debt), Department of Commerce (Disposable Personal Income)

on liquid assets. In any event, the increase in household borrowing in the last two years was not accompanied by any significant increase in illiquidity, which suggests that households are not currently liquidity constrained if they want to borrow more.

Debt-income ratios

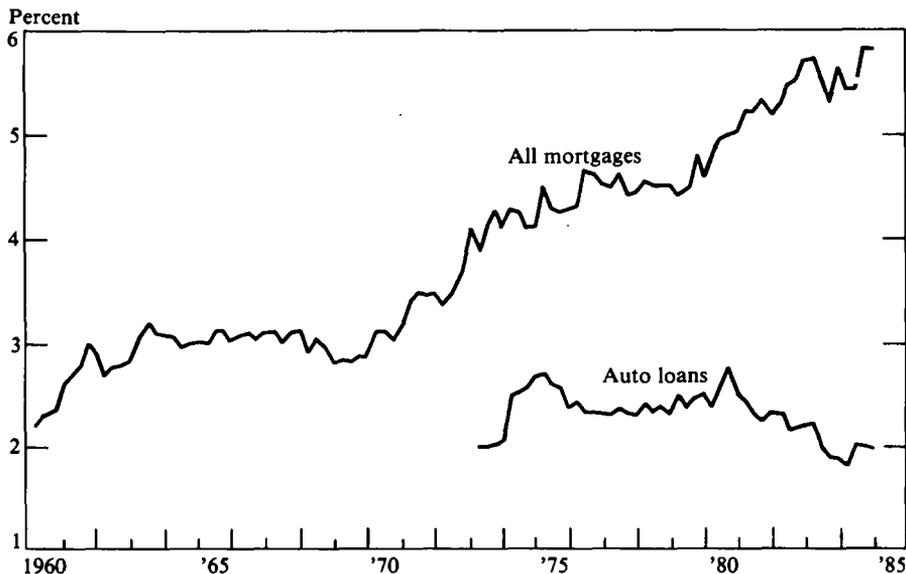
Although the ratio of debt to income, an often-used measure of the debt burden on households, has risen to an historic high, there are reasons for thinking this exaggerates the strain of debt payments on household budgets. Chart 6 gives the ratio of total debt to disposable personal income and the ratios of mortgage debt and consumer installment debt to disposable personal income. All three ratios have trended upward since 1960.

Some increase in the debt-income ratios would be expected from the life-cycle model,

at least since 1970, as the younger age groups increased in size. Also, the upward trend in the ratio of installment debt to income partly reflects two other factors.²² One is the increase in the average maturity of consumer loans. For example, new car loans had an average maturity of three years in 1974 and four years in 1984. If households consider the monthly payment relative to their income as the critical variable when they decide how much to borrow, longer maturities will encourage higher levels of debt since they result in lower monthly payments. The other factor is the rising convenience use of credit cards which inflates debt levels because the outstanding balance is included as debt even though it may be paid in full every month. If households are simply substituting credit card use for checks,

²² See Charles A. Lockett and James D. August, "The Growth of Consumer Debt," *Federal Reserve Bulletin*, June 1985, pp. 389-402.

CHART 7
Delinquency rates



Sources: Mortgage Delinquencies (Mortgage Bankers Association)
Consumer Delinquencies (Business Conditions Digest)

the effective debt burden is less than the data suggest. Surveys on the use of bank credit cards indicate that about 40 percent of households used these cards in 1983, compared with 35 percent in 1977 and 16 percent in 1970. About half the users paid off their bills every month in both 1983 and 1977.²³ While accurate data are not available on the volume of credit card use for convenience, it has been estimated that rising convenience use has increased the debt-income ratio about one percentage point since 1977.²⁴

²³ Tables 17-4 and 17-9 of Avery, Elliehausen, Gustafson, and Canner, *1983 Survey of Consumer Finances*.

²⁴ See Luckett and August, "The Growth of Consumer Debt," pp. 397-398. For an analysis of how credit cards affect the demand for checkable deposits, see Kenneth J. White, "The Effect of Bank Credit Cards on the Households Transactions Demand for Money," *Journal of Money, Credit, and Banking*, February 1976, pp. 50-61, and J. Daniel Hammond, "Credit Card Credit and Demand for Bank Deposits," *Southern Economic Journal*, April 1982, pp. 1031-1035.

A further indication that households are not overextended comes from survey data on the ratio of monthly installment payments to monthly income. Survey data from 1977 and 1983 indicate that households have not increased the percentage of their income going to consumer debt payments. In 1977, 47 percent of the households surveyed had no monthly installment payments, compared with 59 percent in 1983. Moreover, 7 percent of the households in the 1977 survey needed more than a fifth of their income to meet installment payments, compared with 5 percent in 1983.²⁵

²⁵ See Table 19-4 in Durkin and Elliehausen, *1977 Consumer Credit Survey*, and Table 4 in Robert B. Avery, Gregory E. Elliehausen, and Glenn B. Canner, "Survey of Consumer Finances, 1983: A Second Report," *Federal Reserve Bulletin*, December 1984, pp. 857-868. The survey evidence does not reflect the spurt in borrowing since 1983, of course, but this increase is partially offset, in terms of its impact on monthly payments, by longer maturities and lower nominal interest rates.

Loan delinquency rates

If households have become financially overextended, the rates of delinquency on mortgage and consumer installment loans should rise. Chart 7 plots estimates of loan delinquency rates for both types of loans. These rates are the percentage of outstanding loans for which payments are more than 30 days overdue. As the chart indicates, the delinquency rate on mortgage loans has trended upward over the past decade or so. The rate is currently at an historic high. One reason for the upward trend is the rising percentage of mortgages financed under government-sponsored programs. These loans have traditionally had higher delinquency rates because credit standards for these loans tend to be lower than for conventional loans. The recent increase in delinquency rates could be due to the inexperience of households and lenders with variable-rate mortgages and to the slow growth in house prices—negative in some regions—that increases the incentive of borrowers to default. The delinquency rate on consumer installment loans, on the other hand, has declined over the past five years although it did turn up slightly in 1984. This general decline implies that fewer households are having problems meeting their consumer loan payments. On balance, the evidence on delinquency rates is mixed but does not strongly indicate that households have become overextended by the recent increase in debt.

Conclusions

The recent rise in household debt is due largely to the typical increase in the demand for mortgage and consumer credit that comes during a business-cycle expansion and the greater availability of such credit that has come with financial deregulation. Demographic changes also may have stimulated demand, but this effect appears to have been minor. While low costs of credit encouraged households to increase their debt in the second half of the 1970s, the recent increase in debt has occurred despite relatively high costs of credit. This result is consistent with the argument that without deposit and loan rate ceilings, increases in interest rates have less effect on credit flows because they are not accompanied by tighter credit standards.

Even with the recent increase in debt, households do not appear to be in a weak financial position. Ratios of debt to total assets and financial assets have not risen significantly, and households have substantial liquid assets. Although the ratio of debt to income is high, evidence suggests that this ratio overstates the debt burden of households. And while the mortgage delinquency rate has risen somewhat, the consumer loan delinquency rate is at a relatively low level. Therefore, assuming there is no general economic downturn, the overall financial condition of households should not be an impediment to future consumer spending.