BORROWING

BY U.S. HOUSEHOLDS

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Wherever one turns these days, one seems to run into comments about the financial condition of the American household. Most of these comments refer to sources of increasing stress on the American consumer, from the historically low household savings rate to the historically high rates of bankruptcy and debt delinquency. On top of all this, demographic trends are raising the prospect of having to finance the coming retirement of the baby boom generation. These conditions have led some to question the ability of consumer spending to hold up under such growing financial stress. Credit markets and consumers' use of credit products take a central place in this picture. Stories in the popular business press have taken the view that consumer debt will represent a drag on consumption growth in 2006, as the burden of making payments on debt limits households' abilities to make other purchases.[1]

Debt and credit are value-laden terms that evoke distinct images in people's minds. Indeed, cultural historian Lendol Calder has noted the seemingly contradictory value judgments that run through American cultural attitudes about borrowing.[2] "Credit" is seen as a good thing, in that it allows the household financial flexibility in meeting its consumption needs. On the other hand, "debt" is typically viewed as bad, because it represents a lack of self-discipline and holds the household hostage to its past choices. And so we have what appears to be a paradox. The ability to borrow is both liberating and constraining—a path to both rising wealth and the poorhouse.

Another way to view this seeming paradox is to think of "credit" and "debt" from two different vantage points. "Credit" typically refers to the moment when a borrower has access to funds made available by a lender. From this vantage point, it is a tool to help households achieve their desired levels of consumption. "Debt," on the other hand, is an after-the-fact concept, referring to the amount owed. We see this dichotomy in contemporary discussions of credit markets. The expansion of access to credit for households previously thought to be sharply constrained in their ability to borrow is a stated goal of public policy. On the other hand, the financial stress facing some heavily indebted households is seen by many as a problem requiring a public policy solution.

This essay explores the use of credit by U.S. households. The first section describes some facts concerning consumer borrowing and its growth in recent decades. The following sections present some of the economics of household borrowing, beginning with an explanation of the role of borrowing in helping a household to meet its consumption goals over time, and then using that perspective to interpret the facts. This perspective generally does not support the view that consumer debt causes future weakness in consumption growth at the macroeconomic level.

This essay's initial focus is on averages and aggregates, examining trends in total borrowing by U.S. households and assessing those trends from the point of view of the typical or average household. While this perspective is appropriate for thinking about broad trends in credit markets, it can mask the fact that market changes can have different impacts on different people. Indeed, these differences are often important to the way people think about public policy toward credit markets. A look at more disaggregated data, in fact, reveals that much of the expansion of credit that has occurred in recent decades has come in the lower brackets of the income distribution. Accordingly, the essay will address the question of whether the economics of borrowing by lower-income individuals is significantly different from the general economics of credit. (continued)

TRENDS IN CONSUMER CREDIT

How indebted are U.S. consumers? In 2004, the ratio of all consumer debt to disposable personal income was about 108 percent. The bulk of this debt, 84 percent of income, was in the form of mortgage debt, with the remaining 24 percent in revolving and nonrevolving consumer credit. Historically, the debt-to-income ratio has shown steady growth over much of the last half-century as is shown in Figure 1. Total debt to income stood at about 35 percent in 1952 and rose to around 50 percent by 1960. It then fluctuated between 55 and 60 percent for much of the 1960s and 1970s, before beginning a sustained increase in the mid-1980s. But by far the largest share of this growth has been in the mortgage portion of household credit, which was 23 percent of income in 1952. By contrast, nonmortgage consumer credit roughly doubled in this fifty-year period, going from 12 to 24 percent.

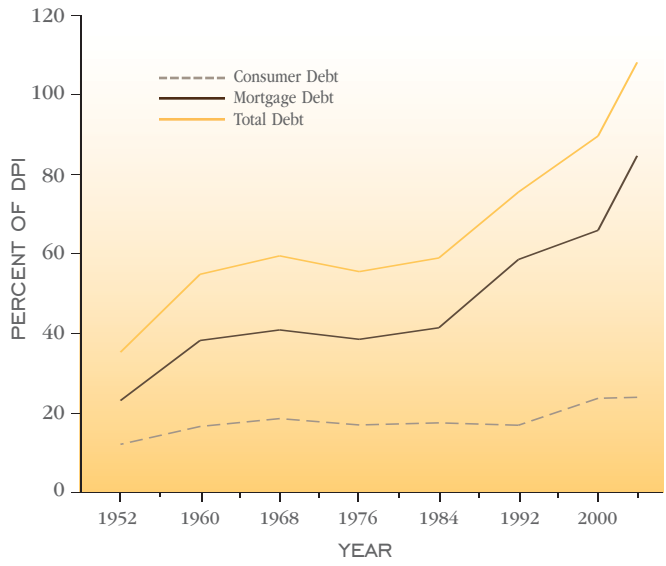
As is apparent, a very large part of the increase in household debt since the 1950s has been the rise of mortgage debt. To some extent, this rise in mortgage debt does not represent the typical homeowner borrowing more against the house that he or she owns. Rather, part of this increase is due to a steadily rising rate of homeownership, which went from 55 percent of U.S. households in 1950 to 69 percent in 2005. Another source of this increase is growth in the value of housing assets owned by consumers. Especially in the 1990s, the median value of privately owned homes grew faster than median income. Still, households have generally increased the share of their homeownership financed by mortgage debt.

Growth in the use of credit has been widespread among U.S. households. While borrowing by households in all income ranges has grown, this growth has been the most pronounced among households with medium and low levels of income. Also, while disparities in borrowing behavior continue to exist between minority and nonminority households, those disparities have tended to decline. This type of disaggregated information comes primarily from the Federal Reserve Board's Survey of Consumer Finances (SCF), which is conducted every three years. An analysis of trends for households in different ethnic and income groups was conducted by Raphael Bostic.[3] Trends for people at different income levels are discussed later in this essay.

Does rising debt to income mean that the typical household's debt burden has risen? The debt burden of a household is usually measured by the payments on its debts relative to its income. Given the wide variety of terms on retail credit—from fixed term, fixed interest rate mortgages to open-ended lines of credit with variable rates—specification of the "payments" used to determine the burden of servicing one's debts is not straightforward. But the two main determinants of a household's repayment obligation are the amount of debt and the interest rates charged. So, while a precise measurement of the payment burden would require detailed data on loan characteristics at a very disaggregated level, it is possible to construct a rough estimate from aggregate data. Dean Maki provides one such estimated time series of the aggregate debt burden of U.S. households.[4] For the time period covered in that series, from 1980 to 2000, the payment burden fluctuates around an average level of about 13 percent. The debt-service burden tends to rise during expansions and fall during recessions. This pattern reflects two other facts. First, interest rates tend to rise in expansions and fall in recessions. But, perhaps more importantly, the growth rate of consumer credit is

Figure 1

Household Debt Relative to Disposable Personal Income



SOURCE: Federal Reserve Board of Governors

also procyclical, with credit growing more rapidly in expansions, on average.

The burden households face in servicing their debts, together with the pattern of growth in those debts, focuses attention on the "credit is good, but debt is bad" dichotomy. Does the data on household debt suggest more that "credit" acts as a tool for managing consumption growth or that the burden of "debt" constrains consumption growth, as is suggested in the popular media. Making this distinction empirically is difficult, since both these forces may be at work for any given household and the mix may vary considerably across households. Maki finds that his debt burden measure does not have strong predictive power for consumption growth, suggesting that, on average, debt is not a strong constraining force. In addition, growth in consumer credit tends to be positively correlated with future consumption growth. This relationship suggests that credit is an important tool for households in making their consumption choices. How households make those choices is the subject of the next section.

HOW HOUSEHOLDS USE FINANCIAL INSTRUMENTS

It is important to view use of credit in the broader context of how a household chooses to consume and save or borrow over its lifetime. A household's financial decisions are driven by the fact that its income varies over time. Broadly speaking, there are two types of variation in income. First, there is a typical, largely predictable, pattern by which an individual's income first rises, say from young adulthood into middle age, then falls as the person or household moves into retirement. But there are also variations in income that are less predictable. Households face an array of shocks that affect their ability to participate and earn income in the labor market. Some of these shocks have only temporary effects, like an illness that keeps a worker out of the workforce but from which the worker fully recovers. Others can be more long lasting, like a permanent decline in demand facing an industry in which a worker has accumulated a great deal of experience and skill.

Against these variations in income, a household uses financial services related to saving and borrowing to achieve the best lifetime pattern of consumption possible. What makes one pattern of consumption better than another? Well, for one thing, more is better than less, so a pattern that gives a household more consumption of goods and services at every point in time is clearly better than one that gives less. But most comparisons of consumption patterns over one's lifetime are not so straightforward. In particular, saving and borrowing decisions have to do with trading off consumption today for consumption in the future. So the important point to bear in mind is that household financial decisions are driven not so much by how people feel about having a bigger savings account or being more in debt as they are by how people feel about having more consumption today versus more consumption in the future.

One principle for thinking about people's preferences for consumption over time and how those preferences affect financial decisions is that people typically have a preference for *smooth* consumption—consumption that doesn't vary too much over time. In other words, a household that gets a one-time windfall, like from winning a lottery for example, will probably not want to spend it all immediately on consumption of goods and services. Rather, the lucky household will want to save some of its temporarily higher income, so that it can spread the consumption benefits over a longer period of time. An important distinction here is between spending on durable versus nondurable goods. A lottery winner may in fact pour a large bulk of his or her winnings into the purchase of durable goods. But such expenditures bear a similarity to savings, because durable goods provide benefits to their

owner over an extended period of time, and the key thing about *consumption smoothing* is that the individual will want to use a temporary rise in income to generate consumption benefits that last over a long time period. This logic works on the other side as well, when a household faces a temporary income shortfall but expects to have higher income in the future. Such a household will want to keep its consumption up by drawing down savings or borrowing against those future increases in income.

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The desire for smooth consumption over time can be explained by economists' usual assumption of diminishing marginal utility. This simply means that the less someone has consumed of a good or of goods and services in general, the more eager he or she is to increase consumption. So, if a household has a low income today but expects a higher income in the future, it faces the prospect of having less consumption today than in the future. According to diminishing marginal utility, the household would be eager to give up some of its consumption in the relatively abundant future for a little more in the present.

The same characteristic of people's preferences for consumption that makes them prefer smooth consumption over time also makes them dislike facing risk to their consumption opportunities. That is, diminishing marginal utility of consumption implies that people are *risk averse* and will be willing to take costly actions or purchase costly insurance to avoid risk.

So the usual assumptions about consumer preferences imply that households will typically desire a smooth consumption path even as their incomes vary over time. The two main sources of income variation are life-cycle effects and the effects of shocks to an individual's ability to earn income. To a large extent, the life-cycle pattern of income is predictable. Labor income rises from young adulthood to middle age, reaches a peak in the 45–54 age range, and then falls. Smoothing consumption over this pattern of income would usually imply borrowing (or drawing down savings) when young, paying off debt and accumulating savings in the peak earning years, and using those savings for consumption in the later years.

Shocks to a household's income come in two forms. Some shocks are specific to an individual household. Prolonged illness of a wage earner, for instance, can limit a household's earning ability. This sort of specific uncertainty in income is referred to as *idiosyncratic*. Other shocks affect larger groups of people. Swings in employment caused by decline of an industry or by the ups and downs of the business cycle affect the incomes of many households. That is, some income fluctuations are associated with aggregate risk. Financial markets are more effective at helping people smooth consumption against idiosyncratic shocks than against systematic or aggregate shocks. In fact, if financial markets worked perfectly, then people would be able to completely protect themselves against idiosyncratic shocks. Similarly, complete and well-functioning financial markets would allow people to smooth out their lifetime variation in income, since this is largely predictable. In this case, the only fluctuations in consumption would be those arising from aggregate income risk.

In perfect financial markets, in addition to cases where standard saving and borrowing instruments are used, households would have access to a wide array of contracts that would allow them to insure against any specific event that might cause a disruption to their incomes. But financial markets are not perfect, and there are limitations to households' abilities to smooth their consumption, even against idiosyncratic or life-cycle income fluctuations. Households and other market participants face an array of constraints on the types of financial contracts available for managing income risk. Some of these constraints have to do with information. Lenders typically cannot perfectly screen borrowers according to their likelihood or propensity to

default. It is also difficult to monitor the behavior of borrowers once they have taken a loan. Other constraints have to do with the costs of enforcing contracts. Bankruptcy laws, for instance, limit the options available to a lender if a borrower defaults. These constraints have two kinds of effects. First, they limit the extent of specific insurance against income fluctuations that households can receive, making saving and borrowing the main means of consumption smoothing for many households. Second, the constraints tend to raise the costs of borrowing and place upper limits on the amount of debt any given household can accumulate. So while the bankruptcy option actually facilitates consumption smoothing for households that have fallen on hard enough times—by releasing them from some debt payment obligations—the more general effect of bankruptcy laws and other credit market constraints is to increase the cost of borrowing and to therefore limit opportunities to smooth consumption.

As Figure 1 clearly shows, the largest part of household debt is that used to finance housing. This specific use of credit is quite similar to the general use of credit for consumption smoothing purposes, since the purchase of a home—a very lumpy transaction—allows the household to consume a smooth stream of housing services. And while constraints associated with limited information and enforcement costs place limits on a household's unsecured borrowing capacity, such limitations are less stringent when borrowing is collateralized, as in the case of mortgage credit. Collateral reduces the risk of loss for the lender should a borrower become unable to repay a loan. Similarly, a portion of nonmortgage consumer credit is used to purchase cars and other durable goods. Much of this credit is tied directly to—that is, secured by—the items purchased. Still, the fastest growing part of nonmortgage credit, especially since the 1990s, has been unsecured borrowing.

THINKING ABOUT CHANGES IN CREDIT MARKETS—CAUSES

Figure 1 showed how consumers' use of credit has grown over time. This growth could be the result of a number of factors. One possibility is changes in the rate of income growth. Remember that in the most basic description of consumption behavior, a household will seek to perfectly smooth its consumption over time. This means that a household expecting a growing income will borrow against future income to even-out its consumption expenditures. The amount that a household will want to borrow will depend on how rapidly it expects its income to grow. So the total amount of borrowing done by households in an economy might be expected to depend on the anticipated growth in income. This logic—faster anticipated income growth makes people willing to take on more debt—carries over to the case where financial markets (and therefore consumption smoothing) are not perfect.

There have, in fact, been several swings in average income growth in the United States in the last fifty years. Figure 2, for instance, shows real GDP per capita. (See page 10.) Of particular note is an extended period of slow growth around 1980, with a pickup in growth beginning around 1984 and continuing to the present with two brief interruptions for the recessions of the early 1990s and the early 2000s. This latter period of faster income growth roughly coincides with the period of greatest growth in household debt-to-income ratios. And debt growth was basically flat during the extended period of stagnating income growth.

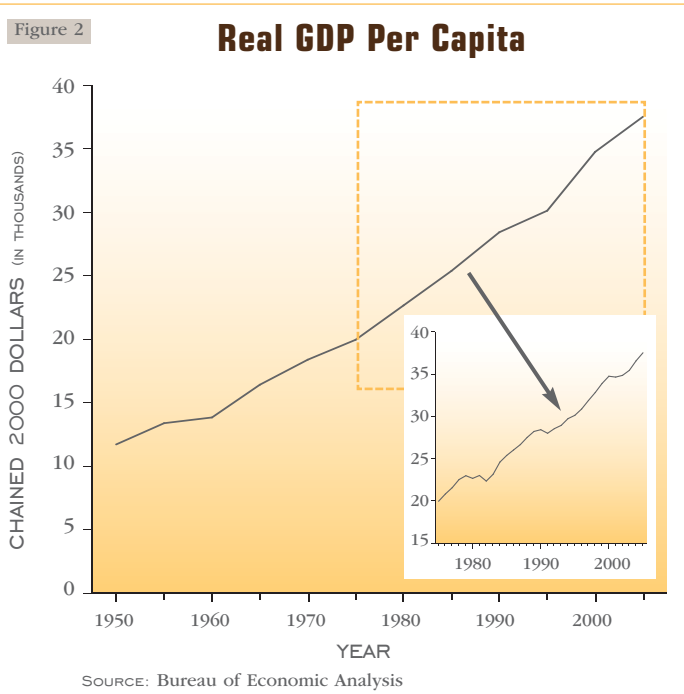
People's beliefs about their future income prospects are one determinant of the demand for credit. Demand could also be affected by the variability of income. Given the limitations to financial arrangements that result from information and enforcement constraints, saving and borrowing constitute the main tool used by households to

smooth consumption in the face of income risk. A household will feel well-prepared to deal with shocks to its income if it has a pool of savings to draw on or if it is confident that it will have ample access to credit. So, if a household faces an upper limit on how much credit it will receive from financial institutions, it will want to make sure it stays far enough away from that upper limit so that hitting the limit in the event of a reduction in income would be unlikely. If income risk increases—if income becomes more variable—the household will want to increase this cushion between its borrowings and its debt limit.

Evidence examined by Dirk Krueger and Fabrizio Perri suggests that income risk faced by households has increased since 1980, implying a rising possibility of running up against limits on debt capacity.[5] This change could have been a force for lessening household demand for borrowing, perhaps partially offsetting the increase in demand that is likely to have come from faster income growth. On the other hand, Krueger and Perri argue that rising income risk could actually increase a household's borrowing capacity. Their argument follows from the assumption that, following default on a loan, a household's access to credit would be sharply reduced. Rising income risk makes losing access to credit more costly and therefore could make a borrower less likely to default. Knowing that a borrower is less likely to default makes a lender more willing to lend. So the effects of rising income risk on overall household borrowing are uncertain. But there are other factors affecting both demand and supply that could be at work in U.S. credit markets.

The make-up of household consumption among housing services, durable goods, and nondurable goods is one additional demand-side factor that could affect household borrowing. Since homes and durable goods are quite typically purchased with credit, an increase in consumers' relative demand for these goods could well be associated with an increase in borrowing. Some evidence in favor of this factor appeared earlier in this essay. As previously mentioned, rising homeownership and rising home values relative to income are at least suggestive of an increase in the relative demand for housing.

Figure 2



SOURCE: Bureau of Economic Analysis

Also on the demand side, a household's willingness to borrow could be affected by its perceptions about the consequences of default. In the United States, defaulting borrowers can seek the protection of the bankruptcy law, which allows them to either reschedule their payments to their creditors (under Chapter 13 of the bankruptcy code) or dismiss their debts in exchange for surrendering their assets, above a personal exemption (under Chapter 7, with exemptions determined at the state level). Some observers have argued that a greater propensity to file for bankruptcy is evidence of consumers seeing default as less costly than in the past and is one cause of rising consumer indebtedness. This is often discussed in terms of a sense of stigma that households may feel when filing for bankruptcy. The argument is that stigma, a psychic cost of default, has declined over time, perhaps for cultural reasons not directly related to credit market conditions. Such a decline of the perceived costs of default would make a household more willing to borrow at a given interest rate.

But the effect that a decline in stigma or in other costs of default has on borrowing amounts is at least muted because of the effect this change would have on lenders and the price of credit. Borrowers who increase their debt because they do not mind defaulting increase the risk faced by lenders, and lenders,

in turn, will have to raise their interest rates in order to compensate for this increase in risk. This rise in interest rates will tend to reduce borrowing, especially by those who consider themselves unlikely to default. In fact, Kartik Athreya has shown that the overall effect of declining stigma would likely be a decline in total borrowing.[6]

There could also be factors on the supply side of credit markets that contributed to a period of rising debt among U.S. households. In particular, technological improvements have reduced the costs to lenders of evaluating borrowers and managing exposures to default risks. This type of change would amount to a reduction of the overall cost of lending and would thereby lead to an increase in the supply of credit. This increase in supply would show up in a reduction in the financial intermediary's "spread" between the interest paid to retail savers and the rate charged on loans.

Of course, the financial intermediary that makes the loan is not the ultimate supply of funds to a borrower. Rather funds originate with the savings of other households or businesses. And the funds could come from within the same country or from abroad. In recent years, funds from other countries have indeed been a major source of supply for U.S. credit markets. Even though the bulk of this foreign investment is the purchase of government securities, these transactions do constitute an increase in the total amount of funds flowing into U.S. financial markets, which could translate into an easing of credit conditions for borrowing households.

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Interpreting evidence on interest rates or spreads over time is made difficult by another trend in the pricing of loans. There is an increasing tendency of lenders to differentiate their lending terms based on borrower characteristics that are associated with default risk. In the 1980s, consumer lenders, especially for unsecured debt like credit card borrowings, usually set a single interest rate at which they lent to all acceptable borrowers. Lenders then used relatively rough evaluations of borrower-default risk to determine who got credit.

Advances in credit scoring and other techniques allow lenders to estimate borrowers' default risk in a more precise way than was possible in the past, making it easier to offer different prices to borrowers, depending on their risk characteristics. This change has differing effects on the various types of borrowers. Very low-risk borrowers probably benefit, as they pay an interest rate that more closely reflects their risk level. On the other end of the spectrum, high-risk borrowers, who previously were screened out of access to credit, also benefit by finding their ability to borrow enhanced. Borrowers in the middle, on the other hand, could be hurt by a move from uniform to differential pricing of credit. These in-between borrowers may have benefited in the past from interest rates that averaged them in with lower-risk borrowers. The effects on different types of borrowers of increased use of differential pricing are detailed by Wendy Edelberg.[7] Still, the technological change that makes differential pricing more practical is the same change that lowers the overall costs of lending, making it likely that many, if not most types of borrowers, have seen either a reduction in the cost of borrowing or an increase in access to credit.

Another change on the supply side of credit markets that would have effects similar to declining costs of lending is an increase in the degree of competition among lenders. If competition is weak, then lenders are able to set interest rate margins at levels that more than compensate for risk and the costs of lending. Many descriptions of the credit card lending market describe it as having relatively weak competition in the 1980s.[8] The structure of the credit card market has changed considerably since then, with many observers concluding that increased competition has

put downward pressure on interest rate spreads. Competition appears to have increased in the mortgage lending market as well, where consumers are increasingly able to search over a nationwide pool of potential lenders, rather than being restricted to a smaller set of local firms. Falling average costs of borrowing, from a combination of improved technology and increased competition, appears to be a major contributing factor to the expansion of consumer credit.[9]

THINKING ABOUT CHANGES IN CREDIT MARKETS—CONSEQUENCES

Changes in credit market conditions shift the demand or supply of credit, resulting in changes in the amount of borrowing done by households. The data show clearly that the net effect of these changes in recent decades has been to increase borrowing relative to income. But to evaluate these changes, we would like to have a sense of how they affected the overall economic well-being of the typical household. Some of the changes discussed in the previous section were supply changes that have the effect of reducing the cost of borrowing. These changes enhance households' ability to smooth their consumption and are therefore likely to make the average household better off.

When an increase in borrowing is driven by increases in demand for credit, the effect on a household's well-being depends on the reasons for the increase in demand. For instance, a temporary increase in borrowing could result from a disruption to a household's income. While the use of credit allows the household to respond efficiently to the disruption, the rise in borrowing in such an instance is occurring as the household is becoming worse-off. So, a short-lived surge in borrowing could be an indicator of households experiencing some financial stress. But the evidence reviewed in this essay deals more with a sustained rise in borrowing. As discussed previously, the demand-side factor most likely to be associated with such a sustained increase is rising expectations of income growth. In this case, increased debt would be associated with improving economic well-being.

> "**Ability to smooth consumption** has improved over time, consistent with a view that the **expansion of credit** has, on average, **benefited households**."

Given that a main motivation in households' use of credit is smoothing of consumption, one way to assess the impact of credit expansion is to ask whether this expansion has facilitated consumption smoothing. The previous section noted evidence studied by Krueger and Perri that points to rising income risk for U.S. households since the 1980s. These authors also examine the variability of consumption and find that, while consumption risk has risen over time as well, it has not risen nearly as much as income risk. They conclude that households' ability to smooth consumption has improved over time, consistent with a view that the expansion of credit has, on average, benefited households.

The fact that the typical household's welfare improves with a sustained expansion of credit does not mean that such a trend creates no problems or difficulties. Most importantly, the foregoing discussion assumes that household decision-making is well-informed by the relevant facts and based on sound analysis of the costs and benefits of credit. While this may be a reasonable assumption for enough households to make our conclusion about the "average" household valid, there may well be households whose decisions are imprudent, naive, or based on faulty analysis. This may be particularly true in a period when credit use is growing relatively rapidly. First, a period of credit expansion may be a period when the number of new and inexperienced borrowers is particularly high, and such borrowers may be more likely to make mistakes in their financial decisions. Second, if the growth of credit is associated with the introduction of new credit instruments or new ways of pricing credit, even some more experienced borrowers may not fully appreciate the implications of their decisions under the new arrangements.

If credit market changes leave some consumers relatively uninformed about the choices they face, then these changes could also create opportunities for some providers of credit services to exploit consumers' lack of knowledge. It should therefore not be surprising to see periods of rapid credit growth coincide with increased instances and allegations of abusive practices. One particular area of change and growth in credit markets in the last fifteen years has been in subprime lending. Products and practices in the subprime market have expanded the set of consumers with access to credit, meaning the average subprime borrower is even more likely to be an inexperienced borrower than the average borrower overall. So, in recent years we have seen rising public concern regarding potentially *predatory* lending, or abusive practices in the subprime lending market.

Of course, even for borrowers who are capable of evaluating their credit market opportunities and making well-informed decisions, outcomes are not always positive. A consumer may face unanticipated expenses or changes in income that limit the ability to service debt, leading to default, bankruptcy, or foreclosure on a mortgaged home. And it is often hard to know, after the fact, whether a distressed borrower made a sound financial decision at the time a loan was originally taken out. So distinguishing those who were victimized from those who were careless and from those who were just unlucky is not always possible.

The growth in bad outcomes from borrowing, a trend that follows from the general growth in the use of credit, can be a driving force for proponents of a public policy response to credit market phenomena. As more borrowers find themselves experiencing difficulties, sentiment emerges for policies that could keep consumers out of credit-induced financial trouble. With such policies tending to be aimed at protecting borrowers of low and moderate means, a look at the relevant facts regarding credit use by households of different income levels may prove useful.

BORROWING TRENDS ACROSS THE INCOME DISTRIBUTION

The data presented in Figure 1 provide a picture of the borrowing behavior of the entire household sector. That is, these data might be thought of as reflective of the average household in the United States. These trends appear to be explained by the supply and demand factors discussed in the previous section. But as was mentioned before, changes in credit market conditions do not affect all households in the same way. In particular, the uses and consequences of debt may differ among households at different income levels. Figure 3 presents information on household borrowing trends across the income distribution. (See page 14.) These data are drawn from the Federal Reserve Board's Survey of Consumer Finances, which is conducted every three years, with the most recent data coming from the 2001 survey.[10] The data from this source do not stretch back as far as the aggregate data, but they do include the period of rapid credit growth in the 1990s.

The five graphs in the figure show the growth in median debt-to-income ratios for the second, third, and fourth income quintiles and for the top two income deciles. In broad terms, the trends for different income quintiles look similar to the aggregate, with debt-to-income ratios rising steadily through the 1990s. In percentage terms, this growth was the most pronounced for the group between the 20th and 39th percentiles, which registered a 290 percent increase, albeit from a very low base. By contrast, the median debt-to-income ratio among the wealthiest households—the top quintile—rose by 48 percent.

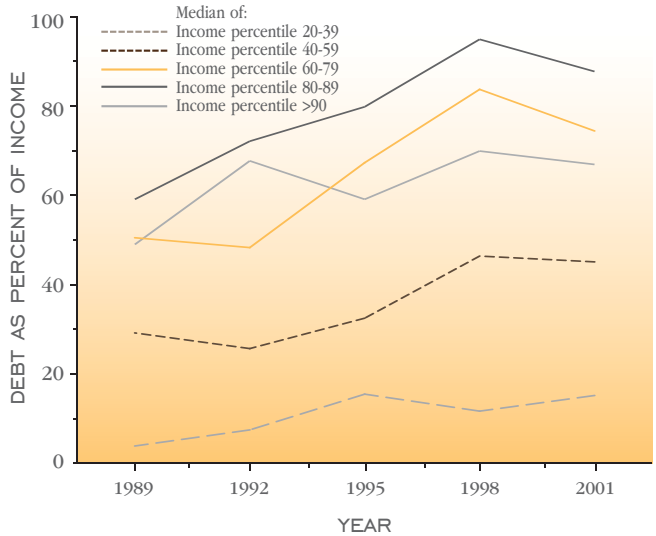
The poorest consumers—those in the lowest income quintile—are missing in Figure 3. This is because the figure shows median debt to income for each

quintile, and throughout this period, fewer than half of all households in the lowest quintile had any debt. If we were to plot, instead, the median ratio in each quintile for only those households with debt, the lowest quintile would look more similar to the others. Doing this leaves out growth in debt that comes from increased participation in credit markets and measures only the extent to which borrowing increased by people who were already borrowing. Among households having at least some debt, debt-to-income ratios grew fastest—78 percent growth from 1989 to 2001—for households in the lowest quintile. At the same time, the fraction of low- and moderate-income households with debt increased during this period. This rate of "participation" in taking on debt increased in all income groups below the median, with the fastest growth coming in the second lowest quintile.

The predominance of debt-to-income growth among households in the lower part of the income distribution raises questions about whether the causes or consequences of growing credit use among these households are different than for households at or above the median income level. As described in the third section, there are both demand and supply factors that have contributed to the growing use of credit among U.S. households. On the demand side, a major determinant of borrowing is a household's expectations of income growth. The growth of the aggregate use of credit in the 1990s lines up well with a pickup in income growth during that period. But income growth was uneven, with income inequality expanding. That is, the acceleration of income growth occurred more for higher-income households. So this demand-side factor might not have been as important for the growth of borrowing by low-income households.

Figure 3

Total Debt to Income for Select Income Percentiles



SOURCE: Federal Reserve Board of Governors

On the supply side, the main factors increasing debt have been improvements in technology that allow improved underwriting practices and a move to greater sensitivity of prices depending on borrowers' risk characteristics. Both of these factors are likely to have improved financial markets' and institutions' ability to bear the risks associated with lending to lower-income households. The greater variability of pricing, in particular, is likely to have helped expand credit to households that previously would have been rationed out of the credit market. This effect may be reflected in the growth in the fraction of low-income households that hold credit.

To the extent that growing credit use among low-income households is being driven by growth in the number of borrowers, it is likely that this expansion has brought new, inexperienced borrowers into the market. This is consistent with the direction of much of the recent discussion about consumer credit policy.

POLICY RESPONSES TO CHANGES IN CREDIT MARKETS

There are three broad types of policy approaches to limiting financial difficulties for borrowers. First, one can imagine policies aimed at the problem of borrowers being uninformed about financial choices. Second, policies that seek to identify and punish instances of abuse by lenders could provide some protection to borrowers. Finally, regulators could try to place limits on the terms and prices that lenders can offer in the marketplace.

Efforts to raise consumers' understanding of financial choices have gained considerable attention recently. There are two broad sets of tools that serve this goal. One can require disclosures by lenders with the aim

of ensuring that consumers can easily compare alternative credit options. This is the approach taken under the truth in lending laws. It is not always easy to summarize all of the relevant conditions in a credit contract with a few simple numbers, however. As the variety of terms and conditions available in the market continues to expand, there may be a limit to how much disclosures alone can enhance consumer knowledge.

The other avenue to creating better informed consumers is through the provision of financial literacy services. Credit counseling is one form of such services, and the 2005 bankruptcy legislation included counseling from an approved nonprofit provider as a precondition for bankruptcy filing. The act also provides for the development of postfiling educational materials. There has also been movement in some states to require financial literacy curricula in public primary and secondary schools. Some financial institutions and trade associations have become directly involved in the development of financial literacy programs, perhaps as an investment in their public image, but also perhaps because many banks see better informed customers as a legitimate business goal.

> "What exactly is it that consumers should learn from **financial education**? The goal, presumably, is for a household to be able to make **informed, forward-looking choices** with regard to the **use of credit instruments**."

What exactly is it that consumers should learn from financial education? The goal, presumably, is for a household to be able to make informed, forward-looking choices with regard to the use of credit instruments. But being able to fully calculate the expected present value of different options may be beyond the reach of many consumers. Retail credit products are not simple financial contracts. They often involve provisions that amount to options for either the borrower or the lender. Such options might be explicit in the contract, like the option to prepay a mortgage, or implicit, like the option to file for bankruptcy. Accurately evaluating options is difficult, even for the financially sophisticated. Perhaps one realistic goal of financial education is for borrowers to appreciate that if one credit alternative has a lower initial monthly payment than another, then it is probably more costly on another dimension. Borrowers who can understand such trade-offs are less likely to make choices that have a high chance of negative outcomes.

A by-product of raising the level of financial savvy among borrowers is that the potential gain to deceptive and abusive practices would be reduced. Still, there will always be instances of such behavior, and effective law enforcement is an important supplement to a well-informed population of borrowers. Prosecution of specific acts, however, is difficult and costly, leading some to advocate credit market regulations that prohibit certain practices that are believed to be particularly susceptible to abuse. The prospect of prohibiting specific contractual terms presents a difficult trade-off. Such a prohibition may effectively prevent some instances of bad outcomes such as defaults, foreclosures, or bankruptcies. And some of those instances would undoubtedly represent cases where it was probably not in the borrower's best interest to take out a loan with the particular terms. Some would be the result of borrowers simply making mistakes, and some would arise from lenders being deceptive or manipulative. But some cases of bad outcomes would result even for borrowers making sound, well-informed choices. For those, the particular credit contract was the best option at the time they borrowed.

A prohibition of a particular practice limits some households' ability to manage their finances and consumption. So such a regulatory approach to credit market behavior necessarily protects some borrowers at the expense of others. Still, one could argue that such a policy is warranted if it were the case that the group that would be helped is much larger than the group that would be hurt, or if the amount by which some are helped significantly exceeds the amount by which others are hurt. But the type of data necessary to make this kind of determination is very hard to come by. To fully understand the overall impact on borrowers

of a particular lending practice and to assess the likely effect of prohibiting it, one would want to take a look at a sample of households, some who used the product in question and some who did not. By tracking that sample for a considerable period, both before and after taking on the loan, one would reveal the average determinants of using the product together with its impact.

Without such detailed data, the regulatory prohibition of lending practices should be viewed very cautiously. The general description provided in this essay of the economics of and trends in household credit suggest that, on the whole, the growth of credit we have observed in recent decades has been beneficial for consumers, providing them with an expanded set of options for managing their lifetime consumption. And this observation points to an important principle for evaluating changes in credit markets, whether those changes are in the form of new products or new regulations. The decision to borrow is inherently a forward-looking decision. Households borrow to align their consumption today, as well as their holdings of housing and durable goods, with their beliefs about their consumption possibilities in the future. Accordingly, the appropriate perspective in evaluating the addition or elimination of a credit product is from the point in time at which a household is making a borrowing choice. Is a household made better off or worse off by having access to this product? Adopting this perspective does not mean that one should ignore the bad outcomes that result from use of the product. It means, instead, that one should think of those bad outcomes as part of a distribution of possible outcomes and ask whether this distribution presents the household, on average, with better consumption opportunities than would be available without the product. Without the data necessary to evaluate the distribution of outcomes, we are left simply knowing that the elimination of a particular credit product may help some but hurt others. Simply knowing that there is a trade-off is a first step, but a small step on the way to policy analysis. ■

Kartik Athreya, Ned Prescott, Aaron Steelman, and Alex Wolman contributed valuable comments to this article.

Endnotes

1. An example is "Night of the Living Debt" in the January 4, 2006, *Wall Street Journal*.
2. See Calder (1999).
3. Bostic (2002).
4. Maki (2002).
5. See Krueger and Perri (2005).
6. See Athreya (2004).
7. Edelberg (2003).
8. A noteable example is Ausubel (1991).
9. Athreya (2004) examines alternative sources of rising credit and finds a strong case for technology and or competition as a primary factor.
10. At the time this Report was in production, the 2004 SCF results had not yet been released.

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