

## ***Consumer Credit and the American Economy: An Overview***

By Thomas A. Durkin, Gregory Elliehausen, and Todd J. Zywicki

It seems that few collections of related goods or services have historically evoked as much angst and commentary, or produced as much intellectual baggage, as use of personal, non housing-related credit known today as consumer credit. Economists, behavioral scientists, historians, sociologists, teachers, lawyers, judges, journalists, and others through history have all offered their commentaries. Even theologians, and, naturally, politicians have weighed in on personal credit use since at least ancient Babylonian and Biblical times.

In our new book, *Consumer Credit and the American Economy*, we address the economic analysis of consumer credit as it has developed over the past century in the United States, exploring not only the economics of consumer credit but also the intellectual history of the study of consumer credit and its regulation. By looking back to historical sources we can better understand current debates over public policy regarding consumer credit and the historical forces that brought us to where we are today.

What is it about personal credit that has provoked so much commentary (and regulation)? It seems the answer is twofold: First, there is the view that credit use somehow involves an attempt to live beyond one's means, considered a moral evil in earlier centuries and potentially a cause of economic dislocations in more secular modern times. Second, certainly also an ancient concern but one given new life in the US since World War II, is the accompanying view that personal credit simply has grown without bound until the country today is awash in a flood of personal debt.

As it turns out, supporting evidence for both of these views is weak. During the scientific revolution, new thinking produced the end of widespread belief in geocentrism and other old ideas, even witchcraft, as explanations for observed natural phenomena. But it seems that mythology about personal credit use as a social phenomenon lives on. In every generation it is reinvented into new rationales for the need of additional government controls. Certainly in modern times the use of consumer credit is widespread. Evidence shows that three fifths to two thirds of families have such credit outstanding at any one time in recent decades and that most consumers use consumer credit at least sometime during their financial lifetime. But this does not prove convincingly that consumer credit users either are misguided and somehow trying to live beyond their capacities, or that resulting credit use is economically excessive.

### **Consumers and Their Credit.**

At its first level, the claim that credit permits living beyond one's means simply is visibly wrong on its face. For a consumer, borrowing resources now and paying them back later does not increase the total available for personal spending over his or her lifetime, unless the lender does not want to be paid back later. Lenders typically *do* want

to be repaid, however, unless they are inherently charitable enterprises. Most lenders are not charities.

This means that lending and borrowing does not change the amount of the consumer's resources, but only the timing of their employment in personal spending. People borrow and then spend more today but repay and spend less later. To be sure, both borrowers and lenders can miscalculate what future prospects of a loan will be.

Variability in future employment and income opportunities among borrowers promises that some loans are not repaid, a manifestation of the concept of risk. But risk does not change the amount of the resources involved, only the probabilities of which party ultimately ends up with them: the borrower retains them (or the benefits from them) if they are not repaid and, most commonly, the lender gets them back over time if they are.

The importance of the borrowing/lending process for consumers is not that it adds resources but that it can increase the total *benefits* of spending for borrowers by providing an opportunity to make relatively large expenditures now that provide benefits over time and produce a positive return over cost. Clearly many uses of credit imply such positive outcomes. Credit allows purchase of durable assets like vehicles, educations, and others out of the succession of current paychecks, rather than using current income only on current necessities plus the more mundane uses that are always available as alternatives (sometimes even referred to as "frittering away" the money).

Evidence shows that most consumer credit is used to acquire consumer-oriented assets that provide their return not in the moment when they are purchased or soon afterward, but rather over a longer period. For instance, cars and light trucks can provide access to better employment choices and the opportunity to live in a preferred location, providing valuable services to the purchasers for a lengthy period. Higher education provides more remunerative and satisfying employment opportunities possibly over decades. Likewise, home repairs and modernization protect and improve investments in housing assets, and household appliances and related durable goods including furniture, carpeting, and fixtures all provide services over a sometimes lengthy life but often do not lend themselves to fitting within a weekly or monthly budget. Some durable goods like vehicles and boats are even usefully available as collateral, and lenders can then lend upon them as secured credit at lower risk and production cost per dollar, saving the buyer money and enhancing the net return on the items purchased.

Most purchases otherwise made on credit could be accomplished by accumulating cash first and then buying the item later, but this often is not the time pattern consumers prefer. For many goods, accumulating cash first could mean doing without the item or paying for more expensive substitute services for a period that might amount to years, both of which are costly. People could walk to work, for example, or they could ride bicycles or take the subway and bus rather than making payments on car loans. They could forego the pleasures of easily visiting friends and family by car as part of the costs they would bear. They also could use laundromats, and scrimp on other appliances and furniture or acquire used equipment. They could put on sweaters and coats if the furnace failed while saving to replace it, or they could live with relatives. Many people do all of

these things in lots of places, but with limited length of lifetimes that often involve children in relatively early years of a family's life cycle, waiting to make these investments is frequently not the preferred option in middle class societies if there is an alternative. The types of credit we observe in the marketplace in large part come about because they are the least costly ways of providing an acceptable alternative.

Thus, using credit to purchase productive assets does not imply living beyond one's means; rather it implies the opportunity to change the timing of purchases to a better one. The alternative is to save and accumulate cash in advance of a purchase, but this is not necessarily the best plan. Alternatives in the meantime (public transportation, furnished dwelling rental, foregoing higher education, etc.) can be expensive to those who take those paths, often requiring replacements or foregoing purchase for a long time. Replacement services like public transportation may even be unavailable in many areas, precluding preferred employment and living choices. Postponing some home repairs, like a needed new roof or a furnace purchase, while accumulating necessary cash in advance through monthly saving can even prove to be disastrous.

In effect, the motivation underlying borrowing by consumers is no different than it is for businesses contemplating new factories or shopping malls: a return on the assets financed. Although consumers may not specifically undertake the detailed risk-adjusted net present value calculus of the corporate financial analyst, consumers will consider the possibilities and will employ credit for purchases of automobiles, educations, home repairs, appliances, and large hobby items when their risk-adjusted rewards exceed their costs. The Federal Reserve Board's statistical efforts and analyses, including its periodic Surveys of Consumer Finances, show that most consumer credit is generated under the circumstances of financing the purchase of large purchases that provide their return over time.

To obtain this change in spending timing, borrowers pay interest, known in Truth in Lending requirements as a "finance charge." The finance charge serves as the needed inducement for the lender to defer its own current use of the resources elsewhere in some other way. The lending process amounts to the reverse of the timing change for the borrower, with the lender spending less now on its own uses in order to spend more later. But the possibility of a timing change and the accompanying exchange of a fee to bring it about has, literally, posed questions for millennia. As indicated, the implied behavior to be avoided by borrowers was for thousands of years the immorality of trying to live beyond one's means. Borrowing and lending should come about only in cases of true "needs." Attempting to restrict lending and borrowing to such situations leads immediately to the Biblical and medieval Church prohibition on the taking of interest (usury) as an affront to the religious requirement for charity in such situations.

More modern economic analysis in the twentieth century has expanded the concept of personal "needs." The work of economists Irving Fisher, Jack Hirschleifer, F. Thomas Juster and Robert P. Shay, and many others during the early to middle decades of the century formed the foundations of today's huge body of academic economic theory and empirical evidence on motivations for timing changes and associated risk of

outcomes designated today as the microeconomics of finance. Fisher demonstrated that borrowing opportunities can enable an individual to undertake more productive investment and then borrow or lend to achieve more highly valued current and future consumption than would be possible without borrowing and lending opportunities. Hirschleifer extended this discussion to the case of imperfect capital markets where lending and borrowing take place at different interest rates. Juster and Shay extended it further to account for institutional characteristics of consumer credit markets including willingness of lenders to extend more credit only at higher finance charges and actual limits on borrowing posed by lenders. This work has been further extended by others.

As aficionados and practitioners of finance well know and understand, the economics and practice of return and risk analysis pioneered by these analysts can be complex and its mathematical academic language sometimes intimidating, but it is based upon a simple idea: Borrowers will borrow and lenders will lend when, for both parties, the risk-adjusted expected return from the change of spending timing exceeds its expected cost.

Twenty-first century minds have generally come to grips with these ideas, but it seems that vestiges of the ancient and medieval view remain in more modern dress. Psychological criticisms of the modern economic view of consumer credit use have also been around for a long time, but their latest imitation of the phoenix is a body of legal literature known as Behavioral Law and Economics (BLE). This is a loosely defined grouping of legal prescriptions based uncritically upon adopting into law some theoretical ideas from a relatively young branch of economics called Behavioral Economics. BLE focuses especially on a technologically newer manifestation of consumer credit use through credit cards.

More will be said about BLE later, but ultimately BLE suggests that there are limitations on the economic rationality of consumer borrowers that must be guarded against with regulation. The problem with BLE is that it conveniently ignores the well-developed ideas of traditional microeconomics without empirical evidence of the degree to which traditional economic theory needs adjustments to account for behavioral personal idiosyncrasies of individual consumer borrowers.

The special province of BLE involves credit card lending, an alleged special problem for consumers because of its ubiquity, easy availability, and immediacy. For BLE proponents, credit cards appear to be an entirely new area of lending in need of repair. It has become an area where they can argue that theoretical concepts based in psychology including “hyperbolic discounting,” “mental accounting,” “shrouding of fees,” and “nudges” should translate into new regulatory spheres.

A more complete view of credit cards within consumer credit is that credit cards are an outgrowth of ongoing technological change of lending in a credit industry looking for ways to reduce costs. As empirical evidence suggests, they have mostly just replaced much of small ticket household financing formerly undertaken by local banks, finance companies, and retail stores and dealers, plus assuming an increasingly important role as

payments devices that involve credit only statistically but not behaviorally. To be sure, some consumers may behave psychologically irrationally in their use of credit cards, but the important question is the extent and overall importance of such behaviors. BLE should provide better empirical evidence of frequency and quantity before recommending legal changes to a system used successfully by millions of patrons.

And so the ancient and medieval tradition of distaste for “immoral” use of personal credit continues into modern times. This does not mean, however, that old ideas should be replaced uncritically by newer sounding armchair empiricism that quickly translates into legal prescriptions. More thoughtfulness is in order.

## Consumer Credit Growth

Limited systematic empirical examination suggests that communications media pronouncements about consumer credit growth have generally been dismal. This is not to establish a straw man for attack and it is difficult to estimate how influential such statements have been, if at all, but even the casual empiricism of asking one’s neighbors for their views of the domestic consumer credit picture reveals the widespread notion that credit for consumers simply has grown too fast for too long. This claim is hardly new and it is easy enough to find examples over decades. This, in turn, raises another empirical question: What actually has been the growth picture in the consumer credit area?

Certainly in nominal terms consumer credit has grown in the postwar era. From a total of \$6.8 billion in current dollars at the end of 1945, consumer credit outstanding grew to more than \$3 trillion at the end of 2013. This clearly is a significant amount, which, of course, is not necessarily the same as being a meaningful worry. Many other economic magnitudes have also risen sharply in the years since World War II, including population, employment, income, assets, and wealth. Comparison of consumer credit to other economic magnitudes, rather than looking at absolute amounts of credit, helps to put the changes into better perspective.

Before examining measures of credit growth, it is worth noting first that economic studies employing sophisticated theoretical and statistical approaches have failed to produce hard evidence from past experience that consumer credit growth has led to the biggest expressed concern: that such growth leads to decreases in future spending and causes or dramatically accentuates macroeconomic recessions. If anything, available evidence is to the contrary. Econometricians who have investigated the relationship between the payment “burden” of consumer credit arising from repayments and subsequent evidence of consumer spending have found that consumer credit growth actually is *positively* related to consumption in future periods. It seems that this positive relationship comes about because consumer credit rises when consumers are optimistic about economic prospects rather than pessimistic about present conditions, including the current burden of debt.

As indicated, it is possible to compare consumer credit versus other economic magnitudes in a variety of ways. Such comparisons show that after a post-World War II surge due to ending wartime restrictions on both durable goods like automobiles and appliances and also on credit, these measures have risen hardly at all in decades.

One of the interesting comparisons over time involves a Federal Reserve measure of the ratio of payments to income known as the “Debt Service Ratio” (DSR). Analysts have contended that a measure of payments burden is better than a ratio of the *amount* of consumer credit outstanding because the payment ratio directly represents the relationship between outgoing resources necessary to avoid debt default and incoming resources available to meet the obligations.

Calculation of the consumer credit DSR over time shows that even with inclusion of student loan debts after 2003, the measure is trendless since first calculated for the year 1980 (see chart). Careful examination of the consumer credit DSR also shows that the DSR arising from credit card credit appears largely to be a replacement for declining DSR on older kinds of installment credit now employed less often for smaller and medium-ticket purchases (also visible in chart). This is not to say that no consumers have debt difficulties. During recessions, and especially at year-end holiday season, the news media are filled with feature stories about debt burdens and other sadness of the unemployed, but as sad as these cases are they do not represent anything close to the majority of consumer credit users. Including mortgage credit in a combined DSR for both kinds of credit raised the combined ratio about five percentage points 1980-2007, but following the mortgage dislocations in the sub-prime area in 2008-9, the combined ratio has returned again to its 1980 level (not in chart). Undoubtedly the flatness in the consumer credit DSR ratio arises in part from the lengthening of consumer credit maturities that has taken place over time, but the result is that the consumer credit DSR is trendless.

Another way to look at consumer credit growth is to array yearly growth rates over a period of time to see if there have been anomalous (or even worrisome) sub periods. Doing so since 1946 makes it immediately apparent that credit growth has not been steady in the postwar period; annual growth rates for both consumer and mortgage credit have fluctuated over the postwar business cycles. Possibly more interesting is how the cyclical episodes have been relatively similar over time. Nonmortgage consumer credit annual growth peaked in each cyclical upswing after 1955 at roughly a 15-17 percent growth rate, with the all-time highs in the earliest postwar period when it was responding to the end of wartime controls during the 1940s. Notably, there has not been a long term sharp uptrend in growth rates in either the consumer or mortgage credit series. Although the relative consistency of pattern does not provide a forecast, it is at least an indication that recent growth patterns in consumer credit are not anomalous or startling in percentage terms. Consumer and mortgage credit grew rapidly in recent cyclical upswings, but they always have done so in upswings before falling off to growth rates around zero in downswings. Possibly the most noticeable change has been the sharp decline in mortgage credit growth after 2004 to negative territory beginning in 2008.

Although the negative growth numbers for mortgage credit are new, a multiyear decline in growth rate is not.

There are further comparisons that can help to put credit growth in perspective and a variety of approaches to reporting the statistical comparisons. Fortunately, the various methods lead to the same general conclusion.

Debt at any instant is a certain amount outstanding. Quantities that are fixed at a point in time are known in economics as “stock” items. Common examples include the money stock (the amount of currency and deposits or other definition of money that the public holds at a given time), the amount of pension assets in individuals’ IRA and 401k accounts at the end of a year, the amount of bank assets subject to reserve requirements, the total public debt of the United States, etc. In contrast, the variation in a stock from one time to another is a change measure, an amount per period of time, and is known as a flow. Income, for example, is a “flow” measure, consisting of the change in a person’s or the economy’s financial condition (wealth) over a period such as a year. The change in credit outstanding over a year is another flow measure.

This distinction between stocks and flows immediately suggests four basic kinds of comparisons that might be made among economic quantities: stock to stock, stock to flow, flow to stock, and flow to flow. Discussion above focused on a particular flow to flow comparison, the ratio of consumer credit repayments to income (the DSR). When journalists compare consumer debt outstanding to something else, they often use a certain stock to flow ratio, debt outstanding relative to income. Both of these comparisons can be interesting, but they are not the only ones available and others also are illustrative. Candidates for further comparisons include both stock and flow ratios of consumer credit to other important consumer balance sheet and income statement quantities: to specific assets, total assets, wealth, and the change in wealth (income). But without going into detail here on each kind of measure separately (information with charts that is available in the book), close examination of all four potential types of ratios for comparing aggregate consumer financial statistics (stock to stock, stock to flow, flow to stock, flow to flow) produces essentially the same conclusion concerning experience with consumer credit in recent years: recent trends are quite similar to experience in earlier decades.

In sum, none of the statistical methods of comparing consumer credit outstanding or changes in consumer credit outstanding produces a conclusion that recent experience is startling or obviously problematic. Furthermore, although economic studies including econometric studies of long-term growth of consumer credit have not been especially numerous over the years, there have been some serious studies in this area that go beyond just outlining the basic statistical trends as above. While most of these studies are rooted in the specific questions and issues of the times when they were written, serious analysts have reached similar conclusions concerning the generally benign nature of long term growth of consumer credit, regardless of the time period covered by their individual efforts.

From the discussion so far it is not obvious that consumer credit growth in the post World War II years warrants the gloomy assessments sometimes associated with it, whether expressed in dollars or in typical analytic form as an aggregate ratio of credit outstanding to some other relevant quantity. Neither the trends in the ratios themselves nor the conclusions of the serious analysts of consumer credit give clear reasons for the expressions of concern so often articulated in other quarters. There still are distributional questions, however, because, by themselves, the aggregates do not indicate how the debt and income may be spread among an economically diverse population. A potentially disturbing possibility is that income growth, for instance, may not accrue to the same consumers who increase their credit use. Credit use may only occur among lower income consumers, for example, while only higher income individuals receive pay raises and become better off financially, maybe never needing to use credit. Or, the relationships among credit users and income earners may change over time (for better or worse). Because of such questions, it is useful also to look at cross section evidence that arrays the holdings of debts and the reception of income.

The Federal Reserve Board's Surveys of Consumer Finances show that there has been growth in consumer credit use in all income and age segments 1951-2010. Among income quintiles, the greatest relative growth in frequency of credit use occurred in the two lowest income quintiles 1951-1963, but since then growth in the credit using population has been slight in these groups and only moderate in the upper income groups. Each of the three highest income groupings registered half or more of their members as consumer credit users in as long ago as 1951, and the proportion in the third and fourth quintiles reached two-thirds by 1963. Only the two highest income groups show any noticeable growth in the proportion of consumer credit users since then, at about five percentage points in both groups. Examination of the shares of consumer credit owed by the various income quintiles also shows great stability since the 1950s.

In conclusion, consumer credit use has grown sharply in the post-World War II era, but not very much relative to income or assets since the early 1960s. Historical patterns in these ratios have been intensely cyclical, however, which likely at least partially explains why there are expressions of concern when they rise, despite lack of firm evidence that rising debt ratios have led to economic calamity. Debt growth has occurred in all income and age groups, but the bulk of consumer credit outstanding currently is owed by the higher income population segments, much as in the past. The two lowest income quintiles taken together owed about 23 percent of consumer credit in 2010 about the same as in 1956, although there was an uptick for the lowest quintile in 2010. The share of consumer credit outstanding owed by the upper income fifth of the income distribution was 33 percent in 2010, not much different from 1951, despite interim fluctuations.

## **Behavioral Analysis and Consumer Credit Use**

During the post-World War II period, the view that consumer credit use is a normal development in a modern economy seems to have gained traction with the public

at large. In large part, this new view is likely a result of decades of experience with consumer credit that has demonstrated its usefulness. There are risks with consumer credit, to be sure, but most middle-class consumers do not have serious credit troubles, and they apparently view credit availability reasonably favorably.

Widespread acceptance of consumer credit is observable from public opinion surveys. Surveys also show that consumers appear well able to differentiate in their minds among acceptable purposes for borrowing; some purposes are more acceptable than others and have been so for a long time. These views suggest a degree of thoughtfulness and deliberation in credit decisions, but this kind of differentiation also suggests that consumers' analyses of their credit decisions may not be entirely consistent with a strict interpretation of economists' axioms of rational choice. Instead, these views suggest that when making credit decisions, consumers may use heuristics ("rules of thumb") that simplify decision making or employ some kind of mental accounting or sorting for making distinctions. Such behavior may be purposive, intelligent, and utility enhancing but still fall something short of the extensive weighing of alternatives underlying the economic model of utility maximization. This fact alone encourages further consideration of the underlying psychological conditions for consumers' choices.

Development of psychological aspects of the theory of consumer credit demand falls into two broad categories: (1) analyses based on psychologists' models of the cognitive process and (2) economic hypothesizing about credit use based on assumptions about consumers' cognitive biases. Analyses in the first category are largely empirical and provide insights into the processes that lead to economic decisions. Analyses in the second category have generated many recent theoretical discussions, mostly about credit card use, but to date have produced relatively few empirical generalizations about consumers' credit or credit card use behavior. Nonetheless, they form a new genre of consumer credit analyses in recent years. A prominent subset of theories in the second category called "Behavioral Law and Economics" (BLE), appears to be mostly concerned with implications of suggested cognitive biases for legal and policy prescriptions, rather than development of either theory or empirical evidence per se. As discussed in a previous essay, some consumers may sometimes behave psychologically irrationally in their use of credit cards, but BLE should provide better empirical evidence of frequency and quantity before recommending legal changes to a system used successfully by millions of patrons. Only a little more about the offshoot BLE will be said here.

Actually, behavioral economists and psychologists have studied consumers' credit decisions for decades, especially using consumer survey techniques. Their studies have been empirical, and many are concerned with the extent to which consumers' behavior is rational. Standard economic theory is concerned with specific goals such as utility maximization, evaluation of all available alternatives, choice of the alternative that best achieves the goal, and consistency in choice. In contrast, behavioral economists expand this concept of rationality. They view rational behavior as purposive and deliberative but not necessarily strictly optimal. They note that consumers often simplify, taking shortcuts and using "rules of thumb." Consumers are often satisfied to take small steps toward goals (adaptive and satisficing behavior) rather than making the effort to achieve the

optimum. Culture, group membership, attitudes, past experience, and even biases may influence the decision process.

Survey research on the process of spending in large part supports the economic analyses that treat consumer credit as a part of consumers' investment-consumption decisions. Surveys have found that the bulk of consumer credit arises in the process of purchasing household durable goods and services that do not fit conveniently into monthly budgets. Consistent with the theories of the economists, surveys find that credit use is greatest in early family life cycle stages, particularly in families with young children. Such families typically start with relatively low stocks of durables and can often obtain high rates of return on additional household investments.

A major additional focus of the survey research has been to investigate the extent to which consumers' durable goods purchasing and financing decisions are deliberative and rational. The research indicates that few purchases include all of the elements of rational decision making, namely, planning for purchases, extensive search for information, formulation of evaluation criteria, and careful consideration of alternatives before making decisions. As indicated, consumers often simplify, take shortcuts and use rules of thumb (heuristics). Consumers may focus on one or a few product characteristics or rely on the experience of friends, for example. Nevertheless, evidence suggests that most consumers use one or more elements of deliberative behavior in decisions about consumer durables and credit.

The research identified several circumstances that lead to more or less deliberation in durable goods purchases. Situations in which consumers tend to follow more closely the economists' fuller model of rational decision making include purchase of an item that is considered expensive or particularly important, purchase of a new or unfamiliar product, dissatisfaction with a previous purchase, and a strong new stimulus that causes uncertainty about previous attitudes or experience. In these situations, consumers are more likely to gather additional information, formulate or revise evaluative criteria, and deliberate more about alternatives, although they may still take shortcuts, simplify, or use heuristics. Few consumers collect all available information, carefully consider all possible choices, or use compensatory decision rules that weight all product characteristics. The economic model of rational choice suggests that they may not want to collect all available information because the collection and decision process is costly. Learning about all product characteristics, identifying sellers, collecting information about prices and characteristics of specific product choices, and evaluating alternatives are time-consuming and may include explicit expenses. This is consistent with the hypotheses of economists that consumers will collect additional information only as long as the cost of the search is less than its benefits.

In contrast, consumers tend to limit extensive deliberative behavior in situations where they perceive a special opportunity that would not be available in the future, have an urgent need, or are satisfied with a previous purchase of the item. Such decisions still may include important elements of rational decision making, however. Even consumers who perceive an urgent need, such as a need to replace an important household durable

good or an automobile, may recognize the problem in advance and take steps to prepare for the eventual purchase.

Survey work has also provided evidence that regular payments have had an additional role in budgeting, called “precommitment” or “mental accounting” in some studies. The practice of precommitment can involve costs, but evidence suggests that many consumers are willing to pay to protect themselves against their own bad habits. While, strictly speaking, such behavior does not represent definitional economic rationality, it does not imply irrationality, either, if that term means uncontrolled credit use outside the general boundaries posed by the economic theory devised by Fisher, Hirschleifer, Juster and Shay, and others.

More recent work by Kahneman and Tversky and others on decision making under risk and uncertainty has further enhanced the interest of economists in psychological influences on economic choices, including credit use. Much of this work involves an experimental approach rather than surveys and does not involve specifics of credit use per se, although it has been influential in developing hypotheses in this area. Resulting theorizing about such things as various cognitive biases that result from individuals’ use of heuristics (simplified decision rules), a tendency for individuals to prefer avoiding losses more strongly than acquiring gains, and experimental and other evidence suggest that individuals discount proximate outcomes more than distant ones. If discount rates vary by time horizon, then the choice between two options might differ depending on when the choice is made. Such behavior might lead individuals to deviate from optimal intertemporal allocations depending on the time period in question. This possibility immediately raises questions about such things as shortsightedness and self-control. New behavioral theories of this kind can challenge assumptions about rationality in economic decision making, including decisions about consumer credit use.

But evidence suggests that experimental studies of cognitive biases are sensitive to the format, context, and content of the problems presented to participants. They suggest that considerable care is required to design meaningful experimental questions and to produce appropriate conclusions. Some of the problems presented to participants in experimental studies likely do not reflect the problems actually experienced by most individuals in making decisions under uncertainty, and participants in experimental studies may not use the same decision processes that they use in making actual decisions. Experimental problems often appear more similar to test questions than choices that consumers actually face in the markets. Hypothetical situations are likely perceived as such by study participants. And it seems unlikely that participants in experimental studies view the consequences of their choices as very important. In an experimental study, as opposed to in the “real world,” there is little cost to making an error and not much reward for efforts to provide a correct response. Consequently, results of the experimental studies should be interpreted with considerable caution and cannot be applied to specific problems without an understanding of the decision process and the environment.

Although it seems reasonable to conclude that individuals sometimes do make cognitive mistakes, we cannot directly conclude that all, most, or even many human

decisions are influenced by cognitive biases, however. Further, individuals may be predisposed to impulsive behavior, but they also have the capacity to exert self-control to implement forward-looking plans. Self-control requires actively maintaining attention to the plan. An individual facing an impulse might yield to the impulse if it does not perturb the plan too much. To be effective, self-control requires that the internal inhibitions become stronger as awareness of the cost of impulsive behavior increases. It is not clear that participants exert the same cognitive efforts in experimental situations that they exert in actual situations where commitments in money and duration are great, past experience and information are insufficient or obsolete, and outcomes of previous decisions are regarded as unsatisfactory. Assessing actual decisions requires understanding the cognitive process and the environment in which the decisions are made, as marketers have pointed out for decades with buyer behavior models and derivatives of them.

Thus, it is worth remembering the definition of rationality as behavior aimed to achieve one's goals or objectives. In many situations simple heuristics can often perform as well as rules based on more detailed definitions of rational decision making. Studies in a variety of areas present evidence suggesting that heuristics provide accurate predictions in many areas but require less information to implement, although, to date, the applications of theories have generally been to relatively simple problems theories on use of specific heuristics in consumer credit decisions or cognitive biases arising from such use have not specifically been tested.

Concerning time discounting, the evidence from a variety of studies suggests that individuals tend to discount proximate prospects more highly than more distant ones; but for long-run time horizons (that is, greater than a year), discount rates appear to be approximately constant, the latter consistent with the standard expected utility model and economists' notion of rationality. The tendency to discount proximate amounts more highly can cause harm. Sometimes the harm is great, as in the case of addiction, for example, but individuals make numerous intertemporal decisions, and in most cases, they do not suffer any apparent harm. Individuals have cognitive control structures that enable most of them to resist temptation for impulsive immediate gratification and undertake actions to achieve goals. Individuals can also choose various external precommitment mechanisms to control impulsive behavior. External controls may not always produce optimal outcomes, but they represent purposeful actions to achieve desired goals. Thus, concluding that hyperbolic discounting is in itself always irrational or that individuals generally do not make purposive and deliberate intertemporal choices is not justified at this time.

Regarding consumer credit, evidence is limited, but empirical evidence on credit card behavior, suggests that consumers generally behave as economic theory predicts and that when consumers make mistakes, the mistakes are small or are usually corrected when large. Consequently, it is not at all clear that behavioral research undermines neoclassical economic theory of credit use as much as it enriches and enhances it. Instead, the behavioral analyses suggest the details of the elements of rational economic choice and where the theory should accommodate differences. More on this point will become known in the future as economists model consumer credit behavior more fully,

employing more fully the insights from behavioral sciences and testing the enlarging body of theory with specific empirical data.

Specifically concerning “Behavioral Law and Economics” (BLE), although proponents have pointed to such discussion as a basis for government regulation of credit cards, they focus on theoretical discussion and *a priori* assertions but provide no empirical underpinning for the arguments. Rather, they hypothesize welfare-reducing behavior by consumers and use several *ad hoc* explanations based on behavioral economics to conclude that these welfare-reducing practices persist because credit card issuers prey on consumer biases. This lack of empirical evidence is especially troubling in light of the extensive existing empirical literature not discussed in BLE.

In sum, behavioral research indicates that consumers do not always make the cognitive efforts required for an extensive decision process. Individuals often take shortcuts, simplify, and use heuristics. Cognitive effort tends to be reserved for situations where commitments in money and duration are great, past experience and information are insufficient or obsolete, and outcomes of previous decisions are regarded as unsatisfactory. In situations where consumers have previous experience and are satisfied with past decisions, consumers often make choices with little further deliberation. That cognitive biases and time-inconsistent discounting exist is well established in the behavioral literature. Some research suggests that these psychological considerations could influence consumers’ credit behavior. The extent to which cognitive biases and time-inconsistent discounting affect actual credit decisions is not known at this time.

But, evidence from analyses of actual credit card behavior indicates that consumers are sensitive to price, consistent with the predictions of economic theory. When a credit card company increases the interest rates on an account, consumers reduce new charges, reduce existing balances, and shift charges to other credit card accounts, and over the course of a year, they reduce total credit card balances from the level before the price increase. Based on subsequent account use, consumers generally make cost-minimizing choices, trading off interest rates and annual fees when choosing new credit card accounts. When they make mistakes, the mistakes are usually relatively small. If mistakes are large, consumers generally correct the mistakes. Although some consumers do not correct large mistakes, persistent large mistakes are not the rule. Analyses of credit card behavior based on survey data also suggest that consumers are sensitive to costs and do not incur costly mistakes. And by far most consumers believe that credit cards provide a useful service and are satisfied with their dealings with credit card companies. Thus, neither behavioral nor conventional evidence provides much support for the conclusion that market failure is pervasive.

## **Consumers and High Cost Credit**

Some consumer credit products have gained special notoriety in recent years because of their apparently high prices, as evidenced by high annual percentage rates and their use by lower-income, credit-impaired, or other less fortunate consumers. The

products in question include pawnbroker loans, some kinds of small personal installment loans, payday loans, subprime credit cards, automobile title loans, and income tax refund anticipation loans. Although they are sometimes called “fringe” products because of the relatively small amounts of money typically involved, they are used by millions of people every year.

Prices for these fringe credit products are indeed high when expressed in terms of annual percentage rates required under Truth in Lending. Finance charges are large relative to the small loan amounts, and terms to maturity are short. Under these circumstances, annual percentage rates often exceed 100 percent. Not surprisingly, triple-digit interest rates invite widespread criticism. The critics of high-rate credit products often contend that consumers would be better off without such borrowing opportunities. They see little or no benefit to using high-rate credit and assert that high-rate credit products contain great potential to harm consumers. They declare further that consumers using such products often are uninformed or sometimes misled, often supporting these views using anecdotes and stories. There clearly are instances when consumers have suffered harm and have been uninformed or misled when they used these products, but systematic evidence on frequency of problems or the extent to which use of high-rate credit may be informed has been limited. That these products visibly remain in demand, and even seem to be gaining in popularity, suggests the usefulness of further analysis.

Review usefully can begin with the economic intertemporal consumption and investment decision model originally developed by Fisher, Hirshleifer, Juster and Shay, and others and discussed previously. This economic model of consumer credit use predicts the characteristics of consumers that may benefit from high-rate credit. Then the psychologists' model of the decision process can provide criteria for assessing the extent to which these consumers' behavior is purposive and intelligent.

In their economic analyses of the consumer's credit decision, Juster and Shay explained why consumers are sometimes willing to borrow at high rates of interest. First, as discussed earlier in this series, many durable products and services purchased using credit provide benefits over a period of time and that for some families, the implied rates of return for these benefits can be quite high. But because income and accumulated savings are finite, lenders limit the amount of credit they are willing to offer any consumer. Consequently, the rate of return from additional investment in durables may exceed the marginal borrowing cost from primary lenders but still be less than the cost of sacrifice of current consumption of other things or reduction in savings necessary to acquire additional durable goods. When this situation occurs, consumers are said to be credit constrained or rationed by the primary lenders. Specialized secondary lenders willing to lend small amounts at relatively high rates can relax the credit constraint and increase utility, but the rates of charge can be high due to the necessity of recovering the operating cost of production from relatively small balances of the credit outstanding.

Such rationed borrowers are likely to be in early family life cycle stages. For them, rates of return on household investment tend to be high. They tend to have relatively low or moderate current incomes and little discretionary income, making the

sacrifices in current consumption to pay for large expenses personally costly. And because of their moderate incomes and young age, rationed borrowers generally would not have accumulated large amounts of liquid assets. At this stage in the life cycle, their liquid asset holdings have a high subjective yield because of precautionary savings motives.

Unrationed borrowers, in contrast, likely are more often in later family life cycle stages or have relatively high incomes. Unrationed borrowers in later life cycle stages may have relatively few high-return household investment opportunities. Higher income and more available savings may provide discretionary amounts that allow for relatively large expenditures without costly reductions in current consumption. For them, subjective yields on liquid assets can be substantially lower for unrationed borrowers than for rationed borrowers. Availability of low-cost discretionary income and liquid assets would make unrationed borrowers generally unwilling to pay high interest rates for additional credit.

For consumers' individual reviews of their situations, the benefits from durable goods acquisitions can often be measured in dollars as saved costs (for example, home appliances and repairs) or as enhanced opportunities (for example, transportation from automobiles). Likewise, benefits of using a short-term loan may also be analyzed in terms of the costs of some market alternative. For example, a short-term loan may be used to avoid a late payment or some other costly outcome, or to take advantage of a one-time opportunity like a sale.

Reviewing available empirical evidence about the users of high-cost credit products shows that consumers using different types of high-rate loans tend to be in age, life cycle, and income groups that are associated with strong demand for credit and are often rationed. They mostly are relatively young, are in early family life cycle stages, and have lower or moderate incomes, depending on the product. Some of these consumers (payday loan and tax refund anticipation loan customers with bank accounts) are more likely to use closed-end credit than all families and are apt to have higher debt burdens than families with debt generally. Others (pawnbroker, tax refund anticipation loan customers without bank accounts, and rent-to-own customers) are less likely than all families to use mainstream credit products. Regardless of their use of mainstream credit products, many high-rate credit customers have characteristics that limit their access to credit, and most have experienced turndowns or perceive that they are constrained. Thus, the consumers who use high-rate loans are generally ones who economic theory predicts might benefit from relaxation of credit constraints. In itself this does not indicate that their use of such credit is rational, but it does suggest that their circumstances are such that use of high-APR credit may be utility-increasing.

To understand consumers' choices involving high-rate credit products, researchers have turned to cognitive models of consumers' decision processes from psychology, including buyer behavior models and related constructs. Viewed this way (and discussed last time), the consumer's decision is a process that occurs over several stages: problem recognition, internal and external search for information, choice, and

outcome evaluation. These stages are interrelated, with feedback occurring throughout the process. Developments during each stage may cause the process to stop, move to the next stage, or proceed immediately to the purchase. Consumers may simplify, use heuristics, or take shortcuts during the decision process. They and economists also recognize that consumers may not obtain complete information about alternatives before making decisions. In the economist's framework, acquisition of information may be costly. A consumer will acquire additional information only if its expected benefit exceeds the cost.

In general, these hallmarks of extended decision-making processes do not describe the circumstances typically involved in choosing high-rate credit products; high-rate credit products have characteristics associated with limited decision processes. Concerning product characteristics, most are relatively short term. Also, because loan amount is usually small, the finance charge is high relative to loan amount but not generally relative to the borrower's monthly income. Deliberation for such purchases may be strongly focused on one aspect of the purchase to the exclusion of others and still be purposive and entirely rational. These psychology-based behavioral models suggest that extensive collection of information and weighing of all available alternatives may not always be necessary for purposive and intelligent decisions. In fact, focusing on the psychological aspects of the decision to use credit for purchasing durable goods on credit, pioneer analyst George Katona noted in 1975 in his classic *Psychological Economics* that if careful deliberation were defined as including all features of decision making—consideration of alternatives and consequences, discussion with family members, information seeking, and concern with price, brand, quality, performance, special features, and gadgets—the conclusion would emerge that almost all people proceed in a careless way in purchasing large household goods. This conclusion, however, seems unwarranted, especially for shorter-term purchases of a more urgent nature.

Further, situational factors may also limit decision processes. A short term to maturity makes high-price credit products more suited to addressing temporary shortfalls in funds than financing investment in durable goods that might last years. Temporary shortfalls may often be the result of unexpected expenses and may therefore be viewed as urgent. Moreover, short-term use to address temporary shortfalls in cash may involve relatively short time periods since previous decisions. In such situations, consumers may perceive that information obtained from previous decisions is not obsolete.

With this as background, empirical research evidence shows that many users of high cost "fringe" credit products show signs of deliberation in their decisions, but most probably do not undertake an extended decision process. Many customers have previous experience with the product and may not exert much effort in subsequent decisions. Relatively low loan amounts and short terms to maturity also may contribute to lack of awareness and lack of deliberation. Customers are largely satisfied with their decisions and generally do not believe that they have insufficient information. In this way, decision processes for high-price credit products do not appear to be much different from decision processes for mainstream credit products. The decision to use high-price credit typically is a result of the consumer's situation rather than a lack of knowledge or information.

Evidence also shows that most consumers using high-rate credit products are aware of the cost of such credit. They generally are able to recall reasonably accurate finance charges but are largely unaware of annual percentage rates for recent loans. Because most high-rate loan products have a short term to maturity, knowledge of the finance charge is generally sufficient for making informed decisions. Under this circumstance, consumers can evaluate costs and benefits without consideration of their timing. Net undiscounted benefits will not differ much from net present value of benefits.

To date, efforts to determine whether the economy as a whole actually benefits from high-rate credit products have focused largely on payday loans. They have examined a wide variety of outcomes, many of which are quite far removed from the circumstances of the payday loan decision. That a \$300 two-week loan used by a very small proportion of the population could significantly influence outcomes such as property crime rates, bankruptcy rates, job performance, or check returns seems almost incredible. To be convincing, these studies must ensure that the differences in outcomes are caused by differences in payday loan access rather than something else and that the consumers who have access to payday loans are similar to consumers who do not.

It is not clear that these studies have succeeded. State laws that regulate payday lending are the product of a political process that also produces laws affecting many other aspects of the local economic and social environment, including the availability of other financial services, quality of educational services, and types of employment opportunities. A state that sharply limits personal or auto loan rates, for example, would hardly be inclined to authorize rate ceilings that permit payday lending. Geographic proximity or accounting for differences in a limited set of economic or social variables is unlikely to eliminate entirely the effects of other influences on outcomes. Thus, while suggestive, these studies are not fully convincing.

There clearly also is considerable room for more micro-oriented research into specific effects of availability of high-rate credit, although such studies can be very expensive and difficult if they involve survey work. Nonetheless, it is likely there will be more of this work in the future.

## **Government Regulation of Consumer Credit**

Credit for individuals is as old as recorded human history, and so is the ongoing interest of governments in controlling it. Ancient laws of Babylon, Greece, and Rome all contained regulation of lending and borrowing by individuals, and some historians have conjectured that centralized tribal control of credit extends even deeper into antiquity. Much later, in the Middle Ages, the Christian church contended that charging interest on loans was a moral evil (usury) and therefore prohibited, ultimately based on restrictions found in its own antiquity, the ancient books of the Old Testament. Overlaps between religious and civil authority during the Middle Ages guaranteed that development of

lending and borrowing relationships in western Europe remained complicated for centuries, producing legal difficulties extending even into modern times.

As notions of morality based on religious principles have faded over time as a foundation for commercial restrictions, concern has developed in some quarters that individuals still need government protection in their credit relationships for two further reasons: to shield them from inability to understand fully the implications of the credit transactions they enter into and to help them avoid possible inappropriate behavior by questionable credit vendors in the marketplace. In this view, the term *consumer protection* in credit matters refers to various governmental means of altering prevailing conditions and practices in the credit marketplace rather than absolute prohibition of credit relationships. Today, many observers of consumer credit markets believe that they are neither perfectly competitive nor perfectly uncompetitive, and, consequently, they recommend regulatory roles for both competition and government.

Whatever the influences, reasoning, and circumstances leading to current conditions, it is apparent that few areas of the American economy are as closely regulated as consumer credit. Until the late 1960s, governmental consumer protection in credit markets was mostly the province of state agencies, but today both federal and state authorities are involved. Consumer credit regulation evolved during a time when the federal system of governing left most aspects of local commerce as the province of state governments, and so early forms of regulation were at the state level. Federal activities for consumer protection began in 1968, with enactment of the federal Consumer Credit Protection Act on May 29 that year, and with its most important provision, the Truth in Lending Act, effective July 1, 1969. The Equal Credit Opportunity Act and other federal legislation followed in the 1970s. By 2010, the growth of federal regulation led to establishment of a new federal Consumer Financial Protection Bureau (CFPB), with official opening date July 21, 2011. Historically, regulation of pricing terms on consumer credit has been the province of state regulation but with federal regulators today waiting in the wings. It is possible, even likely, that federal activity in this area could increase substantially in the future. This essay examines this aspect of government regulation of consumer credit.

Usury laws in Britain served as the model for the American colonies in the eighteenth century. The colonies (and later the fledgling states) adopted a usury ceiling of 6 percent as a carryover of the prevailing 5 percent ceiling in Britain at the time, with an extra percentage point added to help raise capital. For the next century, ceilings on loan interest rates were the rule throughout the states, although with wide variance in levels. The western states, where capital was in great demand and scarce supply, generally adopted higher rate ceilings and weaker penalties for violation of the law than the eastern states, where capital was more plentiful. A lack of hard (coin) money in the west also necessitated a greater reliance on credit, making the inevitable shortages that accompanied interest rate and other lending restrictions more painful.

Legal limits in the colonial period and the early republic sometimes exceeded prevailing market rates and thus were not binding. In some cases states raised or

abolished rate ceilings so that they no longer placed constraints on the market. Ceilings also were commonly evaded and were difficult to enforce, although during the colonial period and the 19<sup>th</sup> century there was not much consumer credit under modern definition available anyway.

But during the early modern industrial period, high rates of interest, abusive collection practices in some cases, and a perception that small loan cash lenders preyed on the poor gave rise in the 1880s to calls for stricter laws and more vigorous reform. Most of the states that had earlier repealed usury laws reinstated them over the next two decades. Generally, these reform efforts were ineffective and counterproductive. Lenders often changed the details of the transaction to place it outside the purview of the revised law; and borrowers, unwilling to risk losing access to credit, were often reluctant to complain to enforcement authorities.

The ineffectiveness of restrictive laws in curbing illegal lending gradually led to an acceptance of the view that laws should regulate but not prohibit cash loans, either explicitly or through restrictions that make small, relatively short-term unsecured loans economically infeasible. Around the turn of the century and especially after 1910, states began passing specific legislation to create a regulated lending industry. Early efforts typically were viewed as consumer protection. Efforts of entrepreneurs and joint efforts with social reformers during this period led to the beginnings of philanthropic lending, Morris Plan industrial banks for working people, credit unions, and the regulated small loan industry. By the end of the first half of the twentieth century, consumer credit reforms had created the institutional structure for modern consumer credit markets, excluding three-party credit cards which also depend on more modern data processing and communications. Nonetheless, evidence shows that rate ceilings continued to influence development of the institutions and markets.

Economists have demonstrated convincingly the complicated nature of the theory of setting appropriate rates to produce favored social outcomes outside of the market context. Various government attempts over the years have demonstrated the practical difficulties, especially if one of the goals involves providing for credit availability at reasonable rates to all risk classes of borrowers. Theoretical work shows that interest rate ceilings can affect the distribution of credit across risk classes of borrowers in ways that are difficult to predict. Depending upon competitive conditions, some risk classes of borrowers may sometimes benefit and others may be harmed.

For this reason, economists have been skeptical that authorities possess the analytical capabilities to assess the supply and demand conditions, price elasticities, and cost conditions in credit markets in order to set ceiling rates in a way that would reduce monopolistic power and produce competitive outcomes for all market participants. They have noted also that even a lender's experience with customers provides information for assessing risk that may not be available to the authorities. Furthermore, they pointed out that in many situations, credit is provided in conjunction with the sale of goods, making evasion of rate ceilings relatively easy. And so interest rate ceilings may not be very effective for controlling such sources of market power.

In addition to the obvious direct impacts on borrowers and lenders of these attempts to manipulate marketplace rates, the differential ceilings according to institutional class of lender found in many states have had the more subtle effect of actually reducing marketplace competition. Fragmented markets for consumer credit and the reduced competition they entailed encouraged higher, less competitive prices in each fragment. For unsecured personal loans, rate ceilings for finance companies typically were higher than those for banks, particularly for small loan sizes. Rate ceilings for credit unions were usually closer to rate ceilings for banks, although most credit unions enjoyed cost advantages over the other institutions. As a result, banks tended to make larger, lower-cost loans per loan

dollar, and credit unions and especially finance companies tended to make smaller, higher-cost loans. In 1971–1972, the National Commission on Consumer Finance (NCCF), a federal government study commission authorized by the federal Consumer Credit Protection Act, verified important facts about consumer lending markets at the time:

- 1) Market rates did not always rise to ceilings as broadly believed.
- 2) Differential rate ceilings by institutional class segmented markets and reduced competition.
- 3) The degree of competition influenced both rate and credit availability.
- 4) Rate ceilings promoted credit rationing.

Summarizing the empirical evidence, the National Commission and other researchers have found empirical evidence of a variety of problems with rate ceilings. None of the findings is encouraging about the overall usefulness of rate ceilings as a consumer protection.

First, differential rate ceilings by institutional class of lenders have segmented consumer credit markets, thereby reducing the ability of different lender types to compete with one another. Thus, interest rate regulation has tended to foster market power of lenders, one of the alleged problems that rate ceilings were intended to remedy.

Second, evidence suggests that low rate ceilings reduce the quantity of consumer credit. This result argues against rate ceilings producing more competitive outcomes than markets in which rates are not restricted. Evidence further suggests that competitive influences have always existed in consumer credit markets, both within lender type and across lender types, despite the adverse effects of market segmentation arising from rate ceilings in the past.

Third, interest rate ceilings have not affected all consumers equally. Higher-risk consumers are more likely to experience a reduction in credit availability than lower-risk consumers, with lower rate ceilings affecting greater percentages of the risk distribution of consumers than higher rate ceilings. Lenders may offer potentially rationed borrowers less risky loan contracts, such as contracts requiring larger down payments or with shorter maturities.

Fourth, high-risk consumers also have obtained credit from sellers who reallocated part of the cost of credit to product prices. The presence of substantial numbers of cash customers (or lower-risk credit customers who can obtain credit elsewhere) limits mainstream sellers' ability to reallocate credit costs in this way. This has given rise to specialized retailers in certain areas without substantial numbers of cash customers or others with access to outside credit sources. Those sellers willing to specialize in credit sales to high-risk consumers face little competition from mainstream sellers and sometimes have been able to charge very high prices for the goods purchased.

Finally, high-risk consumers may obtain credit from friends or family, high-APR lenders, and illegal lenders. Limited financial resources and high-interest or noninterest prices for these sources suggest that high-risk borrowers will not obtain as much funds at a lower price from these sources as from forgone institutional installment credit. This outcome may prevent some perhaps excessive consumption, as some proponents of interest rate ceilings have argued, but it is likely that much investment in higher-quality household durable goods is also forgone. Since household investment can have high rates of return and be wealth-increasing, such rationing likely harms many rationed consumers.