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Consumer and Mortgage Credit at a Crossroads: Preserving Expanded Access while Informing Choices and Protecting Consumers

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Introduction

Americans are no stranger to debt. In 2004, 76.4 percent of all households reported some form of borrowing. Fully 46.2 percent of all households had at least one person with a credit card balance, 48.0 percent with a mortgage loan or line of credit, 39.5 percent with an auto loan or lease, 13.4 percent with a student loan, and 19.3 percent with some other form of lending.[1] The proportion of Americans that have carried each of these forms of debt at some point over their life cycle is likely even higher.

Taken together, the secured and unsecured debt load of consumers has escalated considerably and access to debt among many of those previously denied credit has rapidly expanded.[2] Consumer debt levels and debt payment obligations may be measured in several ways, both at the macroeconomic and microeconomic levels. However, important differences may be found among these measures and their interpretation. Debt-to-income ratios (debt levels to income) at both the aggregate and household levels have increased faster than debt service ratios (debt payments to income) since 1989. One simple reason for this growing divergence is that real interest rates fell sharply from 1998 to 2004, and have not come close to returning to 1980s and 1990s levels.[3] It costs less, therefore, to service an equivalent amount of debt (Dynan, Johnson and Pence 2003). Yet, by all measures Americans are awash in debt as never before.[4]

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[1] From the Survey of Consumer Finance (SCF). Mortgage loan or line of credit is the variable housing debt (mortgage, home equity loans and HELOCs). Other forms of lending includes other lines of credit, debt for other residential property (land contracts, residential property other than the principal residence, misc. vacation, and installment debt reported for cottage/vacation home code 67), other installment loans (installment loans minus vehicle and education loans), and other debts (loans against pensions, loans against life insurance, margin loans, miscellaneous). The fraction of households with any one of these forms of debt is quite low, and we will not address these forms of debt in this paper. Unsecured installments loans, which once were quite common, were being carried by just 9 percent of all households by 2004 according to the Survey of Consumer Finance.

[2] Traditionally, only unsecured lending to individuals or households is considered consumer credit. Increasingly, however, households have been using home equity to finance consumption and investment. In addition, mortgage debt is the largest single form of debt among most of those who have a mortgage. Therefore, it is a major component of debt burdens and is central to the financing decisions of more than half of all households. As a result, the term consumer credit to refer to any debt held by a consumer, whether secured or unsecured.

[3] As an example, the inflation-adjusted composite effective interest rate of all conventional loans placed on single-family homes decreased a sharp 239 basis points from 2002 to 2005 to 2.55 percent, were down 300 basis points in 7 years from a peak of 5.55 percent in 1998, and were 277 basis points lower than in 1989. Inflation data comes from CPI: Urban Consumer - All items, (1982-84=100, SA), mortgage rates come from Federal Housing Finance Board: Rates and Terms on Conventional Single-Family Mortgages. (All Loans, NSA).

[4] As Larry Mote and Daniel Nolle pointed out in their *2005 Special Studies –Rising Household Debt: A Long-Run View,* the debt service ratio shows households' required debt service payments relative to their disposable income, and therefore measures households' monthly servicing obligation, not including other obligations such as rent, auto leases, insurance and taxes, which are captured in the financial obligations ration (FOR). Both measures have risen to levels well beyond their historical averages. Mote and Nolle provided information on these trends.

Beyond decreasing interest rates, explanations for the rising tide of debt run a wide gamut. Expanded access to credit in general, and mortgage credit in particular, is usually singled out as an important contributor to increasing debt service ratios. The relaxation of constraints on maximum permissible debt-to-income ratios also figures prominently. Indeed, several studies show that the intensity of credit constraints (such as willingness to lend as measured by surveys) and the size of the credit supply are strongly correlated with consumer credit growth and consumption expenditures (Japelli and Pagano 1989; Antzoulatos 1996; Baccheta and Gerlach 1997; Ludvigson 1999; Maki 2000). Some argue it is the real rate of growth of the cost of some big ticket items, such as housing and education, which forces households to borrow more to maintain a fixed standard of living.[5] Yet, others blame the profligate consumer or today's consumer culture for increased consumption and debt.

The perceived implications of the increase in debt range from the highly positive to the highly negative. On the positive side of the ledger, the increase in debt has been accompanied by an even larger increase in asset holding so that total net worth has grown along with total debt.[6] Furthermore, the credit delivery system that made the expansion of credit possible has been widely viewed—especially until the crisis in credit markets beginning in the summer of 2007—as compelling evidence that innovations in the lending industry and the capital markets have successfully led to broader access to lower-cost credit, greater consumption, and increased investments in housing than ever before. In addition, several have found that growth in consumer credit is associated with growth in consumer spending and is therefore a plus for the economy (Antzoulatos 1996; Bacchetta and Gerlach 1997; McCarthy 1997; Ludvigson 1999). While delinquency rates of consumer loans have only a modest direct effect on consumer spending, they may have a possible indirect effect on credit access (Garner 1996; McCarthy 1997; Maki 2000).

[5] The Federal Reserve's recent report "The Rise in U.S. Household Indebtedness" by Dynan and Kohn (2007) states that "the increase in house prices – particularly, but not exclusively, over the past half-dozen years- appears to have played the central role." Some of this increase reflects an increased level and availability of credit to more borrowers, yet this same report concludes that the "democratization of credit" appears to have played only a small role in rising indebtedness. No doubt, the rise in housing assets, accompanied by growth in net worth, has spurred consumer spending while increasing household indebtedness for most Americans. See also: Warren and Tyagi (2003).

[6] The Flow of Funds shows that aggregate household wealth increased from $ 32,301.7 billion in 1989 to $ 55,885.6 billion in 2006, in 2006 dollars, while the Survey of Consumer Finances reports an increase in average net worth of households from $279,224 in 1989 to $ 447,041 in 2004, in 2004 dollars.

An additional positive attribute of the American credit system is the opportunity for businesses to profit by expanding access for consumers and meeting the demand for diverse products while managing the lending risks. As risk is better measured and managed, businesses can expand revenues, lower costs, and improve pricing while reducing their liability and reputation risk. Pricing and marketing best practices can help businesses sell products that help borrowers to build and manage their assets.

On the negative side of the ledger, the delivery system has been viewed as allowing, or worse encouraging, consumers to borrow (either for consumption or to make risky investments) without a sufficient understanding of the debt products, , repayment risks to which these products exposed them, or risk of negative returns on debt-financed investments (Essene and Apgar 2007). The credit delivery system has also been viewed by some as fundamentally flawed, and the huge increase in debt, on relaxed terms with lax government oversight, as destined to end in severe credit market disruptions as investors wake up to the reality that risk has been under-priced and mismanaged. Some researchers have pointed to the perils of relaxing credit and then tightening it in driving business cycles (Bernanke, Gertler and Glichrist 1996), whereas others have linked high debt burdens to spending cuts during recessions that exacerbate business cycles (King 1994). Lastly, the rich literature on wealth effects shows that reductions in credit can cause a drop in spending and lead to a re-pricing of assets that can amplify business cycles as well.

Good or bad, taking on debt entails repayment risks. For millions of Americans each year, some combination of life events and their own debt choices results in their being unable or unwilling to pay off their debts, leading to repossession of vehicles, home foreclosures and bankruptcy.[7] In 2006, for example, 597,965 Americans filed for bankruptcy[8] and 792,000 million homes entered foreclosure,[9] and those numbers may be doubled in 2007.

Quite apart from whether the expansion of credit is good or bad from a normative perspective, there remains a debate about whether this expansion is motivated by consumerism and push marketing on the one hand or a rational response to the opening up of new

[7] Interestingly, medical problems are the most often cited reason offered by bankruptcy filers. See Himmelstein, et al. (2005).
[8] Table F-2 U.S. Bankruptcy Courts Business and non-business bankruptcy cases commenced during the 12 month period ending December 31, 2006. The FY 2006 figures include most of the filings that were part of the surge in filings prompted by the October 17, 2005, implementation date of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 As reported by the federal U.S. Courts at http://www.uscourts.gov/Press_Releases/bankruptcyfilings052606.html
[9] Foreclosure numbers from the National Delinquency Survey, Mortgage Bankers Association.

opportunities to invest and smooth consumption over the lifecycle on the other. In either case, the rather sudden shift from far more sharply restricted credit access to wider access and more product choices has created significant challenges for consumers in the credit marketplace. Similarly, special challenges to consumers, debt servicers, and investors alike are posed by the evolution of the credit provision system, from one in which mostly deposit-taking institutions originated, serviced and funded loans, to an unbundled system involving multiple agents and a remarkably diverse group of investors in securities backed by credit bought and sold in the capital markets.

Among the most important challenges of the credit system are those that have the potential to undermine the efficiency of mortgage markets and lead to unfair treatment of consumers. Ample evidence has recently accrued that credit markets violate many of the essential assumptions for competitive markets to operate efficiently and fairly. Credit markets involve increasingly complex decisions about heterogeneous products that involve probabilistic judgments. Pricing is not transparent, comparison shopping is costly and difficult, and consumer decisions are prone to systematic and predictable errors in estimating the true probability of certain events that govern the long-term cost of the product and their capacity to repay it. In addition, the increasing sophistication of marketing may allow suppliers to exploit these predictable biases in how consumers make credit decisions to steer them to products, not based on initial preferences and clear-eyed calculations of utility, but on utilities based on incomplete information and preferences shaped by how choices are framed and products are marketed by the industry. These are just the kinds of conditions that can lead to inefficient outcomes.

Another enormous challenge is the potential for investors to price, and for third-party agents to manage risk incorrectly, when new products and underwriting standards are being introduced with such blistering speed. Yet a third challenge is how to manage agency risk and protect consumers in a system where funding, originating, and servicing functions are so widely distributed among so many agents. And a fourth major challenge is better helping borrowers who get into trouble, but in ways that do not lead to greater moral hazard and greater risk the next time around. Market-based solutions that help borrowers avert credit default or house foreclosures are preferable to overt subsidies to borrowers or lenders.

Lastly, the acceptance of higher levels of risk leads to higher rates of loan defaults given comparable economic conditions that influence default rates. Even if present models

underestimate or overestimate risk (with evidence from the 2006 book of business suggesting underestimation), loans to subprime borrowers even with fixed-rate mortgages perform worse than similar loans extended to prime borrowers. This means that more borrowers will get into trouble than ever before. This places a greater weight on business, public policy and civic efforts intended to blunt the impact of defaults on individuals, investors and neighboring property owners -in the case of mortgages- as well.

Still, few would want to turn back the clock fully to the days when only prime borrowers could get a loan, sources of funds for loans were restricted to mostly domestic deposit-taking institutions, and loan products met only a small slice of demand for different features. But given the problems that began to unfold in credit markets in 2006 and 2007, it is likely that changes in both credit market practices and regulations will occur in the years ahead. Decisions about how to make those changes will likely continue to be dogged by concerns that the pendulum may swing too far back in the direction of tighter standards and fewer features. Decisions about how to move forward will also be confounded by the difficulty in judging which personal credit decisions constitute "errors" and which were caused by intentional misleading of the consumer by their lender. It is especially difficult to make these judgments when consumer preferences and their estimates of utilities can vary widely in ways not easily understood. These differences in utilities can result in choices that seem optimal from a consumer's perspective but that appear suboptimal to an observer.

This paper briefly explores trends in the use of debt by consumers in the United States and the reasons advanced for these trends, as well as their possible implications. It then traces the evolution of the risk-based pricing and unbundled, capital-market funded, credit systems and examines the special challenges, risks and opportunities that the relatively new and rapidly evolving risk-based pricing system poses for consumers, credit providers, financial intermediaries, regulators, and community groups. Lastly, it examines how these constituencies can respond to these challenges, risks and opportunities, and the difficulties they face in doing so.

Consumer Debt Trends

Consumers have been adding significantly to their debt. A logical first question, then, is why people borrow.

Consumer Attitudes

There is a rich literature that explores social attitudes towards borrowing and the economic and social reasons for borrowing. These attitudes and reasons, together with the income and spending patterns of households, govern the demand for credit. But effective demand is also critically influenced by the underwriting standards of credit suppliers, and by the price and supply of credit.

Many publications and organizations have documented the increase of consumer indebtedness. Literally hundreds of books advise consumers on how to get out of debt, while others catalogue the rise in indebtedness and seek to understand its causes. Some authors fault consumers for not taking enough personal responsibility and borrowing to buy things they don't really need.[10] Others rebuff this "over-consumption myth," arguing instead that skyrocketing housing, transportation and education costs have spurred indebtedness to new heights.[11] Dynan and Kohn (2007) of the Federal Reserve Board, for example, concluded that there is little evidence to suggest households have become increasingly impatient in their desire to consume more, or are growing less risk-averse. While lower interest rates and demographic changes have a modest impact, they conclude that "the most important factors behind the rise in debt and the associated decline in savings out of current income have probably been the combination of increasing house prices and financial innovations."[12]

Whatever the cause, consumers themselves feel the stress and strain of increasing indebtedness. A 2005 poll conducted by the Cambridge Consumer Credit Index indicates that 25 percent of all Americans list getting out of debt as their top New Year's resolution. In 2004, 28 percent indicated it was their top resolution -- the first time in the history of the survey that more respondents said that reducing debt is a greater priority than losing weight or exercising more.[13]

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[10] For more information on the survey see http://www.cambridgeconsumerindex.com/index.asp?content=client_survey
[11] Warren and Tyagi.(2003), Weller (2006).
[12] Dynan and Kohn. (2007).
[13] Cambridge Consumer Credit Index, as conducted by International Communications Research interviewing over 800 families nationwide. See: http://www.icrsurvey.com/Study.aspx?f=Cambridge_Index_0305.html

A recent study by the Center for American Progress highlights just how much the American public recognizes the seriousness of the debt issue.: "nearly half [of them] describe household debt on items like credit cards, car loans, home mortgages and payday loans a very serious problem in this country and 82 percent describe it as at least a somewhat serious problem". The study also shows that the vast majority (79 percent) believe it is not just a problem for lower income families but is one that plagues middle-income families as well.

If increasing household debt is so stressful, why do consumers borrow? The primary economic reason for borrowing is to smooth lifecycle consumption and investment and, in the case of investment, potentially also to earn a leveraged return. Modern consumption theory is based on the life-cycle framework with roots in the infinite horizon models of Ramsey (1928) and Friedman (1957) and the finite horizon models of Fisher (1930) and Modigliani and Brumberg (1954).[14] Their theories considered how consumers make life-cycle choices and how they allocate time, effort and money in terms of their borrowing, saving and general consumption. This life-cycle hypothesis considers a consumer's current income and predicts that people consume their expected lifetime income smoothly, by borrowing against future earnings during their early working life and consuming saved assets during retirement.[15] These theories therefore do a reasonably good job of approximating actual behavior.

More recently, the modern consumption model has been compared to real world data to determine how consumers actually behave. While consumers generally follow this model, they are prone to spend more than expected and save less. Courant, Gramlich and Laitner (1984) and others conclude that the main discrepancies between predicted and actual behavior is that people 'underconsume' early and late in their lifetime by failing to borrow against future earnings and not saving enough to adequately finance retirement incomes, respectively. People also seem to 'overconsume' during their highest earning years, and the elderly do not consume from their assets as would be expected, particularly from their household equity. Another discrepancy is that consumers generally treat windfall gains in a manner inconsistent with the life-cycle model.

Others point to shortcomings of the life-cycle model. It does not fully explain consumers' motives behind bequeathing wealth to future generations, consider market

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[14] Browning and Crossley (2001). The authors note that the life-cycle model framework "has a venerable history in the economics profession, with roots in the infinite horizon models of Ramsey (1928) and Friedman (1957) and the finite horizon models of Fisher (1930) and Modigliani and Brumberg (1954)."

[15] Hannsgen (2007).

imperfections of liquidity constraints, or recognize that it may be difficult to determine future income.[16] Behavioral economists propose a behavioral model that builds on the idea that people divide their assets into "mental accounts" of current income, current assets and future income.[17] They find that consumers' marginal propensity to consume is close to one out of their current income, close to zero out of their future income, and in between for current assets. This is consistent with the findings of Courant et al. (1984), and explains the observation that people over consume during their highest earning years and spend liberally from small windfall gains in current income.

One central premise of the life-cycle framework is that households accumulate substantial assets for retirement. Yet, many households have very low levels of accumulated wealth.[18] For low-income households, this theory may fall short of describing their resource allocation and growing debt levels. A recent Brookings Institution study showed that borrowing tended to increase for lower-income people as they age. Lower-income seniors also borrowed more revolving credit than their younger peers, reflecting a difficulty in financing costs of living on a fixed income.[19]

Clearly, social reasons for borrowing also reflect an effort to maintain a particular expectation of living standard if current income is insufficient to cover the costs of meeting that expectation. As the cost of living increases or standards increase relative to income growth, borrowing becomes both larger and greater relative to current incomes. Other social reasons to borrow may relate to cultural obligations to extended family or to the community.

Debt Trends

Debt trends reflect effective demand at different points in time, which is to say that it is not just the demand side that matters, but the willingness of suppliers to lend under different underwriting tolerances and the cost and supply of credit. Effective demand has apparently been increasing substantially.

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[16] Browning and Crossey (2001).
[17] Thaler (1990).
[18] Hubbard, Skinner and Zeldes (1994) point to three idiosyncratic risks facing households including uncertainty about earnings, medical expenses, and length of life and conclude that "expenditure policy, such as the design of social insurance programs, may exert as large an effect on savings behavior as tax policy."
[19] Fellowes and Mabanta (2007).

No matter how it is examined, consumer debt has been growing at rapid rates as measured by the Federal Reserve's Flow of Funds. There are three basic measures of consumer debt at the household level: 1) household debt service ratio (DSR), 2) household financial obligations ratio (FOR), and (3) debt-to-income ratios. Each conveys different information. The household debt service ratio (DSR) is compiled by the Federal Reserve and is an estimate of the ratio of the estimated required payments on outstanding mortgage and consumer debt to disposable personal income. The DSR therefore helps us understand consumers' ability to service their debt given their current payment schedule. However, the DSR does not include many recurring obligations and is a ratio of minimum debt payments, not total debt owed payments, to income. Understanding these limitations, the Federal Reserve created a broader measure of household liabilities.[20] The financial obligations ratio added recurring obligations such as; automobile lease payments, rental payments on tenant-occupied property, homeowners' insurance, and property tax payments to the debt service ratio. However, both DSR and FOR measures use only the minimum debt payment required on credit cards in their calculations, and therefore understate the total amount of debt held by households. The third measure, the ratio of total debt to total income, more generally captures the true debt obligations of borrowers.

While all three measures of debt trends have been steadily increasing, overall debt-to-income ratios are up the most sharply (Chart 1).

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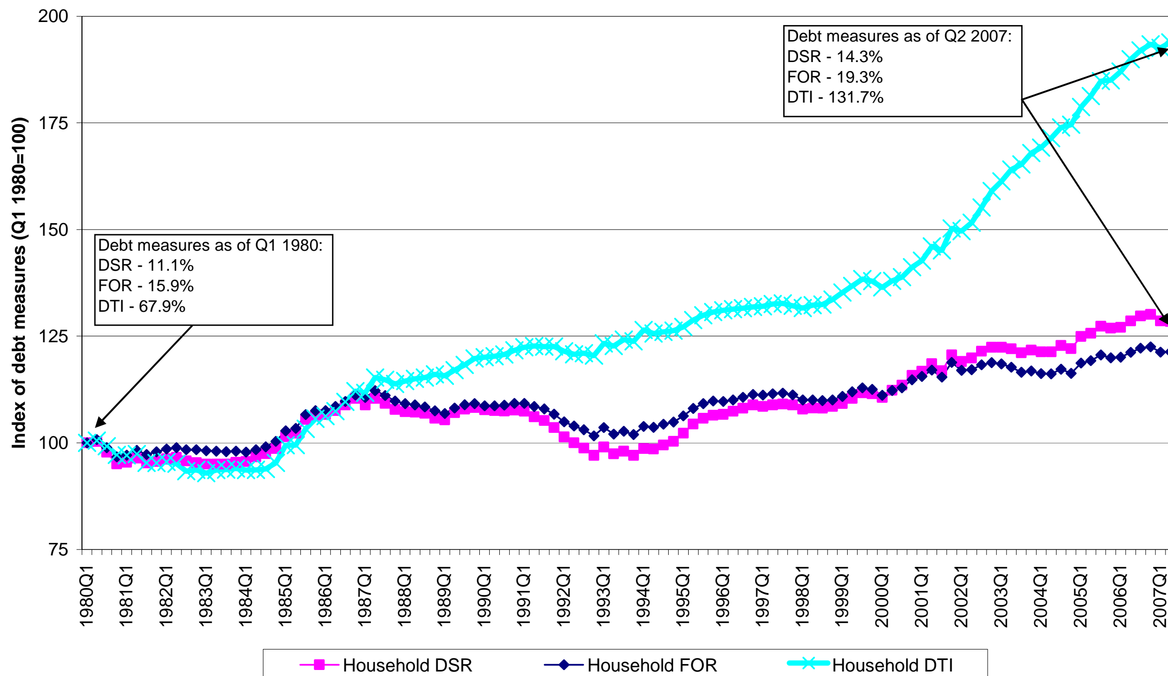
[20] Dynan, Johnson and Pence. (2003).

Chart 1: Measures of Household Debt



Source: Federal Reserve Board.

Aggregate DTI nearly doubled between 1980 and 2007, while DSR and FOR increased about 25 percent. Still, the DSR reached a record 14.5 percent in the last quarter of 2006, up from around 11 percent 13 years ago.[21] The total household FOR also hit a record level at the end of 2006 of 19.5 percent, due to significant increases in the mortgage payments of owners, which rose from 9.0 percent in 1998 to 11.8 percent in 2006.[22] However, Dynan, Johnson and Pence (2003) point out that rising mortgage FOR does not necessarily mean that existing homeowners are paying more for their debt. Instead, it is also affected by the introduction of many new owners who had even higher FOR as renters to begin with. Subtracting out these new owners, the FOR of homeowners is reduced by about one percentage point as of the end of 2003. Given the influx of many more marginal borrowers between 2003 and 2006, it is likely that the effect of these new owners is even greater on total homeowner FOR today.

[21] http://www.federalreserve.gov/releases/housedebt/default.htm

[22] Homeowner and renter FORs are calculated by applying homeowner and renter shares of payments and income derived from the Survey of Consumer Finances and Current Population Survey to the numerator and denominator of the FOR. The homeowner mortgage FOR includes payments on mortgage debt, homeowners' insurance, and property taxes, while the homeowner consumer FOR includes payments on consumer debt and automobile leases.

The above measures of debt are aggregates of all households and are not representative of what individual households owe and pay to service their debt. Aggregate data also do not capture important trends at the household level. The first such trend is the growing share of households in the lower and lower-middle income quartiles that have certain debt products (Chart 2). While the SCF shows that the share of families with loan balances barely increased in aggregate (from 72.3 percent of all families surveyed in 1989 to 76.4 percent in 2004), the share of those in the lowest income quartile with loan balances increased from 48.9 percent to 54.7 percent. This increase was driven by dramatic growth in the share of lowest income households with credit card debt, up from 17.7 percent in 1989 to 30.9 percent in 2004, as well as the share with a mortgage, which doubled from 8.9 percent to 17.8 percent. Significant growth is also apparent in the share of lower-middle quartile households with debt, which increased from 67.4 percent in 1989 to 76.1 percent in 2004, as the share of these households with a mortgage went from 30.2 percent to 38.2 percent.

Chart 2: Share of Households with Debt by Type of Debt, Income and Age

		Auto			Credit Cards			Mortgage			Any Loan or Line of Credit		
		1989	2004	%chg	1989	2004	%chg	1989	2004	%chg	1989	2004	%chg
All Households		34.7	35.6	*2.6*	39.7	46.2	*16.4*	39.5	48.0	*21.5*	72.3	76.4	*5.7*
Income	Lowest Income	13.0	14.2	*9.2*	17.7	30.9	*74.6*	8.9	17.8	*100.0*	48.9	54.7	*11.9*
	Lower Middle	28.8	33.1	*14.9*	35.3	48.0	*36.0*	30.2	38.2	*26.5*	67.4	76.1	*12.9*
	Upper Middle	49.0	48.2	*-1.6*	53.8	55.6	*3.3*	46.5	58.6	*26.0*	81.9	85.3	*4.2*
	Upper Income	46.9	46.5	*-0.9*	50.8	50.1	*-1.4*	70.7	76.0	*7.5*	89.7	89.2	*-0.6*
Age	< 35	37.7	41.3	*9.5*	44.5	47.5	*6.7*	34.8	37.7	*8.3*	79.8	79.8	*0.0*
	35-44	50.5	45.5	*-9.9*	50.5	58.8	*16.4*	57.9	62.9	*8.6*	88.6	88.6	*0.0*
	45-54	47.6	39.0	*-18.1*	49.3	54.1	*9.7*	58.3	64.7	*11.0*	85.2	88.4	*3.8*
	55-64	27.7	34.7	*25.3*	32.9	42.1	*28.0*	37.0	51.0	*37.8*	70.8	76.3	*7.8*
	65 +	10.3	17.3	*68.0*	20.0	27.7	*38.5*	15.4	25.3	*64.3*	37.8	49.5	*31.0*

Source: JCHS tabulations of the 1989 and 2004 SCF

To some degree, any changes in utilization rates or debt service ratios can be driven by changes in the age composition. After all, uses of debt do vary by age and the age distribution is changing. However, analysis undertaken but not presented here suggests that changes in the age composition have not played a dominant role. Instead, it is the increasing propensity to take on or carry debt later into life, especially by the baby boom cohort that has been driving much of the

gains.[23] One good example is the growth in the share of older homeowners with mortgage debt. In 2004, 25.3 percent of elderly homeowners over 65 held mortgage debt compared to 15.4 percent in 1989. For those 55-64, the share was 51 percent in 2004 compared to 37 percent in 1989.

Penetration rates of various forms of debt, as suggested by industry measures, imply an even greater expansion of mortgage credit than federal household surveys. But both point in the same direction: borrowers with spotty credit records have been finding it far easier to get credit than in the past, and relaxation of underwriting constraints on allowable debt service ratios (and also loan-to-value ratios in the case of secured lending) has enabled low-income and lower-middle income households of all races and ethnicities to post substantial gains in the proportion carrying debt and the amount borrowed.

The second trend in household debt patterns is the expanded access of minorities (and especially minorities in the bottom half of the income distribution) to debt products. The share of lower-income minorities having any kind of debt increased only from 59 percent in 1989 to 63 percent in 2004, but the shares with auto loan, credit card debt and mortgages all increased sharply, suggesting more of these households are taking on multiple forms of debt (Chart 3). Over 23 percent of lower-income minorities in 2004 had mortgage debt, up from under 17 percent 15 years earlier. The share with auto loans also went from 16 percent to 23 percent over the same period, while the share with credit card debt rose the most dramatically, from 24 percent in 1989 to 39.5 percent in 2004.

Chart 3: Share of Households with Debt by Type of Debt, Race and Income

		Auto			**Credit Cards**			**Mortgage**			**Any Loan or Line of Credit**		
		1989	**2004**	***%chg***	**1989**	**2004**	***%chg***	**1989**	**2004**	***%chg***	**1989**	**2004**	***%chg***
Race	White	36.5	37.0	*1.4*	41.4	46.1	*11.4*	43.0	51.7	*20.2*	73.2	77.9	*6.4*
	Minority	29.2	31.7	*8.6*	34.4	46.5	*35.2*	28.9	37.3	*29.1*	69.5	72.3	*4.0*
In the bottom half of the income distribution	White	23.9	23.9	*0.3*	28.3	39.3	*38.7*	21.7	30.4	*40.2*	58.2	66.7	*14.6*
	Minority	16.3	22.9	*40.2*	24.2	39.5	*63.6*	16.8	23.2	*38.4*	59.0	62.7	*6.2*

Source: JCHS tabulations of the 1989 and 2004 SCF

[23] SCF data shows that the age cohorts under 45 have held a steady share of debt: those under 35 has at 79.8% and those 35-44 at 88.6%, For those 45-54 share of debt has increased 85.2% to 88.4% and those 55-64 have increased from 70.8% to 76.3%. Seniors have seen the greatest increases from 37.8% to 49.5%.

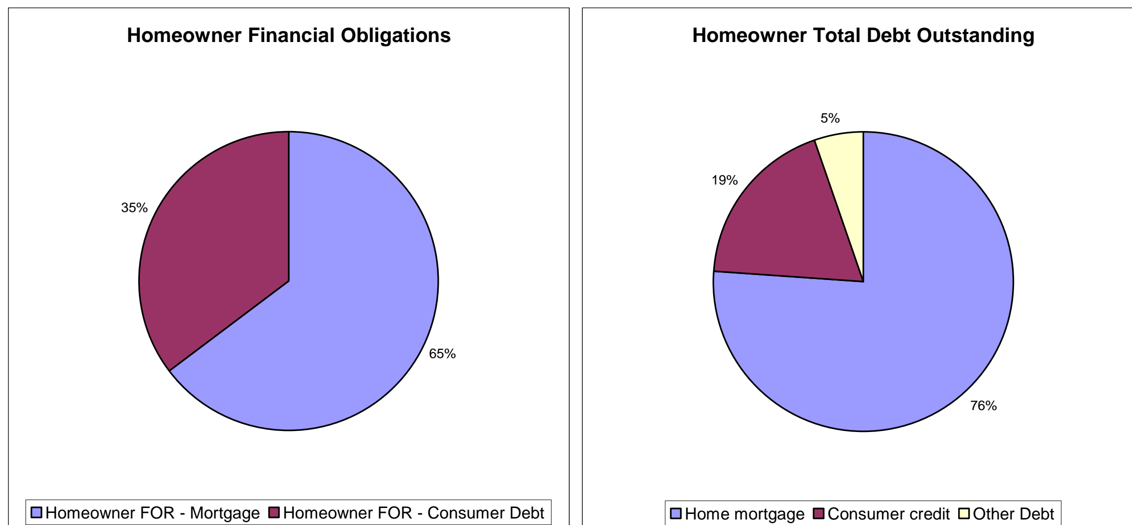
The third trend is the changing composition of debt in household portfolios. In the aggregate, mortgage debt has become a larger portion of consumer debt holdings. The amount of mortgage debt has increased the fastest. The Federal Reserve Flow of Funds data reports that a record 76 percent of all household debt in 2007 is mortgage debt, up from 69 percent in 2001. Housing remains the primary store of wealth for most Americans, constituting one fifth of total household net wealth. The median wealth of homeowners with annual incomes below $20,000 is 40 times greater than the median wealth for renters with comparable incomes. However, since the mid-1980s, mortgage debt has grown more rapidly than home values, resulting in a decline in housing wealth as a share of the value of homes.[24] This is in part a result of a change in tax law in 1986 that encouraged the substitution of mortgage debt for consumer debt. The overall increase in housing wealth has also undoubtedly contributed to the overall level of debt because it is well established that housing wealth stimulates consumer spending, and being able to tap into home equity easily and at a low cost encourages equity borrowing.[25]

Despite the fact that mortgage debt accounts for over three-quarters of what the household sector owes, as of the second quarter of 2007 it was less than two-thirds of all homeowner financial obligations (Chart 4). This apparent contradiction arises because most mortgage debt is long-term, with payments spread out over the course of decades, whereas most other forms of consumer debt are short-term. The enormous run up in mortgage debt over the last few years lifted the mortgage payments share of total homeowner financial obligations from 59 percent in 2003 to 65 percent in 2007, but is still shy of the record 68 percent of FOR set in the early 1990s. The substitution of mortgage debt for consumer debt has, however, arguably created more headroom for borrowers to take on more consumer debt as well.

[24] Greenspan and Kennedy (2007: figure 2)

[25] Belsky and Prakken (2004). Greenspan and Kennedy (2007) estimate the uses of home equity liquefied through cash out. Canner, Dynan and Passmore (2002) show that 1/5 of households used extracted equity for investments in financial assets, real estate, or businesses, ¼ paid off other debt, 1/3 used equity for home improvements and 1/6 for consumer expenditures. Bucks, Kennickell and Moore (2006) report that households mainly used HELOCs for home improvements and debt consolidation.

Chart 4: Mortgage Share of Debt Obligations and Debt Outstanding, as of 2007 Q2



Source: Federal Reserve Flow of Funds, as of Q2 2007

Despite the substitution of mortgage debt for other forms of debt, median household non-mortgage debt has increased for both owners and renters (Chart 5). Median outstanding non-mortgage debt for owners with such debt increased 30 percent from $10,333 to $13,000 between 1989 and 2004 in real terms. For renters with debt, the median debt outstanding was less than for owners but grew at more than two and a half times the rate, up 76 percent from $4,428 to $7,800 over the same period.[26]

Chart 5: Owner and Renter Non-Mortgage Debt, 1989 and 2004
Dollar values are in inflation-adjusted 2004 dollars

	Owners		1989-2004	Renters		1989-2004
	1989	2004	Change	1989	2004	Change
Median non-mortgage debt outstanding	$10,333	$13,000	26%	$4,428	$7,800	76%
Median non-mortgage debt monthly payment	$371	$376	1%	$193	$225	17%
Median non-mortgage debt monthly payment as share of income	7.3%	7.1%	-2%	8.0%	8.0%	0%

Source: JCHS tabulations of the 1989 and 2004 Survey of Consumer Finances.

[26] For low and middle income households the increase in non-mortgage debt appears to have been even greater, though small sample sizes limit drawing firm conclusions from subsets of owners and renters by income.

The same patterns do not hold true, however, for the median monthly non-mortgage debt payment as a share of household incomes. Over the 1990s, income gains and interest rate changes generally offset the impact of additional debt accumulation on required payments. Among renter households, the share of income spent on monthly debt payments remained unchanged between 1989 and 2004 at 8 percent. Among owners there was a slight decline in the share of income spent on monthly non-mortgage debt payments, from 7.3 percent to 7.1 percent over the same period, as many of them transferred their commercial and other debt into a lower-rate mortgage.

The fourth trend in household debt is the high share of low income households with debt service ratios that might be considered burdensome. We take 35 percent of income spent on non-mortgage debt as a delimiter for what constitutes a debt burden. Though the trends were the same when evaluated with other thresholds, small sample sizes require caution in interpreting these trends. The share of low-income renters with non-mortgage debt burdens in 2004 was about 13 percent and of low-income owners was about 12 percent. Even more striking, fully 29 percent of low-income renters had debt service burdens of greater than 20 percent.

The fifth trend is the growth in the share of borrowers with subprime loans and lines of credit, as well as of borrowers exposed to reset risks. According to Inside Mortgage Finance, the subprime share of all mortgage originations rose from 8 percent in 2002 to 20 percent in 2005 and 2006. Many of these recently originated subprime loans included initial discounts on the interest rates to borrowers, making them more attractive and accessible to those with low incomes. Now, two years out from the peak of subprime lending, those discounts are starting to expire and borrowers are seeing their interest rates and monthly payments rise. According to Credit Suisse, as of the end of 2006 almost $500 billion in subprime debt was scheduled to hit a rate reset within the next two years.

The sixth trend is the growth in penalty and fee-based income as a source of profit for credit suppliers and their financial intermediaries, including loan brokers. For example, credit card companies earn part of their revenue from fees charged to consumers. Some fees, like annual fees or application fees, are charged to consumers for the use of the card. Others are tied to specific types of purchases or actions (currency conversion, balance transfer and cash-advance fees), services (credit protection or insurance) or penalties (late payment, over-limit). Credit card fees have been rising steadily, with recent jumps drawing attention. The average late fee in 2005

was $34, with many major issuers charging $39 – a 27 percent increase in five years and almost triple the average fees from 1993. Over-limit fees are also rising, from under $13 in 1994 to over $31 on average in 2005.[27] As a result, the total revenue to card companies from fees was $24.4 billion in 2004, an 18 percent increase from 2003. This includes $14.8 billion in penalty fees (e.g. late payment and over limit fees), $6.1 billion in cash advance fees, and $3.5 billion in annual fees.[28] Similarly, fees on mortgages can be quite high. In general, the fees charged to originate smaller and subprime mortgages are higher as a percentage of the loan. Often these fees are rolled into the amount borrowed or borrowers are charged a higher interest rate in lieu of payment of upfront fees.

Milestones in the Evolution of Credit Markets

The debt trends observed are inextricably linked to the evolution of the credit markets. Several features of the credit delivery system have changed over the last ten or so years that have created opportunities as well as new challenges for businesses, consumers and policy makers. Each has important consequences and raises concerns. Most of the developments in consumer credit have occurred across the major forms of credit: mortgages, credit cards, auto loans, installment loans for durable goods, and student loans.[29]

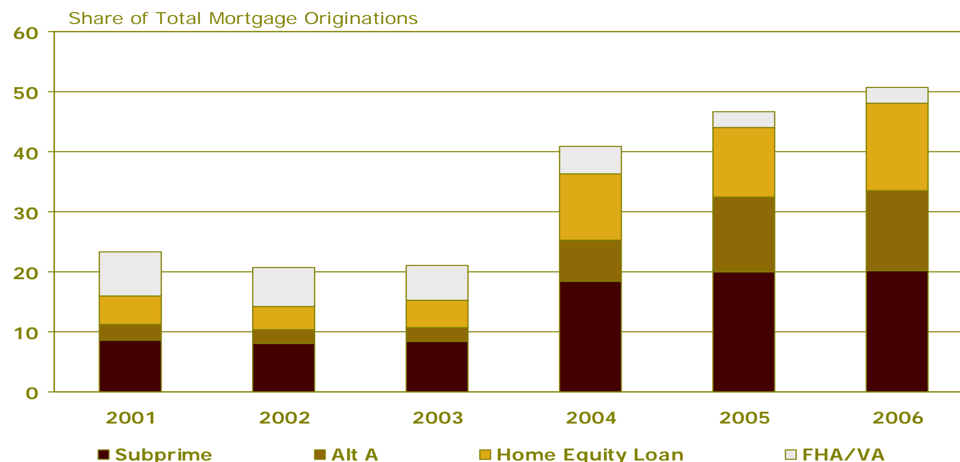
Pricing, assessing, and managing credit risk

Perhaps the most important of these changes is the shift from a credit rationing to a risk-based pricing system. Prior to 1990, the lending industry rationed credit to prime borrowers using tight underwriting guidelines to assess and control risk. Today, far fewer applicants are denied credit. Instead, they are offered credit at higher prices intended to reflect the greater risk posed by these loans. Yet, risk is not perfectly priced. In some cases, borrowers are charged rates higher than their underlying risk demands for lenders to earn a competitive risk-adjusted return, and in some cases are charged less. Furthermore, borrowers are frequently extended loans with interest rates above what the lender demands because brokers are permitted to mark-up or charge yield spread premiums on the loans. Subprime lenders also impose harsher terms, such as

[27] CardWeb, Jan. 17, 2006 and Feb.6, 2006
[28] CardWeb, as reported by Consumer Action, 2005
[29] For brevity's sake the term loan here is used to include lines of credit and mortgages to include mortgage loans or lines of credit both in senior and junior lien positions. While open-ended credit is different than closed-ended credit, for our purposes the matters discussed apply to both unless otherwise mentioned.

prepayment penalties or higher late fees, ostensibly to contain or compensate for greater risks. With these new risk pricing and management tools, subprime lending in the mortgage industry skyrocketed after 2003.

Non-Prime Lending Has Surged



Source: Inside Mortgage Finance, *Mortgage Market Statistical Annual.* as reported in the *State of the Nation's Housing*, Joint Center for Housing Studies, Harvard University.

At first it was mostly home equity loans and lines of credit that were offered and then sold into the asset backed securities market, then refinance loans, and eventually home purchase loans. Subprime lending began to blossom earlier in the auto lending and credit card industries. Auto loan origination totaled an estimated $520 billion and the Federal Reserve placed the total amount of auto loan debt at $800 billion.[30] Although differing terminology and various definitions of what constitutes a subprime auto loan cloud an accurate accounting for the sector, available sources estimate that the sector quadrupled in size from 1990-2000.[31] Estimates of the

[30] Leedom & Associates, LLC (2002) reports that the largest players in the auto finance industry, measured by total auto debt outstanding, are captive finance companies – the financing arm of the auto makers – who hold 39% of the total auto debt outstanding. Next largest are banks, who hold 30% of outstanding debt, followed by credit unions, holding 18% and then independent financing companies who hold 13% of outstanding auto debt. Independent finance companies range from multi-billion dollar corporations, such as CAC and AmeriCredit, with $12 billion in managed auto receivables, to small dealer-financers, or "buy-here, pay-here" dealers who may self finance their own used car sales aimed at those with bad or no credit, and may have fewer than 300 loans in portfolio. Buy-here, pay here dealers are a growing force in the industry, with 8.5-12 million annual car sales, or $80-100 billion per year in sales. Federal Reserve, G.19 August 7, 2006 : This number includes securitized debt.

[31] PIMCO Bonds, found at: http://www.pimco.com/LeftNav/Bond+Basics/2005/ABS_Basics.htm

growth in subprime credit card lending are harder to come by. In the credit card industry, there is a small subset of secured and subprime credit cards available for consumers with poor credit histories. Secured credit cards usually require a deposit equal to the credit limit on the card (as collateral on the revolving loan) which can be assumed by the card issuer if the consumer defaults. Subprime cards are virtually indistinguishable from prime cards except in some very important respects. These include higher fees and interest rates at the outset, lower credit limits, and less lenience from card companies on late or defaulted payments. Subprime cards have only been around for the last five to ten years, and are not as profitable as prime cards, so only a few card companies offer them. These cards are marketed directly to possible consumers with poor or no credit histories, those who previously filed for bankruptcy, or even those on the margin that might qualify for a prime or unsecured card but not know it. Card companies market the cards with tag lines like "despite your poor credit" or "even if you've been turned down before," leading consumers to believe that they may not qualify for a regular card.

Student loans, on the other hand, have generally been available to all comers and at a common price through federal loan programs. Yet, as the cost of education spirals beyond the federal loan limits and the availability of private student loans grows, risk-based pricing is now utilized for pricing private education debt as well. In fact, private student loan volume is growing much more rapidly than federal student loan volume, and if this trend continues, annual private education loan volume will surpass federal student loan volume within a decade. In 2004-5 lenders provided about 14 billion dollars in private loans, a 734 percent increase from a decade earlier, according to the College Board.[32] A large number of student loans are currently being deferred. According to the SCF, at any given time, payments are not being made on one-quarter to one-half of student loans.[33]

Although the subprime mortgage lending excesses that came to light in 2007 may result in a retreat from loan products that have especially high repayment risks and from lending to borrowers with weak credit records, there is reason to believe that standards will not retreat—or for long—to pre-2000 standards. Enough has or will be learned to offer credit to less than prime borrowers on a sustained basis.

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[32] Burd, Stephen (2006). As the Volume of Private Loans Soars, Students Feel the Pinch. *The Chronicle of Higher Education.* http://chronicle.com/free/v53/i05/05a02001.htm
[33] Dynan, Johnson and Pence. (2003).

Arguably, the second most important change has been the proliferation of credit products and terms. Ten years ago there were far fewer types of auto loans, credit card products, and mortgage products than are commonplace today. Nearly all mortgage loans, for example, were prime loans, had fixed rates or were annually adjusting, were self amortizing, and had no prepayment penalty. Today, there are literally hundreds of mortgage loan products offered to borrowers at multiple price points, with very different fee structures, conditions (including prepayment penalties, mandatory arbitration clauses, and credit life insurance), underwriting requirements (0 down or even 125 percent loan-to-value ratios and housing debt-to-income ratios that far exceed 33 percent), due diligence requirements (including no-income/no-asset loans and low documentation loans), and amortization schedules (with some not starting to amortize until after a set period, or even worse, accruing principal). Comparable developments have taken place in the auto loan, private student loan, and credit card industries. Once, these loans were offered at a single price and with similar terms. Now they are offered with variable rates, terms, and fees. New credit card teaser offers, leasing offers in the case of auto loans, and new fees have made comparing terms more difficult and beyond what an annual percentage rate disclosure captures.

A third noteworthy characteristic of credit markets today is the increasing reliance on statistical credit scores to make underwriting decisions, rate publicly-traded securities, price loans, and service loans. A single number has come to capture the credit quality of borrowers. Pricing, credit rating, and loan approval decisions are made based on this score. More recently, decisions about how to focus limited servicing resources have been made based on credit scores as well. Although increasingly lenders are also using individual credit lines in credit reports or customized credit scores to aid underwriting decisions, the importance of automated credit information in governing access and costs of credit has never been greater. The use of credit scores traces back to the 1970s in the case of credit cards, the mid-1990's in the case of auto loans, and the 1990s in the case of mortgage loans, with each taking a number of years before the majority of loan origination decisions involved these scores. This has removed much of the individual discretion of loan officers and brokers, but not all of it. In some cases, lenders may take a "second look" at rejected or cautioned applications and this often involves idiosyncratic judgments on the part of the underwriters. In matched pair self testing efforts, it was not overt discrimination that was found but more subtle differences that may not be noticeable to the

borrower such as not adequately describing product terms and features and closing costs or discussing only one type of product without adequately identifying needs (Lubin 2007).

Originating and funding credit products

Beyond the development of risk-based pricing, automated underwriting, and the proliferation of products, the method by which loans and lines of credit are originated and funded have changed dramatically. The driving force behind these changes has been the rapid growth of the asset-backed securities (ABS) market that funds many types of loans, but especially subprime loans and loans with non-standard features. As a rule of thumb, only subprime mortgage-backed securities are considered part of the ABS market. Mortgage-backed securities issued by Fannie Mae and Freddie Mac, as well as backed by prime and Alt-A jumbo loans (mortgage loans that are above the Fannie Mae and Freddie Mac conforming loan limits), are not. Instead, the ABS market is usually considered one in which newly originated consumer credit securities (backed by car loans, consumer loans, student loans, and credit card receivables, among others) and subprime first-lien and home equity loans and lines of credit are sold as securities.[34] More recently, Collateralized Debt Obligations (CDOs) have emerged as a significant part of the ABS market.

Like subprime lending, the ABS market took off during the 1990s. The birth of the ABS market is usually traced back to 1985 when Sperry Lease Financial Corporation sold securities collateralized by computer leases. That year total issuance was about $1.2 billion in current dollars. By 1991, new issuance in the ABS market totaled $50.6 billion in current dollars according to *Asset Sales Report*, an industry trade publication. Fast forward to 2005, and the Bond Market Association estimates that as of September 30, 2005 outstanding asset-backed securities totaled $1.923 trillion. Under the Bond Market Association's definition of the ABS market, "home equity loan" (which includes subprime first-lien debt as well) debt outstanding totaled $514 billion, credit card receivables totaled $361 billion, auto loans $226 billion, collateralized debt and loan obligations $290 billion, student loans $139 billion, and manufactured housing $35 billion. It is worth noting, however, that Credit Suisse places subprime mortgage debt outstanding that is held in securities in 2006 at a higher $825 billion. In

[34] See Vink, Dennis and Andre Thibeault (2007) *ABS, MBS and CDO Compared: An Empirical Analysis*. Choudhry and Fabozzi (2004) note that some mortgage loans other than subprime loans are subsumed under the ABS category labeled "home equity loans." These include certain high loan-to-value ratio loans (usually over 100 percent), open-ended home equity lines of credit, and loan pools that have been performing poorly.

addition, Credit Suisse places the debt outstanding in the mortgage-backed securities market for Alt-A loans at $722 billion. Though not considered part of the ABS market, this Alt-A market has driven a significant amount of recent mortgage lending.

The growth of the ABS and Alt-A markets are so important to understanding the opportunities and challenges that consumers, investors, and regulators now face. The growth of these markets is intertwined with both the surge of subprime and Alt-A lending and the increasing reliance on the less regulated non-bank channel, from the loan broker to finance companies and independent mortgage banks to private securitization.[35] This is because the ability of finance companies and independent mortgage banks to access the capital markets through private securitization has been instrumental to the expansion of Alt-A and subprime lending—remote investors have been more willing to purchase subprime debt than portfolio lenders such as banks and thrifts.

A fifth prominent feature of credit markets, and one made possible by the deepening of the asset-backed securities market, is the increasing reliance on non-banks to originate and service loans (and in the cases of some credit, such as payday loans, fund them as well). These include auto finance companies working through auto dealers, and mortgage finance companies working through their own branches as well as correspondent lenders and mortgage brokers. Part of this development worth highlighting is the increasing reliance on brokers in the housing finance, auto loan, and installment loan industries, and to some extent in the student loan market as well. Roughly 30 percent of prime mortgage loans are originated by brokers, and as much as 45 percent of subprime mortgage loans. Auto loans and leases are now usually arranged through dealers acting as brokers for third-party lenders. Many furniture and electronics retailers act as loan brokers as well. This development is a logical extension of the retail nature of lending and the costs associated with originating loans in-house. Brokers are a variable rather than a fixed cost to wholesale lenders. Using brokers therefore has appeal from a logistical standpoint in a cyclical industry like consumer credit. Also, it is less costly to use brokers to get to millions of borrowers at the point of sale than to do so through branches or offices with large fixed costs.

A sixth critical development—and one linked to the growth in non-bank lenders, the use of brokers, the emergence of risk-based pricing, and the proliferation of loan products—is what has been characterized as a dual market in which low-income and often minority areas are served

[35] Apgar, Bendimerad and Essene (2007).

primarily by one set of institutions, arrangements, and products and higher-income and white areas primarily by another.[36] Indeed, low-income and especially minority communities are increasingly being served by lenders specializing in subprime lending products. These lenders utilize different marketing strategies, offer different loan products, and deploy different servicing strategies and techniques than prime lenders. Marketing and servicing techniques are more aggressive. In addition, subprime lenders are mostly finance companies that rely more heavily on brokers than prime lenders.

For student loans, traditionally school financial aid officers selected the lender and processor partners to guide student and parent borrowers to preferred partners in an effort to assure quality. This prescreening may also have provided school financial aid officers the ability to negotiate on behalf of their students for better terms in return for higher volumes with lenders. Unfortunately, it has recently come to light that many of those same financial aid officers were receiving kickbacks and perks from the lenders, suggesting that, in some cases, the decisions surrounding the student loans were not made with the best interests of the students.

Lastly, the consumer credit lending industry has been consolidated considerably with increasing use of holding company structures to serve different markets through separate entities under single ownership. In 2005, the top 10 auto loan securities issuers account for two-thirds of all auto loan securitization, while in 2004, the top ten credit card issuers accounted for about 90 percent of issuances. In the case of mortgage lending, the top 25 mortgage lenders in 1990 accounted for 28.4 percent of $500 billion home mortgage originations. By 2005, the top 25 lenders accounted for close to 85 percent of the 3.1 trillion dollar mortgage market.[37]

The Broad Implications of the New Consumer Credit Marketplace

Taken together, the suite of developments in credit markets qualifies as transformational. Much of it occurred against a backdrop of the longest bull market in housing on record and a mild recession that ended before some of the most untested of loan products and the largest increases in subprime lending occurred. As the new credit markets are stress-tested, not in models but in the real world, the fuller implications of them will become more apparent. It is not too soon, though, to conjecture about some of them.

[36] Ibid.
[37] Inside Mortgage Finance. 2005.

Capital Market Funding and the Unbundling of Origination and Funding

The opening up of the capital markets to securitized consumer credit not only allowed American consumers to tap into much deeper global capital pools, but also to tap into a wider range of investors with a broader range of risk preferences and tolerances. Many have attributed the lower interest rates consumers have enjoyed to the integration of global capital and product markets. The downside of these developments, however, may be that these same investors may be too remote from their investments to know the true risk and value. The development of CDOs has exacerbated the problem, making it difficult for investors to look through to the underlying loans that generate the CDO cash flows. While less than complete information is available on the loans backing ABS and mortgage-backed securities as well, the problem is more acute for CDOs. As a result, investors must rely on a limited number of third-party ratings agencies that may model risk incorrectly. If there is a miss on the side of underestimating risk, markets are vulnerable to disruption. Others, though, point out that unless the risks come home to roost across a large pool of assets at the same time and with prices that do not cover investors, these disruptions can be contained because risk in one asset class in one location is divvyed up among so many.

The unbundling of loan origination functions once performed by a single financial institution and the increased funding provided by investors in securities backed by consumer credit have brought benefits. These developments have allowed for economies of scale and lowered the costs of origination and servicing, paving the way for consolidation. But they also mean that non-banks play a larger role in origination and servicing than in the past. These non-banks are not subject to the same examination regimen and regulations as deposit-taking institutions. As a result, regulation of these entities, including of brokers, is the domain of the states. In addition, it means that agency risk is greater and that regulation, examination, and enforcement more decentralized and splintered. Also, it means that investors and even investment bank underwriters of loans have reduced potential exposure and are not liable for the actions of the originator at the point of sale except under narrow circumstances. Finally, the holding company structures of which these non-banks are increasingly a part raises the question of whether banks are exploiting differences in regulations of non-banks for business ends.

The increasing reliance on brokers as a way to lower origination costs and establish a variable cost structure also has distinct implications. For one thing, it has amplified agency risk because the counterparties originating loans are compensated by fees and have little capital at

risk in many cases. While these brokers should have an incentive not to defraud lenders or do a sloppy job of underwriting because it can cause lenders to cease paying them to originate loans, it is a difficult system to police. Moreover, because lenders rely on brokers for business and market share, they must compete for their business. This is a classic collective action problem. Lenders might be better served by moving away from a system that relies so heavily on brokers but no one lender will take unilateral action because of the loss of market share it would suffer.

In addition, the competition for loans originated by brokers has resulted in offering yield spread premiums in the case of mortgage loans and mark-ups in the case of auto loans (and even in student loans in some instances) to brokers. These premiums and mark-ups are fees or interest rates beyond what the lender buying the loan requires that lenders allow brokers to retain as a source of income. This, in turn, creates an incentive for brokers to try to charge some borrowers more than what the lender demands. While this can simply be a form of compensation for loan applications that are more costly to generate, it can also have disparate impacts or result in intentional discrimination. Indeed, several cases have been brought and settled out of court against auto and mortgage lenders for singling out protected classes for different treatment.

Automated underwriting, subprime lending, and product proliferation

As for the reliance on credit scores and automated underwriting systems, there is evidence that it has expanded access to credit to low-income household and minorities. The higher incidence of subprime mortgage loans among these groups is partial evidence of this.[38] But it is not just subprime markets that apparently opened up to these groups. The results of work done by Freddie Mac suggest that access to prime mortgage loans has expanded as well.[39] Unfortunately, no good data are available on the incidence of subprime credit cards and auto loans by income or race and ethnicity of borrowers. Therefore, the extent to which the use of these methods is behind the large increase in the share of especially low-income and minority households that carry these forms of debt now relative to 1989 remains uncertain.

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[38] It is partial because it is possible that some of the increase is a counterproductive shifting of prime to subprime products. Courchane, Surette, and Zorn (2002).

[39] This is as opposed to using more powerful risk assessment tools to merely expand access with out taking on risk as has been achieved to at least some degree in the prime markets. There, more powerful risk models permitted identification of more loan applicants with compensating factors that made them prime risks when previously thought not to be.

Among the benefits of the greater access to credit made possible by relaxing credit standards (and using automated underwriting systems to relax standards in the prime market without adding to credit risk) are that it has allowed more consumers to smooth their consumption in line with expected future income and to use credit to acquire assets. Homeownership is so central to wealth accumulation that opening up the possibility to build wealth through leveraged purchase of a home is a significant potential plus, though one that is not without its risks.[40]

Of course, lending to borrowers with a higher predicted probability of default is riskier for the borrowers themselves and the lenders that advance them the money. Indeed, a higher proportion of riskier subprime borrowers and those with riskier mortgage products get into trouble than prime borrowers faced with similar sets of economic hardships.[41] As an example, in 2006 the serious delinquency rates on fixed-rate prime mortgages were 0.78 percent, fixed-rate subprime mortgages 5.45 percent, and adjustable-rate subprime mortgages 7.99 percent.[42]

The implications of this are significant, especially when combined with the clear concentration of these loans in particular places. First, it means that more households will end up in default or in foreclosure under any given set of such laws or economic environments than would have otherwise been the case. Second, it means that households that fail to repay loans will face higher future borrowing costs or be precluded from borrowing. Third, the concentration of at least subprime mortgage loans in low-income and minority communities means there is potential for negative externalities from foreclosures.[43] Fourth, since many of the borrowers and products have not been stress-tested, it can result in higher than expected investor losses that lead to a pullback in credit for a wider group of borrowers. A case in point is that the worst performing book of mortgage business was originated in 2006 – a year in which a high proportion of these loans layered subprime credit records, lax documentation and verification of income, and risky loan products in a rising interest rate. Just six months later, 6.1 percent of subprime loans from 2006 were in default compared to 1.7 percent of subprime loans originated

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[40] For more information on this topic see two books by Retsinas and Belsky (2002 and 2005)

[41] The one exception may be what will happen when faced with negative net equity in the case of mortgage loans since there is not enough experience with subprime borrowers to know if they will be more prone to walk from their mortgages than prime borrowers. One analysis done by MGIC suggests that subprime loans may not perform worse in falling home price environments.

[42] Serious delinquency is defined here as the sum of loans 60+ days late and started in foreclosure and the numbers are weighted averages from the Mortgage Bankers Association: National Delinquency Survey.

[43] Apgar and Duda (2005)

in 2003, and after nine months, the default rate on 2006 loans was 7.5 percent compared with 2.6 percent of 2003 loans.[44] Finally, the share of all loans entering foreclosure stood at a record high since data were first reported in 1979, as 520,000 loans entered foreclosure in the first two quarters of 2007.[45]

More generally, the risk-based pricing system (and its manifestation in a dual market structure) creates the possibility to discriminate against protected classes on the basis of price or features. Under the credit rationing system, discrimination and unfair treatment took the almost exclusive form of discouraging or denying loan applicants. Now consumers can be the victims of discrimination or unfair treatment without ever having been denied a loan. It was easier to detect discrimination when a common set of underwriting rules was embraced with small deviations by all lenders. It is far more difficult to do so when lenders underwrite using very different rules, at a wide range of prices based on the experience of their own loan portfolios, and on the basis of particular loan conditions and terms. Detecting patterns of unfair or discriminatory treatment on the basis of price, fees, terms, and conditions occurs in the complicated context of an industry that has yet to agree on common practices and prices. It also raises the important question of whether a geographically segmented and differentiated strategy for originating and servicing loans in underserved markets may constitute unfair treatment in and of itself. In other words, it is conceivable that every borrower is treated the same by a subprime lender, but the fact that the borrower ended up with a subprime lender results in unfair treatment because the subprime lender treats all its borrowers unfairly while prime lenders do not..

Last but certainly not least, the proliferation of products has profound implications for the experience of the consumer in the marketplace as well as their access to capital. On the one hand, it has provided consumers with a wider range of choices to meet their credit needs and manage their financial affairs. On the other, it has significantly complicated credit product choices that are inherently difficult to make. It makes it harder for consumers to divine which products they should be able to qualify for and at what lowest cost unless. To do so incurs steep search costs. It also makes it difficult for consumers to compare products because loans have subtly different features that are difficult to value separately (such as a lower late fee or the option to prepay a mortgage loan). This leaves consumers vulnerable to making missteps and to unfair treatment.

[44] Data provided by First American LoanPerformance.
[45] From the Mortgage Bankers Association National Delinquency Survey.

Consumer Behavior and Market Outcomes

Perfectly competitive markets rest on the assumption that consumers have fixed preferences and act rationally based on perfect and complete information to maximize their utilities through exchange (McFadden 2006). These and other strict conditions required of perfectly competitive markets are seldom met completely in the real world. In the case of credit markets, consumers lack perfect information on prices and product features, have preferences that are malleable and subject to influence by marketing and the framing of choices, and must make decisions under uncertainty that involve judging the probability of future events. In making these judgments, experimental evidence suggests that people are prone to make certain errors.

Imperfect information and lack of price transparency

With only a few possible exceptions, it is difficult for consumers to gather enough information on the prices of credit products to make informed choices. The explosion of credit products with different rates, fees, terms, and conditions make comparison shopping extremely difficult. While the Schumer Box was imposed on purveyors of credit cards to facilitate the comparison of credit card offers, there is no comparable requirement in the auto and mortgage loan markets. Mortgage and auto loan brokers have detailed information on the prices and products offered by multiple lenders, but they seldom share this information with borrowers. Instead, they suggest a lender and a product to the borrower. Lacking information on potential competitive bids from other lenders and hard pressed to value individual loan terms and features, borrowers must rely on the advice of their brokers. Furthermore, both auto and mortgage brokers can and often do take advantage of their asymmetric information by charging markups or yield spread premiums that consumer are unaware of. Taken, together there is a striking lack of transparency in pricing, especially in mortgage, installment loan, and auto loan markets.

Even those consumers who try to comparison shop across lenders by gathering information from multiple lenders may find it hard to compare products anyway. Rate sheets of lenders are not widely disseminated. Gathering information involves a time consuming process of contacting lenders and is made a great deal harder by the fact that it is not until after a loan application has been underwritten that a borrower knows what price they will actually be charged and what loan features they will actually qualify for. Even if consumers do know their credit rating, it is unclear to the consumer what risk grade they will be assigned by any particular lender

because most firms use their own proprietary scoring models and modify pricing based on the features of the loan.

Cognitive biases in decision-making

Behavioral economists have produced a number of robust findings about cognitive biases in the ways that consumers make decisions in general and credit decisions in particular. In large measure, these biases come into play when consumers make decisions under uncertainty that require guesses about the probability of future events and placing relative weights on present versus future utilities. In reviewing a wide body of literature on behavioral economics, Laibson and Zeckhauser (1998) conclude that biases are more likely to appear when decisions involve risk and uncertainty, when multidimensional goods are involved that are difficult to compare, and when "some of the dimensions are not readily priced." Credit products have all of these features. A study of a national lender that works through a broker network provides empirical confirmation that these features lead to consumer confusion (Woodward 2003). Consumers made more optimal choices when presented a single mortgage payment measure than those that did not. Furthermore, consumers paid more on average for complex mortgage products because the individual price components were difficult to discern and fairly value. Consumers are stymied because it is hard to value all the terms and conditions of a loan. This makes it difficult to compare total loan costs.

Consumers have a difficult time accurately assessing the probability of future events. Most people have little information on which to make probabilistic assessments about the likelihood of idiosyncratic events like death, divorce, the pace of wealth accumulation, changes in incomes, consumption demands, and moves from one home to another, as well future exogenous events like interest rate changes, recessions, house price changes, and changes in tax and other laws and regulations. Even professionals who are paid to assess and price risk based on the probabilities of certain outcomes frequently get it wrong. For example, that is why some lenders incur losses and why ratings agencies often downgrade their credit ratings as events unfold that prove their initial probability judgments incorrect.

One common bias is to overweight the present and discount the future. Put another way, this so-called "hyperbolic discounting" is the tendency to prefer smaller payoffs now to larger payoffs in the future and to put less weight on the probability of certain negative future events

than on present satisfaction. This means that consequences that may occur in the future have less bearing on present decisions than immediate consequences. Hyperbolic discounting has been used to explain why consumers tend to borrow so much at high interest rates (Harris and Laibson 2001, Gabaix et al. 2006). It also is viewed as underpinning other psychological tendencies, such as problems with commitment and self-control and a desire for instant gratification.

Another critical and well-documented bias is optimism about the future. This is the tendency to believe that one's own chance of experiencing a bad event is the less than the average person's chance.[46] Alone, but especially when combined with hyperbolic discounting, this optimism bias can lead consumers of credit to take on risky loan products even if they have a fairly precise estimate of the average risk of events that would make it difficult or impossible for borrowers to repay their debts. It almost certainly helps explain why consumers recently flocked to products that placed them at much higher risk of having problems repaying their loans, such as interest-only mortgage loans, adjustable-rate loans, and payment option mortgages.[47] The record default rates on these loans in 2007 suggests significant risk-taking on the part of consumers and deep discounting of future probabilities of events like interest payment shocks and house prices declines.

In the context of credit, a particular cognitive bias that has great force is the clear tendency for most people to err on the low side when equating annual percentage rates to monthly payments. Nearly everyone assumes that the APR associated with a monthly payment is lower than it actually is. By one estimate, the underestimate can be much as several hundred basis points on average (Stango and Zinman 2006). This leaves consumers vulnerable to offers that tout low monthly payments that equate to high interest rate charges.

A large class of additional cognitive biases results from the common use of heuristics or "rules of thumb" when assigning probabilities to future events and making complicated decisions.[48] Faced with complex decisions, consumers often resort to fairly predictable

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[46] Jolls (1998) provides a summary of the research on the optimism bias and how it influences a range of product choices.

[47] As Espstein (2006) points out, however, it does less well in explaining why nearly half of credit card borrowers payoff their balances each month.

[48] It is now well established that under these conditions consumers are apt to adopt short-cuts and rules of thumb to make decisions—often called heuristics Tversky and Kahneman (1974, 1979, 1981) were the first to point this out and formalize it, but since their early work on the subject a large body of experimental literature has confirmed and extended their initial findings, as well as expounded on the implications of these decision making errors for market operations and outcomes. Several excellent review articles have recently been written. See for example Laibson and Zeckhauser, 1998 and Fundenberg, 2006. Further, this attention on how consumers actually make decisions rather

shortcuts to make processing information more manageable. Gabaix et al. (2006) pointed out that the use of heuristics makes sense when there are diminishing marginal returns to search and information processing costs. Nevertheless the use of heuristics often leads to judgment errors. One such common bias is to anchor final answers to a problem around an initial starting point, guess, or salient feature. It can be shown that this leads to overconfidence in one's own estimates of future probabilities, because self-reported confidence intervals around an anchored probability guess are inevitably too narrow. Hence, guesses about the low probability of exposure to negative events take on an air of greater certainty than is actually warranted. This bias also accounts for the tendency for consumers to negotiate prices from arbitrary starting points dictated by suppliers, such as the manufacturer’s suggested retail price or dealer invoice in the case of automobiles. The anchoring heuristic leads to judgments which are unduly influenced by the starting point. Thus, if the guess about the starting point is wrong, judgments based on it will be erroneous as well.

While errors in credit decisions are more common in the presence than the absence of processing deficiencies, such as innumeracy (Peters et al. 2006) or inaccurate estimates of one’s own credit score (Courchane et al. 2004), these errors are common even in the absence of such deficiencies. Take, for example, the results of a study of business school students at the University of Chicago in which they were asked to pick the best way to finance a furniture purchase (Shu 2003). Participants were given three pairs of loan payment schedules and instructed to choose the preferred schedule from each pair. Though mathematically there was one option that minimized the discounted present value of the loan and should have been selected by the majority of these trained business school students, not all students were in agreement as to which product cost the least. Instead, students used a variety of simpler heuristics to arrive at a choice among the options, including minimizing the total undiscounted loan payments and minimizing the length of the loan term. This reveals that often incorrect rules of thumb are used even among groups with a more sophisticated understanding of economics and finance than the general population. Similarly, Epstein (2006: 113) concluded that: “Most students who take probability theory find many of its results strongly counterintuitive, only to be baffled by the mathematical formulas that promise some clarity . . . persons who make logical

than assuming they make them in rational ways without error spawned an entire field of behavioral economics that focuses on how economic decisions are shaped by situational factors, social influences, and cognitive processes. These developments have led to a richer understanding of markets.

errors in calculation are likely to make inconsistent judgments about their preferences, and so in ways that can hurt them in both the short and long run."[49]

Framing, marketing social influences, and the malleability of choices

The study of behavioral economics has also produced a considerable amount of experimental evidence that the framing of choices has a significant influence on consumer preferences and decisions. As a result, credit suppliers can exploit known cognitive biases to achieve desired outcomes. Glaeser (2004: 408) neatly summed this up by stating that market outcomes "will reflect the interaction of interested suppliers of influence and consumers who then respond to that influence." And as Gabaix and Laibson (2006: 505) bluntly put it: "when consumers make mistakes, firms will try to exploit those mistakes."[50] Indeed, they find evidence that even competitive markets will not always induce firms to reveal information that would make markets more efficient because they have an incentive to shroud information from consumers. This is the case when the equilibrium price reflects a cross subsidy from naïve to sophisticated consumers. Understanding how framing and social influences shape credit decisions, therefore, is essential to a full appreciation of the challenges inherent in today's consumer credit marketplace and what to do about them.

A recent experiment conducted by a lender in South Africa provides the most compelling evidence that framing matters in credit decisions (Bertrand, Mullainathan and Shafir 2006). The lender sent letters offering incumbent clients large, short-term loans at randomly chosen interest rates and with randomized psychological features embedded in the offers. These features were selected to test the influence of specific types of frames and cues shown to be powerful in the lab in influencing behavior but that from a normative perspective should have no impact on the

[49] The tendency for consumers to make systematic errors in judgment is further underscored by a recent controlled experiment conducted by a large U.S. bank in which two credit card options were presented to consumers (Agarwal et al. 2006). Only one was clearly optimal for any given consumer. Fully 40 percent of consumers in the trial picked the option that did not minimize their net costs. However, the same experiment also revealed that there is an error correction process so that over time only a small fraction of those that made initial mistakes stuck with their initial choice. While this is a promising finding, at least in the context of credit cards, initial errors like these can have more lasting consequences in credit markets were switching is more costly or impossible. Switching is often more costly in mortgage and auto lending markets and may be prohibited or heavily discouraged by prepayment penalties.

[50] They go on to show that suppliers may intentionally shroud information to maximize profits even in perfectly competitive markets with costless advertising and even though it results in allocational inefficiencies. As examples, they give the shrouding of information about the add-on costs of ink replacement to operate printers and of the fees associated with bank accounts.

decision to take out a loan whatsoever.[51] As expected, the interest rate offered did significantly affect loan take-up. The confirmation of the importance of framing, however, came in the form of the significant influence on take-up rates of many of the psychological features that have no normative bearing on the attractiveness or need for a loan. The average effect of these features was equivalent to a 50 basis points difference in interest rates.

But some features had strikingly large effects while others had little or no effect. Remarkably, using a simple description of a single offer rather than of multiple terms and rates had the same effect on credit demand as dropping the interest rate in the offer letter by fully 2.3 percentage points. This effect is consistent with other studies which find that take-up is lower the more choices a consumer is confronted with.[52] The implication is that credit offers that are simple and not confused by other alternatives will increase take-up. In addition, as predicted by Tversky and Kahneman's prospect theory,[53] whether the identical offer was framed as a gain or loss also had an inordinate influence over whether or not a consumer took out a loan. Framing the offer as a loss (a missed opportunity) increased the take-up rate of the loan. This is consistent with other experimental evidence (Thaler 1980) that demonstrates expressing outcomes as losses lead more to take action than expressing them as gains.

As for the strong cognitive bias of underestimating annual percentage rates from monthly payments, it leaves borrowers vulnerable to sales pitches that stress monthly payments and provides an incentive for lenders seeking to charge higher than competitive market rates to obfuscate the underlying interest rate. One study found that biased households in 1983 (the only available year) paid several hundred basis points more for loans than those that were unbiased even after controlling for loan type and borrower characteristics (Stango and Zimmerman 2006).[54] Indeed, it is now common knowledge that borrowers focus on monthly payments not

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[51] Types of frames and cues tested includes such things as the description of the offer (inclusion of a single example of an interest rate and monthly payment or of multiple examples of terms and rate), whether a comparison to the rates of a competitor were included in the offer, whether the offer was framed as a savings or loss, whether the gain or loss was expressed as an absolute amount or a percentage, subtle features like photos included, and suggestion effects about the possible uses of the funds.

[52] For an example, see Iyengar and Lepper (2000).

[53] Prospect theory contends that consumers first code a choice as implying a gain or a loss from a reference point and then evaluating it (Tversky and Kahneman 1979). Losses loom larger than gains for most consumers. Thus, casting a choice as incurring a loss or creating a disadvantage if not made is more apt to spur consumers to action than if it is cast as a gain or a disadvantage if taken.

[54] They also found that these effects were larger for consumers who worked through finance companies that those who worked through banks.

interest rates, and that monthly payments are typically highlighted even in print ads while annual percentage rates (if shown at all) are relegated to the fine print.

Optimism and hyperbolic discounting leave consumers vulnerable to a series of market pitches that emphasize present gratification and deemphasize long-term costs and risks. To the extent that products are designed specifically to appeal to consumers' present-minded focus and discounting of future risks, these biases can also result in greater market penetration even if prices are high. Consumers are attracted to sales pitches that promise no money down and no payments for some period of time. Even if they understand the average risks associated with such products, they may take them despite their higher costs and greater risks even if other less costly options are available to them. And the presumption that people have the wherewithal to accurately assess the average risk of certain loan features, like adjustable rates in the case of many types of loans or possible future modifications of loan terms in the case of credit cards, is in and of itself a large leap of faith.

Another framing decision by suppliers that is increasingly viewed as having a large influence on the type of product and the lender consumers choose, is how quick, predictable and easy it is to qualify for a loan. Groundbreaking research conducted by Fannie Mae showed that mortgage customers fear rejection and place a premium on a high probability of getting approved.[55] Champion Mortgage's slogan sums up an attempt to capitalize on this premium: "when others say no, we say yes." This may permit lenders to compete on the basis of ease of approval rather than price. Indeed, just the convenience provided by easy applications and fast approvals may have strong appeal quite apart from assuaging fears of loan rejection. Several public health studies show that the convenience of being close to a clinic and having a map that marks the location of a clinic can strongly influence positive responses to public health campaigns. This means that lenders that reach out to borrowers where they live, work, or pray, and offer fast and easy approvals have an upper hand in competing for customers.

The challenges of paternalism

While it is tempting to search for paternalistic solutions to the many problems that consumers face in a marketplace that has been described by McFadden (2006) as a "contest," there is not clear agreement about whether a consumer's credit choices should be second guessed.

[55] Yin (2003) quotes Vada Hill, previous Marketing Director from the Fannie Mae Foundation.

Some argue these choices reveal their preferences while others counter that households may not express their preferences optimally for a host of reasons that should be causes for concern because they result in welfare losses (Campbell 2006). Furthermore, it may difficult to come up with a normative yardstick for measuring these solutions. While there is a way to compare the long-term costs of a loan under alternative scenarios about the course of future events, a consumer's ultimate goal may not be to lower the long-term cost but instead to minimize initial payments even if the cost of doing so is added risk of higher long-term payments or payment shocks. Although the tendency for many consumers to underweight the future may strike many as foolish, from another perspective it can be seen as a legitimate preference. Just as many may rail against the diets or exercise habits of others but do not attempt to dictate those most personal decisions, many believe that people's discounting preferences are their own and should not be faulted. The problem arises when consumers of credit do not understand these preferences or if the marketing and framing leads consumers to hold preferences they might not otherwise have, and that diminish the consumer's utility.

There is often a presumption that the behavior of low income households is in some sense non-rational. However, rationality is itself subjective and depends on the frame. The choices when you are poor, out of cash and have more limited options appear less than rational to those that have steady incomes exceeding their expenses.

Sunstein and Thaler (2003) made a strong case that in many situations the choices of consumer are inevitably influenced by those that frame choices like businesses, government, and nonprofits. Thus, it is preferable for business, public officials, and nonprofits to be deliberate and self-conscious about these choices rather than ignore them or fail to recognize their consequential nature. Surely, all of marketing is an effort to influence behavior and, judging by the sums spent on it, it has an effect. Sunstein and Thaler provided many examples of how default rules, framing effects, and starting points shape consumer behavior. They considered, as a simple example, the inevitable choice of what food to place at the start of a cafeteria line. This choice influences the take up rate of food, but only one food can be at the start of the line. The food placed there can be random, intended to maximize firm profits, or encourage more healthful eating. Sometimes, paternalistic judgments about what is best for the consumer prevail, whether or not the normative path that leads to the greatest consumer welfare is known.

The Efficacy of Credit Market Regulations

While it is not the purpose of this paper to describe in detail the complex set of regulations that govern credit transactions and the financial institutions that engage in them, some broad brush observations are useful to help explain the nature of the concerns raised about the compliance costs and effectiveness of the current system in protecting consumers and securing the safety and soundness of the financial system.

Federal laws, as well as elements of the Uniform Commercial Code adopted by nearly all states, influence all credit transactions regardless of how and where the financial institutions engaged in them are chartered. Antidiscrimination laws, laws banning unfair and deceptive business practices, and laws demanding certain consumer disclosures fall under this rubric.[56] Others laws and regulations depend importantly on the type of financial intermediary and how and (and in the case of state-regulated financial institutions) where they are chartered. Deposit-taking institutions, because they receive federal deposit insurance, are subject to certain federal credit regulations that other financial institutions are not, such as the Community Reinvestment Act (CRA). CRA places an affirmative obligation on banks and thrifts to meet the credit needs of all aspects of their communities, including low and moderate-income communities and individuals. In addition, even when chartered at the state level and whether chartered as a thrift or bank, deposit-taking institutions are subject to regular examination by federal regulators.[57]

Although some non-banks are under the orbit of federal examination because they are parts of bank holding companies regulated by the Federal Reserve, most are examined by state regulators if at all. Fannie Mae and Freddie Mac, the large housing government sponsored enterprises, are separately regulated by the Office of Federal Housing Enterprise Oversight and the HUD. The securities markets and the investment banks that serve them are regulated mostly by the Securities and Exchange Commission, National Association of Securities Dealers, and listing requirements of the exchanges on which they are registered. Only the SEC and NASD

[56] These include the Equal Credit Opportunity act, the Federal Credit Reporting Act, the Fair Debt Collection Practices Act, the Credit Repair Organization Act, the Financial Modernization Act, the Truth in Lending Act, the Fair Housing Act, the Home Owners Equity and Protection Act, the Real Estate Settlement and Procedures Act, and the Home Equity Consumer Loan Act.

[57] However, whether they are parts of bank holding companies, state banks or thrifts, national banks or thrifts, or credit unions determines which regulatory agency or agencies oversee their activities. State chartered banks and thrifts along with non-bank financial institutions and intermediaries (including finance companies, mortgage banks, loan brokers, appraisers, and insurers) are state regulated and may be state licensed or examined.

have self-policing aspects.[58] Thus, the type of financial institution and where it is chartered largely determine the nature and intensity of regulations, examinations, and enforcement it faces. Meanwhile, the Federal Trade Commission is charged with enforcing laws that ban unfair and deceptive business practices but lacks examination authority.

In addition to variations in regulations that stem from the type of financial institution and where it is chartered, there are also some variations in regulation based on the type of credit. Mortgage and associated real estate transactions are the most regulated of credit transactions at both the federal and state levels (and even to some degree at the local level). While state laws intended to regulate the offering of these products are too numerous and rapidly changing to recount here, some federal examples are worth noting.

With respect to mortgages, the Home Mortgage Disclosure Act (HMDA) is unique in the level of public disclosure of lending activities it requires of loan originators and the Home Ownership and Equity Protection Act (HOEPA) is unique in the federal restrictions it places on the terms of mortgage terms it bans and the heightened public disclosures it requires. The Real Estate Settlement Practices Act (RESPA) is exclusive in the disclosure of fees it demands at real estate settlements, while the Fair Housing Act has additional bans it places on discrimination in underwriting and granting mortgage credit. The Alternative Mortgage Transactions Parity Act (AMPTA) is unique in its preemption of state laws banning certain mortgage terms and practices. With respect to credit cards, the enactment of the 1988 Fair Credit and Charge Card Act with the well known "Schumer Box" is unique in the consumer disclosures it demands of credit card issuers. Lastly, only ten categories of debt excluded from discharge under the Bankruptcy Code 523 (one is federal student loan debt).[59]

Finding general faults with the regulatory scheme

The tangle of regulations governing credit transactions and financial intermediaries is the subject of much criticism. Not surprisingly, one of the most common criticisms is that the cost of complying with all of these financial, fair-housing, and credit regulations is great and has not been measured against its benefits (Jackson 2005). Another is that regulations may have unintended

[58] Freeman (200X) refers to forms of regulation like the SEC as audited self regulation since the federal government appoints its commissioners and deputizes it to promulgate and enforce rules of conduct and laws.
[59] For a short summary of recent case law related to student loan debt during bankruptcy, go to: http://www.coheao.org/resource/data/telesem0203/ZaunHandout.doc

consequences that range up to and include discouraging competition, increasing the cost or credit, and preventing lenders from offering products that consumers might otherwise demand.[60]

While few view the present regulatory system as perfect, many view it as sufficient because it already bans discrimination, demands reasonable consumer disclosures, gathers and disseminates certain public information on critical lending activities that can be used to highlight apparent problems, and prohibits unfair and deceptive lending practices. Critics are the more vocal, however, and have found multiple faults with the present regulatory system. Many of their criticisms have gained more traction since some of the problems in the subprime mortgage market came to light in 2007, and many have special cogency because of the proliferation of credit products and the reliance of consumer credit on the capital markets. Only some of the most significant and general of the many criticisms leveled against the system are discussed here.

The sheer variation in the regulation, examination, and enforcement of the actions intermediaries in the consumer credit system is a major source of complaint for both industry groups and consumer advocates. Many businesses take the position that it makes operating across state lines difficult and argue for federal pre-emption of state laws. Although some would welcome more federal preemptions, there is a vast difference of opinion over whether those preemptions should be aimed at lowering the bar below the more rigorous state standards already in existence or raising them to a federal standard based on the toughest state standards. Consumer advocates take the view that state efforts have afforded consumers at least some consumer protections in some states though they castigate states for lax oversight of many market players not regulated under the federal banking system. Advocates have a range of positions, from fighting for more state resources for regulation to applying a minimum federal standard based on more rigorous existing state standards but allowing states to go beyond these standards. A case in point is the debate over whether to pre-empt state predatory lending laws, and if so, with what specific provisions under new federal laws and regulations.

Regardless of the view one takes of specific regulations and the uneven compliance and enforcement of violations, it is clear that financial institutions can exploit the unevenness of regulation. For example, the opportunity to work through financial institutions that do not have to comply with the Community Reinvestment Act may have encouraged banks to acquire finance companies as affiliates rather than making them operating subsidiaries of the banks. At minimum,

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[60] Staten (2007)

this unevenness has played a part in the shifting of market share from banks and thrifts subject to CRA to their non-bank counterparts. In addition, even among federal banking regulators some bestow greater flexibility on lenders than others. The Office of the Comptroller of the Currency has been especially aggressive in asserting the powers of national banks and so a national charter bestows the greatest flexibility. However, with that extra power comes arguably the most extensive examination regimen of all the banking regulators. The Office of Thrift Supervision has been similarly aggressive, and some argue that the two regulators are in competition to woo financial institutions to their charters by offering ever greater powers. It is also clear that the variation in regulations can alter the nature of credit supply and delivery itself. As an example, when risk-based capital standards were applied to banks and thrifts, the market moved more towards capital market funding to replace the debt with investors not subject to such requirements.

In addition, state licensing and examination of the financial institutions is highly uneven. As a result, in states with weak examination and enforcement regimens, the Federal Trade Commission is left to combat unfair and deceptive lending practices, yet it lacks the authority and resources to examine institutions for violations. This state-by-state variation leaves some consumers with minimal protection. Regardless of whether state or federal agencies are involved with detecting violations of credit law, the sheer number of financial intermediaries engaged in auto, installment loan and mortgage lending make it difficult to examine each of them. While licensing standards for brokers would not be that costly, examination of them on a periodic basis would not be easy or cheap. Yet, this an issue that even the Chairman of the Federal Reserve Board in 2007 targeted as a major concern stating in testimony before Congress that: “the recent problems in subprime lending have underscored the need for better disclosure and new rules but also for more uniform enforcement in the fragmented structure of brokers and lenders” Edmund (2007).

Another general complaint with the present system is that it relies too heavily on consumers to detect discrimination and unfair or deceptive business practices for enforcement, as well as on the presumption that consumers can adequately protect themselves if they have enough information about the costs and risks of credit products. But it appears likely that even if consumers have enough information (which is doubtful) they are still prone to cognitive biases that lead to judgment errors and are vulnerable to manipulation through framing and marketing.

Finding fault with the regulation of capital markets and intermediaries

The unbundling of loan functions, the reliance on the capital markets to fund mortgages, and the regulations that govern the sale of asset-backed securities have also led to some fundamental public policy concerns. With so many loans sold into the secondary market, it matters whether or not investors or the financial intermediaries that package and sell loans as securities are liable for misdeeds that may occur at the point of loan origination. At present, the holder in due course doctrine of the Uniform Commercial Code allows purchasers of securities backed by loans to avoid liability for the misdeeds of the loan originators except under narrow circumstances. These circumstances include if the loan contract itself is illegal or the product purchased on credit was defective and the seller does not indemnify the consumer for the defective product. Lack of assignee liability has led to accusations that consumers have insufficient recourse if they were mistreated by the lender that initially made the loan or their brokers. Increasing the rights of borrowers to present claims that would offset or reduce the borrower's liability would indeed have an impact on the pricing and rating of such securities. The ability of the market to quantify and rate (or price) such a possible reduction in payments and recoveries remains to be seen.

A second major concern with the system for originating and funding loans through the capital markets is the way in which loan originators and lenders are compensated. Fees have become a larger part of the profit of credit card issuers and are the sole source of income for many firms and brokers that specialize in originating mortgage or automobile loans and firms specializing in servicing loans. In an effort to compete for business, most lenders allow brokers to charge a higher interest rate than the posted price for a product and take the difference as enhanced compensation, or overages.

Lawsuits brought against auto and mortgage lenders and the settlements in these cases underscore the potential to abuse the system and charge certain customers higher prices. In the case of auto loan brokers, the victims of this treatment were protected classes and so the practices were actionable. But in cases where a protected class is not at issue, such as low-income households not mistreated on the basis of race, religion, national origin, age or gender, these practices are not actionable unless unfair, deceptive or fraudulent. Yet the use of these premiums is part and parcel of the way that auto and mortgage lenders compete for the business from brokers. Even universities have been accused of exacting special compensation in return

for working through particular lenders. Others argue that the system as currently configured works adequately and that what critics view as unfair treatment of customers is instead just compensation to brokers for the extra time and effort it takes to reach out to more difficult or costly to serve markets.

A third major concern is the lack of serious licensing standards for loan brokers in many states. With limited capital at risk and evidence that broker originated loans perform much more poorly on average than those originated through other means, the spotlight is on brokers. In response, some states have taken action to beef up their licensing and registration requirements. Related to this is the lack of a fiduciary obligation on the part of the broker to the customer.

A fourth major concern is the effectiveness of the tools used to assess the credit risk associated with securities backed by consumer credit, such as credit card receivables, auto loans and subprime mortgage loans.[61] Investors rely heavily on a handful of rating agencies to affirm the credit quality of ABS, MBS and CDOs. The experience in 2007 with the performance of subprime mortgages has underscored that wholly unregulated rating agency determinations systematically underestimate risk. These determinations have been faulted for not focusing enough on attributes other than the credit quality of the borrower, including vulnerability to payment shocks, the features of the loans themselves, the conditions under which they were originated, and the strength and track records of the counterparties involved. In defense of the ratings agencies, investments are by their nature risky and returns are only guaranteed on inflation-adjusted federal bonds. Ratings agencies spell out these risks and the lack of certainty

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[61] Reliance on credit scores raises several other concerns regarding this system. First, the laws governing the capture of this information take effect only if firms decide to voluntarily supply it. Many payments, such as for utilities and rent, are not supplied, even though they may be the only regular payments certain consumers make. In addition, payments on payday and subprime loans sometimes are not reported to the standard national credit repositories. Hence, some consumers do not have credit scores at all while others have scores that may not reflect positive payment histories that demonstrate a willingness and ability to pay for housing. Second, discrimination laws require only that underwriting decisions which result in disparate treatment of protected classes meet a business necessity test. There is no requirement that lenders demonstrate an effort was made to try alternative model specifications intended to reduce correlations with protected classes. Third, there is reason to suspect that borrowers may be charged higher rates in part because of past inefficiencies and sloppiness on the part of subprime lenders. After all, if all these costs are passed along in the form of higher rates and fees, then lenders are unmotivated to do anything about them unless market competition or investors force them to do so. Hence, what appear to be reasonable loan prices may instead be a form of institutionalized mistreatment. Fourth, the federal credit reporting system is based on the premise that a consumer will know when to suspect that she has been unfairly treated or her credit score is an error. But it is harder and harder for a consumer to do that. It is tough to judge whether the price and terms received on a loan are warranted because there are no readily available benchmarks upon which to judge them. In addition, consumers are not apt to understand whether their credit score is warranted given their past history because the scoring models themselves are proprietary.

in their ratings through exhaustive disclosures. Nonetheless, the power and lack of oversight of ratings agencies have become important issues.[62]

Finding fault with the regulation of credit products and their marketing

Given all that has been learned about the potential for consumer confusion, error, manipulation, and mistreatment (especially in the new world of multiple products, complex features and price points, often distributed through different channels) it is no wonder that many criticisms of the regulatory system focus on the inadequacies of informing and protecting consumers. As Thomas Durkin (2007) pointed out, information availability is highly significant in promoting competitive conditions and the efficient functioning of markets. To reduce consumers' search costs, disclosures therefore became a central element of consumer protection policy. A first major criticism is that consumer-lending disclosures are inadequate both in scope and in presentation. While TILA and RESPA were both enacted to remove informational barriers to consumer search, they may not have kept pace with the market transformation, particularly the deployment of risk-based pricing.[63] One of the greatest barriers is that the federal disclosure laws do not ensure that consumers receive timely information to aid consumers with comparison shopping. Except for high-cost refinance home mortgages, TILA does not require that lenders reveal binding prices until closing and subprime lenders are permitted to advertise their best rates without disclosing that the consumer may not qualify for this rate. To help consumers' comparison shop, McCoy (2007) argued for changes to advertising, price quotes and variable rate disclosures. Durkin, however, pointed out that the central conceptual issue is what constitutes the cost of credit. He went further to frame the debate as the balance between the "laudable search for exactitude, completeness, consistency and

[62] In addition, Regulation AB (which governs disclosure requirements) is often criticized as too lenient. Although new requirements that will significantly expand existing requirements go into effect on January 1, 2006, many changes called for did not make it into the revised rule.

[63] McCoy, Patricia A. 2006. Testimony before Hearings by the Board of Governors of the Federal Reserve System on Home Equity Loans, Atlanta, Georgia. McCoy argues that advertising should be both prominent and bold, and include the range of APRs and a warning about those with weak credit will not qualify for the best price; that lenders should be required to provide firm price quotes before they require payments of other nonrefundable fees; and that there should be additional variable-rate disclosures. McCoy recommends that the following aspects of a variable-rate loans should be clearly disclosed; the fact that it is an ARM, the number of months or years until the reset and the maximum interest rate and monthly principal and interest for the actual loan, the earliest date on which the loan could become fully indexed and the maximum interest and monthly payment on that date, and the maximum amount and timing of any prepayment penalty.

comparability" against the difficulty for consumers to understand all the necessary concepts, while at the same time providing reasonable compliance ease.

Another major concern related to disclosure is the existence of the general practice of shrouding information. Shrouding information is the intentional withholding of information so that consumers have a more difficult time properly valuing and assessing products. The classic example of this is shrouding information on the cost of print cartridges at the time of purchasing a printer. The pricing of credit products also often involves shrouding of potential and known costs. Short of outlawing ignorance or banning misleading but not false advertising, Gabaix and Laibson (2006: 531) suggested there are four types of possible but imperfect regulations to deal with shrouding: 1) compelling disclosure and on specific terms; 2) using warning labels to alert consumers to look out for shrouded costs; 3) imposing caps on the costs of shrouded attributes; and 4) reducing barriers to entry. They cautioned, however, that "even if good theoretical arguments exist for shrouding regulation, such regulations put us on a slippery slope that may produce great unintended consequences."

Even if compelled disclosures were improved, it is an open question whether better consumer disclosures would overcome the general lack of financial literacy of many consumers, susceptibility to being steered to particular products, the complexity of the concepts involved with making choices about the future, and the difficulty of comparison shopping in a world with so many product choices. Finally, disclosures do not help consumers make choices among alternative forms of debt. The Schumer box, for example, arguably helps consumers compare credit card products. But it surely does not help them decide whether they should get a payday loan or a home equity loan instead. Is it therefore sensible to believe that a disclosure-based regime can bring meaningful benefits?

Given concerns over even the ability of consumers equipped with the best and most binding of disclosures provided early enough in the process, another major criticism of the regulations of credit products is that they do not, except in the case of a handful of state laws, place enough curbs on either abusive lending practices or predatory credit products. Many are lobbying for changes in federal and state laws to either restrict certain practices or impose some form of "suitability" standard. Most of these proposals aim to restrict the use of loan features that expose borrowers to large repayment risks and curb the ability of lenders to lend without regard to the capacity of a borrower to repay loans, without verification of income and assets,

and without examining if a refinance benefits the borrower. Opponents fear that specific prohibitions will limit credit while ill-defined prohibitions, such as application of a suitability standard, will lead to confusion, add to costs, limit credit availability, and stifle innovation.

Others fault contract terms found in certain consumer credit products that place the debtor at a disadvantage, including contracts that allow credit card issuers to change many of the terms and fees associated with the product at their discretion, contracts that contain mandatory arbitration clauses, and those that permit credit card issuers to treat a default on another lender's credit card as a universal default on all lenders. Although consumers always have the discretion to payoff their debts or roll them over to another lender if terms are changed, this can still create a situation in which initial offers can be changed in ways that consumers cannot predict but must incur transaction and search costs to avoid. Furthermore, the practice of universal default whereby a failure to pay a debt to one lender triggers higher charges by all credit cards a consumer holds is viewed as unfair. There have been calls to limit the ways in which terms and fees can be changed and to prohibit universal default and mandatory arbitration provisions.

Regulatory Levers

Regulations are viewed by many as a blunt instrument that should be used judiciously and cautiously. Still, economists argue that regulations of market behavior are legitimate methods to correct market failures, ensure competition, and protect consumers from unfair, deceptive, and discriminatory treatment. As we have described, some authorities view the set of regulations that have evolved to achieve these goals as sufficient while others find them lacking. While those locked in heated lobbying efforts to pass or block proposed reforms have staked out their positions, striking the right balance in regulatory reform between allowing market forces to innovate and self-correct on the one hand and protecting and aiding consumers on the other hand, is regarded by all sides as exceedingly difficult. Some might regard overhauling the system to address a variety of concerns and serve a variety of ends as appealing, but an incremental approach to change is likely in the future. Ultimately which of the issues listed above that will actually result in the passage of new laws or the promulgation of substantially new regulations is difficult to divine. But times of crises and media attention provide the conditions most likely to lead to meaningful action and break political logjams.

Eleven legal and regulatory levers

There are at least 11 legal and regulatory levers that those who wish to press for particular reforms can use to address perceived weaknesses in the present regulatory system. Each is discussed briefly in turn.

A first lever is to **strengthen examination and enforcement mechanisms**. A major reform in this area would be to expand the types of financial institutions that are examined by state and especially federal regulators on a regular basis. Many believe that federal examination is desirable. But apart from some flexibility that the Federal Reserve may have in deciding how and whether to examine some of the subsidiaries of bank holding companies, a broadened federal role would require new legislation and could be seen as usurping states' rights. On the enforcement side, additional resources to explore and pursue alleged violations of existing law would be an obvious means to strengthen consumer protections in the system.

A second lever is to **increase public disclosures on lending activities.** At present, the principal public disclosure law on lending activities is the Home Mortgage Disclosure Act. It provides for detailed information on the mortgage lending activities of almost all firms that originate mortgages. Information is reported for all mortgage loans for which an application was received, including whether it was accepted or rejected, the race or ethnicity of the applicant, the applicant's income, the mortgage amount, whether it is intended for owner-occupancy, if an originated loan is sold and how, and the annual percentage rate for loans that meet a threshold test above the rates on Treasuries of comparable maturities.[64] Initially, HMDA data were used to plead the case that lenders were redlining communities and appear to have played a role in the achievement of Community Reinvestment Act agreements during the 1980s. The public release of this information had an even greater impact in the 1990s as a result of the addition of information on applications rather than just accepted loans and on the characteristics of the applicants. It led to a landmark study conducted by the Federal Reserve Bank of Boston that strongly suggested lenders were discriminating against minorities. While it sparked an intense scholarly debate over the validity of the findings, it sent a chill through a lending community fearful that the perception of discrimination would negatively affect business and lead to lawsuits with the potential for large settlements. The very public nature of the debate was likely important in a dramatic increase in efforts by prime lenders to reach out to low-income and

[64] While asked, race and ethnicity are not required and is missing from a significant fraction from all loan records.

minority communities, paving the way for later efforts by subprime lending specialists. No such comparable law governs credit card, installment loan, or automobile lending. The passage of such laws could have a similarly illuminating and important influence on these forms of lending as well. In addition, the public disclosure requirements associated with offering consumer-credit-backed securities for public sale could be strengthened in a variety of ways to give investors a better understanding of the risks and features of the loans in the pool they are purchasing, as well as the conditions under which the loans were originated and sold.

A third lever is to better **inform consumers through consumer lending disclosures**. As we have noted, consumer lending disclosures are the source of some controversy. There is evidence that the form these disclosures presently take is often unhelpful or insufficient to really inform consumers enough to make appropriate choices and easily compare products. Indeed, not as much attention has been paid to figuring out the best way to communicate the necessary information as has been paid in the areas of food and drugs. In addition to Truth-in-Lending disclosures, which are required of all lenders, there are the Schumer Box disclosures required of credit card companies, the Home Ownership Equity Protection Act disclosures required of high-cost mortgage lenders, and Real Estate Settlement Procedures Act disclosures required of lenders in home sales. Of these, the Schumer Box is an example of an effort to help consumers compare products through a common method of displaying information on the many separate terms and fees that go into a credit card contract. Though it does not cover all possible product features, and many elements can later be modified at the lender's discretion, it could serve as an example in the areas of mortgage, automobile, and installment credit for consumer purchases. The features of the Schumer Box itself could also be improved and expanded. Finally, the regulations that govern the time between when good faith estimates are made and when they must be locked in and revealed to borrowers could be strengthened.

A fourth lever is to better **de-bias consumers through disclosures**. This is the step that regulators could take which most specifically links back to the rich literature that has developed around behavioral law and economics. As elaborated by Jolls and Sunstein (2005), the idea is to use the law to help correct cognitive biases and consumer myopia by steering consumers in “more rational directions” and “by reducing or even eliminating their bounded rationality.” They contrast this approach with efforts to use the law merely to inform consumers or block private choices by banning certain products. They make a compelling case that a cognitive bias like

optimism can render even information perfectly communicated through a consumer disclosure ineffective in steering consumers away from taking on debts with undue risks. For example, even if a debtor understands the risks associated with an adjustable rate or interest-only loan (which they may not based on current TILA disclosures), they can still pick a product riskier than they would if they did not discount their own risk relative to the average risk. To counteract biases, laws and regulations could require that other cognitive biases be used to steer consumers away from decisions unduly influence by their biases. As examples, they suggest making sure that risks associated with products are framed as losses rather than gains in disclosures (due to the cognitive bias of loss aversion) and that concrete examples of the worst case outcome are used in the disclosure (due to the availability heuristic) to countervail consumer's optimism bias.

As Jolls and Sunstein (2005, p. 13-14) put it, "In the consumer safety context, de-biasing through the availability heuristic would focus on putting at the consumers' cognitive disposal the prospect of negative outcomes from use, or at least unsafe use, of a particular product . . . on pain of administrative penalties or tort liability . . . to provide a truthful account of consequences that resulted from a particular harm-producing use of the product, rather than simply providing a generalized warning or statement that fails to harness availability." While de-biasing sounds promising, the experience with safety warnings on drugs suggests it may face an uphill climb in steering consumers to the proper products. Drug and tobacco safety warnings often highlight dreadful outcomes that are specifically called out even in television ads. Yet consumers still use these products even after vivid downsides to their use are pointed out. Nonetheless, it is difficult to argue that consumer would not be served by spelling out for them, as a matter of law, the various serious consequences of failing to repay debts and of the specific magnitudes of worst-case scenario payment resets that may befall them from the loan products they selected.

A fifth lever is to **prohibit products, practices, rates or contract terms**. Faced with a loan practice or product that can leave large shares of borrowers vulnerable to unfair treatment or default even in the absence of unfair treatment, what action could be taken? A natural instinct is to consider whether the practices or product features should be banned outright, allowed to be combined with only certain other features when offered, or banned for use by some group of borrowers such as those low credit scores. Restricting specific practices and product features offered in the mortgage market was an active item of debate in Congress and in state legislatures in the first decade of the new millennium.

A sixth lever is to **establish broad suitability standards**. These sorts of standards have the advantage of not outright banning certain practices and product features and of not having to anticipate what the next big problem product or practice will be. However, they leave room for interpretation and later standard setting by regulators that may introduce considerable uncertainty into lending. This ambiguity can end up reflected in a higher price and lower supply of credit to consumer.

A seventh lever is to **create an affirmative obligation to meet certain lending standards.** The most noteworthy affirmative obligation is the Community Reinvestment Act. It requires deposit-taking institutions alone to face the credit needs of low and moderate income communities or face low public grades that tarnish reputation and the threat of having applications for mergers and acquisitions conditioned or rejected. There is ample evidence that over time CRA has resulted in expanded mortgage credit to low-income communities. However, it is unclear how much of its impact derives from the teeth in the law (conditioning or rejecting mergers and acquisitions) and how much from the public grading of institutions. Nevertheless, it is worth considering whether other financial institutions should be placed under similar obligations and whether the information public released and used to grade institutions should be expanded beyond mortgages and small business loans.

An eighth lever is to **expand standing to bring a case and stiffen penalties**. Misbehavior in the market is only as discouraging to a willful violator as the penalties that can be imposed for violation and the number of entities that have the standing to bring a legal action. A logical way to bring about greater compliance, therefore, is to modify credit laws so that more parties can bring cases and so that penalties are more severe. Indeed, Ayers and Braithwaite (1992) argued that the government could do far more to expand the right of public interest groups and associations to file suits and get engaged perhaps more directly in monitoring compliance with laws. McCoy (2007) contended that borrowers should be granted a private right of action to sue if they feel they have been the victim of predatory or abusive lending practices or if they relied on false advertising in picking their credit product. However, there is also some evidence that compliance falls once an optimal level of stringency is passed (Viscusi and Zeckhauser 1979).

A ninth lever is to **strengthen debtor remedies**. Debtors can file for bankruptcy as a way to seek relief from repayment. They also have certain rights when creditors seek remedies

against them such as garnishment of wages. In addition, debtors are also protected when contracts violate the Uniform Commercial Code's unconscionable contract provision or purchase the products from a creditor that has defects that the creditor is unwilling to make right. Strengthening the remedies available to debtors is one way to discourage lenders from certain practices that are not in the best interest of the debtor. Perhaps the most critical issue in terms of debtor remedies (beyond those implied by the standing to bring legal actions and the stiffness of penalties) is the very limited conditions under which consumers can seek recourse from holders in due course. The most often discussed enhancement to existing debtor remedies, therefore, is to expand greatly the conditions under which assignees can be held liable even if they purchased the loan or security in good faith. This is especially important because it would provide a more powerful incentive for assignees to manage agency risk in the system and choose their partners and loan products wisely. It is also important because the brokers, operating at the point of sale and responsible for originating such a large portion of home and auto loans, often do not have deep pockets. Imposition of assignee liability would have far reaching consequences. Those opposed to assignee liability fear that it will result in shutting down credit markets unless liability is narrowly defined and capped at a reasonable amount.

A tenth lever is to **weaken creditor remedies.** Creditors generally have a number of remedies at their disposal. Weakening any of them, but especially those that are used more often, would have the effect of making lenders more cautious about how they lend. Like strengthening debtor remedies, however, it could have chilling effects on the flow of credit. A weakening of remedies that is sometimes imposed in the face of crises is a state-imposed temporary ban on home foreclosures. Other efforts to weaken creditor remedies have made it more difficult for lenders to place liens on assets and garnish wages under certain conditions. Blocking creditor remedies can also elevate moral hazards by making borrowers less willing to repay loans in the future under the belief that government actions will thwart lender efforts to collect in any event.[65]

An eleventh lever is to **impose licensing standards and sanctions for violating these standards**. An often-heard complaint is that some states either lack licensing standards for important parties to a transaction or have standards that are too lax. Beefing up licensing standards, perhaps creating federal requirements, and creating meaningful sanctions if they are

[65] See Rotenberg 1995 for a strong argument against judicial activism in placing constraints on creditor remedies.

violated are ways to address these concerns. Loan brokers are most often singled out for improved licensing standards.

Considerations

Deciding on how to regulate demands enormous wisdom and foresight. Laws are passed and regulations are often promulgated with imperfect information about costs and possible unintended consequences. Even when the urgency of a problem renders efforts to obtain perfect information impractical, several considerations ought to come into play when assessing the relative merits of pursuing different avenues to achieve policy goals.

A first is how much it restricts consumer choices. Approaches that preserve consumer choice have strong appeal. Still, the public may have a compelling reason to restrict choice – as for example the choice to drink and drive, or to purchase cheaper paint that contains lead. In this regard, as yet untested efforts to better inform and de-bias consumers hold promise. A second consideration is how costly it is to comply with the change. Approaches that have higher compliance costs for the average firm than others which can achieve similar aims more cheaply have less appeal. A third consideration is how much uncertainty it creates around costs of complying or the failure to comply with the law. Approaches that reduce uncertainty are desirable because it allows businesses to calculate their costs better. Thus, assignee or other liabilities, if imposed, should have some cap so that the cost of noncompliance is known and the risk of it priced into interest rate charges. A fourth consideration is the externalities that change in regulation may create. Those that create positive externalities (such as averting home foreclosures that are costly to neighbors) have more appeal than those that create negative externalities. A fifth consideration is the unintended consequences of a regulation. Those that have the potential to restrict the flow of credit to previous borrowers, for example, can exacerbate the problems at least initially that one is trying to fix, unless a bridge is built to help them out. A sixth and critical consideration is the likely welfare effects. It is important to do some form of a welfare analysis both in terms of potential gains and losses to different types of consumers and to different types of firms. A seventh and also critical consideration is how likely it is that the change will be effective in achieving the desired outcome. There is a concern, for example, that consumer disclosures may not be effective unless improved and that de-biasing

consumers through better disclosures may not be effective because the process has not yet been tested much.

Beyond Individual Levers

The current debate hinges on specific reforms and interventions that could make markets safer, more efficient, and protect consumers while preserving expanded credit access. But beyond this, the current regulatory system raises even larger issues about the philosophy and approach to consumer regulation in the United States. In addition to broad issues already raised that relate to the decentralization and federalism of our regulatory system, other issues worth exploring concern how the public and private sectors can work together to arrive at a regulatory system that is achieves its objectives most intelligently and at the least cost.

Freeman suggests that there are four models of public-private interdependence in regulation.[66] One is **standard setting.** This is the adoption of rules developed mostly or entirely by private parties and adopted by the government. An example of this is the standard setting of the American Society for Testing and Engineering. A variant is the reliance on advisory panels of experts to propose standards by the Office of Safety and Health Administration, the Environmental Protection Agency, and Food and Drug Administration.

Another model is **voluntary self regulation.** This is when professional and trade associations set standards and impose them or pressure their members to abide by them. Usually, these take the form of management practices and internal accountability standards, not standards for marketing practices or product offerings. Examples of this include the ISO and Chemical Manufacturers Association Responsible Care Program. A third model is **audited self regulation.** In this model, Congress deputizes organizations to promulgate and enforce rules of conducts and laws, such as in the case of the SEC or NASD. The final rule is **negotiated rule making.** This is when an agency convenes stakeholders and a facilitator to come up with consensus based rules under federal guidelines. This is seldom used in part because the rules of engagement allow parties to peel off at any time and for agency not to promulgate the consensus reached.

Only the second and third models appear to have been used in the regulation of consumer credit. The prospects for using the other two have not been much explored and only audited self regulation has been used extensively in the financial markets. This suggests that there is reason

[66] Freeman (2000)

to consider whether more heavy reliance on standard setting, voluntary self regulation, and negotiated rulemaking might make sense.

Ayres and Braithwaite (1992), building on the earlier work of Nonet and Sleznick (1978), argue for an entirely new way of thinking about regulation that is "responsive" to industry structure. It is based on the normative view that regulation is most effective when it balances the diverse objectives of industry associations, regulated firms, public interest groups and the people that work for them. They call for greater delegation of regulation to public interest groups and the regulated firms themselves. To avoid capture of the regulators by the regulated, they advocate for an enforcement pyramid that creates credible threats of costly enforcement actions if responsive regulations fail – that is, if self regulation is not properly constituted or executed. However, they also argue for an interventionist state that enforces the participation rights of, and provides resources to, less powerful groups in negotiating regulations, such as public interest groups and trade associations that represent weak competitors. They offer as their principal example of an effort to create responsive regulations the Trade Practices Commission in Australia, which switched from being an enforcer of strict rules to being a facilitator of deregulation and self-regulation. In this process, the government ensured a place at the table for the less powerful and granted them significant influence.

The United Kingdom provides an interesting model of self-regulation. Dissatisfaction with government regulations and growing political pressure led three trade associations to develop a Banking Code in 1991 to cover unsecured consumer credit. All retail banks, building societies, and credit card issuers are signatories.[67] The Code features an independent monitoring body (Standards Board) that includes executives from the three sponsoring trade associations but a majority of independent members, including the Chair. Signatories are required to submit an annual statement of compliance, and the Standards Board monitors compliance with on-site examinations similar to the type of exam a government regulator would conduct. Serious infractions are referred to a disciplinary committee that can require companies to compensate consumers, can publicly announce violations to pressure firms to change their practices, and can expel members from the Code. Furthermore, the Banking Code has a revision process every three years led by an independent reviewer that makes recommendations, the majority of which

[67] A Finance and Leasing Association Code also exists which covers finance companies that offer consumer and car finance but its signatories only cover about 30 percent of lending (Kempson 2007)

thus far have been adopted by the sponsoring organizations. The Code is viewed as both strong and flexible enough that consumer credit was not brought fully under the rigorous Financial Services and Markets Act of 2000 in the same way as mortgage credit, which was subject to a much weaker and heavily criticized Mortgage Code. The Banking Code suggests that effective self regulation is possible in the consumer credit sphere.

Beyond Regulation:
Private, social, and Public Sector Strategies to Improve Market Outcomes

Looking past possible modifications to the regulation of consumer credit markets, private, civic, and public sectors could take a wide range of possible and promising actions to improve market outcomes. A number of ways of organizing these actions and approaches is possible but a simple solution may suffice: those intended to help consumers inform consumers and help them stay out of trouble, those intended to help consumers once they are in trouble, and those intended to advise consumers on their credit choices.

Borrowers experience financial difficulty repaying their loans, primarily because of life events that force them to spend much more than they had budgeted on critical big-ticket items (such as medical care) or because they suffer a reduction in their income. These are sometimes referred to as trigger events in the literature. Factors more endogenous to debt behaviors themselves include: 1) taking on too much debt relative to their regular budgets and incomes either knowingly or as a result of an overestimation of their future wealth or income; 2) unanticipated or rising costs of late fees; 3) universal default which drives up payments to additional creditors when payments to one are missed; and 4) payment resets as a result of changing interest rates, expiring initial discount offers, or the expiration of an interest-only period.

Increasing debt payments become problems mostly during periods of rising interest rates or after periods when lenders offered especially steep discounts on initial rates charged. Taking on too much debt relative to regular incomes becomes a problem especially during periods of lax underwriting or rapidly rising costs in excess of income gains. Budget shocks like large medical bills happen with some aggregate predictability, but in the lives of most individuals with considerable unpredictability. Income shocks are likely to increase around periods of recession or national job loss but also occur with some aggregate predictability from death, injury, and divorce but in the lives with considerable unpredictability. Difficulties refinancing a mortgage,

of course, occur during periods of falling home prices (which in turn most often occur after periods of overbuilding, overheating of house prices, and recessions).

Chart 6: Job Loss Is the Leading Hardship Reason among All Delinquent Borrowers

Hardship Reason	2001-2005	2006
Unemployment or curtailment of income	42.8%	36.3%
Illness or Death in the Family	22.9%	25.0%
Excessive obligation	11.1%	13.6%
Marital difficulties	7.9%	6.0%
Property problem or casualty loss	1.7%	2.8%
Extreme hardship	2.8%	0.9%
Inability to sell or rent property	1.3%	1.4%
Employment transfer or military service	0.9%	0.6%
All other reasons	8.7%	13.3%

Source: Freddie Mac; data cover period 2001-2006; 2006 data exclude delinquent loans in Louisiana and Mississippi due to hurricane effects.

An indication of the relative weight of these factors is offered by data from Freddie Mac from 2001-2005 averaged and for 2006 (see Chart 6). These data plainly show that unemployment or other income curtailment is the principal reason that borrowers, at least of prime mortgage credit, default in their loans. They also show that excessive debt payments were a greater problem in 2006 than the average of the prior five years. Although the data are not available, it is likely that income curtailment was a significantly more important driver of defaults around 2001 and 2002 than 2003-2005. During periods when the national unemployment rate is increasing, as it was in and around the 2001 recession, it is logical to expect job loss to trigger more defaults than during other periods. It is also likely that excessive debt payments will be a greater problem in the years ahead as a result of the layering of risk, increasing interest rates, subprime lending, and the use of discounted teaser rates in recent years. Still, among prime mortgage borrowers, excessive obligations amounted to only about 14 percent of all reasons in 2006.

Helping Consumers in Trouble

Once consumers get into trouble it is difficult to help them. Yet the likelihood of this occurring given any set of macroeconomic circumstances has increased as a result of the higher debt burdens the typical American faces today than in the past, the opening up of credit to borrowers with previous repayment difficulties, and the extension of credit using products with greater repayment risks (such as increasing use of adjustable debt tied to short-term interest rates, the recent widespread adoption of interest-only and payment option mortgage loans, and the use of aggressive teaser discounts).

Evidence from a study that examined the impact of one-on-one credit counseling delivered by five member agencies of the National Foundation for Credit Counseling demonstrated that one-on-one credit counseling has a positive impact on borrower behavior over an extended period.[68] Borrowers who received financial counseling improved their credit profile and there was a measured reduction in delinquency experiences. This study suggests that early interventions which help consumers understand their options and the implications of defaulting on all or some of their debts are important.[69] Consumers need to understand the pros and cons of filing for different forms of bankruptcy and their eligibility to do so. They may also benefit from financial counseling, where counselors help consumers work with lenders to modify loan terms, extend payments, refinance or consolidate their debts, or sell their property. A recent survey of 1,003 Americans conducted by Princeton Survey Research Associates International (PSRAI) of more than one-third of the 1,003 consumers surveyed received professional advice and more than half say the advice was provided by a financial advisor or planner in making their credit decisions.[70]

Currently, the civic sector provides the majority of counseling while the government and foundations often subsidize this activity. With this support, counseling agencies test ways to work out loans pooled into securities, and some provide blended subsidized and market-rate debt to reach out to more borrowers wanting to refinance to payoff old debts and remain current on new ones. The cost of counseling remains an issue, especially during times of macroeconomic stress when the demand for post credit purchasing counseling can easily exceed demand. Thus,

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[68] Elliehausen, Lundquist and Staten (2003). This study included approximately 14,000 clients in 1997 that received one-on-one credit counseling.
[69] Harad and (2001) also found that certain forms of counseling, after controlling for a variety of factors, have a measurable impact on reducing mortgage delinquencies.
[70] Princeton Survey Research Associates International (PSRAI) conducted the Summary Report, Financial Literacy Survey on behalf of the National Foundation for Credit Counseling, Inc. (NFCC). 2007.

it is promising that more and more studies are finding that such counseling leads to lower credit costs and therefore is in the best interest of businesses to fund, if not provide assistance, themselves. But having these studies in hand is a far cry from getting business or government to cover the costs.

The most common form of debt held by households is mortgage debt, while the loss of a home due to non payment of this debt is both traumatizing for the household and full of potential negative externalities for nearby neighbors and the economy as a whole.[71] Given these impacts, possible strategies are worth singling out for homes at risk of entering foreclosure. Furthermore, the securitization of debt poses special challenges because the permissible terms for working out credit are often spelled out in servicing agreements developed at the time that the credit is pooled, securitized and sold. These terms vary considerably and often were not designed with enough forethought about what permissible terms might be in the ultimate interest of investors in the securities. Once issued, these agreements are in force and the only way to get released from them is to have the debt repaid or completely written off and sold out of the pool. Thus, financial intermediaries moving forward need to put more thought into the terms of servicing agreements so that sensible workouts are feasible. In the meantime, government agencies and civic organizations can try to identify securities governed by more or less liberal agreements and work with servicers under both sets of circumstance to try to achieve the best outcome for both the lender and borrower. Another option for these agencies is to negotiate to buy loans out of pools, effectively refinancing and helping borrowers. This has been done by the Ohio and Massachusetts housing finance agencies in the case of failing mortgage loans.

Another concept for keeping mortgage borrowers in their home and helping to avert foreclosure and the distressed RMBS or related CDOs investors, is the economic concept of SwapRent (SM). While maintaining legal ownership, owners become renters of their own houses for a period of time, trading the appreciation benefits, or downside depreciation risk, for a discounted rate.[72]

[71] Apgar and Duda (2005).
[72] See Swaprent website at: http://www.swaprent.com.

Helping Consumers Stay Out of Trouble and Make Better and More Informed Credit Choices

Much more promising and satisfying are actions and strategies that prevent consumers from getting into trouble repaying their debts in the first place. These efforts could include financial education to make better choices, savings incentives and options to create a safety net, and insurance and debt protection products to cover risks that often drive defaults. The strategy around which nearly all will usually rally is financial education aimed at helping consumers make smarter choices that leave them less vulnerable to debt repayment problems and that get them to live within their means. Many in their hearts worry whether this alone can do the trick – especially when costs of some key items like healthcare, health insurance, housing, and education spiral higher and incomes especially in the bottom half of the income distribution grow so slowly – and two questions remain, what kind of counseling works and is cost effective. Sawady and Tescher (2007) questioned whether classroom-based financial education curriculum that requires a long-term orientation is the best way to maximize economic benefits for consumers, or whether promoting guidance and coaching is a better way to help consumers navigate the increasingly complex world of financial services choices. In addition, whether broad counseling is the most cost effective use of resources remains far from being seen and is difficult to measure. Others believe that financial education targeted around "teachable moments", such as specific credit and financial decisions supplied through the civic sector with government and philanthropic support, remains appealing. To address these concerns, some credit counseling agencies are deploying cost efficient strategies, such as telephone or web-based counseling. Yet, the question of who should pay for these services remains illusive even as bankruptcy law now requires financial counseling services.[73]

It remains to be seen whether or not broad financial education is sufficient to overcome both the push marketing tactics and consumers' cognitive biases when it comes to sales efforts that focus on "quick and easy".[74] As we have seen, the nature of credit product choices is so complex that it is arguably better to offer advice than to expect each consumer to become expert enough in understanding the ramifications of their credit choices and their options to make informed choices. Just as people often seek professional investment advice, the value of professional credit advice may be just as crucial.

[73] Fay, Hurst, and White (2002).
[74] Essene and Apgar (2007).

Thus, while this issue need not be reduced to a choice of whether to provide training, counseling, and financial literacy on the one hand or to provide advice on the other, there are compelling reasons to focus added attention on advice. Yet, how should the advice be delivered, and what should govern the nature of the advice offered? Advice can be delivered by phone hotlines, individual meetings with a credit adviser, or internet websites. While it would be possible also to hold small group sessions, the individualized nature of the decision would place this at the bottom of the list of delivery mechanisms likely to be effective.

But the even more fundamental question of how to offer advice – what factors should be taken into account, how should products be sorted, and how should advice be communicated – is far from having a uniform or single answer. It is striking that so much attention is paid to investing choices, as opposed to focusing on the liabilities side of a mainstream consumer's balance sheet. This is an area of great promise where research, pilot experiments, and an organized effort by those committed to improving outcomes of credit consumers are all essential to success. If the history with the provision of home-ownership counseling is any guide, however, it is clear that this will not be an easy task. Getting agreement around the appropriate content of such curricula and how to deliver them has been elusive in homeownership counseling, despite determined efforts to reach agreement.

Another avenue with real promise for preventing consumers from getting into trouble in the first place is to provide better savings incentives and options. Helping people to save before they borrow so that they have cushions to fall back on in the event of trouble, and helping to engender a habit of savings, deferring some spending for the tradeoff of greater security, are real options. Tufano and Schneider (2007) reviewed the many ways that government, private sector and NGOs can support consumer savings. They place these efforts on a spectrum with compelled savings on one end to excite people to savings on the other. An example of forced savings is the UK's Child Trust Fund account which sets aside 250 pounds for every British child born after September 1st, 2002 with vendors providing a range of account types. On the other extreme, lottery-linked savings or providing a physical collectible to allow consumers to track their savings progress can create excitement about savings. In between are programs that make it difficult not to save (by setting default options to savings and bundling savings with other transactions), make it easier to save (provide savings through other distribution channels that just banks and thrifts), provide incentives to save, and leverage social networks to support

savings. Private lenders have been especially active in developing innovative savings programs that bundle savings with other services. For example, the Bank of America "Keep the Change" program rounds up debit card usage and deposits the change into a savings account with a matching component.

For at least a subset of consumers, bundling rental housing assistance with credit and savings counseling and other savings initiatives is an effective option. About a quarter of all renters at any given time are the recipients of some form of governmental rental assistance, while an even larger share receive such assistance or live in homes managed by mission-driven non-profit organizations. This provides an opportunity for outreach, building upon the renters' current relationship with their subsidy providers or non-profit landlord. Delivering credit counseling and savings planning to these renters could pay rich dividends in the form of fewer renter households with low credit scores, fewer uninformed credit consumers, and fewer households without a savings cushion. While little attention has been paid to the credit consumption of renters receiving assistance and serviced by non-profit housing providers, efforts to promote savings among them have formally begun thanks to a federal program called Family Self Sufficiency (FSS). Though still a small scale program, its aim is to allow those with increasing incomes to take 30 percent of the increase and place it in a savings account rather than plow it back into housing payments. Evaluations of the program suggest that FSS encourages greater work effort and achievement of homeownership, although the success of homeowners aided through the program has not been tracked. Promising as this approach is, it would fail to reach the roughly three-quarters of renters that do not live in subsidized or non-profit managed housing, as well as homeowners who may be in equal need of counseling and savings encouragement.

Another approach to helping consumers stay out of trouble is to have them take out more and better insurance against risks over which they have little control but that have well-established actuarial frequencies of occurrence, such as layoffs, unexpected and uninsured medial expenses, disability, and death of a family member. Indeed, products are now available–offered by insurers and often through brokers, or debt cancellation products offered by banks—to insure borrowers against these all too common risks. However, issues have been raised with how the offering of these products works out in practice, in terms of broker compensation, marketing practices, and pricing, all of which may not serve customers well. In addition, these products cover only a subset of the events that make it difficult for borrowers to repay their bills such as

divorce, job loss for reasons other than layoff, or declining house prices. The first two of these are difficult to insure because they create moral hazard and the risk that borrowers will game the system to layoff the obligation for repaying their debt to others. Meanwhile, efforts to develop products to help people insure against house price declines have only started to get introduced. Still, insuring the borrower has appeal because it helps consumers avoid the high cost of driving down their credit scores and the stress of trying to workout or work off debts they cannot repay. It also indemnifies lenders so has appeal to business as well. This is an area where much work is needed to explore the market potential of the products, regulatory reforms, regulations that may better protect consumers, and debt cancellation products offered by banks and about which there are almost no studies and no public disclosure.

Steering Consumers to Better Choices

Beyond helping consumers stay out of trouble, other efforts could prevent consumers from taking on credit products they do not understand and that expose them to greater risks than they can manage. Building a third-party advisor system, supported with automated tools for consumers and counselors, is one methodology. Another idea, building on the behavioral economist view, is to change the default settings of current choices in the marketplace to encourage the least risky products.

Having a knowledgeable financial advisor provide an objective opinion could prove useful at shopping time, as these advisors evaluate, compare, and provide information on specific loan products.[75] This is, in fact, the service that the best brokers in the business provide, informing consumers and helping them make better credit choices. On the other hand, where broker compensation (both revealed to the consumer and embedded the mortgage interest rate or other components of the overall mortgage cost) is linked to the sale of a particular mortgage product, mispricing of credit to consumers is more common. A flat fee mortgage broker system, operating under the guidelines of a trusted advisor network, could provide unbiased advice to the consumer that decouples compensation from the push marketing of specific products. This system would encourage mortgage advisors to compete by offering superior customer service and higher quality advice. However, the challenges of selling the concept of “fairness”, building brand awareness, and having a meaningful impact are real and it may require regulatory

[75] Ibid.

advantages to grow this system (Apgar and Essene 2007). Promoting the development and licensing of third-party objective advisers and developing automated decision support tools for advisers and/or consumers is one way to steer consumers toward better choices.

Changing the default settings of current choices in the marketplace to encourage "good loans" with the least risky terms (Essene and Apgar 2007: 41) may help consumers stay out of trouble. Requiring an affirmative choice, or "opting out", of the least risky product may help a consumer counter their tendency for hyperbolic discounting and support the default setting. Barr, Mullainathan and Shafir (2007) pointed out that some defaults may be too weak against market pressures and may work best when they are closely aligned with market incentives. They cautioned that the take-up of a program depends on many factors, as "options are construed, elaborated, and contextually interpreted in ways that are both systematic and consequential" (p. 29).

Conclusion

Consumer credit plays a vital role in fuelling economic growth, smoothing the consumption of people over their lifecycles, and creating opportunities to invest in tangible assets and human capital. Although it has the potential to bring many benefits, it also has the possibility of creating serious problems. For example, it can propagate business cycles if credit standards and practices are relaxed so much that a period of credit tightening follows. Furthermore, the evolution of the consumer credit system presents a remarkable number of challenges to the efficient operation of credit markets and to the protection of consumers.

In striving to retain access to credit while better informing and protecting consumers it is well to understand these challenges, the consumer behaviors and cognitive biases that give rise to them, the range of potential regulatory responses to issues of public concern, the considerations that should influence estimates of the relative value of these responses, and of the many means beyond regulation that can bring improvements to the credit markets. Striking the right balance between free choice, access to credit, and innovation, on the one hand, and consumer protections and market efficiencies, on the other, is a daunting task. But it is a vital task and one that will demand more research and experimentation to perfect.

References

Iyengar, Sheena S. and Mark Lepper. 2000. When Choice is Demotivating: Can One Desire too Much of a Good Thing? *Journal of Personality and Social Psychology* 79: 995-1006.

Agarwal, Sumit, Souphala Chomsisengphet, Chunlin Liu and Nicholas S. Souleles. 2006. *Do Consumers Choose the Right Credit Contracts?* Federal Reserve Bank of Chicago Working Paper 2006-11.

Antzoulatos, Angelos A. 1996. *International Journal of Forecasting* (December) 12-4: 439-453.

Apgar, William and Ren Essene. 2007. Helping Consumers Make Better Mortgage Choices. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Apgar, William, Amal Bendimerard, Ren Essene. 2007. *Mortgage Market Channels and Fair Lending: An Analysis of HMDA Data.* Joint Center for Housing Studies, Harvard University. http://www.jchs.harvard.edu/publications/finance/mm07-2_mortgage_market_channels.pdf

Apgar, William C. and Mark Duda. 2005. *Collateral Damage: The Municipal Impact of Today's Mortgage Foreclosure Boom.* A Report Prepared for the Homeownership Preservation Foundation. http://www.995hope.org/content/pdf/Apgar_Duda_Study_Short_Version.pdf

Ayres, Ian and John Braithwaite. 1992. *Responsive Regulation: Transcending the deregulation debate.* New York: Oxford University Press.

Bacchetta, Philippe and Stefan Gerlach. 1997. Consumption and Credit Constraints: International Evidence. *Journal of Monetary Economics* 40: 207-238.

Barr, Michael, Sendhil Mullainathan and Eldar Shafir. 2007. Behaviorally Informed Credit Regulation. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Belsky, Eric and Joel Prakken. 2004. *Housing Wealth Effects: Housing's Impact on Wealth Accumulation, Wealth Distribution and Consumer Spending.* National Association of Realtors.

Bernanke, Ben, Mark Gertler, Gilchrist, Simon, 1996. The Financial Accelerator and the Flight to Quality. *The Review of Economics and Statistics*, MIT Press, 78-1: 1-15, February.

Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. 2006. Behavioral Economics and Marketing in Aid of Decision Making Among the Poor. *Journal of Public Policy and Marketing* 25-1: 8-23.

Browning, Martin and Thomas F. Crossley. 2001. The Life-Cycle Model of Consumption and Saving. *Journal of Economic Perspectives*, American Economic Association 15-3: 3-22, Summer.

Bucks, Brian K., Arthur B. Kennickell and Kevin B. Moore. 2006. Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey. *Federal Reserve Bulletin* 92: A1-A38.

Burd, Stephen. 2006. As the Volume of Private Loans Soars, Students Feel the Pinch. *The Chronicle of Higher Education.* http://chronicle.com/free/v53/i05/05a02001.htm

Campbell, John. 2006. Household Finance. *The Journal of Finance* 61-4: 1553-1604.

Canner, Glenn, Karen Dynan and Wayne Passmore. 2002. Mortgage Refinancing in 2001 and Early 2002. *Federal Reserve Bulletin* 88-12 (December): 469-81.

Choudhry, Moorad and Frank J. Fabozzi. 2004. *The Handbook of European Structured Financial Products.* Hoboken, New Jersey: John Wiley and Sons.

Courant, Paul, Edward Gramlich and John Laitner. 1984. A Dynamic Microeconomic Estimate of the Life-Cycle Model. H. Aaron and G. Burtless, eds., *Retirement and Economic Behavior*, Brookings Institution, 1984, pp. 279-309.

Courchane, Marsha J., Brian J. Surette, and Peter M. Zorn. 2004. Subprime Borrowers: Mortgage Transitions and Outcomes. *Journal of Real Estate Finance and Economics* 24-4: 365-292.

Durkin, Thomas. 2007. Should Consumer Credit Disclosures Be Updated? Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Dynan, Karen E. and Donald L. Kohn. 2007. *The Rise in U.S. Household Indebtedness: Causes and Consequences*. Finance and Economics Discussion Series 2007-37. Washington: Board of Governors of the Federal Reserve System.

Dynan, Karen, Kathleen Johnson and Karen Pence. 2003. Recent Changes to a Measure of U.S. Household Debt Service. *Federal Reserve Bulletin* (October) 89: 417-426.

Elliehausen, Gregory E., Christopher Lundquist, Michael E. Staten. 2003. *Impact of Credit Counseling on Subsequent Borrower Credit Usage and Payment Behavior.* Paper presented at Seeds of Growth--Sustainable Community Development: What Works, What Doesn't and Why?, a Federal Reserve System Community Affairs Research Conference held in Washington, D.C., March 27-28. texthttp://www.chicagofed.org/cedric/files/2003_conf_paper_session1_staten.pdf

Epstein, Richard A. 2006. Behavioral Economics: Human Errors and Market Corrections. *University of Chicago Law Review*, Winter.

Essene, Ren and William Apgar. 2007. *Understanding Mortgage Markets: Creating Good Mortgage Options for All Americans.* Joint Center for Housing Studies, Harvard University. http://www.jchs.harvard.edu/publications/finance/mm07-1_mortgage_market_behavior.pdf

Fay, Scott, Erik Hurst, and Michelle J. White. 2002. The Household Bankruptcy Decision. *The American Economic Review* 92-3: 706-718. http://links.jstor.org/sici?sici=0002-8282%28200206%2992%3A3%3C706%3ATHBD%3E2.0.CO%3B2-T

Fellowes, Matt and Mia Mabanta. 2007. *Borrowing to Get Ahead, and Behind: The Credit Boom and Bust in Lower-Income Markets.* Brookings Institution, Metropolitan Policy Program.

Fisher, Irving. 1930. *The Theory of Interest.* New York: The Macmillan Company.

Freeman, Jody. 2000. The Private Role in Public Governance. *New York University Law Review* 75-101.

Friedman, Milton. 1957. *A Theory of the Consumption Function*. Princeton: Princeton University Press.

Fundenberg, Drew. 2006. Advancing Beyond Advances in Behavioral Economics. *Journal of Economic Literature* 44-3, 694-711.

Gabaix, Xavier, and Laibson, David. 2006. Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets. *The Quarterly Journal of Economics* 121-2: 505-540.

Gabaix, Xavier, David Laibson, Guillermo Moloche, and Stephen Weinberg. 2006. Costly Information Acquisition: Experimental Analysis of a Boundedly Rational Model. *The American Economic Review* 96-4: 1043-1068(26).

Garner, Alan C. 1996. Can measures of the consumer debt burden reliably predict an economic slowdown? *Economic Review*, Federal Reserve Bank of Kansas City, Q 4: 63-76.

Glaeser, Edward. 2004. *Psychology and the Market*. *American Economic Review Papers and Proceedings* 94(2): 408-413.

Greenspan, Alan and James Kennedy. 2007. *Sources and Uses of Equity Extracted from Homes.* Federal Reserve Board: Finance and Economics Discussion Series: 2007-20.

Hannsgen, Greg. 2007. A Random Walk Down Maple Lane? A Critique of Neoclassical Consumption Theory with Reference to Housing Wealth. *Review of Political Economy* 19- 1: 1-20.

Harad, Abdighani and Peter Zorn. 2001. *A Little Knowledge Is a Good Thing: Empirical Evidence of the Effectiveness of Pre-Purchase Homeownership Counseling*. Joint Center for Housing Studies, Harvard University Working Paper LIHO-01.4. http://www.jchs.harvard.edu/publications/homeownership/liho01-4.pdf

Himmelstein, David U., Elizabeth Warren, Deborah Thorne, and Steffie Woolhandler. 2005. *Illness And Injury As Contributors ToBankruptcy.* Health Affairs, MarketWatch. http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.63v1?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=himmelstein&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT

Hubbard, R. Glenn, Jonathan Skinner, and Stephen P. Zeldes. 1994. Expanding the Life-Cycle Model: Precautionary Saving and Public Policy from Papers and Proceedings of the Hundred and Sixth Annual Meeting of the American Economic Association. *American Economic Review* 84-2: 178-179.

Inside Mortgage Finance. 2005. *The 2005 Mortgage Market Statistical Annual, Volume 1: The Primary Market.* Bethesda, MD: Inside Mortgage Finance Publications.

Iyengar, Sheena S. and Mark Lepper. 2000. When Choice is Demotivating: Can One Desire too Much of a Good Thing? *Journal of Personality and Social Psychology* 79: 995-1006.

Jackson, Howell. 2005. *Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications.* Harvard Law School Discussion Paper No. 521.

Japelli, Tullio and Marco Pagano. 1989. Consumption and Capital Market Imperfections: An International Comparison. *The American Economic Review* 79-5: 1088-1105.

Jolls, Christine and Cass Sunstein. 2005. *Debiasing Through Law*. National Bureau of Economic Research Working Paper 11738.

Jolls, Christine. 1998. Behavioral Economic Analysis of Redistributive Legal Rules in Symposium: The Legal Implications of Psychology: Human Behavior, Behavioral Economics, and the Law. *Vanderbilt Law Review* 51:1653-77.

Kahneman, Daniel and Amos Tversky. 1979. Prospect Theory: An Analysis of Decisions Under Risk. *Econometrica* 47: 313-327.

Kempson, Elaine. 2007. Looking Beyond Our Shores: Consumer Protection Regulation Lessons from the UK. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

King, Mervyn A. 1994. Debt Deflation: Theory and Evidence. *European Economic Review* 38: 419-45.

Harris, Christopher and David Laibson. 2001. Dynamic Choices of Hyperbolic Consumers. Econometrica 69-4: 935-57.

Laibson, David and Richard Zeckhauser. 1998. Amos Tversky and the Ascent of Behavioral Economics. *Journal of Risk and Uncertainty* 16:7-47.

Leedom and Associates, LLC. 2002. Analysis of the Buy Here-Pay Here Capitalization Market, December. http://www.twentygroups.com/index.php

Lubin, Paul. 2007. Fair Lending Testing: Best Practices, Trends and Training. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Ludvigson**,** Sydney**.** 1999. Consumption and Credit: A Model of Time-Varying Liquidity Constraints. *The Review of Economics and Statistics* 81-3: 434-447.

Maki, Dean M. 2000. *The Growth of Consumer Credit and the Household Debt Service Burden*. Prepared for presentation at the Credit Research Center's 25th Anniversary Conference, Arlington, VA, November 3-4, 1999.

McCarthy, Jonathan. 1997. *Debt, Delinquencies, and Consumer Spending*. Federal Reserve Bank of New York, Current Issues in Economics and Finance (February) 3: 1-6.

McCoy, Patricia A. 2006. Testimony before Hearings by the Board of Governors of the Federal Reserve System on Home Equity Loans, Atlanta, Georgia. July 11, 2006. http://www.federalreserve.gov/SECRS/2007/July/20070724/OP-1253/OP-1253_40_1.pdf

McCoy, Patricia A. 2007. Rethinking Disclosure in a World of Risk-Based Pricing. *Harvard Law Journal* 44.

McFadden, Daniel. 2006. Free Markets and Fettered Consumers. *American Economic Review* 96-1: 5-29.

Modigliani, Franco and Brumberg, R. 1954. *Utility Analysis and the Consumption Function: An interpretation of cross section data.* Kurihara, editor, *Post Keynesian Economics*.

Mote, Larry and Daniel E. Nolle 2005. *Special Studies –Rising Household Debt: A Long-Run View* Quarterly Journal (March) 24-1. Office of the Comptroller of the Currency (OCC), the U.S. Treasury Department. http://www.occ.treas.gov/qj/qj24-1/3-SpecialStudies.pdf

Andrews, L. Edmund. 2007. *Accord Seen on Revising Mortgage Rules. New York Times*, September 19, Business. *http://www.nytimes.com/2007/09/21/business/21home.html*

Nonet, Philipe and Philip Selznick. 1978. *Law and Society in Transitions: Towards Responsive Law*. New York: Harper Row.

Peters, Ellen, Daniel Västfjäll, Paul Slovic, CK Mertz, Ketti Mazzocco, and Stephan Dickert. 2006. Numeracy and Decision Making. *Psychological Science* 17 (5), 407–413.

Quercia, Roberto G., Michael A. Stegman, and Walter R. Davis. 2005. *The Impact of Predatory Loan Terms on Subprime Foreclosures: The Special Case of Prepayment Penalties and Balloon Payments*, Center for Community Capitalism, Kenan Institute for Private Enterprise, University of North Carolina at Chapel Hill. Available at: http://www.kenan-flagler.unc.edu/assets/documents/foreclosurepaper.pdf

Ramsey, Frank P. 1928. A Mathematical Theory of Saving. *Economic Journal* 38- 152: 543-559.

Retsinas, Nicolas and Eric Belsky. 2005. *Building Assets, Building Credit*. Washington, D.C.: Brookings Institution Press.

Retsinas, Nicolas and Eric Belsky. 2002. *Low-Income Homeownership.* Washington, D.C.: Brookings Institution Press.

Rotenberg. 1995.

Shu, Suzanne. 2003. *Choosing for the Long Run: Making Tradeoffs in Multi-period Borrowing.* Working paper. Chicago: University of Chicago.

Stango, Victor and Jonathan Zinman. 2006. *How a Cognitive Bias Shapes Competition: Evidence from Consumer Credit Markets*. Available at: http://ssrn.com/abstract=928956

Staten, Michael. 2007. The Impact of Credit Price and Term Regulations on Credit Supply. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Sunstein, Cass R., and Richard H. Thaler. May, 2003. *Libertarian Paternalism is Not an Oxymoron.* AEI-Brookings Joint Center for Regulatory Studies, Working Paper No. 03-2. Available at: http://aei-brookings.org/admin/authorpdfs/redirect-safely.php?fname=../pdffiles/phptj.pdf A similar paper with the same name was later published in fall, 2003 in The University of Chicago Law Review 70-4.

Sawady, Edna and Jennifer Tescher. 2007. Financial Decision Making Processes of Low-Income Individuals. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Thaler R.H. 1990. Anomalies: Saving, Fungibility, and Mental Accounts. *The Journal of Economic Perspectives* 4-1: 193-205.

Thaler, Richard H. 1980. Toward A Positive Theory of Consumer Choice. *Journal of Economic Behavior and Organization* 1: 39-60.

Tufano, Peter and Daniel Schneider. 2007. Using Financial Innovation to Support Savers: From Coercion to Excitement. Paper presented at the Understanding Consumer Credit Symposium, November 28-29, in Cambridge, Massachusetts.

Tversky, Amos, and Daniel Kahneman. 1974. Judgment Under Uncertainty: Heuristics and Biases. *Science* 185: 1124-1131.

Tversky, Amos, & Daniel Kahneman. 1981. The Framing of Decisions and the Psychology of Choice. *Science*, 211, 453-458.

Vink, Dennis and Andre Thibeault. 2007. *ABS, MBS and CDO Compared: An Empirical Analysis*. Munich Personal RePEc Archive (November) Paper No. 5028.

Viscusi, Kip and Richard Zeckhauser. 1979. Optimal Standards with Incomplete Enforcement. Public Policy 27-4: 437-56.

Warren, Elizabeth and Amelia Warren Tyagi. 2003. *The Two-Income Trap: Why Middle Class Mothers and Fathers Are Going Broke.* Basic Books, New York.

Weller, Christian E. 2006. *Drowning in Debt: America's Middle Class Falls Deeper in Debt as Income Growth Slows and Costs Climb.* Center for American Progress.

Woodward, Susan. 2003. *Consumer Confusion in the Mortgage Market.* Palo Alto, CA: Sand Hill Econometrics.

Yin, Sandra. 2003. The Title Wave That Isn't. *American Demographics*, October 1. http://findarticles.com/p/articles/mi_m4021/is_8_25/ai_108538941/pg_2