# Baggage of Consumer Installment Cash Lending 

## A New Sorting of the Suitcases

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#### Abstract

Regulation of credit use by individuals is as old as human history. Sometimes, however, rationales for aspects of regulations become lost in history to the point that current policy debates about them contain elements of mythology. Nowhere is this truer among kinds of consumer credit than for small cash installment loans. The origin of these loans as consumer protection under the Uniform Small Loan Law is often largely forgotten, and policy debates over their current regulation often betray misunderstandings. This paper discusses a group of such beliefs in a number of areas: reasons for using credit in the first place, interest rate ceilings on loans, lending profitability, loan renewals, Rule of 78 s , and credit insurance. It seems that good public policy would benefit from less attention to mythology and more to actual experience.


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Few historical phenomena suggest a cyclical view of history more than regulation of personal credit use. From the time of the ancient religious books of the Torah and the secular Babylonian Code of Hammurabi, officials in each historical epoch, with varying degrees of authority, have felt the need to control pricing and usage of credit for individuals. This pattern is visible in the history of ancient Greek city-states, in the imperial government of classical Rome, among religious leaders of the medieval church, and in colonial legislatures before the American Revolution. Not to be outdone, state legislatures in the 19th and early 20th centuries continued this tradition, and it has now spread to the US Congress with the passage of the Military Lending Act of 2006. Recent federal evidence became mixed, however, when in 2010 the Dodd-Frank Act (the Wall Street Reform and Consumer Protection Act) prohibited the Consumer Financial Protection Bureau from establishing usury ceilings.

Not surprisingly, substantial baggage travels along with support for this ancient tradition of restriction. Rationales for restriction have changed over millennia, including the slow evolution from religious to secular to religious again, then back to secular. At their heart, these rationales all contend that individuals should be protected from their own wishes through limitations on lenders. Pricing is the main element of limitation, ranging from an interest rate of zero in the

Biblical prohibitions on usury to somewhat higher, but still sometimes unworkable, rates in secular examples. ${ }^{1}$ More recently, more subtle means of limiting prices have also been imposed.

A July 2015 paper from Boston's National Consumer Law Center (NCLC) titled "Installment Loans: Will States Protect Borrowers from a New Wave of Predatory Lending?" ${ }^{2}$ offers a recent example of the accumulation of such baggage, including newer components. There is no intent here to claim that this NCLC paper is in some sense representative of an intellectual tradition supporting regulations; indeed, its authors claim it involves a new legal look, although others maintain similar views. There is also no intent to use this paper as some sort of straw man of "conventional wisdom" for attack, but it is an interesting reminder of many of the familiar arguments offered over the centuries and of their longevity.

The NCLC paper purports to focus on consumer cash installment lending, but close reading shows it is primarily concerned with so-called payday lending and its variants. Thus, it would be useful to look specifically, at the sometimes misunderstood or forgotten features of the specialized installment form of consumer cash credit. This old industry has been discussed before, but the baggage that comes along with modern attacks on it suggests that another review is warranted. For discussion of installment lending in this report, the accumulation of baggage is divided among seven suitcases. After the first suitcase-which encompasses notions about why individuals use credit in the first place-an introductory quotation from the NCLC paper offers a useful way to focus the ensuing discussion about this industry in the other areas to be addressed.

[^0]
## Suitcase Number One: Mythology of the Reasons for Credit Use

Regulated consumer cash installment lending in the United States actually began as a consumer protection against illegal lending (loan-sharking) encouraged by low state usury ceilings on legal credit in the early 20th century. ${ }^{3}$ Recalling the founding of the legalized small loan industry as an attempt to overcome unanticipated consequences of earlier regulation raises the question: What is it about personal credit that has provoked so much commentary and so many cycles of legal activity in the first place? ${ }^{4}$ It seems the answer is twofold. First, there is the concern that credit use somehow involves an attempt to live beyond one's means, a pursuit that was considered a moral evil in earlier centuries and potentially a cause of economic dislocations in more secular modern times. Either view seems to provoke demands for centralized control. Second-certainly also an ancient concern but one given new life in the United States since World War II-is the accompanying contention that personal credit simply has grown so much over time that society risks being awash today in a flood of personal debt to the detriment of individuals and the

[^1]macroeconomy. Because installment cash loans tend to be relatively small, let us concentrate on the first of those claims. (As it turns out, supporting evidence for both claims is weak. ${ }^{5}$ )

Concerning living beyond one's means, the lending and borrowing process does not change the amount of consumers' resources unless they do not repay their loans. People borrow and then spend more today, but they repay the loans and spend less later. To be sure, both borrowers and lenders can miscalculate what the future prospects of a loan will be. Variability in future employment and income opportunities among borrowers promises that some loans are not repaid-a manifestation of the concept of risk. But risk does not change the amount of the resources involved, only the probabilities of which party ultimately ends up with them. The borrower retains the resources (or the benefits from them) if they are not repaid, and (most commonly) the lender gets them back over time if they are. Although some borrowers undoubtedly behave strategically and try to take advantage of lenders by planning not to repay, this is not the norm in modern consumer credit arrangements.

The importance of the mainstream borrowing and lending process for consumers is not that it somehow adds resources but that it can increase the total benefits of spending by providing an opportunity to make relatively large expenditures now that provide benefits over time and produce a positive return over cost. Clearly, many uses of credit imply such positive outcomes. Credit allows purchase of durable assets such as vehicles, education, and other resources that can be acquired now to provide a long-term return and that are paid for by future paychecks. In this way, credit permits using a productive asset while saving for it.

Without credit, a consumer might have to do without the asset for a long period and pay for expensive alternatives and substitutes while saving for it. Costs of these substitutes, plus the

[^2]more mundane uses that are always available as alternative uses and diversions of current income (sometimes referred to as "frittering away" the money), can easily lead to less favorable outcomes than using credit to acquire the productive asset now. Cash installment loans are often used for asset purchases, but because such loans tend to be relatively small for the most part, other uses are also common. The uses can include attending to various household emergencies (including automobile and home repairs, home appliance breakdowns and replacements, and medical needs) and satisfying current wants and desires.

And so, using credit to purchase productive assets, to address emergencies, or for other purposes does not imply wholesale living beyond one's means. Rather, credit use implies the opportunity to change the timing of purchases. The alternative is to save and accumulate cash in advance of a purchase, but doing so is not always possible or necessarily the best plan. Alternatives in the meantime (taking public transportation, renting new assets rather than repairing the old ones, forgoing repairs and medical care, missing opportunities, relying on the forbearance of other creditors, and using short-term credit alternatives such as asset account overdrafts, loans from a brother-in-law, etc.) can be more expensive. Some of the alternatives may be personally embarrassing to individuals (for instance, to those using the brother-in-law approach) and might even be disastrous in some cases (for instance, to those forgoing medical care).

To obtain this change in spending timing, borrowers pay interest, known in Truth in Lending Act requirements as a finance charge. The finance charge serves as the needed inducement for the lender to defer its own current use of the resources in some other way. The lending process amounts to the reverse of the timing change for the borrower, with the lender spending less now on its own uses in order to spend more later.

But the possibility of a timing change and the accompanying exchange of a fee to bring it about have posed questions for millennia. It was considered immoral for borrowers to live beyond their means, and the prevailing belief was that borrowing and lending should occur only in cases of true "need." Attempting to restrict lending and borrowing to such situations, however, leads immediately to the Bible's and medieval church's prohibitions on the taking of interest (the $\sin$ of usury), as this practice was an affront to the religious requirement for charity in such cases.

Economic analysis since the 18th century has generally come to a better understanding of the concepts of "needs" and "returns over cost." But it seems that vestiges of the ancient and medieval view remain in the 21 st century in the form of psychological criticisms. Psychological criticisms of the modern economic view of consumer credit use have also been around for a long time, but their latest version is a body of legal literature known as behavioral law and economics (BLE). This is a loosely defined grouping of legal prescriptions based on uncritically adopting into law some theoretical ideas from a relatively young branch of economics called behavioral economics. BLE focuses especially on a technologically newer manifestation of consumer credit use through credit cards. ${ }^{6}$

Ultimately, BLE suggests that some limitations on the economic rationality of consumer borrowers must be overcome with regulation. The problem with BLE is that it fails to appreciate the well-developed ideas of the traditional microeconomics of credit use. BLE lacks empirical evidence of the degree to which traditional economic theory needs adjustments to account for the personal behavioral idiosyncrasies of individual consumer borrowers. The province of BLE is

[^3]credit card lending, an allegedly special problem for consumers because of its ubiquity, easy availability, and immediacy. For BLE proponents, credit cards appear to be an entirely new area of lending in need of repair. Credit card lending has become an area in which BLE supporers argue that theoretical concepts based in psychology, including hyperbolic discounting, mental accounting, shrouding of fees, and nudges, should translate into new regulatory spheres.

A more complete view of credit cards within consumer credit is that credit cards are an outgrowth of ongoing technological change in a credit industry looking for ways to reduce costs. As empirical evidence suggests, credit cards have mostly replaced the small-ticket household financing (including cash installment lending) formerly undertaken by local banks, finance companies, and retail stores and dealers. Credit cards have also assumed an increasingly important role as payment devices that involve credit only statistically, not behaviorally. To be sure, some consumers may behave irrationally in their use of credit cards, but the important question is the extent and overall importance of such behaviors. BLE should provide better empirical evidence of frequency and quantity before recommending legal changes to a system used successfully by millions of patrons for many years. ${ }^{7}$

[^4]
## Suitcase Number Two: Mythology That Installment Cash Loans with High APRs Are Necessarily Predatory

Caps on interest rates and loan fees have long been the primary vehicle by which states protect consumers from predatory lending. ${ }^{8}$

Small installment cash loans carry annual percentage rates (APRs) that appear high relative to larger loans, not because lenders want to be predatory but because the production cost per loan dollar is high. ${ }^{9}$ This phenomenon arises from the economies of size of production cost. In other words, lending costs rise as loans become larger (because of the need for more careful screening, the need to take and record more payments over time, etc.), but they rise much less than proportionately, because of production cost economies of size. A multimillion-dollar loan to a top-rated international corporation may cost more to investigate, book, and collect than a small loan to a risky consumer, but not per loan dollar.

As a result, the loan charge to cover production costs needs to be higher per loan dollar for small loans than for large loans if small loans are to be profitable for lenders. For small loans, the production cost per dollar of the loan looms large not in total but rather relative to the dollars of the loan. Much of the production cost arises because lenders must maintain lending locations,

[^5]pay rent, employ personnel, and acquire office supplies and equipment with prices and amortizations. In addition, there are the cost of the lending capital itself and the cost of risk, which can also be substantial relative to the loan amount for small loans. Almost by definition, a borrower in need of a small loan is going to be a risky borrower. ${ }^{10}$

To cover the average production cost of extending a risky, small-size loan, a lender will need to charge a number of dollars for the loan that is large relative to the amount of the loan, even though the dollar amount of the cost is not in itself very large. Despite the loan size, the lender still needs enough revenue to justify obtaining and maintaining the lending location, hiring and paying the personnel, acquiring the supplies and equipment, raising the capital, and allocating the risk cost. Translating these necessities for small loans into an APR as required by the Truth in Lending Act makes the disclosed rate very high, even though the dollars involved are much less startling. This anomaly occurs simply because the production cost looms large relative to the loan dollars involved and the short term of the loan on which the lending cost must be recovered.

At the direction of Congress in the Consumer Credit Protection Act, the same act that established Truth in Lending, a federal National Commission on Consumer Finance (NCCF) studied lending costs at length some decades ago. One of the commission's important findings based on its cost studies was that the APRs would have to be quite high, approaching triple digits at the smaller loan sizes, because of the necessity of covering production and risk costs with

[^6]revenue from only small amounts of loan dollars. ${ }^{11}$ Although the commission undertook its cost work many years ago, its findings remain relevant because the traditional installment cash loan industry has changed so little. Loans are still made from storefront offices with three to four employees. Underwriting, interviewing of borrowers, collections, management structure, and sources of funding remain the same as they have for decades. Office automation is used for record keeping, but costly regulatory compliance needs have increased, offsetting any cost savings there. Overall, employees from many years ago would be quite comfortable stepping into today's small loan lending environment.

Durkin, Elliehausen, and Hwang constructed a series of APRs recommended by the NCCF as necessary for small loan lenders to produce loans of various sizes, with adjustments for inflation. ${ }^{12}$ Adjusting cost and loan-size dollars for inflation since the commission issued its report seems like a reasonable approach in this case because the industry has changed little. Thus, the NCCF estimated a $\$ 370$ fixed cost per loan (2013 dollars) plus a variable cost of about 11 percent of the loan amount for a one-year loan (the average loan term). This makes it possible to calculate break-even APRs for different loan sizes. Figure 1 shows the calculated inverse relationship between break-even APR and loan amount. Some highlights:

- A $\$ 739$ loan has a break-even APR of 91.36 percent.
- A $\$ 1,000$ loan has a break-even APR of 77.86 percent.
- A $\$ 2,100$ loan has a break-even APR of 42.00 percent.

[^7]- A \$2,600 loan has a break-even APR of 36.00 percent. In recent years, a 36 percent APR has sometimes been mentioned as a desirable maximum APR for small loans. ${ }^{13}$

A loan amount of $\$ 7,550$ has a break-even APR of 19.21 percent. Note that $\$ 7,550$ is the largest mean value of individuals' outstanding credit card debt reported in the Federal Reserve Board's 2010 Survey of Consumer Finances.

Figure 1. National Commission on Consumer Finance Estimates of APR Necessary to Recover Costs of a 12-Month Consumer Finance Company Loan, by Loan Size


Source: Updated from National Commission on Consumer Finance, Consumer Credit in the United States: The Report of the National Commission on Consumer Finance (Washington, DC: Government Printing Office, 1972), exhibit 7-16. Based on data in Paul F. Smith, "Recent Trends in the Financial Position of Nine Major Consumer Finance Companies," in The Consumer Finance Industry: Its Costs and Regulation, eds. John M. Chapman and Robert P. Shay (New York: Columbia University Press, 1967). Average loan size was $\$ 3,581$ in 2013 dollars.

[^8]Durkin, Elliehausen, and Hwang then compared these APRs with some existing state
ceilings and the availability of loans of various sizes in those states, using survey data on cash
installment loans made in July through December 2015. They concluded,
It is possible to construct a series of APRs recommended by the National Commission on Consumer Finance (NCCF) as necessary for small loans lenders to produce loans of various sizes and then to compare them with some existing state ceilings and the availability of loans of various sizes in those states. Table 17 [table 1 in this paper] provides such a comparison using the NCCF's estimates of APRs that would "allow for enlargement of the market through a higher degree of risk acceptance" (National Commission on Consumer Finance 1972, p. 144) and adjusting loan amounts and production costs for inflation. The table compares these NCCF rates to actual rates on surveyed loans in the $\$ 100$ size groupings ranging upward from the selected loan amounts. All of the calculations of the NCCF rate used in the table assume a 12 month maturity except the $\$ 500$ loan which assumes a 6 month maturity.

APRs on the surveyed loans demonstrate exactly the pattern recommended by the NCCF in 1972 based upon its cost analyses and its contention that market competition would keep rates in this range if rate ceilings were to allow them. Actual rates on loans are highest on the smallest loan sizes and fall off in the pattern predicted by the NCCF. In the intermediate size groups $(\$ 1000, \$ 1500$, and $\$ 2000$ ) it appears that rates in the table are moderately above predicted rates for some states in large part because a portion of the loans in these states within the indicated size groups are actually for terms less than the assumed maturity of 12 months. This moves the overall mean for the grouping upward, but the mean rates are still relatively close to the NCCF recommendation based on costs, and they show the predicted downward trend relative to loan size.

By loan size $\$ 2500$, actual rates on surveyed loans in all states in the table are right around the NCCF projected level. As discussed earlier, loans of this size are available from the surveyed companies in all the states in the table, but the smaller sizes are not available in California or Pennsylvania, the low rate states in the right hand columns. This is consistent with the writings of the National Commission but also with the earlier theoretical work of Juster and Shay who predicted exactly this outcome. ${ }^{14}$

[^9]Table 1. APRs Recommended by the National Commission on Consumer Finance and Actual APRs on Surveyed Loans: Selected Loan Sizes and States

| Loan sizes (\$) | $\begin{aligned} & \text { NCCF } \\ & \text { APRs }^{\text {a }} \end{aligned}$ | Actual rates in selected states ${ }^{\text {b }}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Texas | South Carolina | Illinois | Missouri | Pennsylvania ${ }^{\text {c }}$ | California ${ }^{\text {c }}$ |
| 500 | 187 | 94 | 67 | 91 | 108 | * | * |
| 1,000 | 62 | 87 | 48 | 64 | 68 | 26 | * |
| 1,500 | 47 | 47 | 63 | 56 | 80 | 25 | 27 |
| 2,000 | 39 | 46 | 55 | 51 | 62 | 26 | 24 |
| 2,500 | 34 | 29 | 34 | 34 | 41 | 26 | 32 |

Notes: ${ }^{\text {a }}$ The NCCF APRs are rates that would "allow for enlargement of the market through a higher degree of risk acceptance." National Commission on Consumer Finance, Consumer Credit in the United States: The Report of the National Commission on Consumer Finance (Washington, DC: Government Printing Office, 1972), 144. Calculated rates are for 12 -month maturities except for the $\$ 500$ category, which is for 6-month maturity.
${ }^{\mathrm{b}}$ The actual rates are mean rates on surveyed loans for loan amounts (Truth in Lending "Amounts Financed") in the $\$ 100$ increment upward from the loan amount indicated (e.g., mean rates for the $\$ 500$ loan amount line are for surveyed loans of $\$ 500$ to $\$ 599$ ). The $\$ 2,500$ category is for loan amounts of $\$ 2,500$ or more.
${ }^{c}$ In Pennsylvania, 79 percent of surveyed loans were for $\$ 2,000$ or more; the corresponding percentage in California was 91 percent.

* indicates an insufficient number of surveyed loans to provide a meaningful mean rate.

Source: Thomas A. Durkin, Gregory Elliehausen, and Min Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies: Results of a New Survey of Small Dollar Cash Lenders" (working paper, December 2016).

Review of evidence from Durkin, Elliehausen, and Hwang's survey of millions of small cash installment loans demonstrates the subprime nature of these small loans-precisely the kind of loans rationed out of the marketplace if the price ceiling is set too low. Many authors have previously drawn the same conclusion from their empirical studies. ${ }^{15}$ Almost 90 percent of the surveyed loans could be classified as subprime. Only about 3 percent of the loans with scores recorded went to borrowers with credit scores over 700. This means that most of the customers for this kind of installment loan probably were ineligible for much additional credit from mainstream lenders.

Evidence from this lending survey also demonstrates the impact of the geographic distribution of state-based rate ceilings. Lenders responding to the survey reported making

[^10]hundreds of thousands of cash loans of $\$ 2,000$ or less in states where higher legal rates were available, but few such loans were made in low-rate states. Ultimately, the high-risk segments of society are restricted from the credit markets by the decisions of segments of society that believe they better understand what is preferable for everyone.

Whether these high APR rates for small loans are "predatory" depends on the viewpoint of the observer. From the production side, they certainly are economically justifiable if cash installment loans of these sizes are to be available in the marketplace. From the consumer side, whether these rates are worth paying depends on how badly the individual needs or wants the lending service, the same as with the price of anything else. If the price is too high for a consumer's preference, the individual can refuse to pay it (or, for loans, refuse to borrow the amount and undertake the spending) or look for a lower-priced lending source. Other possibilities such as buying rent-to-own, buying high-priced retail goods on credit, or getting loans from a brother-in-law may also be available. But if a price ceiling is set below the production break-even point, the consumer will not have the choice of a cash loan because loans of this size will disappear from the marketplace, at least to the relevant risk class. This is the phenomenon of credit rationing, which has been examined extensively by economists for centuries. ${ }^{16}$

## Suitcase Number Three: Conceptual Mythology about Rates and Prices

The APR provides a way to measure the relative cost of two loans. The APR is especially important for revealing the full cost of a loan that charges fees in addition to a periodic interest rate. ${ }^{17}$

[^11]Federal Truth in Lending (TIL) requirements, in effect since July 1969, provide the information necessary for consumers to make informed decisions about credit costs, including best credit sources and benefit-cost analyses of using credit to make particular purchases. To help consumers make these determinations, TIL requires many account-specific disclosures, most importantly the APR and the finance charge expressed in dollars. ${ }^{18}$

In this context, it is worth noting that both disclosures are needed. An APR is useful for comparisons but is not the cost of a loan. It is like a "unit price" available on many other purchases, such as groceries, but its usefulness as a measure of cost also depends on the amount purchased.

As with any price, knowing the cost of a loan depends on the dollars spent on it, specifically the finance charge, and not just the unit price (the APR). Mathematically, the APR relates the finance charge to the time dimension and annualizes it. Technically, it provides the annualized discount rate that reduces the flow of payments over time to its discounted net present value, known in TIL terms as the Amount Financed. (In the case of the simplest kinds of loans, including traditional small cash installment loans, the Amount Financed almost always equals the loan amount, which is not a TIL term or required disclosure.)

Significantly, because the APR is a discount rate for calculating present values of cash flows, multiplying the APR times the amount of the loan (usually the Amount Financed) does not produce the finance charge. This happens because amounts outstanding on amortizing loans decline as payments are made. This aspect of the loan makes the average amount of the loan outstanding equal to a bit over half of the original loan amount.

For this reason, multiplying rate and time by Amount Financed (loan amount) with a loan repaid in installments will typically produce an amount approximately twice the actual finance

[^12]charge because of the installment payment feature. To use a simple example, a one-year $\$ 1,000$ installment loan at 42 percent per annum produces a TIL finance charge of $\$ 248.24$, not $\$ 420$. The finance charge disclosure provides information correcting this potential mathematical misunderstanding. Nonetheless, the appropriate finance charge disclosure may cause confusion among consumers who try the multiplication. If they do not understand the results, they may well downplay or dismiss the APR as some sort of bureaucratic concoction with little understandable meaning. Various surveys suggest that consumers do not, in fact, understand the mathematical relationship between APRs and finance charges. ${ }^{19}$

But saying that the APR is not the cost of a loan, or that most people find it difficult to use an APR to generate the finance charge in dollars, is not to say that the APR is not an important disclosure. As a unit cost, it is useful for making comparisons among credit arrangements, especially loans with long terms to maturity. Even for shorter-term loans, the APR provides full comparative information if the loans have the same size and maturity. For loans with the same size and maturity, the APR, finance charge, monthly payment, and total of payments all tell the same story: The loan with the lowest of any of them also has the lowest of all of them (since they are perfectly correlated) and is the least expensive. They provide separate but consistent indicators. In this case, the APR (or any of these disclosures) is helpful to the consumer in making comparisons among credit sources.

But the time dimension and the necessity that APRs be annualized can sometimes produce anomalies on shorter-term loans of different sizes and maturities. Because of the

[^13]underlying nature of time lending and the mathematics for shorter-term loans, it is easy enough to show that in many cases, the loan with the highest APR is not the most expensive loan, and the loan with the lowest APR is not the cheapest. This means the consumer must be more judicious in using the required disclosures. Some examples are useful.

Consider a consumer who borrows $\$ 500$ for six months to make repairs, to purchase something, to pay medical expenses, or to use in some other way. At an APR of 72 percent, reflecting high lending costs relative to the small loan balance, this amount would be repaid to the lender in six equal payments of $\$ 101.68$, including a finance charge of $\$ 110.09$. All these amounts are required disclosures under TIL, but which of them is helpful to a consumer in making a decision?

As suggested earlier, the APR would be useful for comparing credit sources for loans with the same maturity, but what about the decision whether to borrow at all? Here, the APR may not always be the most useful disclosure. For small short-term cash loans, the consumer may best be able to understand whether the loan is worth the cost by comparing the projected benefits of the loan directly to the finance charge. Ultimately, the decision is whether the benefits of the loan are worth a certain dollar cost, not an annualized percentage, although admittedly the percentage rate is useful for comparing loan sources under comparable conditions.

However, employing the finance charge for comparison of costs versus benefits presents two difficulties. First, it is not always simple to measure loan benefits in dollars. Nonetheless, often it is easy enough to think about comparing benefits to the finance charge on a short-term loan and to determine within a reasonable range whether benefits seem to approach this cost. This will be easier for short-term loans that may be borrowed for an immediate, visible purpose
than for loans such as student loans or those for housing purchase and repair, in which both the payments and returns take place over substantial periods of time.

Second, employing the undiscounted finance charge for comparisons neglects the time value of money. The time value of money is the idea that a sum in hand today is worth more than one available later, as evidenced by the phenomenon that people will pay more in the future to obtain a sum today-that is, they will pay interest on a loan. One can estimate the time value of money by using the financial technique of calculating net present values of future cash flows using current rates of interest, but typical consumers do not think in these terms of financial analysis or actuarial science.

But undertaking such calculations for analytical purposes shows that, for short-term loans, the TIL finance charge provides a reasonable estimate of the time value of money, even at APRs that appear quite high. This means that a consumer can use the disclosed TIL finance charge for short-term loans to evaluate whether the likely benefits from the loan at least approach the cost. Since the (undiscounted) finance charge is always higher than the time value of the same sum, this approach always provides a slight bias toward not accepting a given loan.

On the short-term loan of the previous example, the time value of the deferral cost discounted at the APR is $\$ 94.26$. This is not greatly different from the amount of the disclosed (undiscounted) finance charge of $\$ 110.09$, which is the out-of-pocket amount that the loan costs the consumer over time. And so, for short-term loans, the disclosed finance charge is a reasonably close estimate of the deferred value of the loan amount. In this case, the question is whether making the purchase now rather than later worth is worth $\$ 110.09$ (rather than the theoretically correct $\$ 94.26$ ). For comparisons, deferred benefits and costs should be discounted together, but the comparison of undiscounted amounts is the best that the typical consumer
thinking in the present will have available from the TIL disclosures. In any case, for this evaluation, the disclosure of $\$ 110.09$ for many short-term comparisons of costs to benefits seems more useful than an APR of 72 percent ( 72 percent of what?), although the APR would still be useful for comparing credit sources for the same loan.

Now consider the loan of our hypothetical example, but suppose that the advocacy industry in a particular state recommends an APR cap of 36 percent. If, as previously discussed, 36 percent APR is insufficient for lenders to be willing to make $\$ 500$ loans, those lenders might still be willing to make larger loans. Suppose for discussion purposes that the same lender is now unwilling to make $\$ 500$ loans (because they do not generate sufficient revenue at 36 percent) but will still make $\$ 1,000$ loans for one year at the lower rate. (These loans actually are still unlikely, but let us use the example. Using a still-larger loan in the example would produce an analogous result.)

On this new loan, the 36 percent rate (only half of the APR on the other loan) appears at first glance much more favorable to the consumer. But the consumer wanted only $\$ 500$ and now must borrow $\$ 1,000$ with a longer time period for repayment. Even if the consumer is disciplined enough to put away the extra $\$ 500$ to use in making the payments later, the loan is much more costly, even at half the APR. Calculations this time show that the $\$ 1,000$ loan at 36 percent APR will be repayable in 12 monthly payments of $\$ 100.46$ for a total of $\$ 1,205.55$ in payments and a finance charge (interest) of $\$ 205.55$. The cost of this loan at $\$ 205.55$ approaches double the cost of the other loan (\$110.09) at half the APR. The borrower needing $\$ 500$ would be considerably better off with the smaller loan at twice the APR.

TIL provides the disclosures to enable the consumer to make decisions: For a given loan amount and maturity, the APR, finance charge, size of monthly payments, and total of payments (amount) are perfectly correlated, and they all point the consumer to the preferable credit source.

For differences in loan size and maturity and for the decision of whether to borrow at all, the finance charge disclosure provides dollar information on costs to compare with potential benefits of short-term loans. In the case of short-term loans, ignoring the time value of money does not significantly damage the analysis. The best choice here is the loan with the smallest finance charge that provides the amount of credit needed, not the loan with the lowest APR. For shortterm loans, comparison of this cost to potential benefits is reasonable and understandable, even at relatively high APRs and without adjusting for the time value of money. This suggests the usefulness of recommendations before TIL that finance charges and APRs both be disclosed. Fortunately, TIL has provided for both.

Such discussion is by no means new. For instance, in a monograph for the National Bureau of Economic Research in the period before TIL, economist Wallace Mors noted that the APR is not the only credit-price information that consumers may need to make credit decisions. ${ }^{20}$ He assessed the usefulness of various types of cost-related information and proposed that ideally consumers needed the dollar amount of finance charge, the size and number of monthly payments, and the "annual effective finance rate" (now called the APR). He examined the use of these items in evaluating loan contracts having different loan amounts and terms to maturity. He concluded that none of the items can serve effectively as a single criterion because each applies only to some aspect of the credit decision.

Regarding small, short-term loans, Mors noted that annual effective finance rates are very high, even when the dollar finance charges are nominal, because largely fixed costs of acquisition and servicing are spread over a small amount of credit for a short period of time. In contrast, for large loans with very long terms to maturity (home mortgages, for example), the

[^14]fixed costs are small relative to the total finance charge that may approach or even exceed the amount borrowed. He argued at the time, "The combination of small dollar finance charges and extremely high effective annual rates make it important that the dollar charge information supplement effective annual rate information which, by itself, may be misleading to prospective borrowers" ${ }^{" 21}$ For evaluating alternative cash loans, he noted that the monthly payment amount is a useful indicator of the relative credit price among sources when the term to maturity and loan amount are the same. ${ }^{22}$

## Suitcase Number Four: Mythology about Operations and Profitability

Excessive interest rates enable lenders to generate significant profits from a loan portfolio even when many borrowers eventually default. High profits on loans that are repaid in full can inure the lender to significant defaults. In addition, with a high enough interest rate, especially on a longer term loan, the lender is made whole and begins making a profit well before the loan is fully repaid. Thus, even loans that default at some point may be profitable. ${ }^{23}$

The NCLC's 2015 report on installment loans appears to argue that if prices appear high, profits must necessarily be large or excessive. This view minimizes the existence and significance of production costs in the lending process. In fact, the myth of excessive profitability of small installment loan cash lending was dispelled decades ago, to the point that it is no longer a researchable topic for academic finance specialists because the answer is known.

[^15]Researchers in the 1960s and 1970s undertook studies of installment lender profitability along with analysis of costs, types of loans, and experience with regulation. Many of the studies reflected experience in a particular US state because state regulatory agencies collected the needed data and sometimes shared it for research purposes. ${ }^{24}$ These studies demonstrated some cyclicity of lending revenues, cost of loanable funds to the industry, and bad debts and losses, depending on the stage of the business cycle. But the studies also found that installment lending profitability did not diverge much from returns available in other competitive industries, although it generally tended toward the lower end of the spectrum. More recent reports from the North Carolina Banking Commissioner's office reach the same conclusion: Although the industry is profitable overall, substantial numbers of individual lenders are not. ${ }^{25}$

Research also indicated that on occasion, adjustments to rate ceilings in a state affected profitability of lending in that state for a while, but more significant was the impact on the quality of lending service through availability of credit after short-term adjustments to the new ceilings. The effect of lower ceilings has been to reduce credit availability and the effect of higher ceilings to increase it. Ceilings that are sufficiently low could even reduce availability of the relevant kind of credit to zero for borrowers who were rationed out of the marketplace. ${ }^{26}$

[^16]Chapman and Shay have reported the dynamic:
When rate and loan ceilings are fixed in relation to costs at a particular point of time, they gradually become obsolete as market forces alter cost-revenue relationships. New York, by providing markets for licensees, offers hope that changes in legislation will let lenders average out good and lean years. While it is obvious from our data that lean years have again arrived, we question whether the philosophy of limiting competition in this manner provides an effective environment for loans to consumer borrowers. As of now, we can only state that any adjustments made by licensed lenders to offset the pressures of rising costs have not succeeded in preventing the deterioration of profitability of licensed lending and the incentive to attract capital between 1961 and 1967. ${ }^{27}$

Probably the most detailed and extensive profitability analysis of the installment cash lending industry is found in the 1977 monograph on the industry by Durkin and McAlister. ${ }^{28}$ Before examining profitability using industry data collected from all Texas licensees by the Texas Office of the Consumer Credit Commissioner, Durkin and McAlister reviewed at some length six separate accounting issues before concluding that the data were appropriate for the project. Using econometric techniques, they also examined the question of lending cost by loan size, concluding that operating costs rose far less than proportionately as average loan size increased. This conclusion showed that higher rates would be necessary on the smaller loan sizes before lenders would be interested in making smaller loans (see their appendix B). The accounting issues examined were: methods of revenue recognition used by lenders; cost allocations for multibusiness offices; accounting for salaries of owners in unincorporated firms; reports of loss reserves and bad debt expenses; accounting adequacy of reported income from credit insurance; and methods of allocating income taxes, capital costs, and capital structure among subsidiaries of interstate companies. The authors concluded that either the Consumer Credit Commissioner's figures were adequate for the purposes intended or adjustments were possible to make them appropriate (for example, involving allocation of federal taxes and capital

[^17]structure). After this review of the numbers, Durkin and McAlister concluded that the table
"shows that estimated net return on owners' equity has been lower in Texas 3.15 lending than in
other industries., ${ }^{29}$
Although not focusing per se on analysis of the profitability of installment lending, Durkin and coauthors show that basic production cost experience with small cash installment loans by finance companies did not change much for decades. ${ }^{30}$ This likely is still true, even as other aspects of the economy change. Durkin, Elliehausen, and Hwang have pointed out that this kind of lending remains labor intensive, although there have not been specific recent cost surveys:

Activities such as discussing loan options, taking applications, assessing ability to pay, processing payments, and collecting delinquent accounts all involve substantial labor costs. Salaries and benefits of employees likely have not decreased as a share of operating costs, even with information systems and office automation, because the more sophisticated nature of the technologies employees now use for evaluating and managing risk and today's more stringent regulatory obligations require better educated and trained employees [footnote omitted]. They also spend more time on regulatory compliance, which is costly. ${ }^{31}$

## Suitcase Number Five: Mythology about Calculating Rates, Rebates, and the Rule of 78s

When a consumer pays off a loan early or refinances it, it makes sense that the consumer should be charged interest only for the amount of time that the loan was actually

[^18]outstanding. Yet many state installment loan laws allow lenders to charge the consumer more interest than has actually been earned. The statute may explicitly authorize the lender to keep a certain amount of unearned interest, such as $\$ 5$ or $\$ 10$. The law may specify that certain loan fees do not need to be rebated. Or it may allow the lender to use an archaic method-the Rule of 78s-for approximating the amount of interest that has been earned. ${ }^{32}$

The previous section suggested that there is no evidence of excess profit in the small cash loan industry-exactly the expectation in a competitive market. But this quote from the NCLC installment loan report suggests that the industry enhances its charges, and presumably its profitability, in various ways by somehow charging more "interest than has actually been earned." If this statement is correct but the industry is still not sufficiently profitable, then it is an argument for allowing rates to be high enough by themselves to cover costs, which would also improve the transparency of the charges. But whether this claim is even correct is an interesting analytical question worth looking at in more detail.

On the following page of the report, the claim continues:
For complicated reasons, this formula allows the lender to keep more of the interest than it has actually earned at a given point in time, i.e., more than it has earned when calculated on an actuarial basis.

The need for a rebate of unearned interest upon prepayment arises when the loan note obligates the consumer to pay the principal plus the dollar amount that will be earned in interest and other charges over the life of the loan. When the borrower's obligation is structured in this way, the loan is termed a precomputed interest loan. If the borrower pays off the loan early or refinances, the lender must determine how much of the precomputed interest should be rebated to the consumer. ${ }^{33}$

The rebate should be at least a full actuarial rebate, reflecting the amount of interest that has actually been earned. ${ }^{34}$

Where would the idea of allowing the crediting of anything "unearned" due to a formula originate? It appears to be based on some unidentified value judgment, but concerning rebates

[^19]of unearned charges on precomputed loans, there is both more and less here than meets the casual glance. ${ }^{35}$

Modern regulated small cash lending began with liberal reformers in the first half of the 20th century who were fighting lenders they called loan sharks. The campaign for reform centered in the legal, statistical, and lobbying efforts of the reform-minded progressive Russell Sage Foundation, which, beginning after 1910, advanced a regulatory approach called the Uniform Small Loan Law (USLL). ${ }^{36}$

The original pricing and loan limits advanced in the first draft of the proposed USLL in 1916 were 3.5 percent per month on the outstanding balance ( 42 percent on an APR basis) up to $\$ 300$. At the outset, the foundation realized that this formula favored larger loans at the expense of smaller ones, but the foundation did not want to complicate lending transparency by using different rates for different loan sizes. After some experience, the foundation compromised and favored split rates for different loan sizes to encourage production of both the smallest loans and larger loans.

By the 1960s, almost all states used split rates for their installment cash lending rate ceilings. For instance, at this time, the state of New York allowed 2.5 percent per month on the part of a loan up to $\$ 100$, then 2 percent per month on the amount up to $\$ 300$ and 0.75 percent on

[^20]the remainder, up to a maximum loan size of $\$ 800$. The New York rates were on the low side nationally, but they were not structurally atypical.

It is easy enough to see that calculations to determine monthly payments could be quite complicated with a split-rate approach, especially when up to four break points were involved. The outstanding loan amount declined as payments were made, and split rates collected monthly introduced considerable complexity into lenders' necessary calculations of interest and principal due each month. Split rates also required payment sizes for consumers that differed over time in ways that were difficult for borrowers to predict or for lenders to explain easily to borrowers.

These complications gave rise over time to the notion of precomputation. It is also easy enough to see that all the calculations could be made in advance and entered into a rate book with pages for various loan sizes and maturities (i.e., precomputations could account for split rates and allow for equal payment sizes over time). There would then be no need for office personnel to calculate payment sizes monthly and explain them to customers. Assuming that payments would be made at least generally on time and that the loan ran to maturity, total interest could be calculated in advance, added to the loan amount, and divided by the number of months to produce equal-sized monthly payments. Both borrowers and lenders seemed generally to prefer these arrangements.

Of course, the assumptions did not always hold. First, sometimes customers would pay late. This led to the concept of the late charge as a penalty and an incentive to pay on time, rather than recalculating payments based on varying interest for "months" of varying length as customer payment speeds fluctuated.

Second, loans frequently did not run to maturity, ultimately because of another consumer protection in the USLL. Notably, regulated lenders were not permitted to make multiple loans to
an individual or more than one to a husband and wife. Like precomputation, this requirement also arose from the phenomenon of split rates. To understand this, an example is useful.

If lenders were, for instance, permitted to make two loans to an individual under the New York rates noted previously, unscrupulous lenders with a potential borrower who desired $\$ 600$ could offer paperwork for two $\$ 300$ loans with a total rate and finance charge higher than for a single $\$ 600$ loan. Thus, to eliminate the possibility of higher prices through intentional "loan splitting," as it was known, the USLL allowed no more than a single loan to an individual or to a husband and wife. This seemed only fair because two such loans would actually be underwritten and collected together and would be the functional equivalent of a single loan anyway. Consequently, the USLL contained a consumer protection prohibiting loan splitting in order to assure consumers they received the lower rate on the larger single loan as permitted by law.

But this provision caused difficulties whenever a customer or couple who already had a loan wanted or needed a few extra dollars. Because of the anti-loan-splitting provisions in various states, the lender could not make a second loan for the additional amount. Further, because the existing loan under the USLL was a closed-end loan with specific, existing loan terms, such a request could not be handled by adding the extra dollars to the existing balance like a change in a revolving credit balance. Consequently, if the lender did not want to drive the customer to another lender for the new amount, the whole account needed to be revised and combined into one loan through a process called a renewal. In a renewal, an existing, now partly repaid balance was "renewed" and combined with the additional money into a new loan and again precomputed as another closed-end credit that was legal under the USLL.

A certain mythology seems to have grown that renewals come about mostly when a customer cannot make the payments and the loan is rewritten to stretch it out into smaller
payments-in other words, renewals are a sign of weak credit. There certainly have always been examples of this. But mostly lenders claim that renewals have been signs of strong credit, when the customer has paid down a balance, indicating creditworthiness, but now desires or needs an additional amount of funding. Evidence of creditworthiness is the lender's willingness to advance more cash. Examination of state banking department or consumer credit commissioner reports from past years, when they issued such reports, reveals that the large bulk of renewals were made to acquire new cash, and only a small portion were balance renewals to make accounts current. ${ }^{37}$ As discussed, the USLL required that lending with a split rate could only be done as a renewal and not as a second loan. Of course, when precomputation on the whole account arrangement depends on assumptions now no longer true, certain calculating complications ensue, notably rebate of unearned charges already calculated on the old loan but now no longer due.

The question is, how should this rebate be calculated in the precomputation situation? One possibility is to calculate the actual interest dollars paid so far with the split rate, subtract it from the precomputed total interest, and rebate the remainder. In the days before ready availability of computers, this task involved a different tedious calculation for every loan amount and number of months. This process could be done in advance and provided to employees by managers, but it had to be redone every time a change was made in lending parameters or state requirements.

[^21]A second method is to calculate the time value of money over the full course of the precomputed loan and rebate the currently unearned "actuarial" amount. Computations here quickly become even more complicated.

A true actuarial yield for a period of time depends on determining the rate of interest and size of payments that satisfies the following equation for $r$ :

$$
\begin{equation*}
A m t=P V=\sum_{i=0}^{n}\left(P m t s_{i}\right)\left(1+\frac{r}{n}\right)^{-i} \tag{1}
\end{equation*}
$$

where $r$ is the rate of interest, $n$ is the number of periods, $A m t$ is the loan amount, and $P V$ is present value.

Because this problem involves a single equation with two unknowns (payments and rate), it is not directly solvable. A solution can be reached, however, by assuming a sequence of slightly different payment amounts until the equation solves, a process known as iteration. Iteration is actually the way financial calculators and spreadsheets solve this equation today, but they can do the calculations very quickly. Before calculating devices were available, solving the equation for non-precomputed loans had to be done many times sequentially with logarithms until it converged to a solution-a very tedious and time-consuming process. But this procedure was required to put the results into book form for office personnel to use for every possible loan amount and maturity and every possible number of months before maturity. At a minimum, this process certainly precluded office personnel from offering any flexibility in loan terms.

The alternative was to have office personnel do the calculations at the time of transacting. Suffice it to say that neither management nor employees wanted to perform such calculations every time a loan was renewed. In the words of a contemporaneous textbook writer on the subject of calculating loan yields and refunds, "For practical purposes the difficulty of arithmetical calculations would ordinarily preclude the use of the actuarial method. Fortunately,
the direct ratio method gives a very close approximation to the actuarial method. . . . The credit grantor can maintain his yield very closely to the theoretical level desirable under the actuarial method and yet be fair to the consumer in the refund computations., ${ }^{38}$

This third method involves a simpler mathematical approximation of the actuarial amount known as the direct ratio method, sum-of-the-digits method, or, colloquially, the "Rule of 78s." This method amounts to an approximation of the actuarial method with the same underlying time-value-of-money prescription that interest earned should depend on the amount of time that loan principal amounts are outstanding.

To calculate amounts earned for various sub-portions of the life of a loan, this mathematical approach divides the amount of the loan into equal time units. For instance, for a 12month loan, it assumes that $12 / 12$ of the loan is outstanding the first month, $11 / 12$ the second month, $10 / 12$ the third month, and so forth, down to $1 / 12$ the final month. This pattern of shrinkage of a loan' outstanding principal is not unreasonable, but it is also different from the previously stated equation, in which the loan principal shrinkage follows a smooth curve over time.

The sum of the month-number units $12,11,10$, and so on, is 78 (hence "Rule of 78 s "). Thus, this method concludes that $12 / 78$ of the interest is earned the first month, $11 / 78$ the second month, $10 / 78$ the third month, and so forth, down to $1 / 78$ the last month. To calculate rebates on precomputed interest, employees needed only to apply a decimal rebate factor to the total precomputed interest. The same decimal factor was usable for loans of all sizes and interest rates for a given maturity. But because this decline over the months is not a smooth curve, earned

[^22]interest does not exactly follow the earnings progression of the above equation. In fact, 12/78 of the first month's interest is slightly more than what is produced by equation (1). Amounts earned slightly exceed the amounts from equation (1) up to precisely one-third of the way through the loan maturity. ${ }^{39}$ After that, monthly interest earned under the Rule of 78 s is less every month than under equation (1), and the accumulated excess amount declines every month until the loan matures. (Of course, if the loan runs fully to maturity, both methodologies call for the same interest because they are only methods of calculating earned interest for early payoff.)

In choosing a methodology for rebates upon early payoff, lenders (and state legislatures that ultimately made the choice) faced two challenges. First, rebating according to the strict terms of the split-rate requirement actually produces a yield to the lender upon prepayment less than the actuarial time value of money over the whole transaction if the loan had run to maturity. In other words, a prepayment and renewal with a split rate produces a lower time yield for its length than a loan that runs its full course. This occurs because the split rate provides that the portion of the money outstanding the longest is the amount owed at the highest rate. This backloads earned revenue.

Second, a renewed loan has not paid its "fair share" of the fixed costs of lending. If earned income is calculated actuarially, the loan pays for its fair share of variable costs but not of the fixed costs of lending that cause small loans to require higher rates than large loans. Thus, lenders (and legislatures) looked for a rebate method that addressed both of these issues.

[^23]In addition to its usefulness in dramatically simplifying calculations, the Rule of 78s at least partially addressed both of these challenges. First, because it approximates an actuarial earnings pattern, it does not backload earned revenue as does split rate per month, and it does not undercut lenders' yields when renewals occur. Second, because it produces earnings slightly higher than actuarial amounts in the early months of a loan, it allows for some coverage of fixed costs in these cases, even if some sort of fee arrangements or prepayment penalty might be more transparent and economically efficient. But it is a myth that the intent was somehow to take advantage of borrowers. Rather than an attempt to pry away a yield greater than what was due, the Rule of 78s first and foremost amounted to a way of bringing the yield of a renewal under split rate back up to the actuarial yield of the original precomputed loan. It also provided for covering an unaccounted-for share of unpaid fixed costs.

Imagine a 24-month $\$ 3,000$ cash installment loan made at the state-permitted rate ceiling of 4 percent per month on the unpaid balance up to $\$ 500$ and 2 percent per month on the amount exceeding \$500. Precomputing this loan would produce total interest (TIL finance charge) of $\$ 1,037.87$ over 24 months for a total of $\$ 4,037.87$. It would be paid in 23 monthly payments of $\$ 168.25$ and a final payment of 13 cents less at $\$ 168.12$. Actuarial APR disclosure required by TIL would be 30.33 percent.

But now suppose that the state law were "modernized" to state the rate ceiling in terms of the TIL actuarial APR of 30.33 percent rather than the split rates per month. Precomputing this percentage with the monthly amounts of the outstanding loan would produce the same finance charge and total of payments (except for the 13 cents reduction in the final payment due to rounding differences in the calculations over 24 months, which can be ignored in further discussion here). Monthly payments would still be $\$ 168.25$ for a total of $\$ 4,038$. Again, the

TIL-disclosed APR would be 30.33 percent. Thus, there does not appear to be any difference between the two approaches (except for the 13 cents rounding difference).

As discussed, however, the pattern of earned income over the life of the loan would be different. Notably, income would be earned slightly more slowly under the percentage-permonth approach, because this approach undertakes payoff of the lower-yielding part of the splitrate loan first. In fact, all of the last few payments would consist of the loan's outstanding principal and interest at the higher rate, backloading the earned interest pattern.

To illustrate the magnitudes, let us continue the example. The peak difference in unearned interest rebate under the split-rate calculating method versus the actuarial method occurs halfway through the loan, in this case after month 12. If the borrower were to prepay or renew the loan at that point, the unearned interest rebate due under the split-rate percent-permonth approach for the $\$ 3,000$ loan would be $\$ 336.60$. This amount would exceed the actuarial method's rebate amount of $\$ 296.01$ by $\$ 40.59$. The extra $\$ 40.59$ would be a windfall to the borrower of this amount relative to the actuarial method, and it would also reduce the lender's yield by this amount compared to the actuarial yield. In a competitive market with all else equal, if this reduced revenue occurred frequently, yields to the lending operation would be lower as a whole, and lenders would either stop lending to marginal borrowers or raise rates.

But the Rule of 78s offered lenders a correction for this rebate anomaly and, as previously discussed, actually provides just a bit more to lenders. Calculated according to the Rule of 78 s, the rebate would be $\$ 269.88$, or $\$ 26.13$ less than the actuarial calculation. This would amount to a consumer cost of just over $\$ 2$ per month over the course of the loan up to this point, which would cover some of the unpaid fixed costs. Although this is not exactly a princely sum and some people might call it de minimis, it is, after all, greater than $\$ 0$ and apparently
enough to cause a controversy. It is about 1 percent of the payments made so far in this example and about an extra 3.5 percent of the amount earned up to this point under the actuarial formula. At two-thirds of the way through this loan, the extra amount retained by the lender over actuarial rebate would be $\$ 16.48$, about $\$ 1$ per month and an additional 0.5 percent of the payments already made-about 1.6 percent of the actuarial interest to date.

The differences among the calculations would, of course, not be obvious to customers and would be of no importance to them at all unless the loan were prepaid-for example, in the case of a renewal. The customer likely would not be aware of a small windfall compared with an actuarial refund under the split-rate calculating method or a small additional cost compared with actuarial under the Rule of 78s, and neither mathematical contingency would occur if the loan did not prepay. But lenders' mathematical professionals and aficionados certainly understood the differences. As a result, they supported calculating refunds of precomputed charges under the Rule of 78s in an attempt to raise the yield on prepayments with a split rate back to the actuarial yields of their calculations and to provide for a small prepayment penalty to recoup some portion of the remaining fixed costs in cases of prepayments. ${ }^{40}$

But times change. As states began to shift their rate ceilings into APR percentage terms more familiar in the TIL era, lenders benefited from higher actuarial yields at prepayment than they experienced with earlier widespread use of split rates per month, even with the same actuarial yield to maturity. Also, some states began to permit lenders to advance additional funds

[^24]without booking a "renewal"-in other words, to employ a revolving credit approach. These changes mostly obviated the lender "need" for the Rule of 78s approach for rebates of unearned finance charges under precomputation, and they are probably the reason lenders have largely ceased to push for it. It seems, however, that the Rule of 78s still exists in various state requirements in vestigial form, and its baggage still requires a large suitcase in the advocacy industry, if its centrality in the NCLC paper is an indication.

And so the Rule of 78s, which was well understood by the industry, was less an inducement to refinancing than it was a prepayment penalty to make up for frontloaded costs (interviewing and booking loans, plus a charge added to loss reserves to account for ever-present risk) and backloaded revenue recognition under the split-rate regimes that were almost universal in the early days of state regulation under the USLL. Whether its use was right or wrong is probably in the eye of the beholder. The Rule of 78s is a mathematical technique that has certain implications, and "right" and "wrong" seem to delve into the realm of philosophy rather than mathematics. Nonetheless, the Rule of 78s reasoning should be understood for what it was, a mathematical technique. It is largely gone today; and when it was common in earlier years, there were reasonable arguments for its use, and its impact was never very large relative to the size of loans and their actuarial finance charges.

## Suitcase Number Six: Mythology about Delinquency and Renewal

Loan flipping is a key part of the business model of high-rate installment lenders. . . .
"About 60 percent of OneMain's loans are so-called renewals-a trend one analyst called 'default masking' because borrowers may be able to refinance before they run into trouble paying back their current balance., ${ }^{, 41}$

[^25]As discussed, the growth of "renewals" began in the early years of the 20th century as a consumer protection in the small cash installment loan industry that operated under rate ceilings expressed as split rates. Under those laws, states instituted prohibitions on multiple loans to an individual or couple as a part of the states' consumer protection restrictions to prevent "loan splitting." The upshot was that a small cash installment loan was not allowed to act as a revolving credit account. Any need or request for more cash necessarily involved a "renewal."

As indicated earlier, examination of state banking department or consumer credit commissioner reports from past years shows that the large bulk of renewals involved new cash, and only a small portion were balance renewals to make accounts current. More recently, evidence from a survey of small cash installment lenders shows that payment sizes on those loans seem to be set with borrowers' budgets in mind, to avoid payment difficulties. Virtually all the smallest loans have monthly payments of $\$ 100$ or less, and the payments are $\$ 150$ or less for larger loans up to the $\$ 2,000$ vicinity. ${ }^{42}$

Significantly, concerning the proportion of renewals in a portfolio, it is possible to show mathematically that even a single renewal on individual accounts can produce a high proportion of renewals in a portfolio. As a result, one cannot contend that "default masking" and "loan flipping" cause high proportions of renewals to appear in portfolios without further, direct information to this effect. Rather, it is entirely possible that the percentage may reflect a small number of renewals (or a single renewal) by different customers over time rather than frequent renewals. Several mathematical examples can show this.

Example 1: Here is a summary of features of a hypothetical loan company. All of the features of the illustration are changeable, except the need for some proportion of renewals.

[^26]The company is new today. It begins with making 100 loans today and grows at the rate of 0.5 percent per month (that is, 6.2 percent annually compounded). Loans are made on the first day of the month. (Loans could be made randomly during the month, but then results would have to be shown for each day rather than for the month.)

All customers renew their loans exactly one time, exactly halfway to the loan maturity. The new loan never arises from a delinquency or default and merely relends the amount already paid back as new cash.

For the first illustration, the loans are six-month installment loans. Thus, the borrowers renew after three months, making the revised combined maturity nine months.

Also for the first illustration, no loan sequence runs more than nine months. (Size and growth rate of the company, renewal proportion, initial maturity of the loans, and timing of the renewal can all be changed, as will be shown.)

Now, what proportion of renewals is found in this portfolio? "Default masking" and "loan flipping" are impossible by construction because only one renewal is allowed and it does not result from delinquency or default. The answer can be calculated by a complex algebraic formula, but it is much easier today to employ a computer program that calculates lending outcomes month by month. An SAS language program could be written, but an Excel spreadsheet also provides such a program. The latter requires only properly specifying the assumptions and their relationships. Furthermore, it permits easy changing of the assumptions to explore the sensitivity of the outcomes to such changes.

Using the assumptions outlined, the portfolio would contain zero renewals the first three months because renewals only start after three months. The proportion of renewals in the portfolio at the end of subsequent months is as follows:

Month 4: 24.8 percent (not 25 percent, because the company is growing);
Month 5: 39.7 percent;
Month 6: 49.6 percent;
Month 7: 56.7 percent;
Month 8: 62.0 percent; and
Month 9 to month infinity: 66.2 percent. ${ }^{43}$
And so it is inappropriate to claim that either a high proportion of renewals or a steady state of renewals in a portfolio is evidence of "default masking" or "loan flipping." A high proportion and a steady state can arise in which both of these conditions are impossible; therefore, one cannot infer that they are necessarily the cause of either a high proportion or a steady state of renewals.

Example 2: Let us look at longer loans. Change the assumptions to 12-month loans at their outset, but leave everything else the same, including renewals by every borrower at month 3. The outcome will be a steady proportion of renewals in the portfolio at and after month 15 :

## 79.4 percent.

Example 3: Suppose the 12-month loans renewed halfway through their original contract life at month 6 . This outcome would be a steady proportion of renewals in the portfolio at and after month 18: 65.7 percent.

Example 4: Suppose the loans in example 3 were made by a company growing at 1 percent per month compounded, rather than 0.5 percent per month. This outcome would be a steady proportion of renewals in the portfolio at and after month 18: 64.7 percent.

[^27]And so, the outcomes change a bit if the assumptions change, but from the examples illustrated, the proportion of renewals in the portfolio stays high if sufficient renewals take place and a steady state of renewals in the portfolio is reached fairly quickly, even if changes in the time to maturity and time to renewal differ. (Employing many more examples would show this definitively.)

In fact, the only assumption that has much effect on the overall proportion of renewals is the proportion of loans overall that renew. If people renewed less often than once per loan, the proportion of renewals in the portfolio would be lower. This possibility does not seem to be of much concern to the consumer advocacy industry, which apparently believes that the actuality is higher than once per loan because of masking and flipping. But changing this assumption from the previous example produces another example.

Example 5: If only 90 percent of the loans renew one time, the outcome would be a steady proportion of renewals in the portfolio at and after month 18: 58.2 percent.

In conclusion, mathematical simulations show clearly that it is false to contend that either a high rate of renewals in a lender's portfolio or a steady proportion of renewals is necessarily evidence of either "default masking" or "loan flipping."

## Suitcase Number Seven: Mythology about Ancillary Products, Especially Credit Insurance

Creditors often increase their profits on installment loans, without adding equivalent benefits to consumers, through the sale of credit insurance and other add-on products. The practice of cramming unnecessary products, such as low-value insurance, into a loan while retaining a large portion of the price of the add-on product is generally known as "loan packing." ${ }^{44}$

[^28]The author here (with colleagues) has described debt protection products elsewhere,
including the types of products widely available, pricing, consumer experience, controversies, and regulation. Rather than restating these descriptions with different words, the following dozen paragraphs of description are taken from one of these sources:

Although some debt protection products are not, by legal standards, insurance, consumers see such protection, including both credit insurance and other products, as functionally similar to ordinary kinds of term life and disability insurance. The origin of debt protection products is in the anxiety sometimes felt that death, disability, or another unfortunate life event could cause an earner's family to have difficulty repaying debts or maintaining payments. Because these products' origins are in the lending arena, subsequent regulation has required that the basic nature of the insurance coverage is defined by the terms of the associated credit contract. This requirement has maintained and fostered some continuing differences between debt protections and ordinary insurance and has affected the specifics of related regulation.

One difference between debt protection and ordinary insurance is that the face amount of the debt protection in force is not constant for debt-related products; rather, it declines over the life of the debt as the credit is repaid (or fluctuates in the case of credit card credit). In contrast, most ordinary term insurance is sold in fixed amounts and remains at a constant face amount for the specified period of time.

A second difference arises from the heritage of debt protection in the automobile credit, furniture, appliance, and small cash loan industries rather than in the traditional insurance industry: the small size of typical debt protection contracts. Small sized credit contracts and related debt protection have caused the revenue streams from the protection products to be small as well, leading to highly simplified underwriting, marketing, and paperwork procedures.

In particular, debt protection products developed without a differentiating set of actuarially variable characteristics for pricing, such as sex, age, health, or smoking habits. Furthermore, they were and are still sold part time by lending officers and personnel in the process of booking and servicing consumer credit transactions. Because of account sizes, providers of debt protection have been both unwilling and unable to invest the sums necessary to have it carefully underwritten consumer by consumer or, in the case of credit insurance, sold by independent or ordinary-licensed, full-time insurance agents.

For credit insurance, the lender's personnel function as the sales agents for the insurer (with necessary state licensure if required). For debt cancellation or suspension, loan officers provide the credit protection products approved by their own lending institution. Because of the short term and generally small cash flows, lending officers normally have asked customers only one basic question: whether they want the protection coverage or not. If customers do want protection coverage, there may be a secondary question to determine eligibility-for example, customer age. In some cases, there also might be a recommendation that the protection is a good idea.

As noted, there typically has been no pricing differentiation according to sex, age or actuarial mortality, or health characteristics of the customer population, except that
credit life insurance coverage generally has been unavailable for those over age 65 (or, in some states, over age 70). This lack of pricing differentiation means, of course, that debt protection products are relatively more attractive for males, older consumers, those in poorer health, and those adopting certain lifestyle choices (smoking, for example). The resulting adverse selection against the insurer or lender, together with the small size of the protection contracts, has led to the argument for sales simplification in order to reduce production costs per dollar of protection.

Although generally required by subsequent regulation to be available to any debtor meeting the age requirements, the simplified marketing of debt protection products through lending personnel rather than through experienced agents has been at times controversial. Part of the contention has been that in the absence of any attempt to explore customers' insurance portfolio needs and their special risk characteristics, potential purchasers receive no professional aid in the purchase decision. Some observers have maintained that the marketing is so simplified that the products and their pricing are not even adequately explained. As a consequence, they contend, some consumers do not consider implications of the purchase adequately or sometimes even understand at all what they purchased or how it works.

Further, for credit insurance, in an effort to save on paperwork and recordkeeping and reduce the need for monthly payments to both the creditor and the insurer, the relatively small premium amounts frequently have been collected in a single premium at the outset and financed in the loan balance. In addition to reducing processing expenses, this approach has the advantage that the protection never lapses, even if the consumer becomes delinquent in making payments on the underlying credit obligation. Nonetheless, criticism of the single premium approach and financing it in the loan has led directly to more widespread prevalence in recent years of protection with a monthly fee instead of a single premium. This approach has become known as monthly outstanding balance protection (frequently abbreviated as MOB insurance or protection). Fees for debt cancellation agreements and suspension agreements also are collected monthly.

As outlined, controversy over credit insurance and credit protection products arises not so much from the usefulness of the products for the protection of assets, credit standing, and general financial well being in the case of personal disasters, as from the methods used in the distribution of debt protection. Critics have argued that the distribution method that takes place at the credit point of sale provides both the incentive and the opportunity for lending personnel to mislead consumers about the usefulness of the insurance or other products and even coerce them into purchasing these products.

In contrast, product supporters have argued that the small size of the debt protection and the limited cash flow arising from small credit insurance and credit protection products have not allowed either extensive careful underwriting or review of a consumer's full insurance and protection needs by trained insurance underwriters or financial planners. Rather, in their view, a very useful one-size-fits-all product line has evolved with no or few underwriting differentiations, in order to reduce costs. So as to avoid "cherry picking" or other possible unfair forms of discrimination for this limited set of offerings, law and regulation in this area have also evolved to the one-size-fits-all approach and now generally permit only very limited differentiation among customers (such as an overall age limit like 65 or 70 ). Under these circumstances, sales effort and
review at the point of sale is going to be short and consumers are going to have to decide for themselves what their overall insurance and financial planning needs are.

Credit insurance has long been subject to regulation that varies by state but generally includes state approval of premium rates charged, policy forms, disclosures, the solvency of the insurance companies, and the sales approaches of producers. Newer debt cancellation and suspension products have been judged by federal banking regulators and by courts as legally a part of lending and not a form of insurance. They are offered by national and state banks as banking products under the National Bank Act and state banking parity laws and are not regulated as insurance under state insurance laws. Instead, they are governed by rules of national and state bank regulatory agencies, in particular rules of the Office of the Comptroller of the Currency (OCC), and are enforced by the OCC and other bank regulators. Despite the legal differences, it is common in public policy discussions of consumer protection to examine credit insurance and other debt protection products together. Although credit insurance is an insurance product and other forms of debt protection are considered banking products, from the consumer's standpoint they provide the same kinds of benefits and are close substitutes.

Both credit insurance and other forms of debt protection are also subject to the federal Truth in Lending Act (TILA). The concern that lenders could mislead and misdirect consumers at the point of sale of credit accounts led to a special provision in the law at its passage in 1968. A section of TILA excludes the charge for debt protection products from the finance charge if there is a separate disclosure of the voluntary nature of the purchase before the charge occurs (see $12 C F R \S 226.4(\mathrm{~d})$ ). This provision makes the voluntary nature of the purchase decision a key issue for consumer research. ${ }^{45}$

All states have insurance commissioners or departments responsible for regulating insurance companies and their rates, policy forms, procedures, and solvency. They have initiated prima facie rates on credit insurance (functionally equivalent to rate ceilings) and monitor loss rates and change regulated rates as needed. Further, the commissioners have formed their own association called the National Association of Insurance Commissioners (NAIC) that meets quarterly on a variety of subjects, promulgates model laws and regulations for the states to consider, and collects statistical information. NAIC has issued a Model Credit Insurance Act for possible passage by the states, and most states have passed the act. NAIC has also issued a

[^29]Model Regulation for implementing rules by state insurance commissioners. NAIC maintains a full-time staff to further its work.

State insurance regulators have generally preferred that loss ratios on credit life insurance average about 50 percent in order to balance the interests of consumer beneficiaries with those of the state so that the insurance companies remain solvent and able to honor their future liabilities through sufficient reserves. To maintain such a balance, most states allow maximum premium charges designed to produce their preferred loss rate. Some states have favored a slightly higher loss rate by making maximum allowed premium rates a bit lower.

Evidence shows that loss rates on credit insurance products approximate the levels the states prefer. The rates allowed by the states to reach approximately these loss ratios are known as prima facie premium rates. Loss rates generated in recent years by regulating prima facie rates on credit life insurance have averaged about 49 percent nationally, albeit with variation among states. ${ }^{46}$ Besides maintaining insurance liability reserves, the remaining premium dollars must also cover the operating costs of the insurance companies. Such costs could be substantial relative to premium dollars involved, considering the small sizes of the policies/certificates involved (and related small premiums).

Tables of prima facie rates for credit life and credit accident and health $(\mathrm{A} \& H)$ insurance in the various states are available in publications of the Consumer Credit Industry Association, a trade group. ${ }^{47}$ This source shows that the national average prima facie rate in 2014 for credit life

[^30]insurance was $\$ 0.49$ per $\$ 100$ of insurance per year. The corresponding rate for credit A\&H insurance was $\$ 2.16$ per $\$ 100$ of insurance. Because $\mathrm{A} \& H$ insurance is more expensive than credit life, there might be a prior expectation that fewer borrowers would purchase it. However, one might also expect that A\&H could be more attractive to borrowers concerned about making payments and preserving their credit scores while still alive. This means the kind of insurance purchased more often is an empirical question.

At these rates, the charge for credit life insurance on a one-year loan of $\$ 2,000$ would be $\$ 9.80$, and credit A\&H insurance would cost $\$ 43.20$. Taken together, these insurance premiums would be $\$ 4.42$ per month, less than the cost of a single package of cigarettes for potential purchasers. Whether this is a large amount of money is in the eye of the beholder, but it is not large relative to the finance charge itself. At an APR of 48 percent, the finance charge would be $\$ 557.25$ for a one-year loan. At an APR of 36 percent, the finance charge would be $\$ 411.09$. It seems that individuals desiring to save money might well want to think about doing whatever they can to protect their credit scores (and available APRs). For customers with risks, obtaining protection that continues loan payments in cases of health issues might well be worth considering.

Sometimes the advocacy industry sees utility in combining the insurance premium with the finance charge and factoring the premium this way into the APR. As discussed more fully elsewhere, this is not a good idea for a number of reasons. ${ }^{48}$ First of all, it is conceptually inappropriate. If the lender does not require debt protection, then its cost is not part of the cost of the loan but rather is a separate product. Second, and maybe more significant, including the cost of protection in the loan cost makes credit shopping more difficult because comparisons

[^31]would have to be made among loan arrangements that sometimes include insurance and sometimes do not. And third, if done by regulation, including protection cost in the finance charge violates the Truth in Lending Act itself. Even if appropriate, the practical effect on consumers would be pretty small. Including the average prima facie credit life premium would add less than 1 percent to the APR, and the corresponding A\&H premium would add about 4 percentage points to the cost of a small cash installment loan. Because the premiums are dependent on the same loan parameters as the APR, the APR changes would be independent of loan size, maturity, and existing APR.

None of this is to say that lenders do not receive any commissions from the sale of insurance. They do, and they likely would not sell, or even offer, credit insurance without receiving some compensation. They do, after all, invest time in offering the insurance company's product (even if their own affiliate) and in marketing, training, compliance, data processing, completing and maintaining enrollments, and handling the paperwork for claims processing with the insurer. And so, because of loss ratios and expenses of the insurers, it can hardly be correct to contend that more than half of each premium dollar goes to commissions and profit sharing. ${ }^{49}$

Further, research evidence indicates that the sales effort in this area has become less common over time. Survey research published in the Federal Reserve Bulletin, quoted at length above, shows that the "penetration rate" (the portion of borrowers who purchase debt protection, including credit insurance) on consumer installment credit has fallen dramatically over the years since 1977 and that the likelihood that installment lenders never even mention its availability has increased, the latter somewhat surprising if the product purportedly is so profitable for lenders. ${ }^{50}$

[^32]A table in the Federal Reserve Bulletin shows penetration rates calculated using a similar methodological approach in 1977, 1985, 2001, and 2012 for national samples (reproduced here as table 2). Especially noteworthy is how penetration rates on (nonrevolving) consumer installment fell rather dramatically, from about 65 percent in 1977 and 1985 to about 22 percent in 2001 and 2012.

Table 2. Debt Protection Penetration Rates, 1977-2012 (Percentage Distributions within Groups of Credit Users)

|  | 1977 <br> Install <br> Credit | 1985 <br> Install <br> Credit | $\mathbf{2 0 0 1}$ <br> Install <br> Credit | $\mathbf{2 0 1 2}$ <br> Install <br> Credit | $\mathbf{2 0 0 1}$ <br> Mortgage <br> Credit | $\mathbf{2 0 1 2}$ <br> Mortgage <br> Credit | $\mathbf{2 0 0 1}$ <br> Credit <br> Card | $\mathbf{2 0 1 2}$ <br> Credit <br> Card |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Have | 63.9 | 64.7 | 22.7 | 22.0 | 32.1 | 23.9 | 20.1 | 14.0 |
| Do not have | 30.1 | 33.1 | 74.4 | 75.6 | 60.5 | 72.3 | 73.9 | 82.0 |
| Do not | 6.0 | 2.2 | 2.9 | 2.4 | 7.4 | 3.8 | 6.0 | 4.0 |
| know/refuse | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Total | 100 |  |  |  |  |  |  |  |

Source: Thomas A. Durkin and Gregory Elliehausen, "Consumers and Debt Protection Products: Results of a New Consumer Survey," Federal Reserve Bulletin 98, no. 9 (2012), 6, table 1.

Available evidence on credit-insurance penetration experience that specifically relates to small cash installment loans is consistent. A 2015 survey of a group of small-dollar cash installment lenders making more than two million cash loans of $\$ 2,000$ or less in the previous six months, found the penetration rate for credit-life-type products to be 28.4 and A\&H-type products to be $16.5 .{ }^{51}$ These proportions are well less than the 100 percent reported by the NCLC.

Research evidence also shows that consumer acceptance of the usefulness of debt protection is quite high among purchasers and even among nonpurchasers. Almost 90 percent (or

[^33]more, depending on year) of surveyed users of (nonrevolving) consumer installment credit reported that purchase of debt protection is "good," in every survey year. Even a majority of the nonpurchasers report similarly in each survey year other than 2001. ${ }^{52}$

## Conclusion

Taken as a whole, the NCLC paper does demonstrate the worthwhile conclusion that there really is no conventional wisdom here. If existing regulations on traditional consumer installment lending are, in fact, archaic or sometimes counterproductive, it does not follow that more regulations would necessarily be more useful or better. Maybe fewer regulations or, in some cases, repeal of existing regulations would be more useful. This obviously depends on the thoughtfulness and quality of what has been done in the past and how laws have been maintained in response to changes in the times and needs. In this, undoubtedly, jurisdictions differ.

But it does follow that ongoing thoughtfulness and care in regulatory production going forward would provide long-term improvements in both consumer protection and the healthiness of economic environments. Although it is rarely easy to divorce regulatory change from the immediacy and motivations of differing opinions and accompanying politics, it seems that a few considerations should be paramount.

First of all, individual products should be allowed to stand or fall individually. For instance, the regulation of traditional small-dollar cash installment lending should not be dependent on what someone thinks of other types of lending (for example, credit cards, payday lending, or something else), and vice versa. Second, if some product (for instance, small-dollar cash installment lending) is judged to be a worthwhile product for the citizens of a jurisdiction,

[^34]then necessary conditions should be established for its viability. For example, sufficient legal interest rates should be provided for, and the industry's viability should not depend upon the regulated rates available for other products (such as credit insurance or something else), and vice versa. Despite the potential messiness of the politics sometimes associated with the underlying measures necessary to provide for effective legislation and regulation of lending-related products, it seems that this is just good common sense.

In sum, 4,000 years of experience with credit regulation and 100 years of experience and politics with legal small loans suggest that recommending a simple admonition for thoughtfulness might seem like pie in the sky. Nonetheless, arguing for a regime that begins with thoughtfulness in planning, continues with thoughtful separation of good and bad products as needed, and follows up with care in regulatory structure and proceedings still seems worth doing. This would amount to more than a suitcase-indeed, it would be a trunkful—of good public policy.


[^0]:    ${ }^{1}$ For a long-term view of lending, interest rates, and restrictions on interest rates, see Sidney Homer and Richard Sylla, A History of Interest Rates, 3rd ed. (New Brunswick, NJ: Rutgers University Press, 1996) and Rosa-Maria Gelpi and François Julien-Labruyère, The History of Consumer Credit: Doctrines and Practices (New York: St. Martin's Press, 2000).
    ${ }^{2}$ Carolyn Carter et al., "Installment Loans: Will States Protect Borrowers from a New Wave of Predatory Lending?" (National Consumer Law Center, Boston, July 2015).

[^1]:    ${ }^{3}$ A selection of economic, historical, legal, and statistical studies of the installment cash lending industry in the United States would include, among many others, Arthur H. Ham, The Campaign against the Loan Shark (New York: Russell Sage Foundation, 1912); Rolf Nugent, "Three Experiments with Small Loan Interest Rates," Harvard Business Review 11 (October 1933); Louis N. Robinson and Rolf Nugent, The Regulation of the Small Loan Business (New York: Russell Sage Foundation, 1935); Irving S. Michelman, Consumer Finance: A Case Study in American Business (New York: Augustus M. Kelley, 1970); John M. Chapman and Robert P. Shay, Licensed Lending in New York (New York: Columbia University Press, 1971); National Commission on Consumer Finance, Consumer Credit in the United States: The Report of the National Commission on Consumer Finance (Washington, DC: Government Printing Office, 1972); Thomas A. Durkin and E. Ray McAlister, "An Economic Report on Consumer Lending in Texas" (Monograph No. 4, Krannert Graduate School of Management, Credit Research Center, Purdue University, West Lafayette, IN, 1977); Lendol Calder, Financing the American Dream: A Cultural History of Consumer Credit (Princeton, NJ: Princeton University Press, 1999); and Thomas A. Durkin, Gregory Elliehausen, and Min Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies: Results of a New Survey of Small Dollar Cash Lenders" (working paper, December 2016).
    ${ }^{4}$ The author here (with colleagues) has written extensively in the past about the reasons for use of consumer credit. In increasing levels of length and detail, see Thomas A. Durkin and Todd J. Zywicki, "Credit Is a Powerful Tool for American Families," Washington Post, April 19, 2015, F1; Thomas A. Durkin, Gregory Elliehausen, and Todd J. Zywicki, "Consumer Credit and the American Economy: An Overview," Journal of Law, Economics, and Policy 11, no. 3 (2015); and Thomas A. Durkin et al., Consumer Credit and the American Economy (New York: Oxford University Press, 2014), especially chapters 1-4.

[^2]:    ${ }^{5}$ For further discussion of the latter, see Durkin et al., Consumer Credit and the American Economy, chap. 2. It is not addressed further here.

[^3]:    ${ }^{6}$ The author has also written elsewhere at some length with colleagues about BLE and credit cards. See Thomas A. Durkin, Gregory Elliehausen, and Todd J. Zywicki, "An Assessment of Behavioral Law and Economics Contentions and What We Know Empirically about Credit Card Use by Consumers," Supreme Court Economic Review 22 (2015). For more general discussion of psychology and credit use, see also Durkin, Elliehausen, and Zywicki, "Consumer Credit and the American Economy: An Overview"; and Durkin et al., Consumer Credit and the American Economy, chap. 1-4.

[^4]:    ${ }^{7}$ For empirical discussion of the BLE of credit cards, see Durkin, Elliehausen, and Zywicki, "An Assessment of Behavioral Law and Economics Contentions." Although BLE proponents have pointed to behavioral economics as a basis for government regulation of credit cards, they focus on theoretical discussion and a priori assertions but provide no empirical underpinning for the arguments. Rather, they hypothesize the existence of welfare-reducing behavior by consumers and use several ad hoc explanations based on behavioral economics to conclude that these welfare-reducing practices persist because credit card issuers prey on consumer biases. This lack of empirical evidence is especially troubling in light of the extensive empirical economic literature available but not discussed in the BLE movement.

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

[^5]:    But empirical evidence from analyses of consumers' actual credit card behavior indicates that consumers are sensitive to price, consistent with the predictions of economic theory. When a credit card company increases the interest rates on an account, consumers reduce new charges, reduce existing balances, and shift charges to other credit card accounts. As a result, over the course of a year, those consumers reduce total credit card balances from the level present before the price increase. Observation of subsequent account use indicates that consumers generally make cost-minimizing choices, trading off interest rates and annual fees when choosing new credit card accounts. When they make mistakes, the mistakes are usually relatively small. If mistakes are large, consumers generally correct the mistakes. Although some consumers do not correct large mistakes, persistent large mistakes are not the rule. Analyses of credit card behavior based on survey data also suggest that consumers are sensitive to costs and do not incur costly mistakes. By far, most consumers believe that credit cards provide a useful service and are satisfied with their dealings with credit card companies. Thus, neither behavioral nor conventional evidence provides much support for the conclusion that market failure is pervasive.
    ${ }^{8}$ Carter et al., "Installment Loans," 4.
    ${ }^{9}$ For an extended discussion of the sources of lending costs on small consumer cash loans, see National Commission on Consumer Finance, Consumer Credit in the United States. See also Durkin et al., Consumer Credit and the American Economy, chapter 5.

[^6]:    ${ }^{10}$ The credit card industry has spent huge sums of money to automate the lending process for small amounts of credit and to reduce overall lending costs, but this impersonal kind of lending is not available to all consumers, especially the riskiest ones. Evidence from the Federal Reserve's most recent Survey of Consumer Finances in 2013 shows that only 64 percent of families (economic units) have credit cards. And riskier borrowers who have credit cards may quickly reach their smaller credit limits but still need additional credit to meet some emergency or fulfill some other need or desire. The basic theory of why credit-constrained consumers can obtain more credit only at higher rates is described in F. Thomas Juster and Robert P. Shay, Consumer Sensitivity to Finance Rates: An Empirical and Analytical Investigation (Cambridge, MA: National Bureau of Economic Research, 1964), especially appendix I. See also Durkin et al., Consumer Credit and the American Economy, chapters 3 and 5.

[^7]:    ${ }^{11}$ National Commission on Consumer Finance, Consumer Credit in the United States, 144, table 7-16.
    ${ }^{12}$ Durkin, Elliehausen, and Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies."

[^8]:    ${ }^{13}$ See, for example, the discussion of the Federal Deposit Insurance Corporation's Small-Dollar Loan Pilot Program in Rae Ann Miller et al., "A Template for Success: The FDIC's Small-Dollar Loan Pilot Program," FDIC Quarterly 4, no. 2 (2010). The authors concluded, "Given the small size [of the loans] . . . the interest and fees generated were not always sufficient to achieve robust short-term profitability." Ibid., 32. The maximum loan size for the program was $\$ 2,500$, increased from $\$ 1,000$ after the first year to enhance profitability: "Data collection was expanded to . . . $[\$ 1,001-\$ 2,500]$ after the first year of the pilot, when some bankers relayed . . . the importance of these loans to their business plans. In particular, they indicated that some of their customers could qualify for larger loans and these loans cost the same to originate and service as . . [smaller loans], but resulted in higher revenues." Ibid., 30.

[^9]:    ${ }^{14}$ Durkin, Elliehausen, and Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies," 19-20.

[^10]:    ${ }^{15}$ See the references in footnote 3, among other sources.

[^11]:    ${ }^{16}$ For a review of the underlying economic theory and empirical evidence, see Durkin et al., Consumer Credit and the American Economy, chapters 5 and 11.
    ${ }^{17}$ Carter et al., "Installment Loans," 2.

[^12]:    ${ }^{18}$ For general discussion of goals, concepts, and experience with Truth in Lending, see Thomas A. Durkin and Gregory Elliehausen, Truth in Lending: Theory, History, and a Way Forward (New York: Oxford University Press, 2011).

[^13]:    ${ }^{19}$ This realization began decades ago with survey work by Day and Brandt for the National Commission on Consumer Finance soon after passage of the Truth in Lending Act. See George S. Day and William K. Brandt, $A$ Study of Consumer Credit Decisions: Implications for Present and Prospective Legislation, Technical Studies of the National Commission on Consumer Finance, vol. 1 (Washington, DC: US Government Printing Office, 1973). For a discussion, see also Durkin and Elliehausen, Truth in Lending, 186-90.

[^14]:    ${ }^{20}$ See Wallace Mors, Consumer Credit Finance Charges: Rate Information and Quotation (New York: National Bureau of Economic Research, 1965).

[^15]:    ${ }^{21}$ Mors, Consumer Credit Finance Charges, 43.
    ${ }^{22}$ Other situations in which monthly payments might be useful are when comparing alternative loans with the same term to maturity and when adjusting for differences in the quoted prices of goods to be financed for the same period of time. In both cases, the monthly payment and the total of payments (amount) are useful for comparisons because they are perfectly correlated with both the effective finance charge (including retailer markup in lieu of finance charge) and the APR for the same term to maturity.
    ${ }^{23}$ Carter et al., "Installment Loans," 4.

[^16]:    ${ }^{24}$ See, for example, Thomas G. Gies, Cedric V. Fricke, and Martha Seger, Consumer Finance Companies in Michigan (Ann Arbor, MI: Bureau of Business Research, University of Michigan, 1961); Chapman and Shay, Licensed Lending in New York; and Durkin and McAlister, "Consumer Lending in Texas." Paul Smith of the University of Pennsylvania obtained data from nine major national lenders to provide a national approach: see Paul F. Smith, "Recent Trends in the Financial Position of Nine Major Consumer Finance Companies," in The Consumer Finance Industry: Its Costs and Regulation, eds. John M. Chapman and Robert P. Shay (New York: Columbia University Press, 1967), updating Paul F. Smith, Consumer Credit Costs 1949-1959 (Princeton, NJ: Princeton University Press for the National Bureau of Economic Research, 1964).
    ${ }^{25}$ See Mark Pearce, Trends in North Carolina's Consumer Finance Industry: Joint Legislative Study Commission on the Moderation of North Carolina Banking Laws and the Consumer Finance Act (Raleigh, NC: Office of the Commissioner of Banks, 2010) and North Carolina Commissioner of Banks, Consumer Finance Annual Report (Raleigh, NC: Office of the Commissioner of Banks, 2013).
    ${ }^{26}$ See references in n. 3. For discussion of experience with downward legal-rate adjustments, see Nugent, "Three Experiments with Small Loan Interest Rates."

[^17]:    ${ }^{27}$ Chapman and Shay, Licensed Lending in New York, 78.
    ${ }^{28}$ Durkin and McAlister, "An Economic Report on Consumer Lending in Texas," chapter 3.

[^18]:    ${ }^{29}$ Durkin and McAlister, "An Economic Report on Consumer Lending in Texas," 53.
    ${ }^{30}$ See Durkin et al., Consumer Credit and the American Economy, 179-88.
    ${ }^{31}$ Durkin, Elliehausen, and Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies," 4-5. In a recent conference presentation, Gary Phillips, president of Republic Finance and chair of the American Financial Services Association, discussed costs at a large small-loan company. He noted that while credit bureau scores are important, an employee's analysis is a critical input in underwriting low- credit-score applications. Employees must assess the applicant's ability to pay and determine a set of loan terms (loan amount and monthly payment) that an applicant can easily afford to repay. Phillips noted further that the collections process was especially labor intensive. Despite efforts to make monthly payments easily affordable, a significant number of borrowers make late payments. Employees spend considerable time attempting to contact delinquent borrowers, making arrangements for payment, and resolving problems. Phillips also provided break-even APRs for different loan sizes based on the company's costs. His data showed an inverse relationship between APR and loan size, and the levels of APR at each loan size were broadly consistent with the NCCF estimates. See Phillips' presentation at Gary Phillips, "Traditional Installment Lending: Safe, Flexible, and Affordable" (paper presented at "Small-Dollar Credit: Products, Economics, and Regulation," Federal Reserve Bank of Philadelphia, July 11, 2013).

[^19]:    ${ }^{32}$ Carter et al., Installment Loans, 17.
    ${ }^{33}$ Ibid., 18.
    ${ }^{34}$ Ibid., 19.

[^20]:    ${ }^{35}$ The rebate question is really a component of the larger question of the proper economic and accounting method of charging over time for products that involve substantial proportions of fixed costs. Such products include many kinds of loans. They naturally include small cash installment loans, as discussed above, but they also include larger loans like consumer mortgages. Issues such as legality of origination fees to cover initial lending expenses, variable fees, prepayment penalties, and so on, quickly arise. These issues have been the subject of considerable controversy, legal action, and political debate over time. State legislatures debating legal small loan rates have sometimes considered the broader issues, and not all outcomes have been the same. But from the time of the original USLL, percentage per month (or, more recently, APR per year) has been common, and pricing by percentages often leads quickly to questions about actuarial and nonactuarial rebates and to the myth examined here as suitcase number five. ${ }^{36}$ Discussion of the work of the Russell Sage Foundation, its personnel, and its allies may be found in Michelman, Consumer Finance.

[^21]:    ${ }^{37}$ As an indication of orders of magnitude, reports from the Texas Office of Consumer Credit Commissioner in the 1970s show that the numbers of Article 3.15 loans (loan amounts greater than $\$ 100$ ) with no new cash advanced were 2-3 percent of loans in the period 1970-1975. For riskier Article 3.16 loans (loan amounts of $\$ 100$ or less), the corresponding percentages were 18-21 percent for the same years. See Texas Office of Consumer Credit Commissioner, Annual Report Statistics of Regulated Loan Licensees for the Years 1970-1975, 7, 13.

[^22]:    ${ }^{38}$ M. R. Neifeld, Neifeld's Guide to Installment Computations (Easton, PA: Mack Publishing Company, 1953), 222. Neifeld also discussed other possible refund methodologies. For a review of various algebraic formulas that might have been employed and discussion of how effectively they approximated (or not) true actuarial yields, see Robert W. Johnson, Methods of Stating Consumer Finance Charges, Studies in Consumer Credit 2 (New York: Columbia University, 1960).

[^23]:    ${ }^{39}$ For loans of maturities different from one year, the summation of the number of months in the denominator of the fraction would be different. For instance, for a six-month loan, the sum of all the numbers from 1 to 6 is 21 , which means that, using this method, $6 / 21$ of the total interest is earned the first month. For a two-year loan, the sum of all the numbers from 1 to 24 is 300 , and $24 / 300$ would be earned the first month, etc. Maximum difference from the actuarial-equation method always occurs one-third of the way through the time period.

[^24]:    ${ }^{40}$ See Helmuth Miller, "Testimony on the Rule of 78s" (presented before the California Assembly on Finance, Insurance, and Commerce, Sacramento, CA, October 6, 1977). While this is an obscure source today, it is especially interesting because, as Miller discusses in his testimony, he began his career in the small loan business in 1928 with Beneficial Finance Company. Beneficial is now long gone, with remnants owned by HSBC Bank, but in 1977 it was the largest company in the cash installment loan industry. By the time Miller retired from Beneficial in about 1984, he had spent 55 years in the industry, almost from its beginning. As a mathematics expert on these matters for Beneficial over many decades, he probably had more experience with policy questions about the Rule of 78s and its mathematics for small loan lending than anyone else who ever lived.

[^25]:    ${ }^{41}$ Carter et al., "Installment Loans," 19, 64n45. The footnote quotes Michael Corkery, "States Ease Interest Rate Laws That Protected Poor Borrowers," New York Times, October 21, 2014).

[^26]:    ${ }^{42}$ See Durkin, Elliehausen, and Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies," table 4.

[^27]:    ${ }^{43}$ Mathematics aficionados will spot how by their nature the calculations in this example allow for fractional loans. Since fractional loans do not really occur, the example could make an internal computer assumption of rounding to whole numbers throughout. This is just another assumption that could be changed without damage to the nature of the findings.

[^28]:    ${ }^{44}$ Carter et al., "Installment Loans," 13.

[^29]:    ${ }^{45}$ Thomas A. Durkin and Gregory Elliehausen, "Consumers and Debt Protection Products: Results of a New Consumer Survey," Federal Reserve Bulletin 98, no. 9 (2012): 2-3. For extended discussion, see Durkin et al., Consumer Credit and the American Economy, chap. 12.

[^30]:    ${ }^{46}$ See Consumer Credit Industry Association, 2015 Fact Book of Credit-Related Insurance (Atlanta: Consumer Credit Industry Association, 2015). According to this source, "The credit life insurance countrywide loss ratios have generally fluctuated around $40 \%$ to $45 \%$ for the last 18 years but have trended upward in recent years with slight decreases in 2011 and 2012 and a slight increase in 2013" (page 10, derived from data from the National Association of Insurance Commissioners, the association of state commissioners). This source also illustrates loss ratios on credit disability insurance (accident and health insurance), and both types taken together have fluctuated within a similar range, tending to trend a bit lower during good economic times and to rise during rougher periods.
    ${ }^{47}$ See Consumer Credit Industry Association, 2015 Fact Book of Credit-Related Insurance.

[^31]:    ${ }^{48}$ For extended discussion, see Thomas A. Durkin, "Conceptual Difficulties with the 'All In' Finance Charge and APR Proposed by the Consumer Financial Protection Bureau," Consumer Finance Law Quarterly Report 67, nos. 1-2 (2013).

[^32]:    ${ }^{49}$ Carter et al., "Installment Loans," 14.
    ${ }^{50}$ See Durkin and Elliehausen, "Consumers and Debt Protection Products," especially tables 1 and 2.

[^33]:    ${ }^{51}$ For discussion of this survey and other information about the installment cash loans surveyed, see Durkin, Elliehausen, and Hwang, "Rate Ceilings and the Distribution of Small Dollar Loans from Consumer Finance Companies."

[^34]:    ${ }^{52}$ See Durkin and Elliehausen, "Consumers and Debt Protection Products," table 3.

