

CBO PAPER

PERSONAL BANKRUPTCY:
A LITERATURE REVIEW

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NOTES

Shaded areas in figures represent recessions as defined by the National Bureau of Economic Research. The areas extend from the peak to the trough of the recessions.

Annual data on personal bankruptcy filings end on June 30 of the year indicated. Other annual data refer to calendar years.

Numbers in the text and tables may not add up to totals because of rounding.

PREFACE

The sharp rise in personal bankruptcy filings between 1994 and 1998, a period of economic expansion, has renewed a long-standing debate about bankruptcy laws. One side of that debate ascribes a significant share of the rise in filings to the current law and to a lessening of the stigma associated with filing for bankruptcy. The other side of the debate argues that the rise primarily reflects an increase in financial distress within the consumer sector. This Congressional Budget Office (CBO) paper reviews the available data and evaluates the empirical research on personal bankruptcy. It was prepared at the request of John Conyers Jr., Ranking Democratic Member, House Committee on the Judiciary; Jerrold Nadler, Ranking Democratic Member, Subcommittee on Commercial and Administrative Law of the House Committee on the Judiciary; and Representatives William D. Delahunt and Martin T. Meehan.

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SUMMARY

During the economic expansion of the 1990s, the rapid increase in the rate of filing for personal bankruptcy focused attention on the nation's bankruptcy law. Between 1994 and 1998, the personal filing rate—specifically, the number of nonbusiness bankruptcy cases filed annually per million adults—rose about 75 percent to a historic high of 7,148 (or about 0.7 percent of the United States' adult population). Yet at the same time, the economy was expanding at a healthy pace, and the civilian unemployment rate was falling. That apparent contradiction renewed a long-standing debate about how big a role bankruptcy law and other factors may have played in the personal filing rate's climb.

Personal bankruptcy law is intended to help people who cannot pay their debts. By filing under Chapter 7 of the law, people may generally avoid repaying many kinds of debt in full. The law also allows them to keep specified amounts of certain assets (known as exempt assets) and all future income for a "fresh start" in life after bankruptcy.

Consequently, bankruptcy law creates an incentive for people to increase their borrowing because they know that they will not be impoverished if they have trouble with debt. The magnitude of the incentive, as well as the choice of bankruptcy for solving financial problems, depends on the extent of the benefits that a person receives from bankruptcy. A law that allowed an ample fresh start would give people a greater incentive to borrow than would a law with a smaller fresh start. Indeed, a lenient law creates a greater temptation for people to borrow more money than they could possibly repay over a reasonable period of time. Such a law would also give people a greater incentive to choose bankruptcy rather than other ways of solving their problems. In fact, a more lenient law gives people with few assets but the capacity to repay some of their debts out of future income a stronger incentive to use bankruptcy to escape debt repayment altogether.

Bankruptcy law also creates an incentive for lenders to reduce the supply of credit and raise the cost of borrowing. Losses stemming from bankruptcy, like losses from other defaults on loans, encourage lenders to boost their interest rates, tighten other standards and terms for lending, and reduce the availability of loans. People typically respond to those changes by borrowing less, which diminishes their exposure to debt-repayment problems and makes them less likely to file for bankruptcy.

Advocates on one side of the debate about the effects of current bankruptcy law believe that its incentives explain a large part of the filing rate's upswing and its continued high level. They argue that Chapter 7 makes it too easy and too attractive for people to avoid repaying their debts. Such advocates contend that a significant number of debtors file for a Chapter 7 bankruptcy even though they are likely to have sufficient income in the future to repay a sizable portion, if not all, of their debts.

Also contributing to the higher rate of filing, say some observers, is a lessening of the stigma that society has traditionally associated with bankruptcy.

Many people who consider current law too lenient argue for a means-testing provision that would restrict the way a person could file for bankruptcy. The provision would prohibit people who exceeded certain thresholds for income and debt-repayment ability from filing under Chapter 7 of the law; their options would be to withdraw their petition or to file under Chapter 13 of the law, which encourages them to repay more of their debts out of future income. (Under that provision, people set up a court-approved plan to repay a specific amount of debt over three to five years, after which they may stop repaying the remaining debts covered under the plan.)

Advocates on the other side of the debate about current bankruptcy law see the higher personal filing rate as largely reflecting an increase in financial distress within the household, or consumer, sector of the economy. They contend that such distress stems from adverse circumstances that batter people's finances or from honest mistakes that people make in managing their money. Some proponents of that position attribute most of the rise in the personal filing rate to lenders, particularly bank credit card lenders, who, they say, have overburdened people by extending credit recklessly. Many observers on this side of the debate argue against a means-testing provision for personal bankruptcy law.

The debate attests to the difficulty that policymakers have in designing a bankruptcy law that promotes the common good. Most people would probably approve in theory of a law that prevented consumers from intentionally cheating creditors by running up debt and then using bankruptcy to escape repayment. The challenge for lawmakers is to develop provisions that catch only the cheaters, because the distinction between them and people who, in society's view, deserve a fresh start is not always clear-cut. A more exacting law might lower borrowing costs and increase the availability of credit, but it could also deny a fresh start to deserving individuals. Conversely, a more lenient law that expanded the fresh start and allowed more cheaters to walk away from debts might raise the costs of borrowing and reduce the supply of credit.

Evidence about how much borrowers and lenders respond to the incentives in bankruptcy law would help policymakers as they work to redesign it. How much do those incentives affect people's decisions to borrow money and to declare bankruptcy? What percentage of debts "discharged" (or forgiven) in bankruptcy could actually be repaid? How much do lenders adjust the cost and availability of credit on the basis of changes in their bankruptcy losses? Answers to those questions would give policymakers vital clues about the possible inefficiency of current law.

In its search for those answers, the Congressional Budget Office (CBO) reviewed the available data and evaluated existing studies on personal bankruptcy.

Overall, CBO found that those sources generally offered only limited guidance. Although economic reasoning can identify the *direction* of borrowers' and lenders' responses to incentives in bankruptcy law, empirical research has made only a little progress in estimating the *magnitude*, and hence the significance, of those responses. Estimates of potential debt repayment by Chapter 7 filers under various proposals with a means-testing requirement suggest that some filers might be using bankruptcy to escape from their debts. The potential repayments by those filers are uncertain; they might amount to as much as several billion dollars. Repayments of that magnitude would contribute to a lower cost and a greater availability of credit, but the exact changes are unclear.

Many analysts who have studied the current bankruptcy law agree that some of its provisions could, indeed, be improved.¹ However, this paper does not analyze alternative proposals for changing the law, nor does it indicate areas in which the law might be reformed. Moreover, following CBO's standard procedures, it does not present recommendations about policy.

Available Data on Bankruptcy and Related Topics

A lack of data hinders any attempt to analyze the effect of bankruptcy law on borrowers and lenders. The official statistics collected by the Administrative Office of the U.S. Courts are insufficient to determine how well the bankruptcy system is working. For example, such basic information as the total amount of debt discharged in personal bankruptcy is lacking, and the data on personal bankruptcy filings have several problems that limit their usefulness (see Appendix A).² Data on individual filers are scanty as well, and for good reason: collecting such data would require not only a large sample of personal bankruptcy petitions but also direct questions to the consumers themselves—a complex, expensive undertaking. Data on related topics, such as the stigma associated with a bankruptcy filing, simply do not exist. And public information on the cost and availability of credit for consumers is fragmentary, which makes it difficult to estimate how much lenders adjust the quantity and price of the credit they offer in response to their bankruptcy losses.

What the available data do indicate is that, from a historical perspective, the rapid rise in the personal filing rate from 1994 to 1998 is unusual but not unprecedented. The rate has also risen, in some cases rapidly, in other economic expansions since the end of World War II. In the broadest of terms, the personal filing rate follows the risk of default within the household sector, measured as either the sector's debt-to-income ratio or its debt-service burden (the ratio of household debt payments to disposable personal income). Indeed, increases in the risk of

1. See, for example, the National Bankruptcy Review Commission (1997).

2. Bermant (1999) discusses other gaps in the data about people who file for bankruptcy.

default within the household sector typically precede increases in the personal filing rate, which suggests that at least some of the major factors behind the rise in personal bankruptcies during the 1990s are the same factors that increased the household sector's risk of default.

Empirical Research on the Factors Leading to Personal Bankruptcy

The empirical literature on personal bankruptcy is voluminous, but researchers have made little progress in judging the relative importance of the factors that lead people to file. Economists would generally agree that the health of the economy and of the household sector and other aspects of the demand for and supply of credit are key macroeconomic factors that underly the broad trends in the risk of default within the household sector. Consequently, they might also be expected to significantly affect the personal filing rate. Empirical studies do not, however, consistently find such effects.

Not surprisingly, studies of individual filers indicate that a person's financial health affects his or her chances of going bankrupt. Such research has shown that people from all walks of life experience financial difficulty for a variety of economic and personal reasons, including large medical bills following a serious illness or accident; divorce; loss of income as a result of unemployment or a drop in overtime hours; and what is generally termed poor debt management, which may cover several underlying factors.³ However, for the most part, the studies do not examine the specific factors that might motivate a person to file for bankruptcy rather than resolve financial distress in some other way. (For example, one impetus toward filing may be the desire to avoid wage garnishment.)⁴ Because the sources of financial difficulty shed little light on how people respond to the incentives in bankruptcy law, those studies are not reviewed in this paper.

Research to estimate how the incentives in bankruptcy law affect personal filings has had limited success. Perhaps the clearest finding from such studies is that consumers generally file under the chapter of the law that best suits their financial circumstances. Another result from a study of consumers suggests that the probability of filing for bankruptcy generally increases with bankruptcy's financial benefits. Other studies have had less success in identifying the role played by bankruptcy law incentives. For example, studies of the estimated impact of the Bankruptcy Reform Act of 1978, which instituted major changes in the law, found effects ranging from negligible to substantial. Research has also produced mixed

3. Luckett (1988) briefly reviews some of that research.

4. In general, studies show that rates of filing for bankruptcy tend to be higher in states with stricter laws for wage garnishment. See, for example, Stanley and Girth (1971) and Ellis (February 1998).

results about how provisions for exempt assets affect personal filing rates measured at the state level.

Several studies maintain that the social stigma associated with filing for bankruptcy plays a significant role in determining the filing rate, but at best, those findings are merely suggestive. Because direct measures of stigma do not exist, the studies used other variables as proxies—that is, to approximate the effects of stigma. However, the proxy variables did not isolate stigma’s influence on the filing rate. Some of those variables were related to economic factors in addition to stigma, and some proxies measured only an unexplained change in filing rates over time. Other proxies were open to interpretation. Consequently, the studies probably overstated the effects of stigma.

Studies Simulating Proposals for a Means-Testing Provision in Bankruptcy Law

A clearer indication of how people respond to the incentives in bankruptcy law comes from several studies that simulated recent legislative proposals for a means-testing requirement. The requirement would prohibit Chapter 7 filings (but not filings under Chapter 13) by people whose incomes were above certain thresholds and who could repay a minimum percentage or amount of their nonpriority unsecured debt (for example, credit card debt) over a five-year period. (Little nonpriority unsecured debt is repaid in bankruptcy.) As noted earlier, advocates of a means-testing requirement argue that current law gives people a strong incentive to file for bankruptcy to avoid debts that they could afford to repay. The studies’ estimates of the number of filers whose income and debt-repayment capacity would have exceeded the means-testing thresholds provide one indication of the possible magnitude of the incentive’s effect.

The studies suggest that a small percentage of Chapter 7 filers could repay a substantial portion of their nonpriority unsecured debt. A very small percentage—typically no more than 5 percent—of filers could repay 100 percent or more of that debt; larger percentages—but typically no more than 15 percent—of filers had the means to repay at least 20 percent or 25 percent. (The results depended on the study and the specific proposal being examined.) In particular, a study of H.R. 833, the Bankruptcy Reform Act of 1999, estimated that 10 percent of Chapter 7 filers in 1997 could repay at least 25 percent or \$5,000 of their nonpriority unsecured debt over a five-year period. Another general finding from the studies was that the amount of nonpriority unsecured debt repaid by people exceeding the means-testing thresholds would amount to no more than a few billion dollars. (Researchers who simulated the effects of H.R. 833 estimated repayment of \$3 billion, or 8.6 percent, of the total amount owed by Chapter 7 filers in 1997.)

Although the studies agree in a broad sense that some filers could repay a substantial portion of their debts, they differ in their estimates of the percentage of

filers who would not be allowed to file under Chapter 7 and the amount of debt they might repay. The varying provisions of the means-testing proposals and researchers' differing assumptions about the amount of income that filers could keep for living expenses while repaying their debts accounted for most of the differences; the remaining variation (probably only a small part overall) reflected differences in the samples of filers that the studies used. The proposals adopt the standards for living expenses that the Internal Revenue Service uses in tax collection cases. But researchers in the studies CBO examined interpreted those standards—and the expenses they covered—in varying ways, which raises the question of how different bankruptcy judges would rule on the allowances and consequently how much debt could actually be recovered. Another area in which the studies differ is in their assumptions about information that was unavailable to researchers, such as a filer's monthly payments on secured debts like mortgages.

The amount of debt repayment that a means-testing requirement might generate is uncertain for other reasons. For instance, the studies assume that filers would complete their Chapter 13 repayment plans. Yet the available data indicate that a significant fraction of consumers who filed Chapter 13 plans in the past did not make all of their scheduled payments. (Why those plans fail is not clear.) Another unknown factor clouding debt-repayment estimates is how people would respond to a repayment plan that stretched out for five years and committed a substantial proportion of their income to paying down debt. Some filers might decide that repayment was too burdensome and so work less or hide income to reduce their payments. Other filers might take on more debt and find themselves back in financial trouble. Alternatively, if a means test was in place, some consumers might not file at all and would make a greater effort to repay their debts.

Empirical Research on How Bankruptcy Affects the Supply of Credit

In theory, a stricter bankruptcy law ought to lower the average cost of credit and increase its availability (particularly in the case of unsecured credit). One study, in fact, found that in states with low asset exemptions, households owning few assets faced lower interest rates on auto loans and held more debt than did similar households in states with high asset exemptions. The same study also found that the probability of a household's being denied credit (of any kind) or being discouraged from applying for a loan was lower in states with lower asset exemptions.

But there is little empirical evidence showing how the supply of credit has responded to past changes in bankruptcy law provisions. Some data indicate that, at least for credit card lenders, losses related to bankruptcy are large enough to affect their decisions about lending. It is unclear, though, exactly how the cost and availability of unsecured credit for consumers would change as a result of a means-testing requirement for Chapter 7 filing.

THE FUNDAMENTALS OF PERSONAL BANKRUPTCY LAW

Bankruptcy law is a debt-collection law that insures people to some extent against the inability to repay their debts as they fall due. The vast majority of people file for bankruptcy under either Chapter 7 or Chapter 13 of the bankruptcy law (specifically, title 11 of the U.S. Code). (Certain consumers can also file under Chapter 11 or Chapter 12.) Chapter 7 is used by about 70 percent of filers; it provides for "straight bankruptcy," or the liquidation of assets. Chapter 13, entitled "Adjustment of Debts of an Individual with Regular Income," is a court-sponsored debt-refinancing plan.

Debt Collection and Insurance

The procedures by which creditors can collect debts are laid out in state commercial law as well as in bankruptcy law. State commercial law outlines the process for staking a claim to what is owed; it also ranks those claims and details the "remedies" available to creditors to satisfy or collect them. State law for debt collection is a "grab law," based on the notion of first come, first served. Accordingly, the creditor that first stakes a claim to particular assets of a debtor is entitled to be paid first (Jackson 1986). The legal remedies for creditors, such as foreclosure on and the sale of property, allow them to collect what they are contractually owed, and from the point of view of state law, debtors are required to repay debts in full, regardless of the circumstances. But debtors sometimes default on their debts, and grab law makes no provision for sharing the risk of such defaults—either among creditors or between debtors and creditors. That results in an inefficiency; in other words, society would be better off with provisions for sharing default risk. The inability of borrowers to shift such risk also creates what is known as an adverse selection problem for creditors: risk-averse consumers will shy away from borrowing, leaving creditors with a group of riskier borrowers.

Bankruptcy law can better allocate the risk of default for the economy in comparison with the allocation provided by state commercial law. Most important, bankruptcy law spreads default risk among borrowers and lenders by providing borrowers with some insurance against their inability to repay their debts. The insurance "payoff" for borrowers is the opportunity to receive a discharge (or forgiveness) of their debts and to keep certain assets to start life afresh after bankruptcy. As a result, that insurance gives people an incentive to increase their borrowing because they know they will not be impoverished if they cannot repay their debts. Society benefits from this aspect of greater risk spreading because it allows people to better plan their consumption—they can finance it when they desire it most rather than when they have the cash to pay for it.⁵

5. Bankruptcy law also helps creditors by providing a collective forum for debt collection that is based in large part on their rights and priorities under state law (Jackson 1986).

In the long run, borrowers pay the cost of the insurance provided by bankruptcy law. To recoup their losses from bankruptcy, creditors will raise the cost of borrowing by using a combination of stricter standards and terms on their loans, such as higher interest rates, larger down payments, and restrictions on the supply of credit. Essentially, the premium borrowers pay for the insurance coverage of bankruptcy is that additional cost of borrowing. In the short run, creditors will share some of the risk of default if their loan losses are greater than expected. Moreover, if the law is tightened, creditors are likely to profit—at least temporarily (see the later discussion).

The strength of the law's incentive to borrow and the cost of borrowing depend on the magnitude of the fresh start. The greater the fresh start, the greater are the incentive to borrow and the cost of borrowing. A larger fresh start also gives people more incentive to use bankruptcy, rather than other means, to solve their financial problems and escape debt repayment. Consequently, a bankruptcy law with a generous fresh start may promote greater risk spreading, but it can also raise the cost of borrowing by expanding the fresh start and making it easier for people to walk away from debts that they could afford to repay.

The difficulty of achieving a desirable trade-off between the benefit of risk sharing and its cost helps explain several changes to bankruptcy law since the late 1970s:

- o The Bankruptcy Reform Act of 1978 (BRA-78) was the first overhaul since 1898 and the first major revision since the Chandler Act of 1938 introduced the wage-earner Chapter XIII plan, precursor to the current Chapter 13.⁶ BRA-78 had several goals: to modernize bankruptcy law following the tremendous growth of consumer credit in the post-World War II period, to improve the fresh start for personal filers, and to reform a bankruptcy court system that many people viewed as inefficient and unfair (Jeweler 1997).⁷
- o The Bankruptcy Amendments and Federal Judgeship Act of 1984 sought in part to curtail alleged abuses of bankruptcy law by reducing bankruptcy's benefit for consumers (Kowalewski 1985).
- o The Bankruptcy Reform Act of 1994 made a host of changes in the bankruptcy code; among other things, it doubled the dollar value of federal asset exemptions (which had not been adjusted for inflation since 1978) and included provisions to curtail bankruptcy fraud.

6. A brief summary of the changes made by BRA-78 appears in Domowitz and Eovaldi (1993).

7. The growth of the market for consumer credit in Europe during the 1980s, which was followed by recession in the early 1990s, prompted many European nations to modify their consumer bankruptcy laws. See Niemi-Kiesilainen (1997).

Basic Provisions of Chapter 7

Under Chapter 7, the administrator of a bankruptcy case, who is known as the trustee, oversees the liquidation, or sale, of a debtor's nonexempt assets and the distribution of the proceeds to creditors. Only creditors with "allowable" claims in the case receive a share of those proceeds, which are distributed after the trustee's expenses, other administrative costs, and priority claims have been paid.⁸ Unless the court finds that the debtor was dishonest or engaged in wrongdoing, it discharges (forgives) all allowable claims on the person and his or her assets except for nondischargeable claims (for example, many kinds of taxes) and any debts covered under reaffirmation agreements (in which the person specifically agrees to repay one or more debts). The debtor keeps the value of the assets designated as exempt under the law (the fresh start discussed above) and may not receive another discharge under Chapter 7 for six years.

Although bankruptcy law is federal in scope, provisions designating exempt assets appear in both federal and state law. BRA-78 introduced federal exemptions but allowed states to "opt out" of using the federal limits and continue using their own. Today, 35 states do not use the federal exemptions; in the remaining states, residents may use either the federal or the state exemptions. Both federal and state exemptions cover broad categories of assets including primary residences; motor vehicles; various kinds of personal property, such as household goods and clothing; and the tools of a person's trade. However, the particular types of assets that may be exempt and the dollar values of those exemptions vary widely.

The homestead exemption is a good example of how dollar values for asset exemptions differ among the states. Georgia allows bankrupt consumers to keep only \$5,000 of equity in real property used as a residence; Florida, in contrast, allows an unlimited amount of equity in as much as one-half acre in a municipality or 160 contiguous acres elsewhere (King 1998). The federal dollar limit on the homestead exemption is currently \$16,150 and is adjusted for inflation every three years.

Basic Provisions of Chapter 13

Chapter 13 helps people avoid liquidation of their assets by requiring them to repay their debt out of future income. To qualify for a Chapter 13 discharge, debtors (with the exception of stockbrokers and commodity brokers, who are covered by separate provisions) must have a regular income, and their unsecured (such as credit card) and

8. The definition of a claim is very broad under the bankruptcy code. All possible legal obligations—to banks, finance companies, public utilities, hospitals, divorced spouses, and governments, for example—are within the purview of the bankruptcy court, including claims that are unliquidated or contingent. Thus, the term "creditor" covers any entity with a legal claim on the debtor that arose before the bankruptcy case began. It also covers some claims that arise afterward.

secured debts must total less than \$269,250 and \$807,750, respectively. The debt limits are adjusted for inflation every three years.

Under Chapter 13, the debtor works with the trustee and submits a plan to the court to repay outstanding debts over three (or, in some circumstances, five) years. The plan must satisfy three criteria:

- o First, although the plan may call for less than full repayment of certain debts, creditors must receive at least as much as they would have received if the consumer had filed for bankruptcy under Chapter 7 and liquidated his or her nonexempt assets.
- o Second, the trustee and all unsecured creditors must agree to the plan. If one of them objects, the debtor must use all of his or her income in excess of reasonably necessary living and business-related expenses for debt repayment.
- o Third, the court must determine that the plan has been filed in “good faith”; otherwise, the plan may be dismissed.⁹

When the payments are completed, the consumer receives a discharge from all debts that the plan covered. A Chapter 13 filing has three advantages (relative to a Chapter 7 filing) that encourage people to use it: debtors retain all of their property, not just their exempt assets; a greater variety of claims can be discharged; and consumers may be able to repay less than they owe on certain secured debts.¹⁰

TRENDS IN PERSONAL BANKRUPTCY FILINGS

The rapid increase in the personal filing rate between 1994 and 1998, despite the vigor of the nation’s economy, is unusual but not unprecedented, given that the rate has risen during previous periods of relatively strong economic growth as well as recession. In fact, for the most part, the rate has trended upward since the end of World War II. What accounts for the growth in personal bankruptcy filings, both before 1994 and, more specifically, between 1994 and 1998? On the surface, the upswing in the filing rate mimics the trend in the risk of default for the household sector. Yet because households have some control over that risk, changes in its trend do not completely explain changes in the personal filing rate. As discussed later, the current policy debate is about what underlies the ascending trends in both measures.

9. Chapter 7 filings may be dismissed for several reasons, including a judgment that discharging debts would be a “substantial abuse” of the law’s provisions. The antiabuse language has been interpreted by the courts to authorize dismissal if debtors are able to pay part or all of their debts out of future income.

10. Jeweler (1997) discusses differences between Chapters 7 and 13 in the definition of dischargeable debts.

The Personal Filing Rate in the Postwar Period

The personal filing rate has risen during all but one economic expansion of the postwar period (see Figure 1). Indeed, although the rate has often increased especially sharply during recessions, much of its postwar growth has occurred in good economic times, not in slowdowns. Between 1948 and 1967, the rate climbed in every year except 1962, when it fell slightly after a jump in 1961. Between 1967 and 1979, the rate varied within a modest range, following a more cyclical pattern—rising during a recession, falling immediately afterward, and then rising later in the expansion. The rate has trended strongly upward in the 1980s and 1990s, with modest declines following recessions. The rate fell in 1999, though it remains high.

The break in the personal filing rate displayed in Figure 1 shows that after 1979, the rate is not strictly comparable with the rate before that year. The reason is that the Bankruptcy Reform Act of 1978 introduced joint husband-and-wife bankruptcy petitions. (Before the law was enacted, a husband and wife had to file separate petitions.) Comparing the number of filings before and after 1979 is difficult because analysts do not know how to adjust the data to account for the joint filings (see Appendix A). CBO chose to indicate the break when appropriate and, after 1979, to use the number of nonbusiness bankruptcy filings to calculate the personal filing rate.

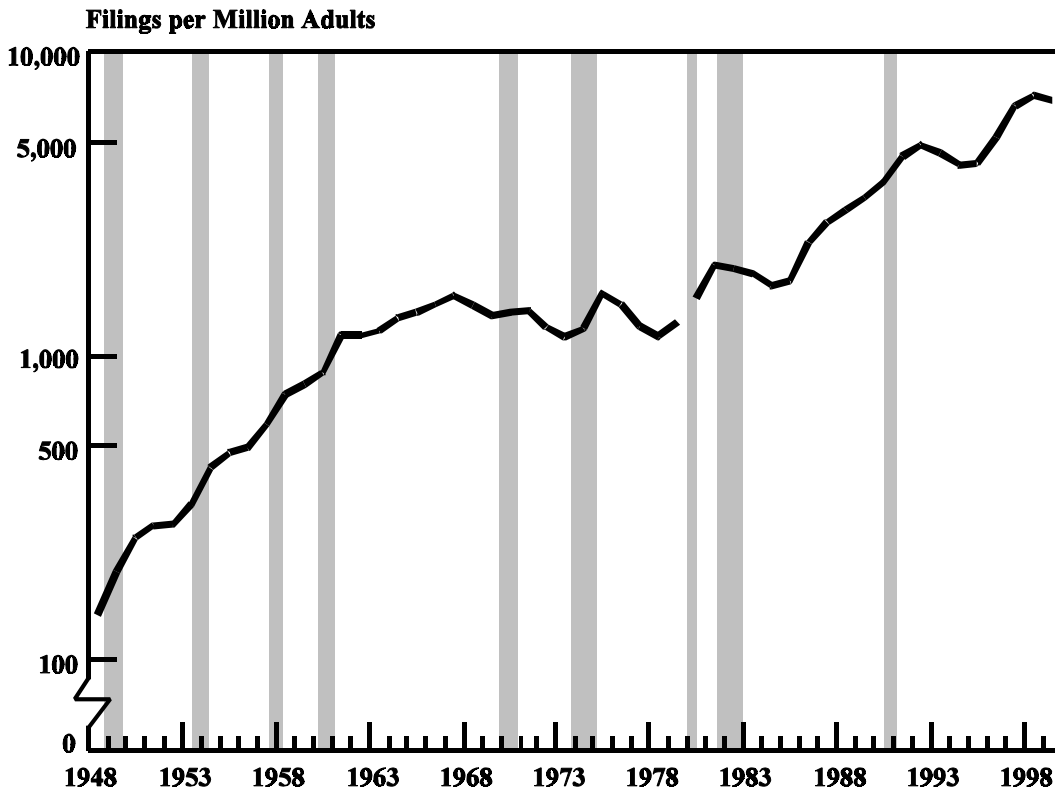
The Personal Filing Rate and the Household Sector's Risk of Default

Changes in the personal filing rate tend to mirror changes in the risk of default in the household sector. A household's risk of default generally rises when:

- o It takes on additional debt,
- o Interest rates on its floating-rate debt rise,
- o Its income falls, or
- o Its extraordinary or other living expenses rise.

Analysts typically use two ratios to measure the household sector's risk of default: the debt-to-income ratio and the debt-service burden. Yet neither of those measures is a perfect indicator of default risk. Both fail to incorporate changes in extraordinary and other living expenses, and the debt-to-income ratio does not encompass interest rate changes on floating-rate debt or the effects on monthly payments of refinancing debt.

FIGURE 1. THE PERSONAL FILING RATE FOR BANKRUPTCY, 1948-1999



SOURCES: Congressional Budget Office; Administrative Office of the U.S. Courts; Department of Commerce, Bureau of the Census.

NOTES: The personal filing rate is the number of nonbusiness bankruptcy cases filed per million adults age 20 and older. The data are plotted on a logarithmic scale.

A break occurs in the personal filing rate between 1979 and 1980 because the data are not strictly comparable. The break represents the introduction of joint husband-and-wife filings allowed by the Bankruptcy Reform Act of 1978.

Debt-to-Income Ratio. This ratio is measured as the sum of consumer credit plus home mortgage debt divided by disposable, or after-tax, personal income.¹¹ It compares the level of the major types of debt held by the household sector with a measure of the sector's ability to repay that debt. A larger amount of debt relative to income indicates a larger amount of default risk; that is, as more households have more debt relative to their repayment ability, more of them are more likely to face financial difficulties arising from any source.¹²

The risk of default, according to this measure, can mount because households take on more debt relative to their income or because their income falls relative to their debt. In economic expansions, households generally take on debt at a greater rate than the rate at which their income expands; most analysts think the reason is that households feel confident about their income prospects and their debt-repayment ability.¹³ At the same time, creditors are more willing to lend because they feel more confident that they will be repaid. By contrast, in recessions, creditors are less willing to lend. Households, for their part, take on debt more slowly, but the growth rate of their income drops off even more sharply. Just after recessions, the debt-to-income ratio may fall for a while because households' incomes pick up before households and creditors become confident enough about their financial futures to resume more normal patterns of borrowing and lending.¹⁴

Both before and after 1979, the broad trend in the personal filing rate follows the trend for the debt-to-income measure (see Figure 2). Given the break in the data for the personal filing rate, one cannot conclude that the relationship remained the same in the two periods. Nevertheless, the increase in the personal filing rate between 1994 and 1998 is broadly consistent with the rise in the household sector's default risk during that period.

Generally, an increase (or decrease) in the risk of default precedes an increase (or decrease) in the personal filing rate. For the year ending June 30, 1998, for example, the rise in the personal filing rate reflects the rise in the risk of default at the end of calendar year 1996. The lag may occur because loans typically do not go into default immediately and because people may try to resolve their financial problems

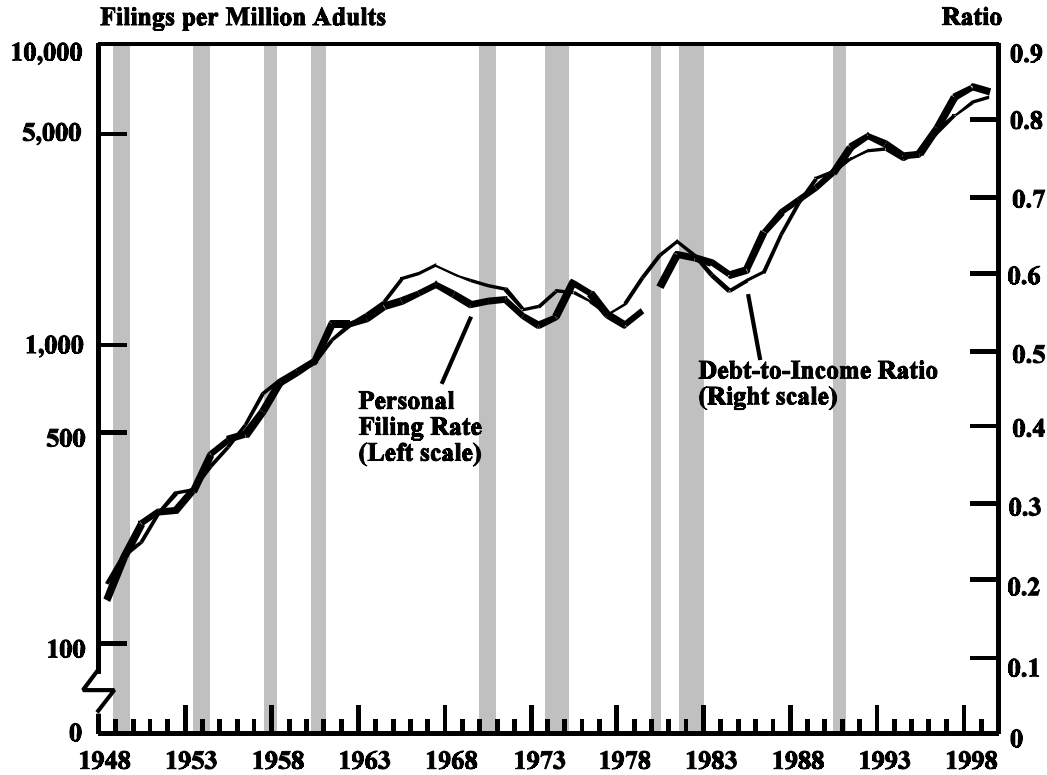
11. The data on debt come from Board of Governors of the Federal Reserve System (2000). Consumer credit includes installment and noninstallment debt. Home mortgage debt includes home-equity loans.

12. The close correlation should not be taken to mean that debt is the cause of bankruptcy. Of course, debt is necessary for bankruptcy, but saying that it causes bankruptcy begs the question of what factors explain the debt holdings of households. Those factors are discussed later in this paper.

13. Consumers' expectations about their income prospects also affect their decisions about saving, as discussed in Congressional Budget Office (1993).

14. The incentives in bankruptcy law and the stigma associated with filing for bankruptcy probably do not affect the risk of default across the business cycle.

FIGURE 2. THE PERSONAL FILING RATE AND THE DEBT-TO-INCOME RATIO OF THE HOUSEHOLD SECTOR, 1948-1999



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis and Bureau of the Census; Federal Reserve Board.

NOTES: The personal filing rate is the number of nonbusiness bankruptcy cases filed per million adults age 20 and older. The data are plotted on a logarithmic scale.

The debt-to-income ratio, which is plotted with an 18-month lag, is the ratio of the sum of consumer credit plus home mortgage debt to disposable (after-tax) personal income.

A break occurs in the personal filing rate between 1979 and 1980 because the data are not strictly comparable. The break represents the introduction of joint husband-and-wife filings allowed by the Bankruptcy Reform Act of 1978.

before filing for bankruptcy. The lag appears to be the same both before and after 1979.

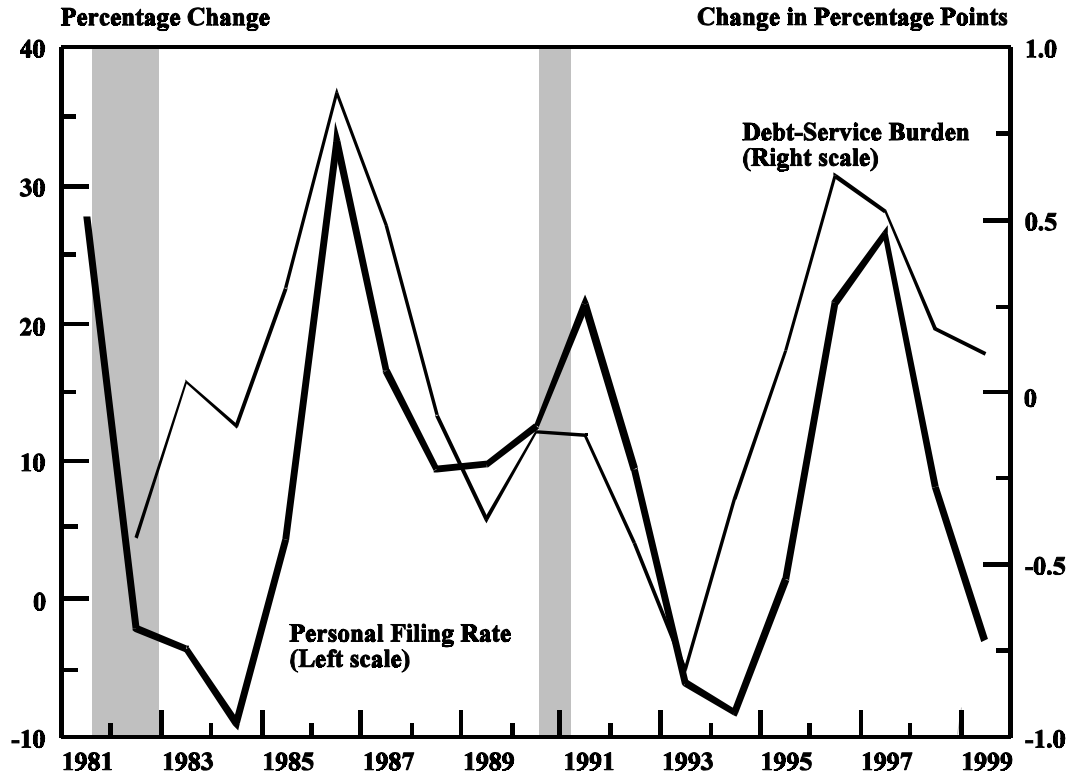
Some analysts dispute the correlation between the personal filing rate and debt-related measures of the household sector's default risk. Their arguments, however, are based on less useful measures of that risk. Chimerine (1996) and Feldstein (1998), for instance, do not believe that the rise in personal bankruptcy filings during the mid-1990s is related to growth in the debt holdings of the household sector. However, the measure Chimerine uses covers only consumer credit; it excludes home mortgages and home-equity loans, which are substantial components of household debt. Indeed, many people have taken equity out of their homes to support their consumption, using such loans as a substitute for consumer credit (Canner, Durkin, and Luckett 1998). One of Feldstein's arguments against the idea that debt contributed to the surge in filings is that the nominal-dollar value of debt is not closely related to personal bankruptcy filings. That finding is not surprising because the amount of outstanding debt presumably rises when creditors believe that they will be repaid. Thus, the ratio of debt to income, rather than the nominal-dollar amount of debt, better measures the household sector's vulnerability to financial problems.

Debt-Service Burden. This measure is the ratio of the household sector's debt-service payments to disposable personal income, as computed by the staff of the Board of Governors of the Federal Reserve System. Debt-service payments are the principal and interest payments on consumer credit and home mortgages (the two debt variables used in the debt-to-income ratio). According to that measure, the risk of default increases as debt-service payments rise relative to income. Because no comprehensive statistics exist on actual debt-service payments by households, the Board of Governors' staff estimate the payments using data on the average terms for new loans and a variety of assumptions for the period since 1980. The staff consider their estimates to be a "rough approximation" that is useful for indicating changes in (rather than levels of) the household debt-service burden.¹⁵

The relationship between growth in the personal filing rate and the change in the household debt-service burden, plotted with a one-year lag, is shown in Figure 3. Growth in the filing rate tends to increase (or decrease) in the year following a greater (or smaller) increase in the debt-service burden. In particular, the slowdown in the rate's growth during the past few years corresponds to smaller increases in the debt-service burden.

15. The series is described at www.federalreserve.gov/releases/housedebt/about.htm.

FIGURE 3. GROWTH IN THE PERSONAL FILING RATE AND THE DEBT-SERVICE BURDEN OF THE HOUSEHOLD SECTOR, 1981-1999



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of the Census; Federal Reserve Board.

NOTE: The debt-service burden, which is plotted with a one-year lag, is the ratio of the household sector's debt-service payments to disposable (after-tax) income.

FACTORS LEADING TO PERSONAL BANKRUPTCY

The current debate over revising personal bankruptcy law centers on the reasons for the personal filing rate's jump between 1994 and 1998 and its continued high level since then. Some observers believe that the high rate, occurring in a strong economy, indicates that many consumers are filing for bankruptcy even though they could repay a substantial portion of their debt. Those observers argue that a significant proportion of recent filings stem from various legal and social factors—in particular, an overly lenient personal bankruptcy law and a weakening of the stigma that has traditionally been associated with bankruptcy. Other observers maintain that growth in the filing rate largely reflects a household sector that has become heavily indebted and unable to manage its debt burden, as a result of financial troubles brought on by bad judgment or bad luck.¹⁶ The debate comes down to the empirical question, What is the relative importance of the various factors leading to personal bankruptcy?

Empirical research has made only limited progress in supplying an answer. The close correlation during the postwar period between the default risk of the household sector and the personal filing rate suggests that macroeconomic factors underlying the risk of default play a large role in what happens to the rate nationally. Economists would generally agree that those factors include measures of the financial health of the household sector and other aspects of the demand for and supply of credit. Because of possible methodological problems, however, empirical studies do not consistently find that macroeconomic factors significantly affected the filing rate.

Mixed success also characterizes attempts to estimate how much the incentives in bankruptcy-related federal and state law, as well as various social factors, influence the personal filing rate. Those elements complement the macroeconomic factors by providing additional explanations of credit demand and supply. But measuring such elements accurately has proved difficult, if not impossible. The clearest finding on how consumers respond to the incentives in bankruptcy law comes from research comparing filers under Chapter 7 with those under Chapter 13. Those studies suggest that consumers file for bankruptcy under the chapter that best suits their circumstances. Moreover, some evidence suggests that the probability of filing for bankruptcy rises with the financial benefits of filing. Research using the personal filing rate measured at the national, state, and circuit court levels is split, however—some studies found that bankruptcy law affected the filing rate, and others did not. Several studies attempted to analyze whether changes in the stigma associated with bankruptcy had affected people's propensity to file. But those

16. Some analysts have also cited greater awareness among consumers of the benefits of bankruptcy—stemming perhaps from advertising by lawyers or discussions with family members and friends who have filed for bankruptcy—as another factor in the rate's upward trend. Given the lack of data on that factor, however, an evaluation of its importance is difficult.

studies were hampered by the use of proxy variables (discussed below) that do not isolate stigma's effects.

Macroeconomic Factors

Broadly speaking, the trends in the risk of default and indebtedness in the household sector reflect trends in the sector's economic health and in the supply of credit available to households. The 1946-1967 period, which encompassed the baby-boom years (1946 to 1964), was a time of rapid family formation. Consumers were optimistic about the future because of low unemployment, low inflation, strong household balance sheets, and the rapid growth of real (adjusted for inflation) disposable personal income per capita. Consequently, lenders accommodated consumers' robust demands for credit, and indebtedness rose rapidly to finance spending for housing and consumer durable goods. With greater indebtedness (and, presumably, larger debt-service payments) relative to income, personal bankruptcies rose as well.

In contrast, overall household finances generally deteriorated from about 1968 through 1982. The period was marked by economic turbulence as a consequence of food and energy price "shocks" and rising inflation, two deep recessions on top of a slowdown in the trend growth of real disposable personal income per capita, and postwar highs in short- and long-term interest rates. Consumers lowered their expectations about future economic conditions and grew cautious about accumulating debt. Debt-financed purchases of houses and consumer durable goods slowed, possibly also because the surge in family formation and the baby boom were over. The personal filing rate was strongly correlated with the business cycle during this period, as external forces dominated changes in family finances.

After 1982, the financial picture of the household sector brightened. A strong economic recovery, rising stock market, and sharp drops in energy prices, inflation, and interest rates bolstered the sector's general financial health. Consumers' expectations about their future prospects soared. With the baby-boom generation entering its own family-formation phase, spending for housing, furniture, and other consumer goods expanded, as did home mortgage and consumer debt. At the same time, consumers increasingly used general-purpose credit cards as a substitute for cash. As the indebtedness and default risk of the household sector increased, so did personal bankruptcies.

The recession at the beginning of the 1990s and the slow recovery from it kept a lid on the demand for credit by consumers and potential home buyers for several years. But economic conditions in the household sector had improved again by the second half of the decade. Employment gains came quickly as the economy began to grow more rapidly; by the late 1990s, the civilian unemployment rate had fallen to levels not seen in over two decades. Interest rates also fell while inflation

remained under control, and household wealth was boosted by impressive gains in the stock market. That confluence of favorable developments bolstered consumer confidence and expectations about the future and probably contributed to the rise that occurred in household indebtedness and default risk.

The preceding explanation of the broad trends in the demand for credit by households and in the risk of default in the household sector is based on a widely accepted theory of consumer spending behavior, the life-cycle model. Accounting for variations in the household sector's debt holdings more precisely is difficult, however, because the literature offers few models of total household indebtedness. That limited understanding of indebtedness mirrors economists' lack of knowledge about the factors that influence the rate of personal saving in the United States.¹⁷ The saving rate fell in the mid-1980s and dropped considerably in the 1990s—at the same time that household indebtedness and personal bankruptcies were rapidly rising.

Home mortgage and consumer lenders, of course, share responsibility for the rise in the household sector's risk of default. Lenders affect that risk through their terms and standards of lending: lenient terms and standards encourage borrowing, which raises default risk.¹⁸ Indeed, lenders have made credit more widely available, particularly in the past two decades—a period encompassing changes in bankruptcy law and alleged reductions in the stigma attached to bankruptcy. That wider availability stemmed from deregulation of credit markets, technical innovations, tax policy, and competition among lenders.¹⁹ For example:

- o The Supreme Court's 1978 decision in *Marquette National Bank of Minneapolis v. First of Omaha Service Corporation* allowed a nationally chartered bank to extend credit at the maximum interest rate of the state in which it was chartered rather than at the maximum rate allowed by the borrower's state. That decision spurred many states during the early 1980s to raise or eliminate the maximum rates of interest (usury ceilings) that lenders could charge consumers, which contributed to the rapid growth of credit card lending in the 1980s.²⁰

17. Chapter 4 of Congressional Budget Office (1993) reviews the possible reasons for the decline in personal saving. See also Gokhale, Kotlikoff, and Sabelhaus (1996) as well as summary comments on that paper in the same volume. Neither analysis examines the role that changes in bankruptcy law or in the stigma of bankruptcy might play in the drop in the national personal saving rate.

18. As discussed later, creditors' efforts to tighten their lending standards might explain why personal bankruptcy filings stopped rising in 1998.

19. See Getter (1996).

20. See, for example, Ausubel (1991); Canner and Lueckett (1992); Evans and Schmalensee (1993); and Ellis (March 1998).

- o The elimination of ceilings on interest rates for deposits in banks and thrift institutions ended the flow of funds out of those institutions when market interest rates rose above the ceilings. The change helped to stabilize the availability of funds for borrowers.
- o The Tax Reform Act of 1986 eliminated the tax deductibility of interest payments on consumer loans, which spurred growth in the market for home-equity loans. Those loans cost less than consumer loans because their interest rates are lower and interest payments are tax-deductible.
- o Advances in information processing and in financial management techniques have reduced the costs of marketing and servicing a large portfolio of loans. They have also allowed lenders to price and manage risk better by using “credit-scoring” models (to evaluate prospective borrowers) and loan securitization (to sell some of their loans to others).²¹ For example, high loan-to-value home-equity loans (for up to 125 percent of a homeowner’s equity) have become widely available.

The increased availability of credit has made individuals and homeowners better off. By increasing the risk of default in the household sector, however, it has also contributed to a higher incidence of personal bankruptcy. Consumers who formerly could not get the credit they wanted have found it much easier to obtain in the past 20 years.²² Indeed, evidence compiled by the Board of Governors of the Federal Reserve System indicates that borrowing increased broadly throughout the population during the 1980s and the first half of the 1990s.²³ To the extent that the increase in indebtedness of the household sector reflects borrowing by consumers who previously found credit difficult to obtain, that indebtedness would be more the result of the greater supply of credit than of changes in attitudes toward debt and bankruptcy. (That would be true even if more marketing of credit had changed consumers’ attitudes.) Evaluating that possibility, however, requires additional research.

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21. One example of the effect of advances in information processing, the tremendous growth in solicitations for bank credit cards, was documented by Ausubel (1998) in a hearing before the Senate Committee on Banking, Housing, and Urban Affairs. The use of credit-scoring models is discussed in Staten (1993), who notes that creditors increased their lending to riskier borrowers throughout the 1980s.
 22. Economists have long recognized that imperfections in credit markets may prevent some creditworthy consumers from obtaining credit at any cost. The percentage of those so-called credit-constrained consumers in previous years has been estimated at between 15 percent and 45 percent of the population (see, for example, Perraudin and Sorensen, 1992). Once constraints on credit are relaxed, those consumers readily increase their borrowing and, consequently, their chances of financial trouble.
 23. See Board of Governors of the Federal Reserve System (1995 and January 1997) for data on 1983 to 1992 and 1992 to 1995, respectively. See also Black and Morgan (1999).

Legal Incentives to File for Bankruptcy

A considerable amount of research has examined whether the incentives contained in federal and state law have driven up bankruptcy filings. Many studies have investigated BRA-78's effect on the personal filing rate; others have developed simple measures of the value of asset exemptions to judge how those exemptions affect personal filing rates among the states and the probability of filing among individual consumers. Still other studies have looked at whether incentives affect a person's choice of a Chapter 7 or Chapter 13 filing.

Such research has encountered considerable difficulty in identifying the incentives' effects, in part because many of them are extremely difficult to quantify. The results of studies of how BRA-78 affected the personal filing rate range from no effect to a substantial one; studies that searched for a relationship between asset exemptions and personal filing rates among the states also have mixed findings. Nevertheless, there is some evidence that the probability of filing for bankruptcy and the choice of the bankruptcy chapter under which to file depend on the benefits of filing. Moreover, simple comparisons of the characteristics of people who file for bankruptcy suggest that they respond to the law's incentives by filing under the chapter that best suits their circumstances.

How Differences in the Benefits of Bankruptcy Affect the Probability of Filing. Fay, Hurst, and White (1998) found evidence suggesting that people do respond to the incentives in bankruptcy law, although their results are weakened by the small number of filers in their sample. Their study used data from households participating in the University of Michigan's Panel Study on Income Dynamics from 1984 to 1996; the 1996 "wave" of the study asked respondents if they had ever filed for bankruptcy and if so, when.²⁴ The researchers found that the probability of filing increased as the value of bankruptcy's benefits rose to \$9,000; thereafter, the estimated probability did not change. (Fay, Hurst, and White defined "benefits" as the difference between respondents' unsecured debt and their wealth after subtracting the value of exempt assets allowed by their state.) However, only 254 of the thousands of households in the study had ever filed for bankruptcy.²⁵ Gross and Souleles (1998) note that estimating probabilities from models with such small samples can give misleading results.

Indeed, the small number of filers in the sample may be responsible for several puzzles in Fay, Hurst, and White's results. For example, the researchers divided the variable for benefits into five separate variables representing different ranges of benefits. Yet only two of the five coefficients for the variables were statistically

24. The results of Fay, Hurst, and White's study may be misleading if some of the respondents who said they filed did not receive a discharge of their debts.

25. The figure probably refers only to those who filed under Chapter 7.

significant. Furthermore, the estimated overall effect of the benefit variables was different over time. The researchers found the expected positive effect on the probability of filing in the first half of their sample (1984 to 1989) but only a small and negative effect in the latter half (1990 to 1995). Those results, if taken at face value, would imply that the incentives in bankruptcy law were encouraging personal filings in the second half of the 1980s but discouraging them in the first half of the 1990s. Alternatively, they may simply indicate that such a small sample of filers is unlikely to yield stable results.

How Incentives Affect the Choice of Bankruptcy Chapter for Filing. Another way researchers have looked for the effects of the incentives to file for bankruptcy is by examining whether people choose the chapter under which they file on the basis of available asset exemptions. The general hypothesis of such studies is that a high level of asset exemptions creates an incentive for people to file under Chapter 7 rather than under Chapter 13.²⁶

Domowitz and Sartain (1998) examined a very small sample of personal filers in the early 1980s and found that bankruptcy asset exemptions affected people's choice of chapter. They estimated that, all else remaining constant, a 50 percent drop in exemption levels would increase the probability of a person's choosing Chapter 13 over Chapter 7 by between 18 percent and 25 percent.

Other studies exploring the impact of asset exemptions on chapter choice yield mixed results. For example:

- o The General Accounting Office (1983) found that as a group, states that opted out of the federal exemptions in the early 1980s experienced slower growth in Chapter 7 filings than the group of states that permitted use of the federal exemptions. However, the GAO researchers also found considerable variation in filings by state, which led them to conclude that they could not make a "definitive assessment of the impact of Federal exemptions on decisions to file bankruptcy" (p. 34).
- o White (1987-1988) used a model based on county-level data in 1981 and found that asset exemptions significantly affected chapter choice. According to the model, higher exemptions raised Chapter 7 filings and lowered Chapter 13 filings. However, few economic variables are

26. The relative number of nonbusiness Chapter 7 and Chapter 13 filings varies widely among the states. In calendar year 1998, for example, Chapter 13 filings accounted for about 28 percent of personal filings nationwide; in Rhode Island, they were only about 5 percent, but in Tennessee and North Carolina, they were about 58 percent. Because those differences persist over time, some observers attribute the differences in chapter usage to differences in legal culture among the states and among the localities within a state. See, for example, Sullivan, Warren, and Westbrook (1989) and Braucher (1993).

measured at the county level; consequently, White's results may also reflect other differences among counties that are not included in her model.

- o Bork and Tuck (1994) found no correlation between state homestead exemptions and the number of Chapter 13 filings.
- o Sullivan, Warren, and Westbrook (1994, 1997) compared filing rates by chapter and argued that differing asset exemptions within and among the states did not appear by themselves to explain a person's choice of bankruptcy chapter. The 1994 study examined a very small sample of filers in 1991; the 1997 study simply compared filing rates among bankruptcy court districts.
- o Buckley and Brinig (1998) found that higher asset exemptions lowered Chapter 7 filing rates among the states over the 1980-1991 period.

The mixed findings in these studies could have several roots. All of the studies had to grapple with the sizable difficulty of developing measures that summarized the myriad exemptions in federal and state law. In addition, many of them may have failed to adequately control for differing economic conditions and levels of default risk among the states. Furthermore, as several researchers noted, the studies failed to take into account the reactions of creditors to different limits on asset exemptions. For example, Gropp, Schulz, and White (1997) found that households in states with high exemptions were more likely than households in states with low exemptions to be denied credit or be discouraged from applying for a loan.

Several studies of individual filers indicate that people file under the chapter that best suits their circumstances. Both the General Accounting Office (GAO), in a 1983 study, and Barron and Staten, in a 1997 study, found that Chapter 13 filers, on average, had higher income, more assets, more secured debt, and less unsecured debt than did Chapter 7 filers. That finding suggests that the bankruptcy code steers some consumers who can repay a portion of their debts into filing under Chapter 13 rather than under Chapter 7.

How BRA-78 Affected the Personal Filing Rate. Empirical studies examining the act's impact on the personal filing rate do not provide a consistent or satisfying picture.²⁷ Several problems help explain the studies' limitations:

- o The difficulty of measuring the magnitude of the changes in incentives to file for bankruptcy;

27. See Carter (1982), Kowalewski (1982), General Accounting Office (1983), Peterson and Aoki (1984), Shepard (October 1984, Winter 1984), Boyes and Faith (1986), Shiers and Williamson (1987), Domowitz and Eovaldi (1993), Bhandari and Weiss (1993), and Domowitz and Tamer (1997).

- o The lack of data on other potentially important variables such as advertising by lawyers and the stigma associated with filing for bankruptcy;
- o BRA-78's introduction of joint filings; and
- o Inadequate treatment of macroeconomic effects.²⁸

One major problem confronting all of the studies is quantifying the changes that BRA-78 made in the incentives to file for bankruptcy. The legislation was a major overhaul of bankruptcy law that affected a wide assortment of provisions. Many observers agree that BRA-78 made filing for personal bankruptcy more attractive, which should have encouraged filings by consumers. But quantifying and comparing the effects of many of those changes with effects under the previous law range from difficult to impossible.

For example, the studies do not clarify how much filing incentives changed when federal asset exemptions were introduced. Initially, the federal exemptions were more generous than the exemptions being used in many states, and by the end of 1982, 35 states had opted out of using them. Whitford (1997) argues that as a result, the incentives to choose bankruptcy to solve financial problems were not much changed after BRA-78's passage because so many states continued to use their own exemptions. Shuchman and Rhorer (1982), however, contend that such incentives did change because a number of states raised the value of their exemptions when they opted out of using the federal standards. The authors claim that most of those states “revised their state exemption laws—many for the first time in 50 years or more—making them more generous to debtors and more suited to the times” (p. 2). But Shepard (October 1984) claims that the opt-out states set their exemptions “at less liberal levels” compared with the federal exemptions (p. 425). Thus, sometime after enactment of BRA-78, the asset exemptions of the opt-out states may have been higher than they had been before, but they may not have been as high as the federal exemptions in place when the states opted out.

Because of the difficulty of quantifying changes in incentives under BRA-78, the studies estimating the law's effect use a technique that probably biases their results in favor of finding an effect. The studies typically assumed that any increase in the personal filing rate that their models could not explain was due to BRA-78. The problem with that approach is its sensitivity to the specification of the models: the effects of an error in choosing the explanatory variables or in the relationship

28. The difficulty of explaining the behavior of the personal filing rate and the impact of BRA-78 is illustrated by the two models of personal filings described in Shepard (*ibid.*). The models use slightly different periods and several different explanatory variables, and they deliver different results. For example, one model found that the unemployment rate had a significant effect, and the other did not. The two studies conclude that BRA-78 increased personal filings, but whether one model is more accurate than the other or, indeed, whether either model is accurate is difficult to determine.

between those variables and the personal filing rate may be mistakenly attributed to BRA-78.

For example, the studies excluded two factors whose effects may be confused with those of BRA-78—namely, advertising by lawyers and the stigma associated with filing for bankruptcy. There are no quantitative statistics on either of those two factors, and thus their effects cannot be directly measured. Research attempting to estimate stigma's effects is discussed in detail later. Lawyers were allowed to advertise for the first time in 1977, which may have encouraged filings by increasing consumers' awareness of the benefits of bankruptcy. Advertising may also have intensified competition among bankruptcy lawyers, which could have lowered consumers' legal costs for filing. However, the extent to which stigma or legal advertising encouraged personal bankruptcies is unknown because the estimated effects of those factors are commingled with those of BRA-78.

Properly accounting for joint bankruptcy filings is another serious problem in all of the BRA-78 studies. The majority of those that did not adjust for the joint filings found that the law had no statistically significant impact.²⁹ Yet all of the studies that doubled the number of joint petitions to make the personal filing rate comparable before and after the law's enactment found that the law raised the rate. As discussed in Appendix A, doubling probably overstates the law's effects. Domowitz and Eovaldi (1993) found that BRA-78 had little effect as long as the adjustment for joint petitions was not too great. Without additional research to collect the necessary information to adjust for the joint filings, determining the law's effect on the personal filing rate is impossible.

In the case of effects arising from macroeconomic factors, the studies may have failed to find them consistently because of methodological inadequacies. None of the studies carefully separated the effects of factors affecting the demand for credit from those affecting supply. Moreover, to capture macroeconomic effects, a number of studies used cyclical factors, such as the unemployment rate, instead of factors with strong rising trends. Cyclical factors do not generally contain rising trends but tend to move up and down around a fairly steady level over time. Yet as Figure 1 on page 6 indicates, the major movement in the personal filing rate throughout the postwar period has been upward. The studies might have been more successful in estimating macroeconomic effects if they had used appropriate macroeconomic factors with rising trends. Or the studies might have better identified macroeconomic effects if they had explained the growth in the filing rate rather than its level.

Ellis (March 1998) compared personal bankruptcy filings in Canada with those in the United States to argue that BRA-78 did not significantly affect U.S. filings.

29. That result is suggested by Figure 2. If one ignores the break, BRA-78 appears to have had little impact on the personal filing rate—an observation confirmed by regression results.

Her comparison rested on the fact that although Canada is similar to this country in a number of ways, it did not change its bankruptcy law between the late 1970s and the early 1990s. Hence, comparing personal filings in the two countries might suggest how BRA-78 affected the personal filing rate in the United States. Ellis found that personal filings in Canada, like those here, rose rapidly in the 1980s; she concluded that the changes in U.S. bankruptcy law had had little effect on the nation's personal filing rate. That conclusion may be too strong, however, because the study does not account for other factors that may affect personal filings in the two countries.

How Differences in State Asset Exemptions Affect the Personal Filing Rate. Studies of the relationship between asset exemptions and personal filing rates at the state level have yielded conflicting results.³⁰ Researchers expected higher filing rates in high-exemption states than in low-exemption states because the benefits of bankruptcy to borrowers are greater when exemptions are high. In general, results from the studies did not confirm that effect, probably as a consequence of the problems discussed earlier in relating exemptions to the choice of chapter under which to file. For example:

- o Apilado, Dauten, and Smith (1978) found mixed results for the exemption variables in their model of state filing rates.
- o Woodward and Woodward (1983) examined the effect on state personal filing rates of differences between asset exemptions established for the bankruptcy process and exemptions that applied if an individual resolved financial problems outside of bankruptcy. The difference can exist, for example, if a state allows residents to choose between the federal and state exemptions when filing for bankruptcy but requires residents to use the state exemptions when resolving financial problems outside of bankruptcy. Woodward and Woodward failed to find higher rates of personal filing in states in which bankruptcy exemptions were greater than the exemptions available outside of bankruptcy.
- o Shepard (October 1984) compared the personal filing rates of opt-out states with those of other states for 1979 and 1980 and claimed that the differences in asset exemptions did not have a significant impact. He did find, however, that the average growth of the personal filing rate for the

30. Personal filing rates among the states vary widely. In 1997, for example, the top five states in filings per thousand residents (adults and children) were Tennessee (9.6), Georgia (8.2), Nevada (7.8), Alabama (7.7), and Mississippi (6.9). The bottom five were Vermont (3.0), South Carolina (2.9), South Dakota (2.9), North Dakota (2.8), and Alaska (2.0). For the United States as a whole in 1997, the filing rate per thousand residents was 5.0. Rankings among the top states in filings per capita are fairly stable over time. Over the 1962-1974 period, for example, the top five states, from highest to lowest, were Alabama, Nevada, Tennessee, Oregon, and Arizona. See Apilado, Dauten, and Smith (1978).

- opt-out states was less than that for states that allowed the federal exemptions.
- o Shiers and Williamson (1987) examined filings by state in 1980 and found that lower homestead exemptions were associated with higher personal filing rates. The reason, they asserted, is that creditors loosen their lending standards and terms when exemptions are low.
 - o Pomykala (1997) observed that personal filings grew at a slower rate in the opt-out states than in the states that allowed federal asset exemptions after the dollar value of those exemptions doubled in 1994.
 - o Ellis (February 1998) did not find a close relationship between homestead exemptions and state filing rates. Like Shiers and Williamson, she reasoned that lenders probably compensated by changing their lending standards and terms.

The Stigma of Bankruptcy

Analysts who are puzzled over the rise in the personal filing rate have turned to various social factors for a possible explanation. Prominent among them is the stigma that has traditionally been associated with filing for bankruptcy. If, as some observers argue, there has been a weakening of that stigma, people should be less reluctant to borrow money in the first place and, when faced with financial difficulties, less reluctant to file for bankruptcy (because they would suffer less embarrassment among their family and friends).

A finding by White (1997) suggests the potential importance of stigma. White analyzed a national sample of households and estimated that at least 15 percent of them could benefit from filing for bankruptcy, given their assets and debts and the exemptions in their states.³¹ Yet the personal filing rate represents only about 0.7 percent of the adult population, leading White to suggest that many eligible households did not file either because they could get the benefits of bankruptcy without going to bankruptcy court or because they were waiting for a more advantageous time to file. An alternative explanation is that other factors—such as stigma—might be keeping households from filing.

Several studies claim to have uncovered evidence that a lessening of stigma has encouraged some people to file for bankruptcy. At best, however, that evidence is only suggestive because no objective measures of stigma exist. How much stigma is currently associated with bankruptcy and how or why it may have changed are

31. Fay, Hurst, and White (1998) found that an even larger percentage of households would benefit from filing.

unknown. As a result, studies typically rely on proxy variables to estimate stigma's effects. Some of those variables appear to include economic and possibly other effects apart from stigma; others only capture an unexplained change over time. The following studies considered bankruptcy stigma:³²

- o Yeager (1974) argued against a lessening of stigma, although his test was inconclusive. He did not attempt to measure the change in stigma or estimate its effect but simply pointed to the stable relationship over time between the personal filing rate and the household debt-to-income ratio as indicating that a change in bankruptcy stigma was unlikely. Although Figure 2 on page 8 suggests that Yeager's conclusion holds up for the past 20 years and the previous 30, his simple test is inconclusive because it neither examines the possible effect of lessened stigma on the debt-to-income ratio nor considers other factors that might have offset such an effect.
- o Visa U.S.A. Inc. (1996) claimed that a reduction in stigma and changes in other social factors contributed to the rise in personal bankruptcy filings between 1981 and 1996, but its claim has no empirical content. Visa's model for explaining the personal filing rate used a variety of macroeconomic factors and a proxy variable that, Visa maintained, captured the effect of the social factors. But the proxy was constructed simply to follow the trends in the personal filing rate and thus could provide no independent explanation of the rate's behavior (Kowalewski 1997).
- o The study by Fay, Hurst, and White (1998) mentioned earlier claimed to have found evidence that a reduction in the stigma of bankruptcy contributed to consumers' growing propensity to file for bankruptcy in the first half of the 1990s. Their evidence, however, is not convincing. Both of the variables that the researchers used as proxies for stigma contain economic effects in addition to any possible effects from stigma (see Appendix B).³³

32. The difficulty of looking for the effects of changes in attitudes is highlighted in the work of Calder (1999), who reviews the history of attitudes about the American public's thriftiness. He argues that the notion that the American consumer has become a spendthrift, living on consumer credit, is not a new phenomenon but goes back to just after the Civil War. He also contends that the notion has grown stronger since World War II.

33. The sample used by Fay, Hurst, and White contains hints that some of the stigma of bankruptcy still exists. Their sample, like the one used by White (1997), indicates that the percentage of people who would benefit from filing for bankruptcy is much greater than the percentage of actual filers. Moreover, the personal filing rates for all but one year in their sample are considerably less than the national rates. That may reflect a stigma effect in light of the fact that their sample was collected in face-to-face interviews.

- o Gross and Souleles (1998) claimed that a lessening of stigma was responsible for a significant increase in the propensity to file for bankruptcy between 1995 and 1997. Their sample consisted of observations over time from several hundred thousand credit card accounts issued by a number of credit card lenders, including variables that measured each account's credit risk (risk of default). Consequently, their study was able to look for changes in the propensity to file for bankruptcy after considering the accounts' risk characteristics. Gross and Souleles found that the bankruptcy rate for the accounts was higher than the credit-risk variables could explain and asserted that the reason was a lessening of stigma. Their proxies for stigma, however, were simple binary variables (known as dummy variables) that bore no necessary relationship to stigma. As a result, their conclusion critically rests on how well their model explains the accounts' propensity to file for bankruptcy. Since their explanatory variables were unlikely to fully capture the underlying riskiness of the accounts and the propensity to file, the effect they attributed to stigma is likely to be overstated.

- o Buckley and Brinig (1998) contended that the strength of stigma and other social norms, rather than economic factors or incentives in the bankruptcy law, were the most important elements in the rise in the personal filing rate at the county level between 1980 and 1991. But their conclusions rest heavily on their particular interpretations of the proxy variables they used for social norms. For example, they used the divorce rate as a proxy for the social stigma attached to promise-breaking, but divorce may also be a cause or consequence of the financial troubles that lead to bankruptcy. They also used the percentage of the population over age 65 as a proxy for conservative attitudes, but the effects registered by that variable may simply reflect the fact that the elderly population had a relatively small percentage of people who needed or wanted to assume debt. As a final example, Buckley and Brinig used migration to capture the strength of social networks, but that proxy may instead reflect differences in household incomes and finances among counties.

THE ABILITY OF CHAPTER 7 FILERS TO REPAY THEIR DEBTS

People who advocate tightening the bankruptcy code to make it less beneficial for debtors argue that it allows many of them to discharge debts that they could in large part repay. A handful of studies have examined that contention by estimating how much debt Chapter 7 filers could possibly repay over a five-year period. Most of the studies simulated one of several means-testing bills that have been considered by the House. In general, those bills would prevent a Chapter 7 filing by people whose income exceeded a certain threshold and who had the capacity to repay at least a minimum percentage or amount of their nonpriority unsecured debt. (Nonpriority

unsecured debt includes, for example, credit card and medical debt. Little of it is repaid in bankruptcy.)

The studies all suggest that a small percentage of Chapter 7 filers could repay a substantial portion of their nonpriority unsecured debt. A very small percentage (typically no more than 5 percent) of filers could repay all of their debt. Larger proportions of filers (but typically no more than 15 percent) had the means to repay at least 20 percent or 25 percent of their debt (depending on the specific proposal being examined). The studies' estimates of the dollar amount of debt that could be repaid amounted to as much as several billion dollars.

The different estimates reflect differences in the legislation that the studies examined and different assumptions about the money for living expenses that bankrupt consumers would be allowed to keep during the repayment period. All of the recent means-testing proposals call for using the living expenses that the Internal Revenue Service (IRS) allows for tax collection purposes. But researchers have interpreted those standards differently, which has led to different assumptions about what constitutes a reasonable allowance. They have also made different assumptions about information (such as the filer's monthly payments on secured debt) that is not currently available from bankruptcy petitions. How the various bankruptcy courts would rule on the allowances and, consequently, how much debt could be recovered in practice are both unclear.

Means-Testing Proposals from the 105th and 106th Congresses

Recent means-testing proposals all share three general tests, although the parameters of the tests are slightly different. Those differences have a noticeable impact on the studies' estimates of how much debt could be repaid. A person who "passed" all three of the tests below would be barred from filing a Chapter 7 bankruptcy:

- o The filer's income met or exceeded a certain percentage of the median income of households with the same number of members;
- o The estimated percentage of nonpriority unsecured debt that the filer could repay over a five-year period met or exceeded a specified minimum; and
- o The dollar amount of nonpriority unsecured debt that the filer could repay met or exceeded a specified minimum.

The studies focused on three needs-based proposals: H.R. 3150, the Bankruptcy Reform Act of 1998, initially introduced in the 105th Congress; H.R. 3150 as passed by the House; and H.R. 833, the Bankruptcy Reform Act of 1999, as introduced in the 106th Congress (see Table 1).

TABLE 1. PARAMETERS FOR THE MEANS-TESTING PROPOSALS EXAMINED BY THE STUDIES

Test	H.R. 3150 as Introduced	H.R. 3150 as Passed	H.R. 833 as Introduced
Minimum Income	75 percent of the national median income for families of the same size	100 percent of the national median income for families of the same size up to four members; median income for a family of four used for larger families	100 percent of the national median income for families of the same size up to four members; larger families use median income for a family of four plus an extra \$583 for each additional family member over four
Minimum Percentage of Nonpriority Unsecured Debt That Could Be Repaid Over Five Years	20 percent	20 percent	25 percent or \$5,000, whichever is less
Minimum Dollar Amount of Nonpriority Unsecured Debt That Could Be Repaid Over Five Years	\$50 per month	\$50 per month	\$5,000 or 25 percent, whichever is less

SOURCE: Congressional Budget Office.

Estimating a filer's capacity for debt repayment requires information on his or her monthly income, living expenses, and secured and priority debt payments.³⁴ Income data come from the filer's bankruptcy petition. The proposals define living expenses according to the IRS's collection financial standards (the categories are "National Standards," "Local Standards," and "Other Necessary Expenses"). Currently, people do not report their payments on secured debts on bankruptcy petitions; if one of the proposals became law, however, the form of the petition presumably would be changed to record them. The calculations required to estimate a debtor's repayment capacity assume that the filer's income and expenses do not change during the five-year period. If they do, the filer can petition the court for changes in the debt-repayment amount.

34. Priority claims consist largely of taxes and certain other debts owed to governments, as well as alimony, maintenance, and support claims.

Studies Estimating Debt-Repayment Capacity Under the Proposals

Four studies simulated versions of the means-testing proposals to estimate the capacity of individual Chapter 7 filers to repay their nonpriority unsecured debt.³⁵ Another study of repayment capacity, by Barron and Staten (1997), did not simulate a recent proposal but simply estimated the amount of nonhousing debt that Chapter 7 filers could repay. That study does not directly apply to the current debate because it focused on a different measure of repayment ability. The relevant measure is the difference between the losses to creditors under Chapter 7 and the losses creditors would have experienced if the consumer had filed instead under Chapter 13. In many cases, that measure largely corresponds to the amount of nonpriority unsecured debt that a consumer would repay under Chapter 13, which is, indeed, the focus of the needs-based proposals.³⁶

The four studies produced a moderate range of estimates of the number of filers under Chapter 7 who would be denied its benefits and the amounts they would have to repay.

- o Ernst & Young (March 1998) simulated H.R. 3150 as introduced. Researchers estimated that 15 percent of the Chapter 7 filers in the study's sample passed the means tests and could, on average, repay 64 percent of their nonpriority unsecured debt—in total, \$4 billion. Only 5.7 percent of the filers could repay 100 percent of their nonpriority unsecured debt.
- o Culhane and White (1999) based their estimates on the version of H.R. 3150 passed by the House. They found that only 3.6 percent of filers passed all three tests; those filers, on average, could repay about 75 percent of their nonpriority unsecured debt, or approximately \$0.9 billion. Culhane and White estimated that only 1.3 percent could repay all of their nonpriority unsecured debt.
- o The March 1999 Ernst & Young study simulated H.R. 833 as introduced. Researchers estimated that 10 percent of the Chapter 7 filers in their sample passed the tests and could repay an average of 53 percent of their nonpriority unsecured debt. Their estimate of the total amount that could be repaid was \$3 billion, or 8.6 percent of the total amount owed. Only 4 percent of filers could repay all of their nonpriority unsecured debt.

35. Ernst & Young (February 1998) also simulated H.R. 3150, but that work was superseded by its March 1998 study, which used a better sample of Chapter 7 filers.

36. A broader critique of the Barron and Staten study appears in General Accounting Office (February 1998 and March 11, 1998).

- o Bermant and Flynn (1999) used the higher of the income thresholds contained in H.R. 3150 and a similar bill (S. 1301 of the 105th Congress) to examine repayment capacity when different percentages of income above the median value are applied to debt repayment. Bermant and Flynn did not use the IRS standards to compute allowable living expenses because they found the standards difficult to implement. Instead, they assumed that all income below the median would be used for living expenses and repayment of secured debt.³⁷ The researchers focused on the portion of income above the median and subtracted business expenses, estimated tax liabilities, support and alimony payments, and priority debt payments, after which only 15 percent of the filers in their sample had income remaining for repayment of nonpriority unsecured debt. Under the assumption that all of the remaining income above the median would be assigned to debt repayment, unsecured creditors would receive about \$3.8 billion; if lower percentages of income—specifically, 75 percent, 50 percent, and 25 percent above the median—were assigned to repayment, creditors would receive \$3.2 billion, \$2.5 billion, and \$1.4 billion, respectively. Bermant and Flynn believe that less than 5 percent of the Chapter 7 filers in their sample could repay 100 percent of their nonpriority unsecured debt.

Some of the differences in the results of these studies reflect their varying samples. The March 1998 and March 1999 studies by Ernst & Young used a national, stratified, random sample of about 2,100 consumers filing under Chapter 7 in 1997, whereas Culhane and White used a smaller sample of 1,041 Chapter 7 cases from 1995 collected from only seven federal judicial districts. Bermant and Flynn used a sample of 1,955 Chapter 7 no-asset cases filed by consumers in late 1997 and early 1998 that they drew from every federal judicial district. Because the studies do not provide comparable descriptive statistics for their samples, it is difficult to evaluate how differences in the samples might have affected the results. However, it seems likely that such differences were not a major reason for the different estimates of repayment capacity. For example, the Ernst & Young and Culhane and White samples imply similar values for total nonpriority unsecured debt owed at the national level: \$35 billion for Ernst & Young and \$36 billion (in 1997 dollars) for Culhane and White.³⁸

37. Bermant and Flynn discuss some of the problems in implementing the IRS guidelines, as does Wedoff (1998).

38. Culhane and White computed their total by multiplying their figure for average nonpriority unsecured debt (\$35,613) by the number of nonbusiness Chapter 7 filers in 1997 (957,117) and then inflating that figure by 5.3 percent, the growth in the consumer price index for urban consumers between 1995 and 1997. The Ernst & Young figure was provided by one of the authors of the 1999 study, Gautam Jaggi.

Most of the variations in the estimates arise from the studies' different assumptions, some of which simply reflect different versions of the bills.³⁹ One obvious distinction between the March 1998 Ernst & Young study and Culhane and White's research is the percentage of median income used for the test: Ernst & Young used 75 percent, and Culhane and White used 100 percent. Ernst & Young completed its study before H.R. 3150 was amended to incorporate the higher figure. Culhane and White state that if Ernst & Young had used 100 percent of median income, 11 percent rather than 15 percent of the Chapter 7 filers in the Ernst & Young sample would have met all of the means tests.

If all of the studies had used the same set of values for the income test, the differences among them would be smaller. The General Accounting Office (June 21, 1999) notes that the value set used in Ernst & Young's March 1998 study is the lowest (in 1997 dollars). The other three studies use the same values for family sizes up to four. For larger families, Culhane and White's values are the lowest, and Bermant and Flynn's are the highest.

A key variation in the assumptions involves one category of the living expenses allowed to filers—the transportation allowance. The standard that the IRS uses in tax collection cases has allowances for vehicle ownership and operating expenses and for the costs of public transportation. The ownership allowance caps the amount of debt and lease payments for a consumer—as long as he or she is obligated to make such payments. If the consumer owns the vehicle outright, the IRS does not provide an ownership allowance. But Culhane and White did so, noting that a significant number of the cars owned by filers in their sample were at least five years old at the time of filing and would need major repairs or replacement during the five-year debt-repayment period. In contrast, Ernst & Young followed the IRS standards and assigned the ownership allowance only to filers making lease or debt payments on vehicles. Culhane and White reported that if they had used Ernst & Young's transportation allowances, the percentage of filers in their sample who met the means tests would rise to 6.8 percent, nearly double their estimate of 3.6 percent.

The studies also differ in their treatment of nonhousing secured debt. Researchers had to make assumptions about the monthly contractual payments due on that debt because their source of data (filers' bankruptcy petitions) did not include them. Ernst & Young amortized such debt over two years, assuming a 9 percent interest rate on the loans. Culhane and White used the same 9 percent rate but a five-year period, citing the proposal's repayment span as the relevant amortization period.

39. See the statement of Richard M. Stana, Associate Director, Administration of Justice Issues, General Government Division, General Accounting Office, before the Subcommittee on Commercial and Administrative Law of the House Committee on the Judiciary, in General Accounting Office (March 17, 1999). Stana also notes that the Ernst & Young and Culhane and White studies treat student loans differently. See General Accounting Office (June 21, 1999) for a comprehensive discussion of the differences among the various studies.

The longer amortization used by Culhane and White increased filers' estimated interest payments on secured debt—which reduced (compared with Ernst & Young's estimate) the capacity of filers to repay nonpriority unsecured debt.⁴⁰

Implications of the Studies' Estimates

The findings of all of the studies suggest that a small percentage of people may be avoiding debts that they could afford to repay. The clearest indication comes from the studies' estimates of the proportion of Chapter 7 filers who could repay 100 percent of their nonpriority unsecured debt—that figure is typically no more than 5 percent. What is less certain is whether other filers with lower incomes or with less capacity to repay such debt also intended to avoid repayment. No sharp line divides those who need bankruptcy to relieve difficult financial problems from those who simply want to avoid repaying their debts. If the means-testing proposals are viewed as providing practical, reasonable criteria for separating people who file for bankruptcy out of need from people who file to avoid debt repayment, then the studies' results suggest that the majority of people file out of need.

Although the percentage of filers who would be prevented from filing under Chapter 7 is not large, the reduction in creditors' losses might be great enough to have a noticeable impact on the standards and terms of unsecured borrowing. Ernst & Young's estimate of \$3 billion in potential repayments over five years is about one-half of 1 percent of the total amount of revolving and noninstallment debt in 1997. If creditors did, in fact, recover that much additional debt under a means-testing requirement in the future and they channeled all of it into the interest rate on future loans, they could lower the rate by as much as one-half of a percentage point.⁴¹

Uncertainties Surrounding the Estimates

How much debt would be repaid to nonpriority unsecured creditors under the means-testing proposals is difficult to determine. One problem is how the different federal district courts would determine filers' allowable living expenses. Flynn and Bermant (1999) argue that the IRS standards for living expenses "are subject to legitimate differences of interpretation and need to be supplemented by judgment calls during the calculations" (p. 30).

40. A better length for the amortization period is probably somewhere between two and five years. Five years is probably too long—many filers may have already been repaying the loans for some time before they decide to file for bankruptcy. But two years may be too short, particularly because there may be past-due payments on those debts that ought to be taken into account in estimating repayment capacity.

41. Whether the benefits of a lower cost of borrowing exceed the various costs of implementing and administering a means-testing requirement is beyond the scope of this paper.

Another problem is that the studies may overstate the amount of debt that could be repaid because they assume that all filers will complete their repayment plans successfully within five years.⁴² But experience shows that some filers do not do so. Between 1984 and 1991, an average of 36 percent of consumers filing Chapter 13 cases successfully completed their scheduled payments and received a discharge from their remaining debts (see Table 2). The rest of the cases were either dismissed or converted to Chapter 7 cases or did not receive a discharge for some other reason. Nevertheless, the success rate of Chapter 13 plans is probably greater than 36 percent because some of the dismissed cases may represent multiple filings by the same debtor or “face filings” that may have been dismissed before their plans were confirmed (see Appendix A for more details).

Whether the current success rate among Chapter 13 filers would apply to filers under the means-testing proposals is unclear. The characteristics of successful Chapter 13 plans are unknown—they might require fewer payments than would plans under the proposals. In addition, some filers might not make all of the scheduled payments in their plan. They might decide that the plan was too burdensome and reduce how much they work, or they might hide income to reduce their payments. Or they might take advantage of allowances for charitable contributions or add to their monthly expenses by leasing or financing a vehicle. (Culhane and White discuss those loopholes.) And if filers had access to new credit while they were making payments under a repayment plan, they might take on additional debt that would doom any chance of their plan’s succeeding. Consequently, the number of successful Chapter 13 plans or the amounts repaid under successful plans could be lower than the studies assumed.

Alternatively, payments to creditors under a means-testing requirement might be greater than the studies estimate. Many would-be filers who would have to use Chapter 13 under such a requirement might decide not to file at all and instead continue making their debt payments. Some filers would experience gains in income during the repayment period that might go toward debt repayment. And some consumers might respond to the incentives of a tighter bankruptcy law by borrowing less money, thereby lowering the potential losses of creditors. However, if many low-risk consumers decided to borrow less, the riskiness of lenders’ loan portfolios might increase, which could temporarily hurt profits.

A further question concerns the accuracy of the data on consumer bankruptcy petitions. A number of observers have noted that filers have an incentive to overstate expenses and understate income. Yet all of the needs-based studies used the dollar

42. Not all of the estimated repayments would necessarily reduce losses by creditors because the studies could not account for debts that filers voluntarily repaid through reaffirmation agreements with creditors and those agreements were not available to researchers. (Reaffirmations are voluntary agreements by borrowers to repay at least some of their overdue debt.)

TABLE 2. DISPOSITION OF CHAPTER 13 CASES, 1984-1991 (In percent)

	1984	1985	1986	1987	1988	1989	1990	1991	Average
Dismissed	52.3	49.8	48.2	48.3	50.9	51.1	49.7	49.7	49.9
Converted ^a	13.2	14.9	14.9	14.6	13.6	13.0	13.0	12.7	13.6
Discharged	34.2	34.9	35.6	35.6	35.2	35.7	37.1	37.3	36.0
Other ^b	<u>0.2</u>	<u>0.4</u>	<u>1.3</u>	<u>1.5</u>	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>	<u>0.2</u>	<u>0.5</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCES: Congressional Budget Office; Administrative Office of the U.S. Courts.

NOTE: As of December 31, 1997, some of the Chapter 13 cases filed during these years were still active. The figures for 1984 to 1988 update the original numbers appearing in Michael Bork and Susan D. Tuck, "Chapter 13 Dispositions," Working Paper 2 (Administrative Office of the U.S. Courts, Washington, D.C., October 1994). The updated figures for 1984 to 1987 are virtually identical to the Bork and Tuck numbers.

- a. Chapter 13 filings that were converted to Chapter 7 cases.
- b. Chapter 13 cases in which either a discharge was denied, waived, revoked, or not applicable, or the case was transferred to another district.

figures from the petitions. If those figures were, indeed, inaccurate, filers' repayment capacity might be greater than the studies have estimated.

HOW PERSONAL BANKRUPTCY AFFECTS THE SUPPLY OF CREDIT

In theory, bankruptcy law can affect the supply and cost of credit, particularly unsecured credit such as credit card lending. An actual or an expected boost in bankruptcy losses will encourage creditors to employ some combination of stricter lending standards and terms—such as higher interest rates, larger down payments, and a smaller supply of credit, at least for borrowers who pose greater risks. Those strategies can help stave off greater losses from bankruptcies.⁴³ As Ausubel (1997) notes, the converse is also true: stricter bankruptcy provisions give creditors an incentive to relax their lending standards and terms, which encourages borrowing and raises the chances that more borrowers will default and file for bankruptcy.

43. Creditors could not simply raise interest rates because that would tend to increase the percentage of borrowers in their loan portfolios who would be more willing to risk defaulting on their loans. That result is known as the adverse selection problem.

Consequently, over the long run, borrowers bear the costs of bankruptcy-related (and other) loan losses.⁴⁴ If creditors cannot distinguish which borrowers are poor credit risks, they will charge all borrowers—not simply the riskiest—more for loans and make less credit available overall. Over the short run, lenders may bear most of the costs of unexpected loan losses until they tighten their lending terms and standards. Taxpayers also shoulder some of those losses because the losses are tax-deductible. (Taxpayers pay for the bankruptcy court system as well.) Moreover, individual lenders who suffer unexpectedly large losses may not be able to recoup them by charging more for loans if their competitors do not suffer similarly large losses. In those circumstances, they and taxpayers will bear the brunt of such losses.

Changes in bankruptcy law can also affect lenders' profits in the short run. Switching to a stricter law can temporarily raise creditors' profits from their existing loans, which were made under the previous bankruptcy law that implied greater expected losses. If existing borrowers default under the new, stricter law, however, they will have to repay more than if they had filed under the old law. Only creditors benefit from those extra repayments; any such "windfall" is unlikely to affect the terms of new lending.⁴⁵

As is the case for many other aspects of personal bankruptcy, little is known about the ways bankruptcy affects credit markets. One study found that the level of asset exemptions affected consumers' access to and cost of credit. Bankruptcy losses are likely to affect the cost and availability of bank credit card lending because they are a significant, though not the largest, component of losses on such loans. Other evidence suggests that bankruptcy losses during the mid-1990s may have spurred tighter conditions in the market for consumer lending, which contributed to the decline in filings by the end of the 1990s. What is missing is evidence on creditors' responses to changes in bankruptcy law. Without that evidence, it is unclear exactly how any reduction in losses stemming from a means-testing bankruptcy requirement would affect the cost and availability of unsecured credit for consumers.

44. Could loan losses from personal bankruptcies be passed on to consumers through other markets—say, the market for consumer goods and services—in the form of higher prices? Loan losses are not likely to affect the general level of prices in the economy, although some retailers might raise their prices if they and all other retailers in the market suffered losses on their own in-house credit plans. In general, consumer lenders and retailers operate in separate markets; the costs of "producing" consumer loans are different from the costs of producing goods and services. Even for an integrated retailer like Sears, which markets its own credit card, the two markets are distinct. If Sears loses money on its credit card business, it cannot recoup the losses by raising the prices of its merchandise because it will put its goods at a competitive disadvantage compared with those of other retailers. And if it tightens its credit card lending, some of its borrowers will move to other sources of credit (because Sears accepts other credit cards) or shop elsewhere. Sears' profitability will fall if its loan losses are unexpectedly high. In that case, profitability can improve only if Sears reduces the costs of its credit card operation.

45. According to the means-testing studies, creditors would have earned as much as several billion dollars in extra profits had a means-testing requirement been in place in 1997.

Creditors' Responses to Personal Bankruptcy Provisions

Two recent studies have found that the effect of asset exemptions on lending practices varies by the type of loan:

- o Gropp, Scholz, and White (1997) found that the likelihood that a person seeking credit (of any kind) would be denied or discouraged from applying was greater for people living in high-exemption states than for those living in low-exemption states. They also found that households with few assets in high-exemption states had less debt and faced higher interest rates for auto loans than did households in low-exemption states. In contrast, they found that households with many assets had more credit in high-exemption states than in states with low exemptions. The authors interpret their findings to mean that asset exemptions may redistribute credit to households with many assets.
- o Hynes and Berkowitz (1998) found different results in the mortgage market. Their research showed that the probability of being turned down for a mortgage loan was marginally lower for residents of states with large homestead exemptions. They also found that mortgage rates appeared to be slightly lower in those states. They reasoned that homestead exemptions affect mortgage lending to only a small degree because mortgage loans are backed by collateral and the interests of the lenders are protected by bankruptcy law.

Unfortunately, researchers have not specifically examined credit card lending, which theoretically ought to be the part of the credit market most affected by changes in bankruptcy provisions. Those lenders' responses ought to be quite noticeable (because virtually all credit card lending is unsecured), and a good place to look for them should have been in the wake of BRA-78. Lenders should have tightened the supply of credit card debt after the law was passed because many of the law's changes made bankruptcy a more attractive option for consumers. But those effects are not evident because, as noted earlier, the supply of credit card debt has ballooned since then as a result of the deregulation of interest rates and technological innovations. Evidently, the factors that raised the supply of credit card lending more than offset the provisions of BRA-78 that should have lowered it.

The Impact of Personal Bankruptcy on Creditors' Losses

One clue to the importance of bankruptcy losses in creditors' decision making would be the magnitude of those losses relative to other loan losses. Yet as noted earlier, there are no comprehensive data on losses resulting from personal bankruptcy. Neither the Administrative Office of the U.S. Courts nor the Executive Office for

U.S. Trustees compiles data on debt discharged in bankruptcy. And few creditors' groups consistently report loan losses from bankruptcy.

Nevertheless, several measures suggest that bank credit card lenders have suffered greater losses from bankruptcy in recent years than in earlier periods. Data collected by the American Bankers Association (ABA) show an increase in bankruptcy-related gross losses on credit cards as a percentage of outstanding debt (see Table 3). In 1994, for example, average gross losses related to bankruptcy were about 1.7 percent of the outstanding credit card balances at large issuing banks, or about 37 percent of their total gross losses. Although not strictly comparable, the bankruptcy loss rate in 1997 was 2.9 percent, or about 44 percent of total gross losses for those banks.

Three other features of the ABA's data are noteworthy. First, gross bankruptcy losses were smaller than combined gross losses from all other sources excluding fraud. Second, for most banks, the percentages of gross losses excluding bankruptcy and gross bankruptcy losses increased over the 1994-1997 period. Third, gross losses and bankruptcy-related losses increased with the size of a bank's credit card portfolio, suggesting that the banks with the largest portfolios were the most aggressive credit card lenders.

Another estimate of bankruptcy-related losses on bank credit cards comes from a report by Visa U.S.A. Inc. (1996). The report noted that the fraction of bankruptcy-related net losses on bank credit cards (Visa and MasterCard) grew from 39.8 percent in 1987 to 45.0 percent in 1995, which is similar to what the ABA reports. But the dollar value of nonbankruptcy losses also rose over that period, indicating that the increased losses suffered by credit card lenders were not all due to bankruptcy filings. In addition, it is not clear whether the figures reported by Visa are representative of the whole industry or only of a sample of card issuers.

As the ABA and Visa data indicate, personal bankruptcy does not explain all of the rise in losses by credit card lenders in recent years. Indeed, analysts believe that the losses reflect the effects of intense competition within the credit card industry. According to the Board of Governors of the Federal Reserve System (August 1997), such competition drove down profitability as the banks' focus shifted in the 1990s from annual fees and program enhancements to interest rates. By the mid-1990s, unpublished data from the Federal Deposit Insurance Corporation (FDIC) show that the return on assets (a measure of profitability) for banks specializing in credit card lending had begun to fall (see Figure 4). Net losses rose from a little more than 3 percent of outstanding balances, on average, in 1994 to nearly 5.5 percent in 1998. More recently, the return on assets at banks with extensive credit card lending has improved. In addition, net losses appear to be dropping.

TABLE 3. AVERAGE LOSSES AND RECOVERIES PER BANK ON BANK CREDIT CARDS (As a percentage of outstanding balances)

Banks	1994	1995	1996	1997
Small Issuers^a				
Losses excluding bankruptcy	1.84	1.67	1.84	2.15
Bankruptcy losses	<u>0.70</u>	<u>0.89^b</u>	<u>1.09</u>	<u>1.16</u>
Total gross losses	2.54	2.56	2.93	3.31
Total recoveries	<u>-0.69</u>	<u>-0.55</u>	<u>-0.37</u>	<u>-0.38</u>
Total Net Losses	1.85	2.01	2.56	2.93
Medium-Size Issuers^c				
Losses excluding bankruptcy	2.04	2.43	2.96	2.82
Bankruptcy losses	<u>0.94</u>	<u>1.43</u>	<u>1.32</u>	<u>1.66</u>
Total gross losses	2.98	3.86	4.28	4.48
Total recoveries	<u>-0.63</u>	<u>-0.62</u>	<u>-0.37</u>	<u>-0.53</u>
Total Net Losses	2.35	3.24	3.91	3.95
Large Issuers^d				
Losses excluding bankruptcy	2.97	3.50	3.59	3.65
Bankruptcy losses	<u>1.74</u>	<u>2.14</u>	<u>2.40</u>	<u>2.91</u>
Total gross losses	4.71	5.64	5.99	6.56
Total recoveries	<u>-0.72</u>	<u>-0.82</u>	<u>-0.64</u>	<u>-0.62</u>
Total Net Losses	3.99	4.72 ^e	5.35	5.94

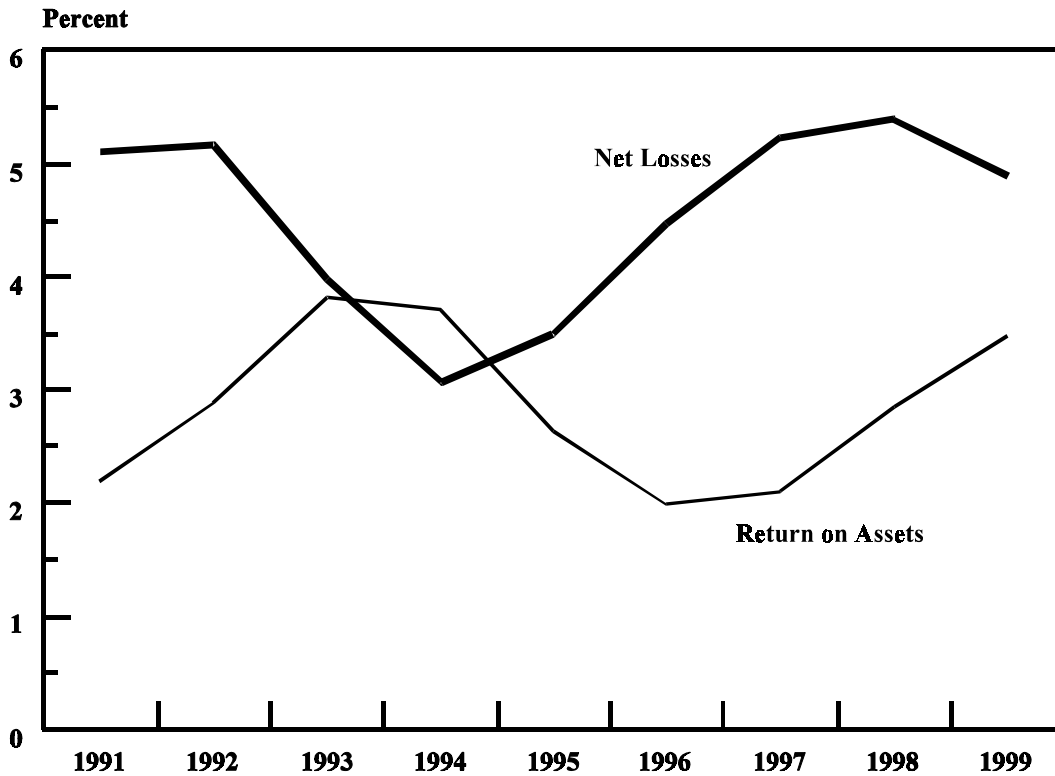
SOURCES: Congressional Budget Office; American Bankers Association, *Bank Card Industry Survey Report* (Washington, D.C.: American Bankers Association, various years).

NOTES: Losses exclude losses from fraud.

The data for 1994 and 1995 cover standard and classic cards; data after 1995 also include gold cards. As a result, losses in 1994 and 1995 are not strictly comparable with those in 1996 and 1997.

- For 1994 and 1995, small issuers include banks with under \$50 million in outstanding balances. For 1996 and 1997, they include banks with under \$50 million in outstanding balances and fewer than 50,000 active accounts.
- Estimated.
- For 1994 and 1995, medium-size issuers include banks with between \$50 million and \$749 million in outstanding balances. For 1996 and 1997, they include banks with between \$50 million and \$749 million in outstanding balances or between 50,000 and 749,999 active accounts, whichever implies the larger size for the bank.
- For 1994 and 1995, large issuers include banks with at least \$750 million in outstanding balances. For 1996 and 1997, they include banks with at least \$750 million in outstanding balances or more than 750,000 active accounts, whichever implies the larger size for the bank.
- As reported by the American Bankers Association.

FIGURE 4. PROFITABILITY MEASURED AS THE RETURN ON ASSETS AND NET LOSSES FOR COMMERCIAL BANKS SPECIALIZING IN CREDIT CARD LENDING (In percent)



SOURCES: Congressional Budget Office; Federal Deposit Insurance Corporation.

NOTES: Net losses are net charge-offs of credit card loans.

Many commercial banks specializing in credit card lending securitize (essentially, sell to others) a significant share of their credit card loans. After doing so, they do not count the securitized loans as assets, even though they continue to earn income from them. Consequently, the return on assets shown in the figure may be considered inflated because the denominator does not include the securitized loans. If those loans are added to the banks' assets, the return on assets in recent years falls by about half.

Data collected by the FDIC also indicate that delinquencies on credit card loans have recently leveled off. Delinquencies refer to loans that are 30 or more days past due; the delinquency rate is the average percentage of delinquent credit card loans at all insured commercial banks. That figure for all commercial banks rose from 3.4 percent in 1994 to 4.7 percent in 1998 and then fell slightly in 1999 (see Figure 5). The delinquency rate for specialized credit card lenders was higher than that for all insured commercial banks from 1991 to 1999, suggesting that the former have riskier loan portfolios.

The WEFA Group (1998) has estimated the costs of bankruptcy for consumer lenders in 1997 and in the 1997-2000 period. The group estimated that loan losses stemming from personal bankruptcy totaled more than \$40 billion in 1997, or about \$400 per U.S. household. However, the estimate relies on a variety of assumptions and bits of information from a broad range of sources, most of which are difficult to evaluate.⁴⁶ In addition, WEFA's report does not examine the sensitivity of its results to changes in assumptions. As a result, judging the reliability of the estimate is quite difficult.

WEFA's projected losses for the 1997-2000 period undoubtedly overstate actual losses. The projections assumed an annual rate of growth of 15 percent in personal bankruptcies between 1998 and 2000. But the growth in personal filings has slowed considerably since that projection was made: filings grew by only 3.6 percent in 1998, and they fell by 8.3 percent in 1999.

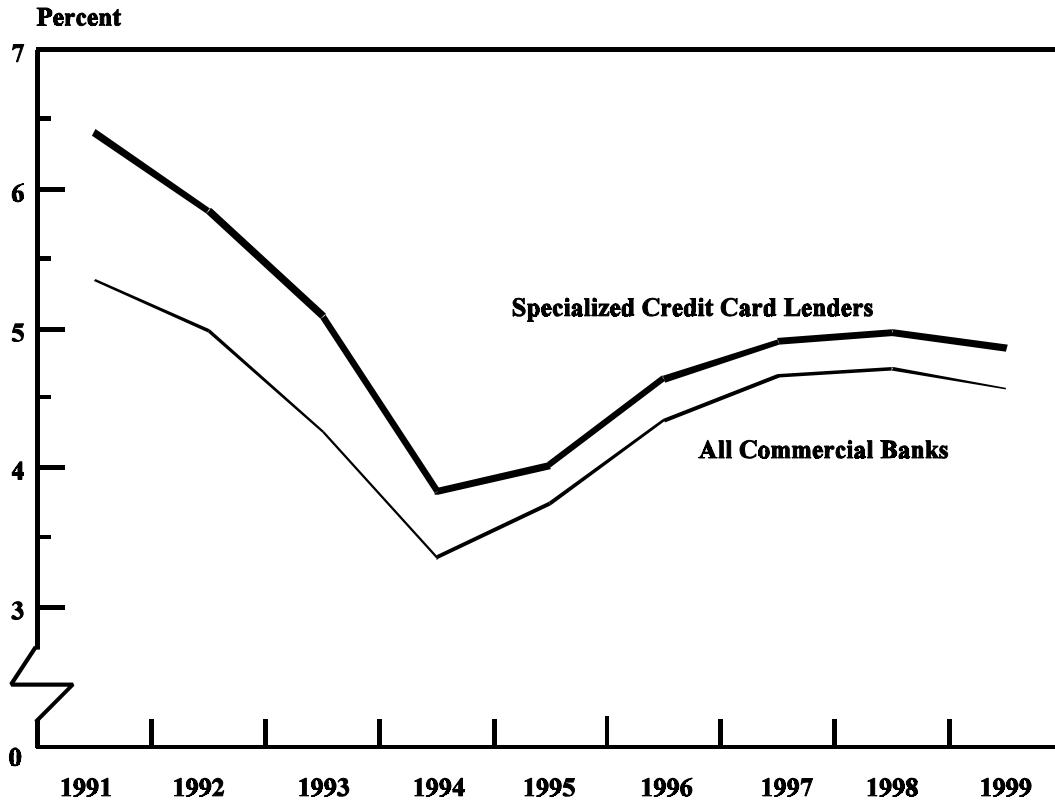
Explaining the Recent Decline in Personal Filings

The personal filing rate measured on a quarterly basis began falling after the second quarter of 1998; by the end of 1999, it had dropped to its level at the end of 1996. At the same time, delinquency rates on credit cards and other consumer loans stabilized or fell. Why personal filings have slowed is not known, but one possible explanation may be the efforts of consumer lenders to tighten their lending standards and better determine the creditworthiness of their borrowers. According to the Federal Reserve's periodic Senior Loan Officer Opinion Survey on Bank Lending Practices, the net percentage of banks willing to make consumer loans plummeted between 1994 and 1996 and increased at a moderate pace through the end of 1999.⁴⁷ The Board of Governors of the Federal Reserve System (August 1997) also reported that some credit card issuers were attempting to gauge the default risk their

46. See General Accounting Office (April 22, 1998).

47. Various reports between 1994 and 1996 also noted a drop in the demand for consumer loans at commercial banks.

FIGURE 5. THE DELINQUENCY RATE ON CREDIT CARD LOANS AT COMMERCIAL BANKS (As a percentage of the dollar amounts of loans)



SOURCES: Congressional Budget Office; Federal Deposit Insurance Corporation.

borrowers posed and to offer card plans with different terms to borrowers in different risk categories. The American Bankers Association (1997) credited tighter underwriting standards of card issuers for at least part of the improvement in their measure of the delinquency rate on credit cards. And Standard & Poor's (1998) reported that financial services companies appeared to be handling bigger loan losses not by raising interest rates generally but by "tightening underwriting standards to preserve credit quality, limiting credit line increases to existing customers, stepping up credit collection efforts, and creating better credit scoring methods to weed out customers with potential credit problems" (p. 4).

Another possible reason for the slowdown in personal bankruptcy filings is the large amount of mortgage refinancing from 1997 to 1999. Lower interest rates for mortgages have allowed homeowners to reduce their monthly mortgage payments and their potential for financial trouble. Some homeowners may also have strengthened their financial position by consolidating their higher-interest debts into their lower-interest mortgages. (Note the reduction in the debt-service burden shown in Figure 3.) That apparently explains much of the recent interest among homeowners in high loan-to-value mortgages (see Ellis 1999). However, it remains to be seen whether such loans will actually solve those homeowners' financial problems.

APPENDIX A:
PROBLEMS WITH THE DATA ON PERSONAL BANKRUPTCY FILINGS

The statistics on personal bankruptcy are widely quoted and used as indicators of financial stress in the consumer sector and of losses by creditors. A number of problems bedevil the personal bankruptcy data, however, making them less useful as measures of creditors' losses and as signs of financial pressure among consumers. Those problems must be kept in mind when analyzing personal filings.

One serious difficulty with the data is that some bankruptcy filings that are classified as personal may have originated as business failures. Proprietors of small businesses may use personal lines of credit or pledge personal assets as collateral to fund their commercial operations. When a small business fails, the owner may file for personal bankruptcy rather than, or as well as, for business bankruptcy. Sullivan, Warren, and Westbrook (1989, pp. 16 and 40-41) estimate that about 20 percent of their sample of individual filers in 1981—who also account for more than half of their sample's debt—either were self-employed at the time of filing or had formerly been self-employed.⁴⁸

Another problem is that the filings data do not represent discharges of debts, just petitions for discharge. As Table 2 noted, a significant number of Chapter 13 filings are dismissed, with those people never receiving a discharge. The Chapter 13 filings data also contain multiple, or "serial," filings by consumers who repeatedly file and carry out repayment plans. Moreover, the filings data include so-called face filings by consumers who use the automatic-stay provision of bankruptcy law to temporarily stop creditors' collection efforts (Brown 1998). Apart from those problems, the dollar amounts of debt discharged in bankruptcy are not necessarily correlated with the number of filings.

Other minor problems in the filings data add to the confusion for researchers. The data on the annual number of personal filings, prepared by the Administrative Office of the U.S. Courts, do not equal the sum of higher-frequency (monthly or quarterly) filings data that the office also publishes because revised versions of the higher-frequency data are not released. Users of the monthly or quarterly data must also bear in mind that the filings data are not seasonally adjusted.

As noted earlier, the introduction of joint petitions by the Bankruptcy Reform Act of 1978 has posed a serious problem for understanding how personal filings reacted to the change in the federal bankruptcy law. Subject to court approval, husbands and wives may now file a single joint petition instead of the two separate petitions required under previous law. The rationale for joint petitions is to ease the administrative burden posed by essentially duplicate bankruptcy cases. (Although

48. Sullivan, Warren, and Westbrook's finding, however, might overestimate the number of personal filings spurred by a business failure in an average year because their sample was drawn from 1981, a recessionary year. Using a sample drawn from 1997, Bermant and Flynn (1999) found business debt among only 5.8 percent of the Chapter 7 filers who had income above the medians set by H.R. 3150 and S. 1301.

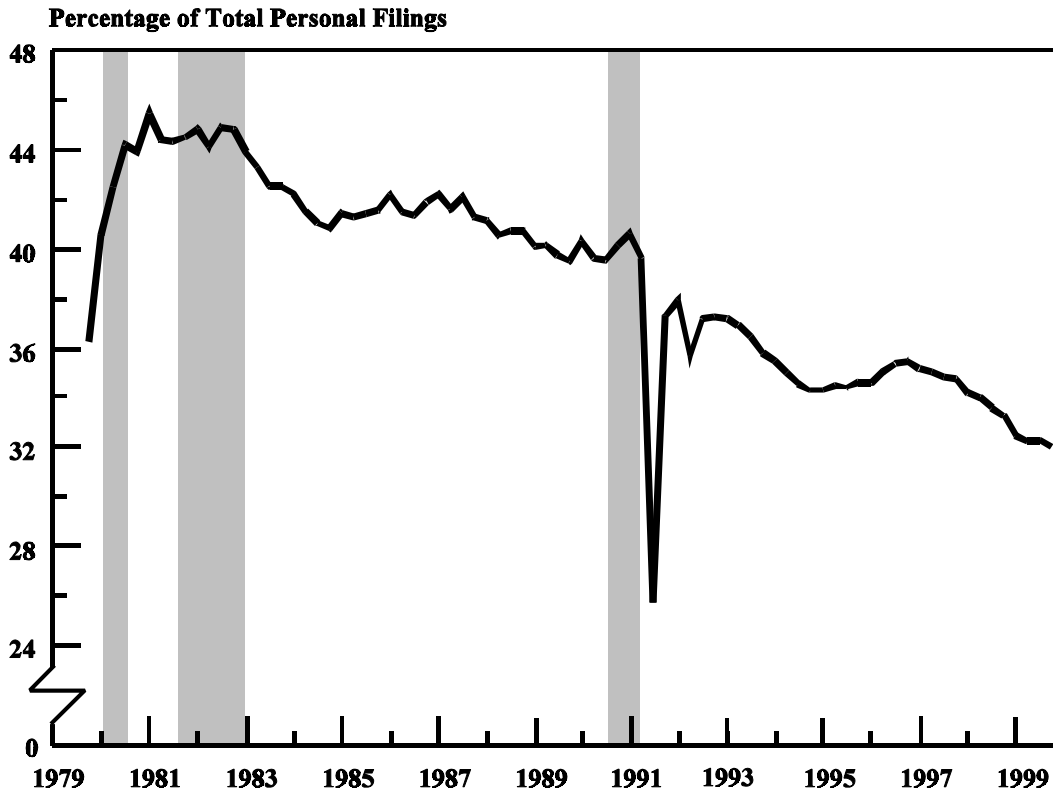
legally there are two debtors, in many cases only one set of assets exists to settle creditors' claims.) But introducing joint filings creates a potentially large break in the data series on the same date that the bankruptcy law was completely overhauled. At the end of the first year under BRA-78, joint filings accounted for more than 44 percent of personal filings (see Figure A-1). Since then, joint filings have fallen to about 32 percent of personal filings, possibly reflecting relatively greater financial strains among single filers.

No consensus exists on the best way to adjust the personal filings data to account for the introduction of joint filings. Some researchers have counted joint petitions twice when comparing filing rates before and after BRA-78. Their rationalization is that the joint filings would have been separate filings by a husband and wife under the previous bankruptcy law. But counting joint filings twice may not correctly approximate the number of filings that would have occurred in the absence of the joint filing option because the costs of filing for a couple are little more than the costs for an individual. Consequently, even if only one spouse has burdensome debts, a husband and wife have an incentive to file a joint petition to protect the other spouse from debt-collection actions by creditors at little additional cost to the couple.

Domowitz and Eovaldi (1993) argue that doubling joint filings is inappropriate not only because of the low marginal cost of the joint filing but also because “spousal propensities to become bankrupt have significantly changed under the Code.” (The authors do not explain those changes.) Indeed, if many joint filings occurred simply because more spouses hold credit in their own names, then the filings would represent a shift only in the distribution of credit holdings within households and not necessarily in the propensity to file for bankruptcy. Consequently, doubling the number of joint filings would overrepresent them compared with filings under the old law. Shuchman and Rhorer (1982) also argue that, on the basis of their findings from a small sample of filers in Connecticut in 1980, doubling joint filings would overstate the potential losses to creditors. Instead, they recommend increasing personal filings by only one-half the number of joint filings. It is not clear that such an adjustment would be appropriate today.

More research is required to determine how the incentives to file a joint petition may have changed with BRA-78. For example, a husband and wife who filed in a state that permitted the use of either the federal or the state asset exemptions temporarily had an additional incentive to file jointly because one spouse could use the state limits and the other the federal as a way to exempt more assets. (The 1984 amendments to BRA-78 revoked that incentive.) In the 15 states including the District of Columbia that currently allow the use of the federal exemption limits, joint filers may double the value of exemptions that a single filer can use. In contrast, some of the other states that do not allow use of the federal limits prohibit joint filers from taking double exemptions, which reduces the attractiveness of filing

FIGURE A-1. JOINT PERSONAL BANKRUPTCY FILINGS (In percent)



SOURCES: Congressional Budget Office; Administrative Office of the U.S. Courts.

NOTE: The large drop in the series in 1991 appears to be an error in the reported data.

jointly. It is not as yet known whether those states may have changed their doubling provisions around the time of BRA-78's passage and whether spouses in the states that do not permit doubling can effectively do so by filing two petitions.

Little information is available about husband-and-wife filings under the old bankruptcy law. On the basis of estimates in the literature, Domowitz and Eovaldi (1993) noted that between 14 percent and 24 percent of all filings were by a spouse. The 14 percent figure is quite dated, however—it was taken from a 1964 survey conducted by Stanley and Girth (1971). The 24 percent figure comes from a report by the General Accounting Office (1983), which does not indicate how it was calculated. If GAO calculated it by using data after the change in the law, as Shuchman and Rhorer did, the adjustment factor may be overstated. Moreover, in light of the drop in the percentage of joint filings as a share of total personal filings, those adjustment factors might overstate filings more recently.

A further question concerns the reliability of the data. A sharp drop in the joint filings data occurred in the third quarter of 1991 and was reversed in the following quarter. Such a pattern usually suggests a data error, which would indicate reliability problems.

APPENDIX B:
THE STIGMA VARIABLES USED BY FAY, HURST, AND WHITE

Fay, Hurst, and White (1998) computed their proxy variables for the stigma associated with filing for bankruptcy using state and national personal filing rates. The variable they called stigma I is the difference between the filing rate in a state and the national filing rate, summed over the previous three years. The other variable (called stigma II) is the residual from a regression of state filing rates on state and time dummy variables, which is also summed over the previous three years. The stigma II variable attempts to isolate the effect of the spread of information, as well as changes in attitudes resulting from high rates of bankruptcy in the past, from the effect of differences in consumers across states. (The effect of differences in consumers is also part of stigma I.) The researchers found that increasing a state's rate by 1,000 bankruptcy filings per million people (holding the national rate constant) raised the state's filing rate by 4.6 percent in the following year.⁴⁹

In their paper, Fay, Hurst, and White argued that their proxy variables for the stigma associated with bankruptcy were intended to measure changes in stigma, but their argument seems to refer only to the spread of information about the bankruptcy process. They argued that “[a]s the bankruptcy filing rate rises, people become more knowledgeable about bankruptcy both because they are more likely to hear about it from friends and relatives and because there is greater advertising of bankruptcy by lawyers and more coverage of bankruptcy by the local media. . . . When they [filers] tell their friends about bankruptcy, the friends are likely to be reassured about the process and to become more likely to file” (pp. 8-9). By that reasoning, people are more likely to file because they know more about the process rather than because their attitudes about the stigma of bankruptcy have changed. Indeed, Fay, Hurst, and White assumed that, for people to have the courage to tell their family and friends about their bankruptcy, the stigma of filing for bankruptcy must have fallen.

A critical problem with the stigma variables is that they appear to incorporate other effects besides stigma. That possibility is suggested by the different time patterns of the proxy variables for different states. Over the 1984-1995 sample period that the researchers used, filing rates for some states both rose and fell relative to the national rate. In contrast, filing rates for other states always increased or always decreased relative to the national rate. A shrinking difference between the filing rate in a state and the national rate suggests that the stigma effect was lessening in that state—a seemingly paradoxical result, given the researchers' assumptions. That such movements reflected only changes in stigma seems unlikely.

49. An increase of 1,000 filings per million people is substantial. By comparison, the national filing rate in 1999 was 4,950 per million people.

One important factor that accounts for the variation among the states is differences in their economic fortunes relative to the nation as a whole.⁵⁰ If a state's economy worsens relative to that of the nation, its filing rate should rise relative to the U.S. rate, provided everything else remains constant. For example, the 1990-1991 recession hit the states in New England and the mid-Atlantic region particularly hard. Not surprisingly, the filing rates for most of those states climbed at that time in comparison with the national rate. Such economic effects appear in a simple pooled regression of the difference between state filing rates and the national rate (the term used to compute the stigma I variable) as a function of the ratio of state civilian unemployment rates to the national civilian unemployment rate. The coefficient on the ratio of unemployment rates is positive and statistically significant.⁵¹ Similar economic effects also appear in a regression using the residual used to compute stigma II as the dependent variable.⁵²

50. Gross and Souleles (1998) also argue that factors affecting the chances of declaring bankruptcy in a state might show up in the state's filing rate and mistakenly be labeled a change in bankruptcy stigma.

51. Fay, Hurst, and White use the growth in nominal state income and the standard deviation of nominal state income per capita in their models, but those variables may not control for the differences in relative economic performance.

52. CBO computed the residual using the same technique as the authors—by regressing the state filing rates on the same state and time dummy variables. However, CBO's results differed slightly from the results given in Fay, Hurst, and White's paper. Details of CBO's calculations are available on request.

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