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The Long-Run Effects of the Bankruptcy Reform Bill*

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The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 went into effect on October 20, 2005. It's been almost a year since this controversial bill – the most significant modification of the bankruptcy code in 27 years – became law. The act makes it harder for a person to file for bankruptcy under Chapter 7, the Chapter wherein a person's debt is discharged in return for forfeiture of nonexempt assets. The key feature of the new act, and the one that is the most controversial, is that it introduces a form of means-testing for people seeking to file for bankruptcy under Chapter 7. For a person to be eligible for a Chapter 7 filing, his or her average household income for the past six months (annualized) must be less than the median income for households of the same size in the debtor's state of residence. If this requirement is not met, eligibility requires that the debtor not have "too much" disposable income. Disposable income is calculated by deducting a mix of actual and IRS-determined expenses from the person's average income. If "disposable" income, so calculated, is enough to pay $167 a month to creditors, a Chapter 7 filing is not permitted.[1]

Anticipated Effects of Bankruptcy Reform: Fewer Bankruptcies and Cheaper Credit

Analysts are firmly of the view that the long-term effect of the new law will be to reduce the number of Chapter 7 filings. In addition, spokesmen for the credit card industry have repeatedly pointed to the "flip side" of erecting barriers to Chapter 7 filing: Credit costs are expected to decline because credit card debt will become less risky for lenders. These two effects — permanently lower filing rates, on the one hand, and permanently lower

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* The views expressed here are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

[1] Another change with respect to a Chapter 7 filing is that the value of a debtor's assets — such as furniture and other household goods — is to be calculated at replacement cost rather than at the price such assets would fetch on the market. This change is expected to increase the calculated value of a debtor's assets and thus reduce the number of assets that fall below the exemption limit permitted in a Chapter 7 filing. The new law also requires that an attorney/lawyer verify the debtor's income and asset position prior to any kind of filing. In addition, prospective filers are required to get credit counseling prior to filing.

default premiums on unsecured loans, on the other — are viewed as the key implications of the bankruptcy reform bill.

Indications are that reform has made filing for Chapter 7 more difficult, although the immediate effect of the law was to increase the filing rate. The law was passed by the House in April 2005 but did not go into effect until October. Thus, there was approximately a six-month period during which debtors who anticipated filing for bankruptcy in the near future and who feared that they would be ineligible for a Chapter 7 discharge under the new law or that the new law would make a Chapter 7 filing more costly had a strong incentive to file early under the old law. Apparently many struggling debtors took this view, and Chapter 7 filings soared in 2005 (see the first chart). Consistent with the stiffer standards for discharge, the annual rate of Chapter 7 filings has been much lower in the first half of 2006. It is less clear if these stiffer standards have had any effect on interest rates charged on consumer loans. However, we can be reasonably sure that if personal bankruptcy filing rates stay low, the competitive pressure to reduce the default premium on consumer loans will mount, as will the pressure from consumer advocacy groups.

Therefore, it would seem that, as predicted, we are headed into a regime of low bankruptcy filing rates and low default premiums on consumer loans. Or are we? The notion that the new law would lead to permanently lower bankruptcy filings and permanently lower default premiums on consumer loans misses the point that the lower cost of credit may induce more borrowing. And because greater indebtedness is always associated with a higher chance of bankruptcy and default, the filing rate may not decline as much as one might otherwise expect. In turn, this means that, at the margin, the cost of credit may not decline as much as expected. Indeed, experience with previous changes in bankruptcy law suggests that induced changes in lending and borrowing behavior are important. The Bankruptcy Reform Act of 1978 made it relatively easy for people to file under the generous provisions of Chapter 7. Although this act was amended in 1984 to prevent opportunistic filings, the number of filings did not decline. Perhaps credit card companies, secure in their knowledge that loans were less risky, made credit available on cheaper terms to borrowers. The result was a rise in indebtedness and, ultimately, filings.

In the rest of this article, I will report on some estimates that suggest that the same thing may happen with the new bankruptcy law. The stiffer standards for discharge may make consumer loans less risky and ultimately force credit card companies to offer credit at lower interest rate to consumers. In the long run, cheaper credit could lead to greater indebtedness and more bankruptcy filings.

Long-Run Effects of Bankruptcy Reform: Greater Indebtedness and More Bankruptcies

The estimates of the long-run effects reported here are drawn from my recent working paper.[2] To put these estimates in perspective, a brief description of the nature of the model that produced them is useful. The model studies an economy in which households can borrow to increase their consumption via unsecured loans with the option to default. The default option resembles a bankruptcy filing under Chapter 7 of the U.S. Bankruptcy Code prior to the reform. Competitive financial intermediaries offer a menu of loan sizes and interest

[2] Satyajit Chatterjee, Dean Corbae, Makoto Nakajima, and Jose Victor Rios-Rull, "A Quantitative Theory of Unsecured Consumer Credit with Risk of Default," Working Paper 05-18, Federal Reserve Bank of Philadelphia, August 2005.

rates. In equilibrium, interest rates rise with the size of a loan because the propensity to default rises with higher indebtedness. But each loan makes zero profits in expectation.

Households are hit by shocks that may trigger bankruptcy. These shocks include shocks to earnings such as job loss, large involuntary medical expenses, and events that have the effect of increasing a household's urgency to consume and therefore its expenditures. The parameters of the model are selected so that the model can match as closely as possible some key statistics for the U.S. economy. Specifically, the model aims to match U.S. facts on the aggregate net debt of households, the fraction of households that declare bankruptcy each period, the volatility and persistence of household earnings, the aggregate capital stock, and the distribution of wealth across households.

In our model some households declare bankruptcy because they have no other choice — their liabilities are so large relative to their earnings that they cannot repay their debts and still consume anything. These households tend to be ones that have been hit by large medical expenses. But many households also declare bankruptcy even though they have the resources to repay their debt — for them bankruptcy is not the only option but it is the best one.

With the model in hand it is a relatively simple matter to evaluate the effects of not permitting above-median-income households that could repay their loans to file under Chapter 7. The following table shows what happens to the key model statistics pre- and post-reform as well as the current value of these statistics in the U.S. In the table, GDP is normalized to 100 in each column. The first two columns show U.S. data and pre-reform model statistics. Because the model is designed to match pre-reform statistics, the correspondence between the first two columns is quite good. Aggregate capital stock (normalized by GDP) is slightly lower in the model relative to the actual U.S. economy. Net debt normalized by GDP and the fraction of households filing for Chapter 7 bankruptcy in the model are exactly the same as in the U.S. economy. The percentage of indebted households is somewhat lower in the model than in the data. The real risk-free rate in the model is a tad above 2 percent, and the average interest (person-weighted) on unsecured debt is about 18 percent. The final column shows how model statistics change when restrictions on Chapter 7 filings are implemented. This column predicts the long-run effects of bankruptcy reform. With one exception there is very little change in the model statistics. The exception is net debt, which increases more than 50 percent in the post-reform world.

Variables	U.S.	Model	Reform
GDP	100	100	100
Capital Stock	308	297	295
Net Debt	0.67	0.67	1.01
Percentage of Filers	0.54	0.54	0.60
Percentage with Net Debt	6.70	5.36	6.81
Risk-Free Rate (%)		2.10	2.17
Average Interest Rate on Consumer Loans (%)		18.31	18.06

Source: Table 12 in "A Quantitative Theory of Unsecured Consumer Credit with Risk of Default."

What's going on? The second chart, taken from my working paper, helps us understand this result. The figure plots the loan price schedule faced by households in the pre- and post-reform worlds. Household debt is measured relative to average income along the horizontal axis: Bigger negative values signify higher indebtedness. For an average household income of $44,000, a value of -0.25 would correspond to household debt of $11,000. The vertical axis measures the price of a loan: A lower price signifies a higher interest rate. In our model there are white-collar and blue-collar households that differ in terms of their long-run average income (this element of realism is necessary to match the debt and default statistics). The pre-reform loan price schedules for blue and white collar households are shown by the light and heavy solid lines, respectively. For both types, the loan price schedule is generally downward sloping; that is, interest rates are higher for bigger loans because the probability of default and bankruptcy is higher for greater indebtedness.

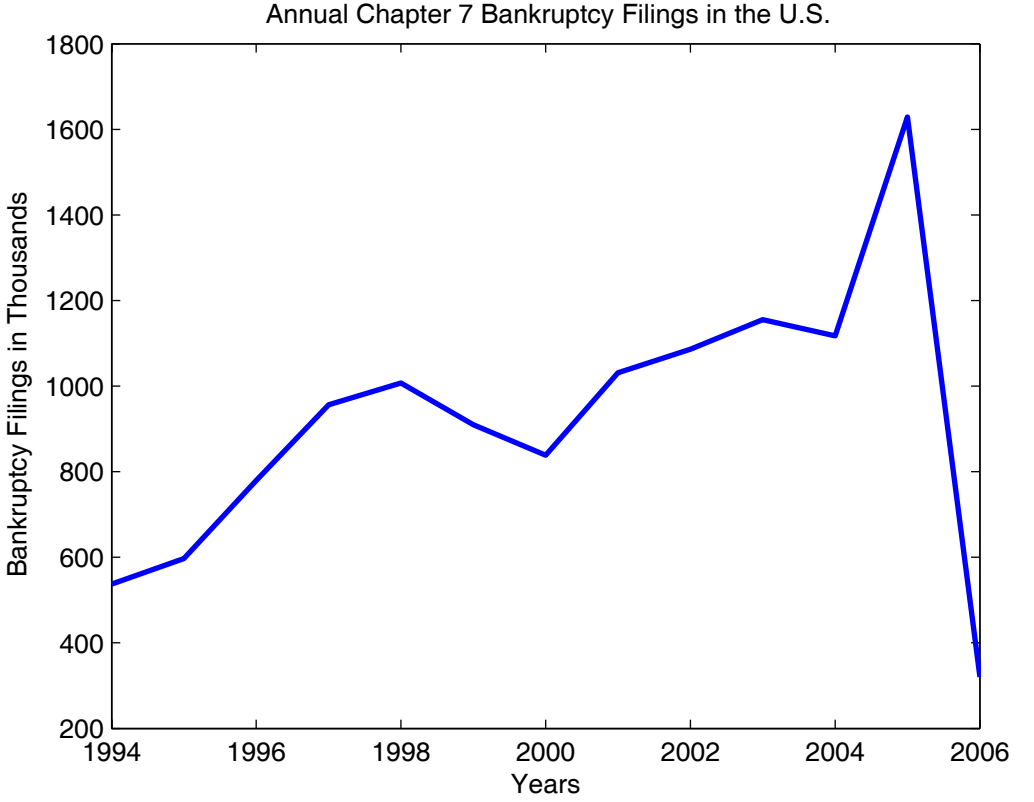
The loan price schedules for blue- and white-collar households in the post-reform world are shown in dotted and dashed lines, respectively. These loan price schedules also generally slope down, but they are shifted up relative to the corresponding pre-reform schedules. This means that for each given loan size, the loan price is higher or the interest rate is lower. The upward shift in these loan schedules occurs because loans are less risky in the post-reform world: There are some situations where households would have defaulted in the pre-reform world but cannot in the post-reform world. This is exactly what the reform is intended to accomplish. In a competitive world, lower risk will eventually show up as lower interest rates on loans — hence, the upward shift in the loan schedules. If households did not change their borrowing behavior in response to this shift, the reform would result in lower bankruptcy filings. But households respond to the shift up in the loan price schedules by borrowing more. Since a bigger loan is associated with a higher probability of default, bankruptcy filings tend to rise on this account. Our model predicts that as competition among lenders works to lower interest rates, the effect of greater indebtedness will more than compensate for the fact that each given loan size is less risky. The result will be a large increase in indebtedness and a modest *increase* in the number of households filing for bankruptcy.

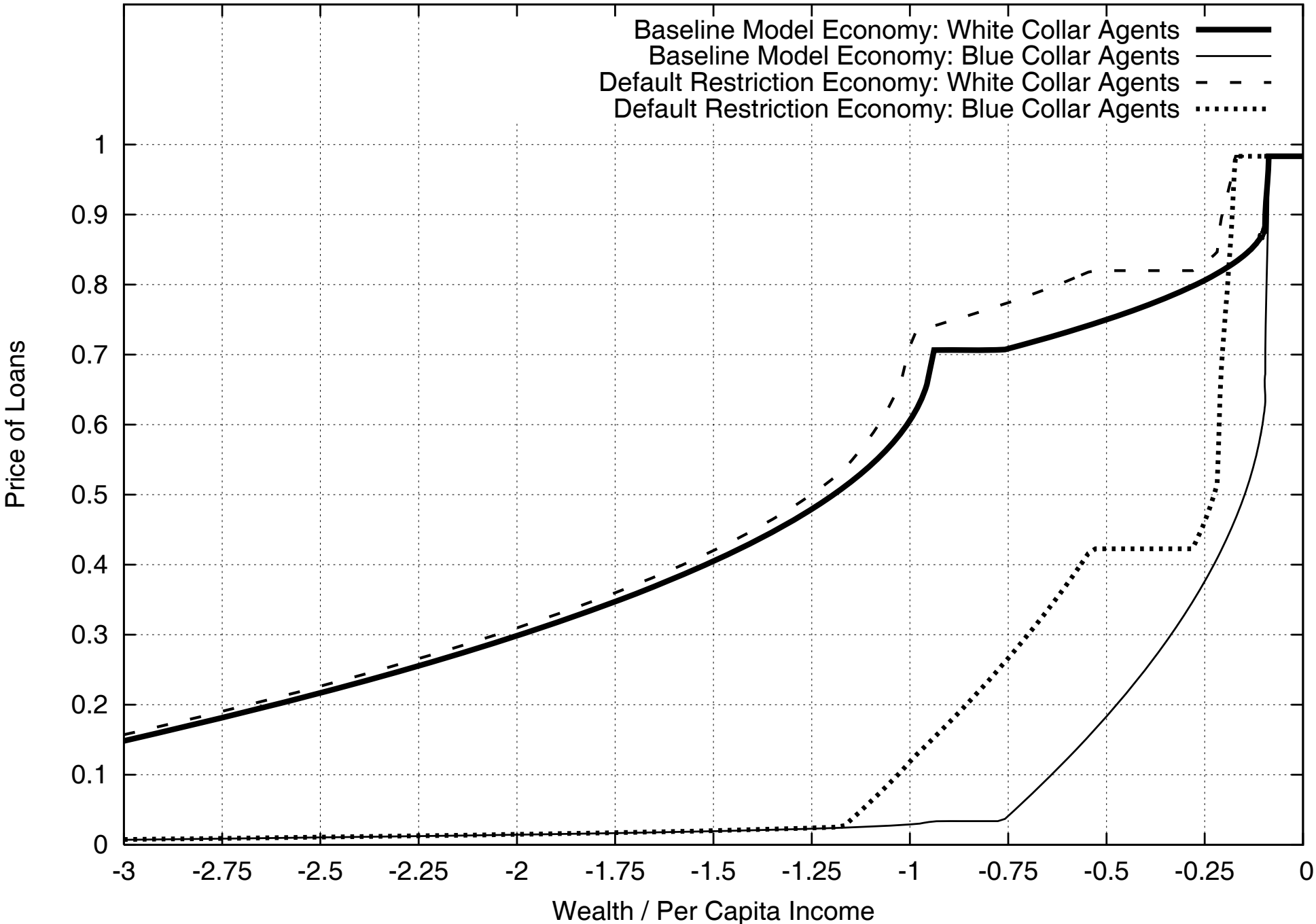
For analogous reasons the average interest rate paid on unsecured loans is predicted to not change much in the post-reform world. Although the interest rate on any loan of a given size is lower in the post-reform world, the proportion of borrowers with bigger and therefore more expensive loans is also higher. Our model predicts a modest increase in the average interest rate paid by borrowers.

Is Reform a Good Idea Then?

One might dismiss a reform that leads ultimately to greater indebtedness and bankruptcy filings as a failure. But economists don't view indebtedness or bankruptcy as necessarily bad. For an economist the question is: Are people, on average, better off under the new bankruptcy bill? There are two countervailing forces at work. On the benefit side is the fact that reform lowers the cost of credit for households — the shift up in the loan price schedule mentioned earlier. But this benefit comes at the cost of households' not being able to declare bankruptcy when doing so would make the household better off.

In our model, households that lose from reform are drawn entirely from the pool of households currently suffering from an expenditure shock of some type: a shock resulting from an increased urgency to consume or from a large involuntary medical expense. In any given year, such households make up about 17 percent of all households in the model. About 1.2 percent of these households lose from the reform. Among these adversely affected households, the vast majority are those that are suffering from a large medical expense. Against these sufferers is a large group for whom the benefits of lower interest rates outweigh the cost of a limited bankruptcy option. The fact that most people in our model care more about lower interest rates than about an unrestricted bankruptcy option should not be surprising: The likelihood that a household will have occasion to borrow is far greater than the likelihood that a household will be in a situation where it would like to declare bankruptcy but cannot. If we count the number of people in our model who would support reform, by this metric, reform appears to be a good idea: It has the support of 99.8 percent of households in the model.


Annual Chapter 7 Bankruptcy Filings in the U.S.
Bankruptcy Filings in Thousands
1800
1600
1400
1200
1000
800
600
400
200
1994
1996
1998
2000
2002
2004
2006
Years


Baseline Model Economy: White Collar Agents
Baseline Model Economy: Blue Collar Agents
Default Restriction Economy: White Collar Agents
Default Restriction Economy: Blue Collar Agents
Price of Loans
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
-3
-2.75
-2.5
-2.25
-2
-1.75
-1.5
-1.25
-1
-0.75
-0.5
-0.25
0
Wealth / Per Capita Income