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# The Effect of the Bankruptcy Reform Act of 2005 on Filings

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**Abstract:** This study develops a simple time series model to identify the effects of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 on bankruptcy filings. The model includes a fleeting, "beat the deadline," effect and a long-lasting reduction in the rate of filings. It also isolates additional transitional and permanent effects in those states that had generous domiciliary exemptions.

**Keywords:** Bankruptcy, Debt, Consumer Protection

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## 1. Introduction

In 2005, the U.S. Congress passed the Bankruptcy Abuse Prevention and Consumer Protection Act (Pub. L. No. 109-8, 119 Stat. 37, enacted April 20, 2005), the first major change in bankruptcy law since the first liberalization of consumer access to chapter 7 liquidations in 1978. The 2005 Act restricts access to Chapter 7 liquidations to persons or households below the median income of their state and to those whose "priority debts" are particularly burdensome. Among other changes, the Act limited state homestead exemptions for all filers to $125,000 (to be adjusted periodically) for homes acquired less than 40 months before filing. In addition, 11 USC §101, 307 (2005) also limits homestead exemptions for filers who have been convicted of security law violations or been found guilty of certain other crimes regardless of a state's existing statutory exemption allowance. The Act also made filing significantly more costly in terms of out-of-pocket and implicit costs. Following certain key votes on the Act, there was both a rush of bankruptcy filings to "beat the deadline" followed by a precipitous decline in filings subsequent to the effective date of the law.

According to data from the Statistical Abstract of the United States, during the nine months ending March30, 2005 filings averaged 130,000 per month. Then, in the nine months ending December 31, 2005, the effective date of the act, they averaged 186,000 per month. In the nine months ending September 30,2006 they averaged 49,000 per month. The post-deadline decline in the rate of filings far exceeded prior estimates of the potential of a revival of a means-test to curtail bankruptcy filings. To be sure, prior

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estimates depended on the specific means test employed by researchers, e.g., income above the median, and are difficult to compare. According to one study, only about a third of those who declared bankruptcy in selected jurisdictions in 1996 earned enough to be required to make at least some payments on their debt based upon ability to pay (Barron and Staten, 1997). Another study, underwritten by Visa and MasterCard and based on a nation-wide representative sample of 1997 filings, estimated that only about 10 percent of those who declare bankruptcy earned enough to trigger mandatory debt repayments (Neubig at al., 1998). Presumably, the dramatic post-deadline decline in the rate of filings is to be explained by the numerous changes effected by the 2005 bankruptcy reform act in addition to reviving a means test (Culhane and White, 1999).

The potential impact of bankruptcy reform involved controversies over effectiveness as well as efficacy. Much attention has been paid to the balancing of consumer interest in access to credit on reasonable terms, which is undermined by liberal bankruptcy laws, against consumer interest in the discharge of indebtedness upon unexpected income losses and/or unavoidable expenses, presuming that interest rates change so as to compensate creditors for prospective losses (Athreya, 2002; Domowitz and Sartain, 1999; Fay et al., 2002).Underlying causes of bankruptcy filings such as unemployment, uninsured medical expenses, gambling debts, easy access to consumer credit, and prevailing legal culture were thought to be more predictive of filing than economic motivation narrowly-construed. Concerning state homestead exemptions, it was thought that most debtors' bankruptcy decisions are not affected by the amount of property that state law permits debtors to keep after bankruptcy (Sullivan et al., 1989). Others argued that exemption laws contributed to delinquencies in unsecured debt (Agarwal et al., 2003). Thusly, an econometric model of the effect of the bankruptcy reform act on filings could be informative of the significance of economic motivation in influencing the bankruptcy decision, and of the influence of law in shaping the culture regarding indebtedness and bankruptcy.

The econometric model developed in this study is a naïve time series model; i.e., one that abstracts from most underlying causes and focuses on the effects of a particular change. In theory, this model is capable of separating the secular and cyclical trends affecting bankruptcy filings, and local influences such as legal culture, from the impacts of changes in bankruptcy law on all states and on those states which had generous homestead exemptions. The model does not consider differences in interpretation of the homestead provisions across districts as they develop or may have already developed. Instead, it supposes the Act influenced filings similarly across districts except as districts are in states that had or did not have generous homestead exemptions.

The next section outlines the history of bankruptcy in the United States. The section following presents the data and develops the econometric model used to analyze these data. The concluding section discusses findings and prescribes some directions for future research.

## 2. Background

At the time of the Founding, debtors in default were treated punitively. (Balleisen, 2001; Coleman, 1999; Rosen, 1997; Skeel, 2001) People who defaulted on their debts were often subject to debtors' prison. There, they would languish until and unless someone paid off their debts which would ransom them free. Because of the abuses associated with debtors' prison, several of the states of the new country, most notably New York, Pennsylvania, and Rhode Island either completely banned or severely regulated imprisonment for debt. Virginia and other southern states, in keeping with Jeffersonian Democratic-Republican sentiments, went one step further. They protected a person's freehold estate (usually a farm, although sometimes a town or city lot), along with the tools of a person's trade, from attachment upon default. Alexis de Tocqueville, during the early 19th Century, noted the “strange indulgence” shown to bankrupts in the United States and how “Americans differ, not only from the nations of Europe, but from all the commercial nations of our time.”

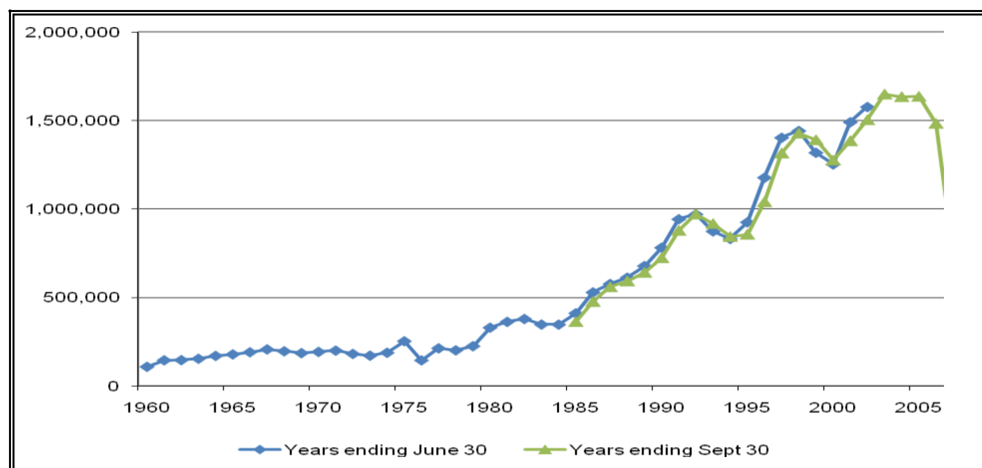
Federal provisions for bankruptcy were little debated at the Constitutional Convention. The right to establish a uniform, nationwide procedure for bankruptcy was reserved for the Congress and this power was inserted into the Constitution immediately after the Commerce Clause. The first federal bankruptcy act was passed in 1800 as a Federalist, not a Democratic-Republican, law. Accordingly, it was used to undercut states' protections of freehold estates. This Act was repealed shortly thereafter in 1803. Subsequent federal bankruptcy laws enacted in 1841 and 1867, following recessions, were repealed in 1843 and 1878 respectively. In 1898, following another recession, our current federal bankruptcy law was enacted, albeit with major changes in 1938, 1978, and 2005.

The 1978 amendment liberalized bankruptcy law to such an extent that filing for Chapter 7 liquidation could be said to have amounted to little more than the exercise of a "get out of debt free" card. Except that, simultaneously, debts have grown from which relief via bankruptcy is not available, e.g., back taxes, support payments and student loans. Most significantly, by electing to proceed under Chapter 7 liquidation (as opposed to Chapter 11 or Chapter 13 reorganization plans), a person's earning capacity was no longer a consideration as future wages were no longer attachable. In addition, much of the stigma associated with of bankruptcy was removed by changing the term in the law referring to the debtor seeking relief through bankruptcy from “bankrupt” to “debtor.” There was also a continuation of a generalized expectation allowing every debtor a “fresh start” as a

"personal liberty quite as much if not more than it is a property right."(Local Loan Company v. Hunt 292 U.S. 234 (1934) p. 236)).

Subsequent to the liberalization of the bankruptcy law in 1978, personal bankruptcies soared to unprecedented heights. As is shown in Figure 1, prior to the 1978 amendment, filings for personal bankruptcies fluctuated between 100,000 and 200,000 per year. Following the 1978 amendment, and prior to the 2005 amendment, filings for personal bankruptcies rose steadily, until they averaged approximately one million per year.

**Figure 1: Total Bankruptcy Filings, 1960-2007**




Sources: Statistical Abstract of the United States, various issues, http://www.census.gov/compendia/statab/past_years.html

Among these filings were some cases in which debtors abused the bankruptcy system to avoid accountability for unethical or even unlawful business practices. A particularly notorious case was that of Harry Schreiber. Prior to his personal Chapter 7 filing in 1992, Schreiber had been found guilty of fraud in the sale of real estate tax shelters, defrauding investors of over $50 million dollars. Subsequently, he sold dry cleaning franchises, and fraudulently raised another $3 million before that company went bankrupt. In 1992, he declared personal bankruptcy, for the second time, and relieved himself of all $3 million in liabilities against assets of $1,588. (Button, 1992)

Several economists argued that at least a part of the increase in the number of bankruptcy filings following the 1978 act was due to the change in the law (Boyes and Faith, 1986; Peterson and Akoi, 1984). In particular, an investigation of the University of Michigan's Panel Study on Income Dynamics covering the period 1984-1995 revealed that borrowers

responded in predictable ways to the incentives implicit in the bankruptcy law (Hurst and White, 2002). Without doubt, the 1978 changes to the statute were not the only factors contributing to increased bankruptcy filings. Other factors included the increased availability of consumer credit (especially credit cards), increased accessibility to legal gambling, and continuing reduction of the social stigma attached to bankruptcy. A good review of the literature can be found in M.J. White (1998).

Predictably, following the 1978 liberalizations, lenders tightened credit and demanded increased collateral from borrowers of less than the highest creditworthiness. According to Gropp et al. (1997)one possible form of credit tightening was the development of the home equity line-of-credit, although a change in the federal tax law making consumer interest non-deductible was also a factor in shifting credit to home equity lines-of-credit. In states with high homestead and/or personal property exemptions, credit shifted from unsecured to secured forms, and towards borrowers with substantial assets (Lin and White, 2002).

Creditors came to view unsecured loans to borrowers of marginal creditworthiness on an actuarial basis in which higher interest rates off-set losses on debts that fall into default. As long as losses due to default were predictable, lending to borrowers of marginal creditworthiness was not seen as particularly risky on a portfolio basis. Creditors also developed adaptive risk management control processes to monitor and react to changes in creditworthiness. During the 1990s, the premium per unit of risk increased even as access to credit by very high-risk borrowers expanded (Edelberg, 2006).One analysis of credit card programs indicated that higher credit risk borrowers tended to use high interest rate accounts which use resulted in profits net of write-offs comparable to those derived from lower interest rate loans to more creditworthy borrowers (Stavins, 2000).

The 2005 Act restricts the liquidation of debt by high income individuals, limits the homestead exemption for recently acquired properties, and mandates credit counseling for filers. The effects of these changes in the law, both in inducing filings prior to the effective date of the act and in collapsing subsequent filings, were quite dramatic. Careful analysis, however, is required to separate the effect of the changes in the law on the rush to "beat the deadline" from any long-lasting effect on the rate of filing.

## 3. Econometric Analysis

In order to adequately investigate the effects of the 2005 Bankruptcy Reform Act on filings, using the data of the quarterly reports on bankruptcy filings from the Administrative Office of the U.S. Courts, for each of 90 U.S. District Court jurisdictions from 1995Q1 to 2007Q3, the following naïve time series model was developed:

$$ln(F_{dq}) = b_0 + \sum_{d=1}^{90} b_{1d}\, Q_q \times D_d + b_2 U_{dq} + b_3 T_q + b_4 P_q + b_5 X_d \times T_q + b_6 X_d \times P_q + e_{dq}$$

where $F_{dq}$ is defined as the rate of filings in district d during quarter q relative to its average from the first quarter of 1995 to the fourth quarter of 2000. This variable is the ratio of the rate of filings in each district, by category, to the average rate of filings in that district, in that category, during a base period. By constructing the variable this manner, persistent differences in the rate of filings across districts due to slowly-changing unidentified factors such as the legal culture are removed from the data.

$Q_q$ is defined as zero in the first quarter of 1995, 1 in the second quarter of 1995, 2 in the third quarter of 1995, and so forth. $D_d$ is defined as 1 in district d and zero otherwise. The ninety variables defined by the products $Q_q x D_d$ are designed to capture differences in the secular rates of change in bankruptcy filings across districts.

$U_{dq}$ is defined as the average monthly unemployment rate in the host state of district d during quarter q. The data were obtained from the U.S. Bureau of Labor Statistics. Experimentation revealed no improvement to leading or lagging this variable. Since the unemployment rate is a lagging indicator, bankruptcy filings are indicated to lag employment, production, sales and income (i.e., the coincident indicators). These first several independent variables – the set of trend variables and the unemployment rate – as well as the construction of the dependent variable make the model a naïve time series model. The model does not attempt to completely explain why the rate of filings differs from one district to another nor why the rate of filings may have different trajectories across districts. The model may nevertheless be able to isolate the effects of certain variables of interest. This ability critically depends on whether the variables of interest change in a way that is independent of the way unidentified factors are changing.

$T_q$, interpreted as the transitional effect variable, is defined as positive fractions totaling +1 during the three quarters prior to the effective date of the act, negative fractions totaling -1 during the three quarters following the effective date of the act, and zero otherwise. The fractions were estimated to be 0.13, 0.32, 0.55, -0.63, -0.23 and -0.14, with any further leads or lags being insignificant. The variable is constructed in a way that the coefficient of $T_q$ indicates the filings that were expedited in order to "beat the deadline" as a percentage of the average rate of filings from the first quarter of 1995 to the fourth quarter of 2000. The sequence of positive and negative fractions summing to 1 in absolute value imply, if the coefficient of $T_q$ is statistically significant, that some filings during the run-up to the effective date of the act would have normally been filed after that date.

$P_q$, interpreted as the permanent effect variable, is defined as 1 during the quarters following the effective date of the act and zero otherwise. The coefficient of the $P_q$ variable indicates the long-lasting percentage reduction in the rate of filings (again, relative to the average rate of filings during the base period).

$X_d$, interpreted as the generous homestead exemption variable, is defined as 1 in districts in host states with unlimited exemptions (as compared to the $125,000 limit for recently acquired properties provided by the 2005 bankruptcy reform act). The variable $X_d$ is defined as 0.7 in districts in host states with $500,000 limits, 0.1 in districts in host states with $200,000 limits, and zero otherwise. Probably because of the small number of jurisdictions involved, no strong statement can be made as to the size of the impact of the 2005 Act within states having homestead exemptions above $125,000 but no higher than $500,000, relative to the impact within states having unlimited homestead exemptions. The coefficient of the interaction term $T_q x X_d$ indicates the additional percent of filings that were expedited to "beat the deadline" in states with generous homestead exemptions. The coefficient of the interaction term $P_q x X_d$ indicates the additional long-lasting percentage reduction in the rate of filings.

Five categories of filings for bankruptcy are investigated with this model: (1) total filings, (2) total business filings, (3) total personal filings, (4) personal filings under Chapter 7 (liquidations), and (5) personal filings under Chapters 11 and 13 (reorganizations and wage-earner reorganizations). The fourth and fifth categories are subsumed under the third and the second and third are subsumed under the first. It may be expected that the 2005 change in the bankruptcy law predominantly impacted personal filings under Chapter 7. However, due to the many provisions incorporated into the law, as well as uncertainty concerning these provisions prior to enactment, it is possible that the 2005 changes in the law impacted other categories of bankruptcy filings, at least in terms of transitional effects.

The results are presented in Table 1. With regard to personal filings under Chapter 7, the coefficient of the transitional effect variable indicates that filings amounting to 62 percent were expedited to "beat the deadline." In regressions such as these, when the effect is small, the coefficient can be directly interpreted as a percentage change. In this case, because the change is large, the percentage change has to be calculated as $\ln(1 + b_i)$. This effect is highly statistically significant as the t-statistic of 38.52 is much larger than 2.99 which would be the 1 percent significance level. With such a large rush of filings, the 2005 change in the law might appear to result in a dramatic decline in fillings, as filings would be abnormally high immediately before the effective date of the law and then abnormally low immediately afterward. However, a large part of this dramatic decline was transitional.

**Table 1: Regression Analysis of Bankruptcy Filings**

| | Total Filings | Total Business Filings | Total Personal Filings | Personal-Ch.7 Filings | Personal-Ch.11,13 Filings |
|---|---|---|---|---|---|
| Transition | 0.7456<br>(0.0206)<br>[36.05] | 0.9000<br>(0.0495)<br>[18.17] | 0.7433<br>(0.0208)<br>[35.57] | 0.8551<br>(0.0222)<br>[38.52] | 0.2752<br>(0.0302)<br>[9.11] |
| Long-run | -0.8524<br>(0.0102)<br>[83.28] | 0.0148<br>(0.0245)<br>[0.60] | -0.8759<br>(.0103)<br>[84.71] | -1.0781<br>(0.0109)<br>[98.15] | -0.4272<br>(0.0149)<br>[28.59] |
| Transition*Generous State Exemption | 0.1423<br>(0.0497)<br>[2.86] | 0.2593<br>(0.1190)<br>[2.18] | 0.1368<br>(0.0502)<br>[2.72] | 0.1836<br>(0.0533)<br>[3.44] | 0.0050<br>(.0725)<br>[0.07] |
| Long-run*Generous State Exemption | -0.1086<br>(0.0225)<br>[4.83] | 0.0185<br>(0.0539)<br>[0.34] | -0.1179<br>(0.0227)<br>[5.19] | -0.0931<br>(0.0241)<br>[3.86] | -0.0565<br>(0.0328)<br>[1.72] |
| Unemployment Rate | 0.0291<br>(0.0025)<br>[11.63] | 0.0685<br>(0.0061)<br>[11.40] | 0.0281<br>(0.0025)<br>[11.09] | 0.0266<br>(0.0026)<br>[9.89] | 0.0503<br>(0.0036)<br>[13.74] |
| R Square | 86.5% | 54.7% | 86.6% | 88.9% | 68.7% |
| N | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 |

Note: Dependent Variables: ln(Quarterly Bankruptcy Filings by District/average of same over 1995Q1 - 2000Q4 ), Independent Variables: See below. 1995Q4 - 2007Q3, 48 Quarters, 90 Districts
Intercepts and coefficients of ninety 'quarter*district' variables not reported
Standard errors are in parentheses; absolute values of t-statistics are in brackets.
"Transition" equals fractions totaling +1 during 2005Q2-2005Q4, fractions totaling -1 during 2006Q1-2006Q3, and 0 otherwise.
"Long-run" equals 1 during 2006Q1-2007Q3, and 0 otherwise
"Generous State Exemption" equals 1 for districts within DC, FL, IA, KS, OK and TX (as these states had unlimited homestead exemptions), 0.7 for districts within MA and MN (as these states had homestead exemptions of $500,000), 0.1 for districts within NV and RI (as these states had homestead exemptions of $200,000), and 0 otherwise.
"Unemployment Rate" equals quarterly averages of the monthly unemployment rates of the state of the district.

Continuing with personal filings under Chapter 7, the coefficient of the permanent effect variable indicates that the long-lasting impact of the change in the law was to lower filings by 73 percent. This effect is also highly statistically significant. Even when separated from the transitional impact, this is still a very large effect. In fact, it is much larger than

had been expected from a mere revival of a means test for liquidation as was discussed during the period leading up to the change in the law. It is reasonable to suspect that the size of this effect probably reflects provisions of the 2005 Act requiring more work from bankruptcy lawyers and mandatory debt counseling and, hence, higher monetary and implicit costs to debtors seeking relief through bankruptcy.

The coefficient of the interaction of the transitional effects variable and the variable denoting states with generous homestead exemptions, $T_q x X_d$, indicates that perhaps additional filings amounting to 17 percent were expedited to "beat the deadline" in states with unlimited homestead exemptions (and lesser additional amounts in states with maximum homestead exemptions larger than that provided in the 2005 act for recently acquired property). This coefficient is statistically significant at the 1 percent level.

On the other hand, the coefficient of the interaction of the permanent effects variable and the variable denoting states with generous homestead exemptions, $P_q x X_d$, indicates that filings were permanently reduced by an additional 9 percent in states with unlimited homestead exemptions. As indicated by the t-statistic, this effect is statistically significant at the 1 percent level. With respect to personal filings under Chapter 7, it appears that the 2005 Act results in large transitional and permanent effects with the expediting of many filings to "beat the deadline," a large drop in the rate of filing independent of the transitional effect; and in additional transitional and permanent effects in states with generous homestead exemptions.

Turning to personal filings under Chapters 11 and 13, the results indicate lower, yet still statistically significant transitional and permanent effects. The coefficient on the transitional effect variable indicates that 24 percent of filings were expedited "to beat the deadline." Also, the coefficient on the permanent effects variable indicates that the long-lasting effect of the 2005 Act was to lower the rate of personal Chapter 11 and Chapter 13 filings by 35 percent. These effects are each highly statistically significant.

The coefficient of the interaction of the generous homestead exemption variable and the transitional effect variable indicates practically no additional personal filings under Chapters 11 and 13 were rushed "to beat the deadline." Also, the coefficient of the interaction of the generous homestead exemption variable and the permanent effect variable indicates a long-lasting reduction in personal filings under Chapters 11 and 13 of perhaps 5 percent. The first of these two effects is statistically insignificant, and the second barely reaches the 10 percent level of significance. With respect to personal filings under Chapters 11 and 13, transitional and permanent effects are estimated to be about half as large as those found for personal filings under Chapter 7; and, little if any additional effects are found in states with generous homestead exemptions.

Turning to business filings, surprisingly, some transitional effects are indicated. Judging by the coefficient on the transitional effect variable, $T_q$, 64 percent of business filings appear to have been expedited "to beat the deadline." This effect is highly significant. Likewise judging from the coefficient of the interaction of the transitional variable and the generous homestead exemption variable, $T_q x X_d$, additional filings amounting to 23 percent were expedited "to beat the deadline" in states with generous homestead exemptions. This effect is significant at the 5 percent level. These transitional effects might be attributed to the overlap of personal and business filings in cases involving proprietary business, and to uncertainty concerning the change in the law. With regard to long-lasting effects, little or no impacts are indicated on the rate of business filings.

The explanatory power of the model is very high with respect to personal filings under Chapter 7, as indicated by $R^2$. In contrast, the explanatory power of the model with respect to personal filings under Chapters 11 and 13 is lower. With respect to total business filings, the explanatory power of the model is lower still. The apparently high explanatory power of the model with respect to total personal filings and total filings is simply due to personal filings under Chapter 7 constituting a large majority of total filings.

## 4. Conclusions

The econometric analysis of bankruptcy filings by quarter, district, and type of filing, indicates that the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 had very large transitional and permanent effects on the rate of personal filings under Chapter 7, large transitional and permanent effects on personal filings under Chapters 11 and 13, and large transitional effect on the rate of business filings, across all states. The Act also had large additional transitional and permanent effects on the rate of personal filings under Chapter 7 and on business filings in those states with generous homestead exemptions.

Since it is clear the 2005 reforms reduced the rate of personal filings, it would be interesting to see what effects, if any, the Act has had on the performance of various types of consumer loans, especially unsecured consumer loans, and on the availability of and interest rates on consumer loans. According to economic theory, improved performance of consumer loans should be associated with greater availability and lower interest rates. As was discussed above, there is a public interest both in the cost and availability of credit to consumers as well as in the equitable resolution of debts that prove to be burdensome. It may not be clear, *a priori*, how these two potentially conflicting concerns should be balanced. The finding that the 2005 Act had certain large, even very large effects on filings, while interesting in itself for certain purposes, invites investigation of these other matters.

The size of the permanent effect on bankruptcy filings was beyond what was anticipated in analysis of the potential impact of a revival of a means test, during the period leading up to the Act. Presumably, these effects were due to other provisions of the 2005 Act, such as the additional work required of bankruptcy lawyers and mandated debt-counseling, which raised the cost of filing to debtors. Whether or not these effects were intended, because of the public interest in an orderly bankruptcy process and in the equitable treatment of the parties involved, this matter also deserves investigation.

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