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## **The Seduction of Bankruptcy**

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Abstract.

Consumer bankruptcy has been rising for three decades until 2005, when the *Bankruptcy Abuse Prevention and Consumer Protection Act* was enacted. According to the standard theory of bankruptcy, bankruptcy filing is caused by financial distress of consumers. The prediction of this theory is that bankruptcy filings will be cyclical: rising in recession and falling in prosperity. The prediction is consistent with observations until 1979. However, during the 1979-2005 periods, bankruptcy filings have been rising rapidly in spite of strong economic growth. Between 1979 and early 2000s, personal bankruptcy filings increased by more than 400 percent. An alternative explanation considers the fact that the *Bankruptcy Reform Act* of 1978 has been more forgiving to debtors than earlier laws. This theory considers incentives in rational choice model in explaining the rapid rise in bankruptcy filings. The rational choice theory is not sufficient to explain the fact that the rise took several decades. Considering the stigma people have about filing bankruptcy and the opportunistic behavior, I propose a behavioral theory in which individual behavior results in horizontal evolution. An empirical work has been proposed and performed to compare my proposed theory with the traditional theory. The GINI index is used as a proxy for financial distress. The tentative result based on the data for the 1969 through 2002 indicates that behavioral theory better explains the observed behavior.

JEL codes: D12, K34

Key Words: consumer bankruptcy, Bankruptcy Reform Act, horizontal evolution, GINI index

## Section I. Introduction

Bankruptcy is the legal process that resolves debts of financially distressed individuals. In this sense, bankruptcy law allows partial anarchy in the fringe of an ordered society. Since the *Bankruptcy Reform Act* of 1978, consumer bankruptcy has been rising for 25 years until 2005. See attachment 1 and 2 at the end of the paper. The bankruptcy filings for each year in the early 2000s, more than a million per year, have been more numerous than the number of college graduates of the year. According to the traditional theory of consumer bankruptcy, bankruptcy filings are caused by financial distress of individuals. The prediction of this theory is that the number of bankruptcy filings will be counter cyclical. During the recession bankruptcy filings will rise, and the filings will fall during the economic boom. The traditional theory explains fairly well the data for 1900-1978. However, contrary to this theory, bankruptcy filings have been rising rapidly, in spite of strong economic growth, during the 1978-2005 periods.

Writers on bankruptcy -- economists, legal scholars, and sociologists - - provide two different or opposing interpretations of the observations of 1979-2005. Sullivan et al (2000), for instance, stick to the traditional theory and interpret the data as indicating some hidden factors that are not shown on the superficial aggregate data. Others claim that the traditional model fails to explain the observation of 1979-2005. Buckley (2002), White (2007), and Zywicki (2005), among others, belong to this group. These authors argue that the rising bankruptcy files are the result of the incentive provided by the 1978 Bankruptcy Code that is forgiving to debtors by extending asset exemptions.

The intellectual background of traditional theory had influence on the 1978 *Bankruptcy Reform Act*. The bankruptcy filing rate was 1.5 million in

2004 and 2 million in year 2005. After the *Bankruptcy Abuse Prevention and Consumer Protection Act (BAP-CPA)* has been enacted in 2005, the filing rate fell sharply to 600,000 in 2006.

It is expected that the forgiving nature of the legal institution will reduce the opportunity cost of filing consumer bankruptcy. That is, institution matters because of its influence on incentives. The incentive argument is based on economic theory and has intuitive appeal. However, the standard incentive argument is not sufficient to understand the bankruptcy behavior. We note that there are many who do not file even if they can benefit from bankruptcy. People have stigma about filing bankruptcy and wish to behave as responsible persons. To understand the role of stigma on behavior, I propose to introduce a behavioral dimension in addition to the dimension of preference/utility calculations.

To contrast the proposed theory with the traditional model for bankruptcy, I conducted an empirical work. The GINI index has been used as a proxy for financial distress. The tentative result indicates that the proposed behavioral model explains the observations of 1979-2005 better than the traditional theory. In the following three sections, I will first discuss the traditional theory of bankruptcy and the data in section II. In section III, I discuss different interpretations of the data. A behavioral theory is proposed in section IV, and report the data analysis. Some concluding remarks appear in the last section.

## **II. Theory of Consumer Bankruptcy and Data**

The traditional theory explains bankruptcy filings by financial distress faced by individuals. The major causes of financial distress are unexpected

unemployment, medical problem, divorce, or indebtedness. Each of these factors are discussed in Sullivan et.al (1990).

The traditional theory assumes that people face financial distress during the economic recessions. The implication of this theory is that bankruptcy filings will move with business cycles; filings will rise during recession and fall during prosperity. The theory explains the data fairly well from 1900 through 1978, though the trend has been a slowly increasing rate of bankruptcy filings over time. This theory served as the intellectual background for the *Bankruptcy Reform Act* of 1978. Legal scholars generally agree that the law was forgiving to debtors. We can expect that the 1978 bankruptcy law would affect behavior.

Since 1979, bankruptcy filings have been rising rapidly, in spite of the strong economic growth until 2005. In 2005 *BAP-CPA* has been enacted to prevent abuses of the forgiving nature of 1978 Bankruptcy Code. The new law enacted was less forgiving to debtors, especially Chapter 13 of the Code.

The pattern of consumer bankruptcy filings has been analyzed from the data available for the last hundred years: Annual Report of the Attorney General of the United States and Administrative Office of the United States Courts. See Figure 1 for a plot of this data. During the Great Depression, bankruptcy filings peaked in the 1930s at 60 per 100,000 population. In 2004 the filings were 500 per 100,000 population or 1.5 million filings. In 2005, the filings are 2 million. The bankruptcy filings dropped immediately after 2005, yet the number has been rising again during the financial crisis and economic recession of 2008. As Murray and Dougherty (2010) reports the bankruptcy filing is already 1.4million.

### **Section III. Interpretation of the Observation**

The simple version of traditional theory of bankruptcy would hardly explain the observed pattern during the period 1979-2005. Basically, there are two different perspectives or theories in interpreting the observation.

Sullivan et al. follow the traditional theory and argue that the American middle class faces financial distress. But they failed to identify and locate factors that would explain the anomaly from the perspective of the traditional theory. In terms of economic theory, their position implies the hypothesis that individual's preference and behavior are stable. Even changes in legal constraints do not affect incentives of an economic man. For an economist, it is hard to accept an argument that assumes, though implicitly, that behavior is unaffected by the legal institution. It should be no surprise to observe the rising bankruptcy filings for 25 years, which is considered as an anomaly to the traditional theorists. In the following section, I consider factors that might influence bankruptcy filings during the time of strong economic growth.

Consider an individual who solves an inter-temporal consumption problem by his earnings, borrowing, and saving. A standard rational choice theory will predict that a forgiving bankruptcy law will give incentive for more borrowing. If default cost is included as the cost of borrowing, much as in corporations, we can predict that lower cost of borrowing offer incentive for borrowing more and thus higher chances for default and bankruptcy filing. This observation may end the debate about explaining away the anomaly. We note, however, that, even in financial distress, most people have stigma about filing bankruptcy. According to some calculation, about 20 to 30% of population will financially benefit from filing bankruptcy. The actual bankruptcy filing is much lower than this.

#### **Section IV. Alternative Theory and Empirical Work**

To better understand the behavioral pattern of bankruptcy filings discussed above, we first develop a theory of financial distress. We note that, during the last thirty years of globalization, along with increased business opportunities, risk and uncertainty has been increased.

As Milton Friedman (1953) has argued, economic freedom in capitalism offers opportunities whose results are uncertain and risky. People may have different attitude toward risk and some individuals have risk-loving range in their utility functions. As a consequence of economic freedom, income inequality follows. Thus, the economic freedom and business opportunities from globalization means more income inequality and financial distress for some. Those who were unsuccessful in risky business will face financial distress and may end up filing bankruptcy. This argument is consistent with the traditional theory of bankruptcy.

Under this scenario of risk and financial distress, GINI index is chosen as a proxy for financial distress. I have chosen GINI index partly because it is readily available data. We can formulate the idea in a linear form. Let  $x$  denote the GINI index and  $y$  the bankruptcy filing rate. Then  $y$  can be expressed in a linear form:

$$Y(t) = a + bx(t)$$

The data used was for the period 1967 through 1997. A simple regression show that the  $t$ -value for GINI index is 11.59 and - 10.3 for the constant term. Since both terms have trend during the period of data, we consider the equation for first differences:

$$dy(t) = b [dx(t)]$$

where  $dy = y(t) - y(t-1)$  and  $dx = x(t) - x(t-1)$ . From the regression, t-value for the difference of GINI value is  $t = -0.66$ . But when we introduce a constant term and regress the equation,

$$dy(t) = a + b [dx(t)]$$

The t-value for the GINI difference is  $-2.28$  and for the constant term the t-value is  $3.95$ . Just conducting regression for a conjecture is not very meaningful, especially for the highly aggregated data we have. I test this theory against the behavioral theory proposed below.

Unlike the traditional theory, the alternative explanation considers economic incentives in different legal institutions. However, the standard rational choice theory also begs a question. The incentive offered by the 1978 Bankruptcy Act will boost bankruptcy filing, and the level of filing rate should stabilize immediately. But what we observe is the continuous increase over 25 years. Spread of information certainly takes time, but not 25 years! Even in financial distress most people or a significant number of people do not file bankruptcy. This indicates that the simple incentive argument in rational choice model is not sufficient to counter the argument of Sullivan et al. We have to consider the dimension of behavior.

The fact that most people have stigma about filing bankruptcy suggests that the social norm about bankruptcy has been the result of cultural or social evolution. Hayek emphasized cultural evolution in explaining the emergence of institutions. The process of removing or reducing such stigma is another behavior pattern similar to horizontal evolution or learning. Stigma, however, is difficult to define and measure functionally. In quantifying stigma I borrow from behavioral psychology. In the Darwinian theory of evolution, the basic evolutionary mechanism tells that new and

more adaptive distribution emerges through natural selection. Likewise, in the learning process, through instrumental conditioning, new distribution emerges. The new law and those who have filed bankruptcy serves as conditioning for the rest of the population. See Rachlin (1991).

As an alternative hypothesis to the traditional model based on GINI index, I mobilize the behavioral theory proposed above. My conjecture is that changes in bankruptcy filings can be explained by the number of existing bankruptcy filings. The assumption of this conjecture is that preference/utility function approach does not fully explain bankruptcy behavior. Behavior changes as the stimulation increases, and the filing activities of other individuals serve as stimulation.

Based on the theory developed above, we can formulate a linear equation in which bankruptcy filing rate is a function of the GINI index and the number of bankruptcy cases that have been already filed. Then,

$$\begin{aligned}
 y(1) &= a + bx(1) + cy(0) \\
 y(2) &= a + bx(1) + c[y(1)+y(0)] \\
 &\dots\dots\dots \\
 y(t-1) &= a + bx(t-1) + c[y(t-2) + \dots + y(0)] \\
 y(t) &= a + bx(t) + c[y(t-1) + \dots + y(0)]
 \end{aligned}$$

By subtracting  $y(t-1)$  from  $y(t)$ , we obtain

$$y(t) - y(t-1) = b[x(t)-x(t-1)] + c y(t-1) \text{ or}$$

$$(1) \quad dy(t) = b dx(t) + c y(t-1)$$

Data Work.

Equation (1) has been applied to the data for the period 1967-2002. See Table 1 for the data. The data covers the period of *Bankruptcy Reform Act*, between 1978 and 2005. The regression result shows is this. The t-value for GINI term is -1.13 and the t-value for the sum of bankruptcy filings is 2.99. It is possible that people who file bankruptcy has information about bankruptcy filings in the economy and form expectations. In this case, the regression equation could be,

$$(2) \quad dy(t) = b dx(t) + c y(t)$$

In this case, the t-value for the GINI index term is -1.1 and the t-value for the historical sum of bankruptcy filings is 3.38.

By comparing the t-values, we conclude that the behavioral theory explains the bankruptcy filing behavior better than a traditional theory for bankruptcy.

## **Section V. Conclusion**

The behavioral model proposed has an implication that was not discussed so far. The behavior from reduced stigma is different from economic response to incentives. Behavioral change will stay even after the economic incentive is gone. This finding will help our interpretation of future bankruptcy data. The result of this paper also raises questions about what should be the principle of bankruptcy law. Should it be the efficiency, or social safety net? American bankruptcy law is unique in that, unlike bankruptcy laws in other countries, bankruptcy law offers a fresh start or a partial anarchy in the fringe of the society. In this way, bankruptcy serves as consumption insurance and social safety net. The common law countries like England and

Canada have more social safety net and less bankruptcy filings. We may ask whether bankruptcy is proper substitute for social safety net, if indeed we consider social safety net. Bankruptcy is an old one question as we read from a clause in the U.S. Constitutions on bankruptcy.

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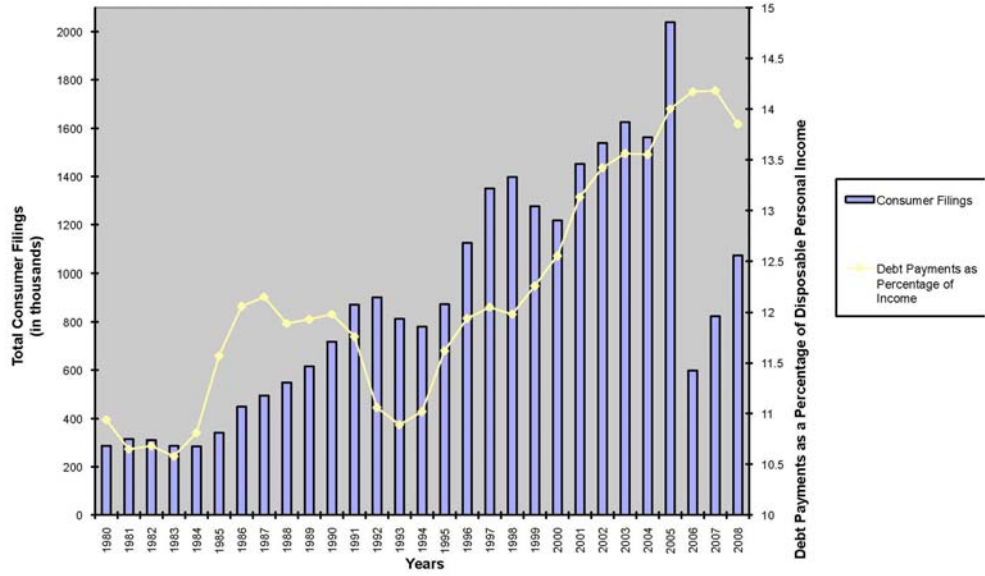
Table 1  
 Gini index and bankruptcy filing rates  
 CF: Bankruptcy filing rate  
 Gini: Gini index

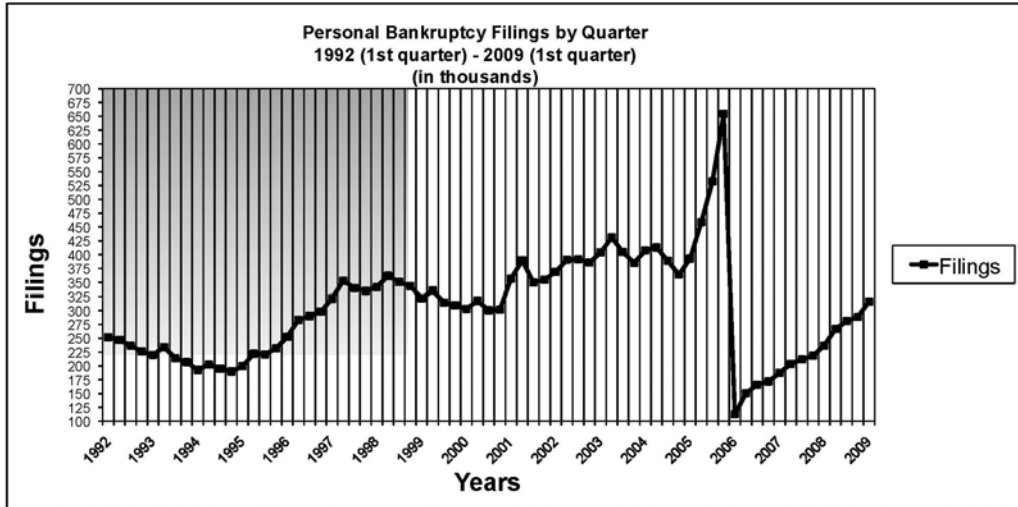
Year	CF	Gini
1967	964.8584	0.399
1968	903.1417	0.388
1969	836.3063	0.391
1970	869.0569	0.394
1971	877.2484	0.396
1972	784.6409	0.401
1973	734.6227	0.397
1974	788.8843	0.395
1975	1038.226	0.397
1976	968.7749	0.398
1977	826.8547	0.402
1978	774.6405	0.402
1979	875.233	0.404
1980	1385.791	0.403
1981	1376.384	0.406
1982	1342.48	0.412
1983	1239.816	0.414
1984	1206.476	0.415
1985	1434.026	0.419
1986	1870.335	0.425
1987	2034.142	0.426
1988	2248.807	0.427
1989	2498.804	0.431
1990	2878.595	0.428
1991	3459.954	0.428
1992	3532.428	0.434
1993	3153.425	0.454
1994	2997.979	0.456
1995	3328.124	0.45
1996	4241.647	0.455
1997	5041.825	0.459

1998	5173.7	0.456
1999	4699.759	0.457
2000	4327.922	0.46
2001	5098.476	0.462
2002	5337.303	0.466

Note: The next two attachments on bankruptcy filings come from American Bankruptcy Institute.

**Influence of Total Consumer Debt on Bankruptcy Filings  
Trends by Year 1980-2008**





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## Personal Bankruptcy Filings Rising Fast

By [SARA MURRAY](#) and [CONOR DOUGHERTY](#)

