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Consumer Bankruptcy Filings: Trends and Indicators

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This paper examines consumer bankruptcy filing rates. It attempts to identify some trends and some economic indicators that might predict those filing rates. While several studies examined these questions prior to the passage of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA), there remains considerable uncertainty and debate over what economic factors correlate to consumer bankruptcy. This is the first study that takes into account the impact of BAPCPA, both in anticipation of and in the aftermath of its effective date.

1. Part I lays out the historical filing rate data following the effective date of the Bankruptcy Reform Act of 1978. Part II examines the impact of BAPCPA on filing rates, and finds that the dramatic post-BAPCPA drop in filings may be almost over. Soon, consumer bankruptcy filing rates are likely to return to their pre-BAPCPA levels. Part III then analyzes the possible correlation of numerous plausible economic data sets to non-business bankruptcy filing rates. The paper finds several such data sets that correlate to non-business filings to a high level of statistical significance. These economic indicators point to a return to pre-BAPCPA filing levels. However, those indicators also suggest that it is unlikely that consumer filings will increase much over those old levels unless fundamental underlying economic changes occur. The findings in Part III further indicate that if Congress wants to curb consumer bankruptcy filings, it needs to focus on treating root causes – such as the explosion in revolving consumer credit – rather than on symptoms. Thus, BAPCPA may have been misguided

Consumer Bankruptcy Filings: Trends and Indicators

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Introduction

This paper looks at consumer bankruptcy filing rates, and attempts to identify some trends and some economic indicators that might predict those filing rates. The $64,000 question (which, adjusted for inflation, today would be the "$484,537 question") is, what causes consumer bankruptcy? Answering that question with any degree of confidence probably is impossible (or might win me the Nobel Prize for Economics if I were able to answer it). Here one must be wary of the causation-correlation trap. What we can do to skirt that trap is to consider the question of what economic indicators are correlated to, and thus may be able to predict, consumer bankruptcy filings.

Much rhetoric has been bandied about over the past quarter century about the consumer bankruptcy crisis, and a tough new bankruptcy bill was passed in 2005 largely on the basis of unproven assumptions and guesses about why that crisis came to pass, and how it might be fixed. This paper seeks to provide some hard data to replace the guesswork. While several studies examined these questions prior to the passage of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA), there remains considerable uncertainty and debate over what economic factors correlate to consumer bankruptcy. This is the first study that takes into account the impact of BAPCPA, both in anticipation of and in the aftermath of its effective date.

Part I lays out the historical filing rate data following the effective date of the Bankruptcy Reform Act of 1978, which began the modern era of "high" consumer bankruptcy filing rates. Part II examines the impact of BAPCPA on filing rates, and finds that the dramatic post-BAPCPA drop in filings may be almost over. Soon, consumer bankruptcy filing rates may return to their pre-BAPCPA levels. Part III then analyzes the possible correlation of numerous plausible economic data sets to non-business bankruptcy filing rates, and finds several such data sets that correlate to non-business filings to a high level of statistical significance. The findings in Part III suggest strongly that if Congress wants to curb consumer bankruptcy filings, it needs to focus on treating root causes – such as the explosion in revolving consumer credit – rather than on symptomatic reactions, and thus BAPCPA may have been misguided.

I. Filing Rates

* This paper would not have been possible but for the immense help and contributions of two people: Professor Robert M. Lawless of the University of Illinois College of Law, and Rebecca M. Tabb, M.Sc. Economics candidate 2006, University College London, J.D. candidate 2009, Stanford Law School.

It is common knowledge that bankruptcy filing rates rose dramatically in the quarter century following the effective date of the Bankruptcy Reform Act of 1978. On the eve of the October 17, 2005 effective date of BAPCPA, non-business bankruptcy filings spiked up sharply. However, in the immediate aftermath of the effective date of BAPCPA, bankruptcy filing rates fell drastically. These filing trends are shown by Chart 1. If one normalizes for population growth, the filing rate chart look very similar, as illustrated by Chart 2. Table 1, in the Appendices, contains the numerical data that support Charts 1 and 2.

Chart 1

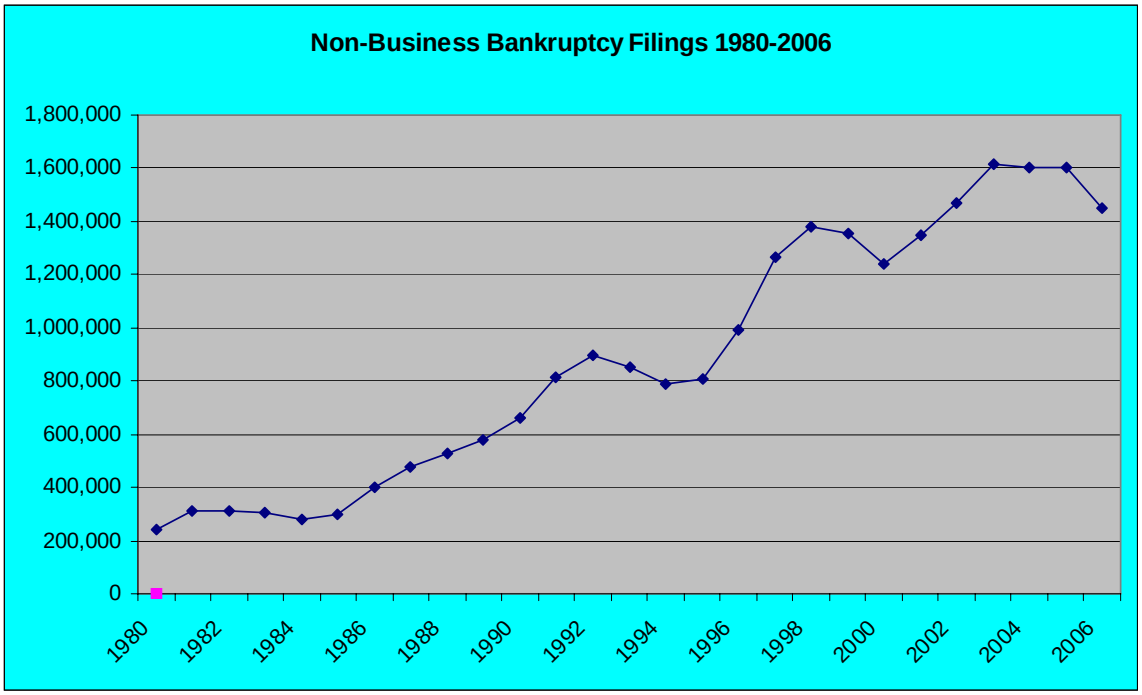
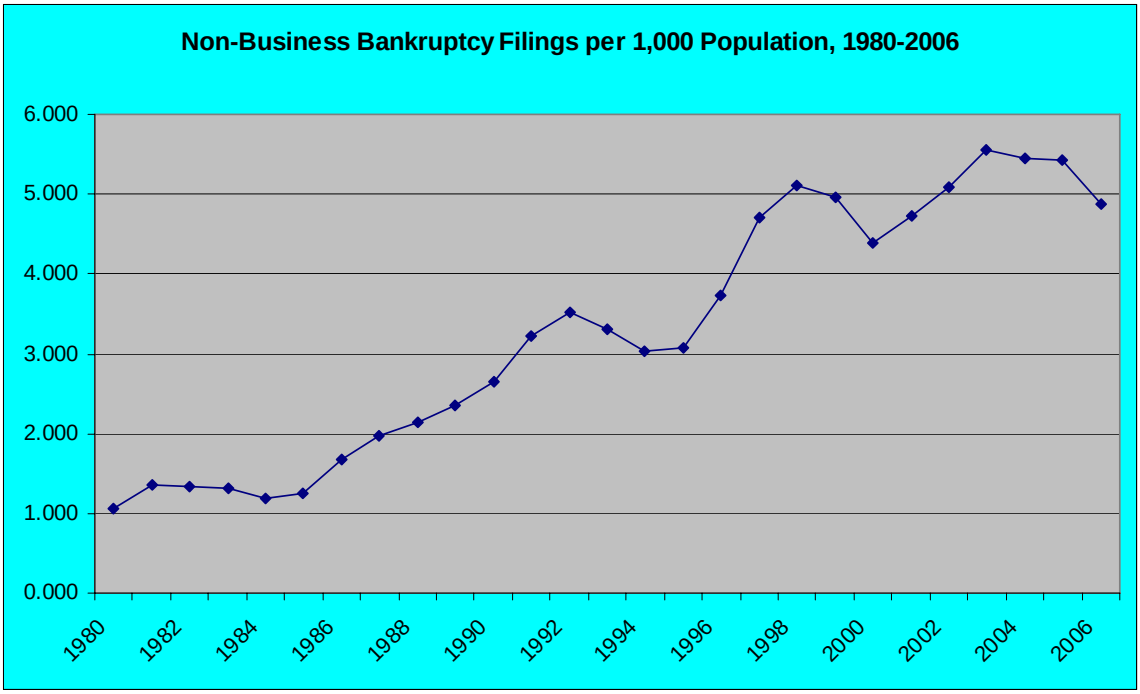
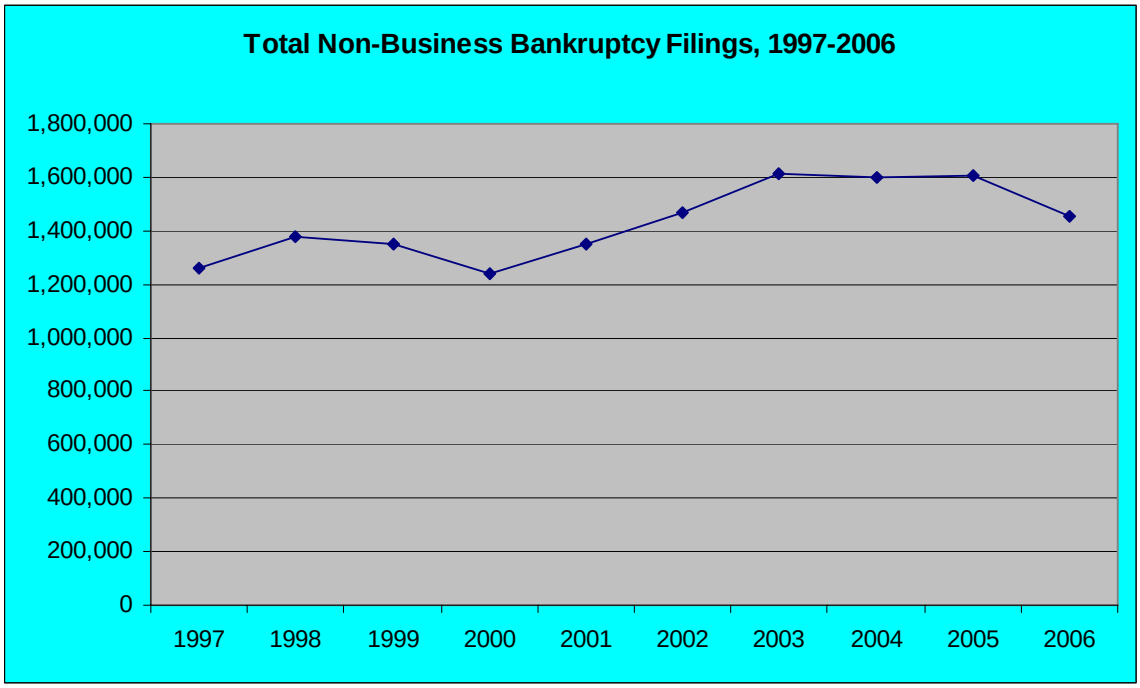


Chart 2



However, the picture of non-business bankruptcy filings is much less dramatic when only the past decade is used, as seen in Chart 3.

Chart 3



As Table 1 shows, 1997 was the beginning of the "modern" era of consistently high non-business bankruptcy filings. That was the first year of more than a million non-business bankruptcy filings, with 1,263,006 such filings, up over 25% from the prior year's previous high of 989,172. 1997 also was the first year that non-business filings surpassed 4.0 per 1,000 population, reaching 4.717 per 1,000.

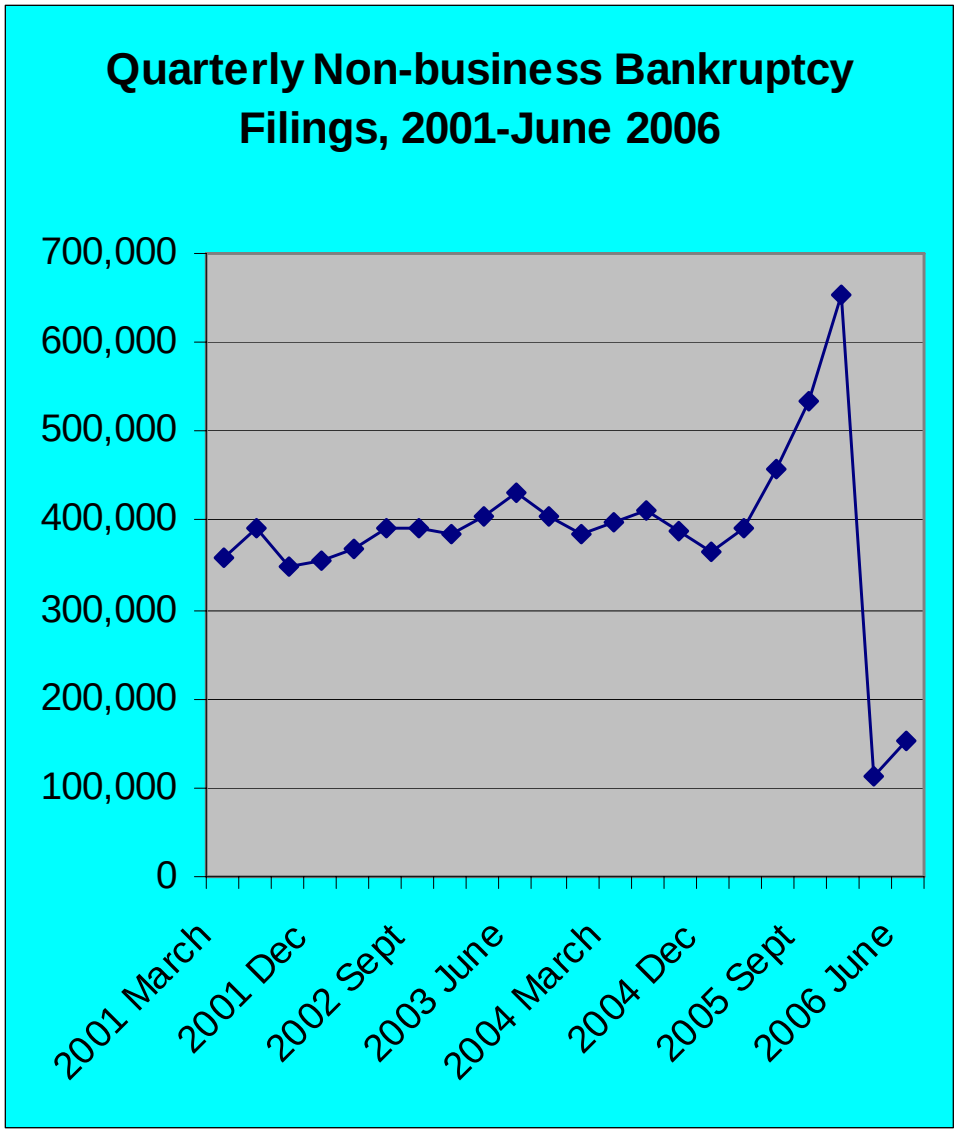
Since 1997, however, while non-business filings still have grown, they have done so at a much, much more modest pace. Where total non-business filings more than quadrupled from 1985 to 1997 (from under 300,000 to 1.26 million), they increased a total of only 15% from 1997 to 2006 (from 1.26 million to 1.45 million). Even more telling, the increase in filings per 1,000 population has increased only *three percent total* from 1997 to 2006, from 4.717 to 4.872 – a minuscule annual growth rate in per capita filings of barely three-tenths of one percent. By contrast, from 1985 to 1997 the filing rate per 1,000 went from 1.252 to 4.717. In the past decade, total non-business filings have ranged from a low of 1,240,012 (in 2000) to a high of 1,613,097 (in 2003), and in the year ending June 30, 2006, fell in the middle of that range, at 1,453,008. Per capita filings in the past decade have ranged from a low of 4.394 per 1,000 (in 2000) to a high of 5.546 (in 2003), and

in 2006 were in the lower part of that range, at 4.872 per 1,000 people. Looking at this filing history, one wonders whether Congress in enacting BAPCPA was responding to a supposed "crisis" almost a decade after the "crisis" had passed

II. The Impact of BAPCPA on Filing Rates

The immediate impact of BAPCPA on filing rates can be seen more readily by examining quarterly filings, as seen in Chart 4 and Table 2 (Appendix). The spike in filings after passage of BAPCPA in April 2005 and before the October 17, 2005 effective date, and the fall-off thereafter, are starkly evident.

Chart 4

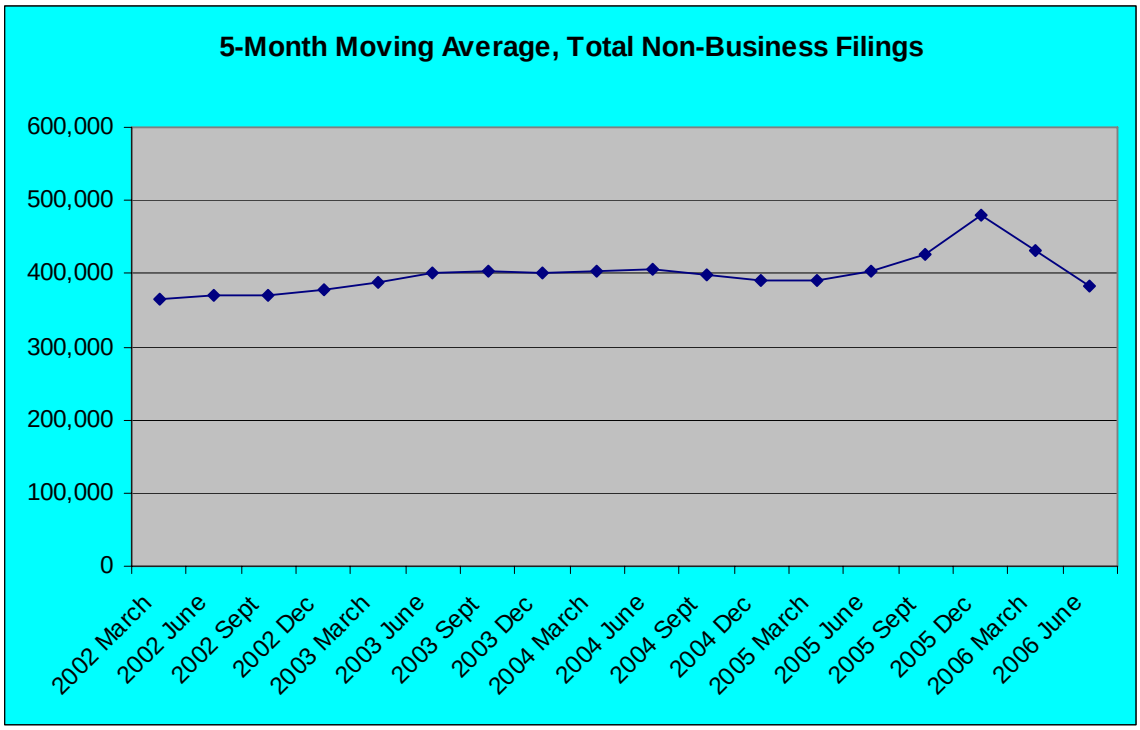


It is interesting to note the amazing consistency of non-business bankruptcy filings for the 17 quarters from the beginning of 2001 through the first quarter of 2005 (the last full quarter before BAPCPA was enacted on April 20, 2005). Non-business filings averaged 386,464 for those 17 quarters, and with remarkably little deviation from the mean. In the three reporting quarters that included the time period after BAPCPA was enacted and before it became effective, by contrast, filings averaged 548,585 – a 42% jump over the average of the prior 17 quarters. And the spike is really even much more dramatic, since the figures for the three "spike" quarters are dampened considerably by the inclusion of about four months of time either pre-enactment (March 1-April 19) or post-effective date (October 17-December 31), the latter period when filings plummeted.

In the two full quarters following BAPCPA's effective date, non-business filings have totaled 263,660, a per-quarter average of just 131,830 – barely a third of the pre-BAPCPA enactment average of 386,464. However, when all of the "aberrant" quarters (those following BAPCPA's enactment and preceding and following the effective date of BAPCPA) are averaged, we see an "average" quarter of 381,883 filings – almost identical to (98.8%) the prior 17-quarter average of 386,464 – but of course with a much higher standard deviation. This data suggests the possibility that the post-BAPCPA plummet in filings may have just about played out – unless fundamental changes have occurred. As Part III. will show, that does not appear to be the case.

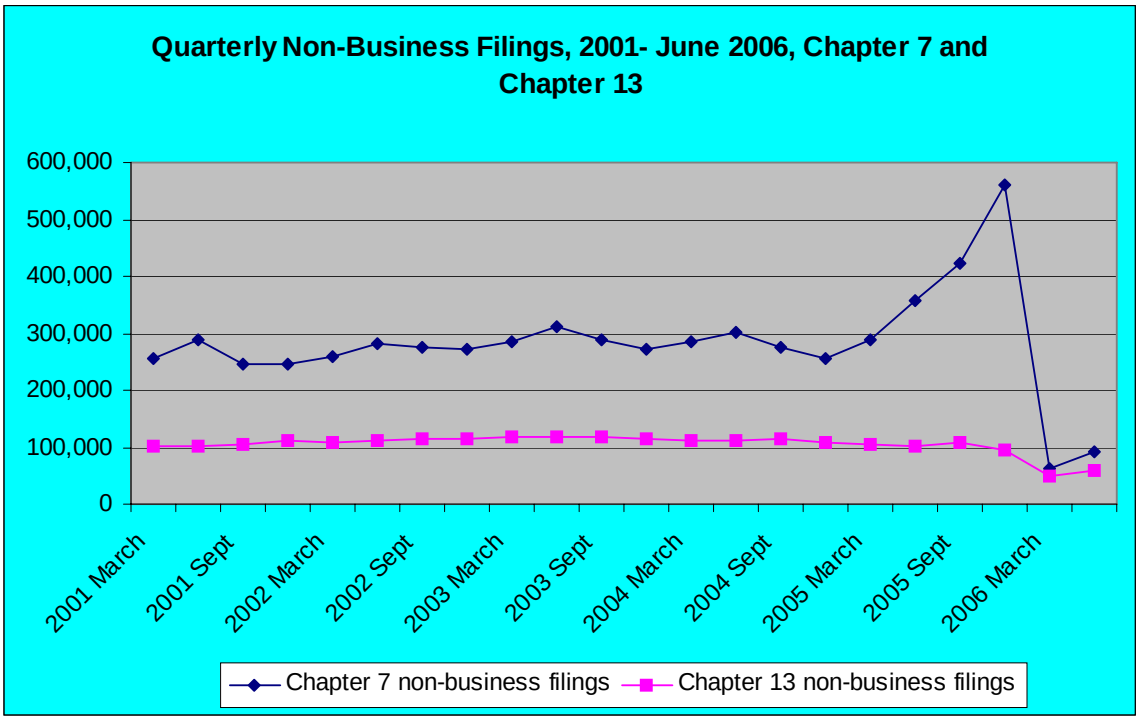
Further evidence of the possibility that the crazy spike/drop in quarterly filings may be nearing the end of its run can be seen by considering the moving average of non-business filings. A five-quarter period is used, to correspond to the 5-quarter aberrant period pre-and post-BAPCPA effective date. The 5-month moving average calculation starts in March 2002, since our computation begins in the first quarter of 2001. Recall that the 5-month average for the "aberrant" pre- and post-BAPCPA period (for quarters ending June 2005 through June 2006) was 381,883. That 5-month average is just slightly less than (98.2%) the mean 5-month moving average of 388,895 total non-business filings for the pre-BAPCPA enactment world – those quarters from March 2002 through March 2005. These 5-month moving averages are displayed in Chart 5, and in Table 2.

Chart 5



H o
w does the picture look when non-business filings are broken down by chapter (7 and 13)? As Chart 6 below and Table 2 demonstrate, in examining the quarterly non-business bankruptcy filings in chapter 7 and chapter 13, it is evident that both the pre-BAPCPA-effective-date spike and the post-BAPCPA fall-off in filings were much more drastic in chapter 7 than in chapter 13. This of course is hardly surprising, since the reality – and the perception – was that BAPCPA was making it much more difficult for consumer debtors to obtain chapter 7 relief. Little wonder, then, that anyone who was considering filing chapter 7 would rush to the courthouse to file before BAPCPA supposedly brought down the curtain of ready chapter 7 access. For over four years, from the start of 2001 through the first quarter of 2005 (i.e., just before BAPCPA was enacted on April 20, 2005), chapter 7 filings were remarkably constant, averaging 275,297 per quarter, with a very modest deviation. In the three reporting-period quarters in which consumer debtors had a chance to file post-BAPCPA enactment and pre-effective date, by comparison, chapter 7 filings averaged 446,503 – *62% higher* than the previous 17 quarters. It is little wonder, then, that the total chapter 7 non-business filings for the two quarters following the BAPCPA effective date were 154,924, or an average of 77,462 per quarter – just 28% of the one-quarter average of 275,297 for the 17 quarters preceding BAPCPA's enactment. If the deviant five pre-and post-BAPCPA quarters are averaged, however, we see a quarterly average of 298,886 – slightly higher than the preceding 275,297 average, but only by 8.5%. While the consideration above of all non-business filings indicated that the run of below-average filings might be largely over, this data on chapter 7 filings suggests the possibility that chapter 7 filings might remain slightly below historic (*viz.*., pre-BAPCPA enactment) levels for another quarter – again, unless some fundamental change has occurred.

Chart 6



In looking more closely at chapter 13 filing trends, the first fact of note is that (unlike chapter 7 filings, which spiked) there was virtually no change at all in chapter 13 non-business filings in the time period after enactment of BAPCPA in April 2005 up to the effective date in October 2005. This "non-spike" can be seen in Chart 6 above. Chapter 13 non-business filings for the quarters ending June 2005 and September 2005 were 102,107 and 109,833, respectively, an average of 105,925. For the 17 quarters from March 2001 through March 2005 (the pre-BAPCPA world), the chapter 13 non-business filing average was 110,937 – very close to (just 4.7% higher than) the post-enactment, pre-effective-date average of 105,925 for chapter 13 non-business filings. Indeed, even in the quarter ending December 2005, which included 2 ½ months *following* the October 17, 2005 effective date, chapter 13 non-business filings were down only slightly, to 93,714.

It has only been in 2006 that chapter 13 filings have gone down significantly. For the two quarters ending March 2006 and June 2006, chapter 13 non-business filings were 49,314 and 59,170, respectively, an average of 54,242 – almost exactly half of the 110,937 quarterly average for the pre-BAPCPA world. The drop, however, in chapter 13 filings has been much less than in chapter 7, where the post-BAPCPA drop, to date, has been to barely a quarter of historic levels. If the five quarters beginning with BAPCPA's enactment are examined, we see an average quarterly chapter 13 filing rate of 82,809, approximately three-fourths of the prior average of 110,937.

Looking at this data, one can speculate about some possible explanations for the recent trends in the chapter 13 filing rate. As noted above, the dramatic jump in chapter 7 is explainable largely by consumer debtors trying to take advantage of the old, more favorable law. So, too, it is likely that a substantial number of putative chapter 13 filers (i.e., those who absent the enactment of BAPCPA might have filed chapter 13 some time from the fourth quarter of 2005 on) moved up their

bankruptcy filings to beat BAPCPA's effective date. While most of the press has gone to the "tough new chapter 7," so too did BAPCPA make chapter 13 harsher for consumer debtors (especially those above the state median income). This "race to the courthouse" idea for chapter 13 would help explain the substantial decline in the post-BAPCPA chapter 13 filing rate (down to half of prior levels), but does not explain why the pre-BAPCPA effective date rate did not correlatively increase, as was true in chapter 7. Rather, the total for the last five quarters in the chapter 13 rate is down about 25% from prior levels (from 110,937 per quarter to 82,809). Thus, chapter 13 filings the last five quarters are off by 28,128 per quarter.

Where did those chapter 13 filers go? To chapter 7, apparently – where for the last five quarters non-business filings are up 23,589 per quarter. Overall, recall that average non-business filings for the last five quarters (since BAPCPA was enacted) are down by only 4,581 per quarter, which is just 1.2%. However, there has been a shift in the *composition* of the filings, as between chapters 7 and 13. Actually, there have been two distinct distributional shifts, in radically opposite directions. Before BAPCPA was enacted, the chapter 7/13 split was approximately 71%—29%, as seen on the next page in Chart 7. Overall, in the five quarters since the enactment of BAPCPA the split has moved to 78%—22%, as seen in Chart 8. That is, since BAPCPA was enacted, *total* non-business filings are almost exactly the same as before, but there has been some *substitution* effect of chapter 7 filings for chapter 13 filings. But that statement, standing alone, may be misleading, since it fails to highlight two distinct time periods. In time period number one, which is comprised of the three quarters that include the post-enactment, pre–effective date world (that is, the last three quarters of 2005), the chapter 7/13 split was 81%—19% (reflecting quarterly averages of 446,503 and 101,854, respectively), as seen in Chart 9. Thus, the chapter 7 percentage went up significantly. By contrast, Chart 10 shows that in the two complete quarters since the BAPCPA effective date (the first two quarters of 2006), non-business chapter 7 filings totaled 154,924, while there were 108,484 chapter 13 non-business filings, a chapter 7/13 split of just 59%-41%. Thus, in this second time period, the percentage of chapter 7 filings has gone down substantially.

Chart 7

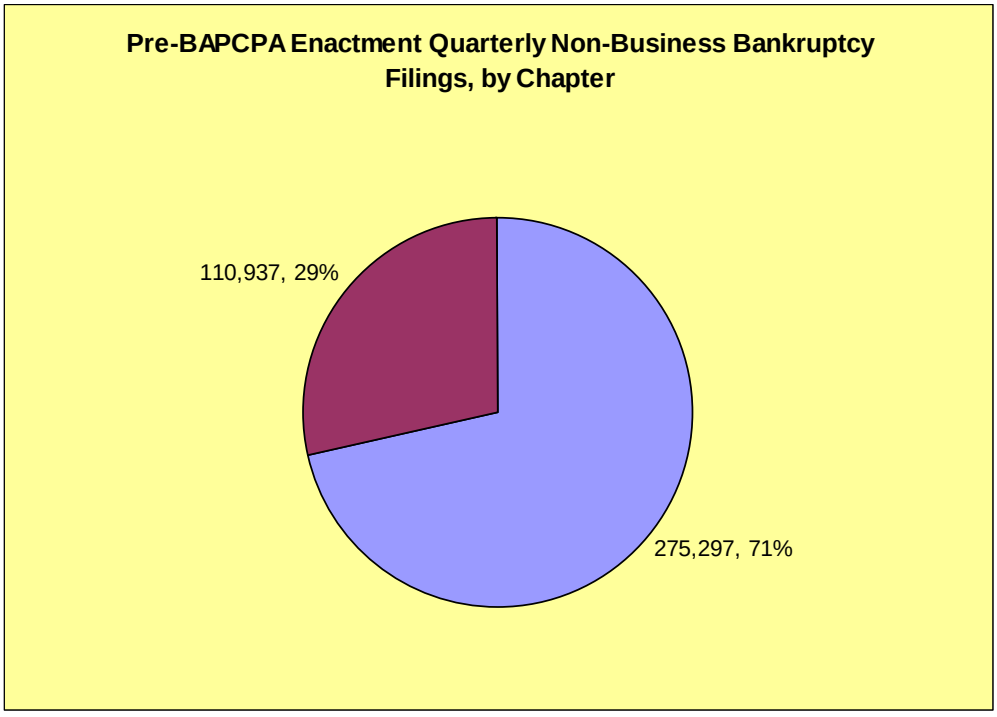


Chart 8

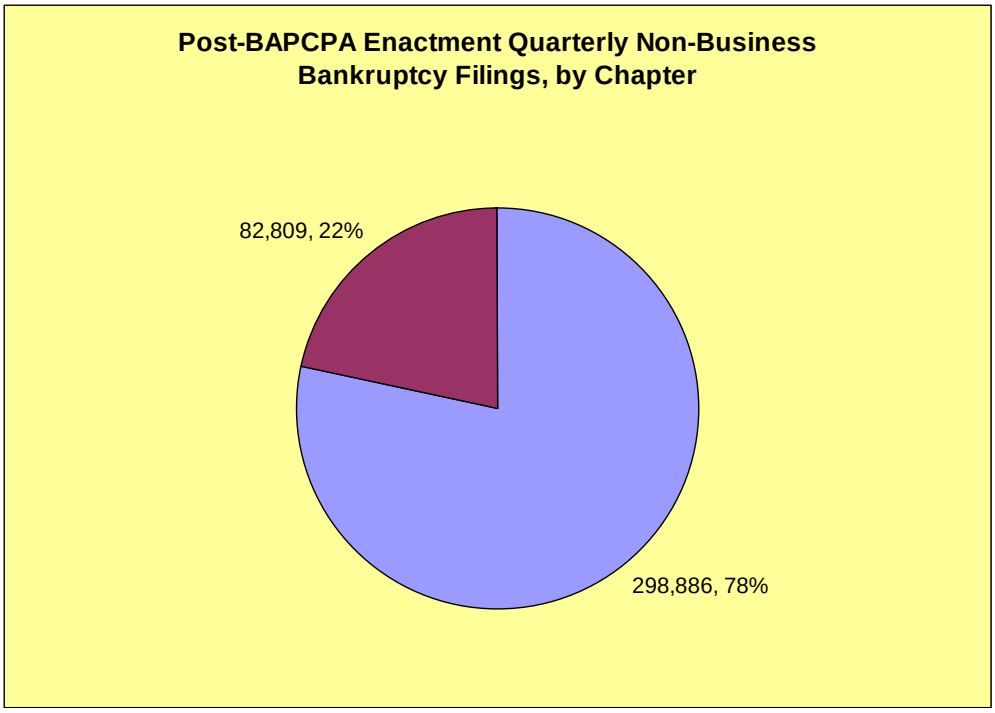

Post-BAPCPA Enactment Quarterly Non-Business Bankruptcy Filings, by Chapter
82,809, 22%
298,886, 78%

Chart 9

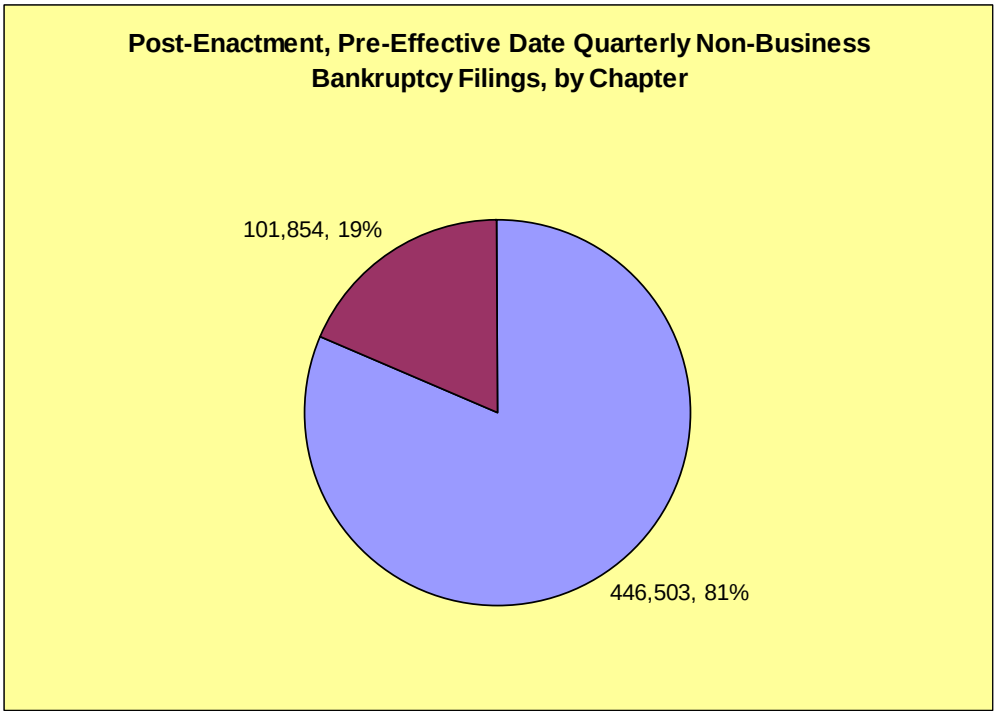
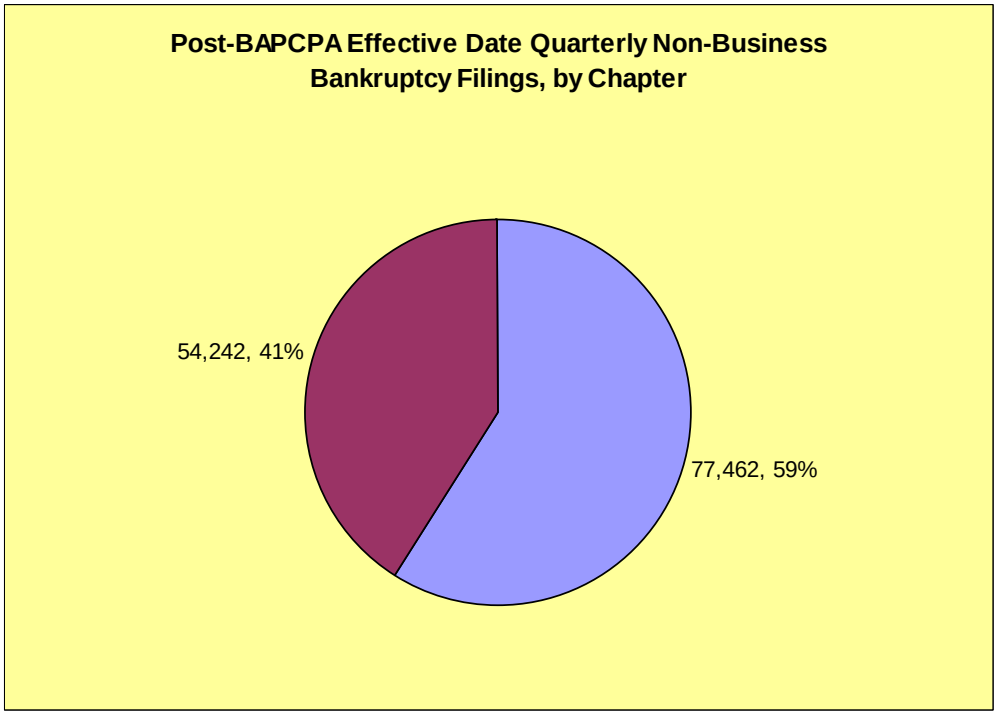


Chart 10



While Congress probably would be delighted if chapter 13 filings continued at over 40% of non-business filings, as reflected by Chart 10, one may wonder whether such will continue to be the case. Remember from Chart 8 that only 22% of all non-business filings have been under chapter 13 since President Bush signed BAPCPA into law on April 20, 2005, a percentage which is actually below the 29% that existed before enactment, as seen in Chart 7. Taken fairly, these statistics probably reflect little more than the far greater rate of filing *acceleration* from the post-BAPCPA to the pre-BAPCPA effective date in chapter 7 as compared to chapter 13 cases. In addition, it seems plausible that a small percentage of prospective chapter 13 filers chose instead to file chapter 7 prior to October 17, 2005, while the prior more generous chapter 7 option was available. Where the chapter 7/chapter 13 ratio will go in the future is difficult to predict. By the end of 2006, or perhaps more accurately by the end of the first quarter of 2007, we should have a better sense of that trend, since by then it is likely that virtually all of the "accelerated" pre-BAPCPA filers will have been accounted for.

Before moving to a consideration of economic indicators as compared to the bankruptcy filing rate, let us recap some findings from the data on bankruptcy filing statistics:

1) bankruptcy filing rates have grown dramatically since the Bankruptcy Code went into effect, with total non-business filings increasing six-fold from 1980 to 2006, and filings per 1,000 people increasing almost five-fold in that time;

2) most of that increase occurred from 1985 to 1997, when filings quadrupled; since 1997, by comparison, filings are up only 15% total, and are up just over three percent when adjusted for population growth;

3) overall non-business bankruptcy filings went up dramatically in anticipation of BAPCPA's effective date, especially in chapter 7, AND

4) overall non-business filings are down substantially since BAPCPA's effective date, BUT, taking these two points together, we see that

5) the *total* filings since BAPCPA was *enacted* are virtually identical to prior filing rates, which were remarkably stable, which suggests that soon bankruptcy filings soon may revert to historic levels;

6) chapter 7 non-business filings had a higher "beta" than chapter 13 filings; that is, they went up more prior to BAPCPA's effective date and went down more afterwards than was the case for chapter 13 filings; indeed, chapter 13 filings did not change on the eve of BAPCPA; and

7) the ratio of chapter 7 to chapter 13 filings has shifted substantially in light of BAPCPA, with a pre-effective date increase in the chapter 7 ratio; a post-effective date decline in the chapter 7 percentage, and a slight increase in the chapter 7 percentage since the enactment of BAPCPA.

III. Bankruptcy Filing Trends and Economic Indicators

This part of the paper will examine the correlation of the following economic indicators to the non-business bankruptcy filing rate (per 1,000 population). I have chosen various sets of

economic data that might plausibly be thought to be correlated to the rate of consumer bankruptcy filings. Where applicable, I have adjusted for inflation, using the CPI (Consumer Price Index), 1982-1984 = 100, and have adjusted for population growth, calculating pertinent data per 1,000 population. The data considered is:

1) Total consumer credit outstanding (Charts 11 and 12);[1]
2) Revolving consumer credit (Charts 13 and 14);[2]
3) Non-revolving consumer credit (Chart 15);[3]
4) Revolving credit as a percentage of total consumer credit (Chart 16);
5) Personal, non-farm mortgage debt (or "home" mortgages) (Charts 17 and 18);[4]
6) Sum of total consumer credit and home mortgage debt (Charts 19 and 20);
7) Ratio of total consumer credit to personal income (Chart 21);[5]
8) Ratio of "total debt" (i.e., total consumer credit + home mortgage debt) to personal income (Chart 22);
9) Credit card charge-off rates (Chart 23 and 24);[6] and
10) Credit card delinquency rates (Chart 25 and 26).[7]

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[1] The Federal Reserve publishes consumer credit data as Statistical Series G. 19, at http://www.federalreserve.gov/releases/g19/hist/ (last visited Sept. 8, 2006). The Fed in Series G. 19 states that "Consumer Credit Outstanding" "Covers most short- and intermediate-term credit extended to individuals, excluding loans secured by real estate." See http://www.federalreserve.gov/releases/g19/current/ at note 1 (last visited Sept. 8, 2006). It is the sum of revolving and non-revolving consumer credit.

[2] See note 1, *supra*, for the G. 19 statistical reference. "Revolving" credit is treated by the Fed as synonymous with "open-end credit," which it defines as: "A line of credit that may be used repeatedly up to a certain limit. (Also called a charge account or revolving credit.)." See http://www.frbsf.org/tools/glossary/glossReg.html#R. Credit cards are the main type of revolving credit used by consumers.

[3] See note 1, *supra*, for the G. 19 statistical reference. According to the Fed, nonrevolving credit "Includes automobile loans and all other loans not included in revolving credit, such as loans for mobile homes, education, boats, trailers, or vacations. These loans may be secured or unsecured." See http://www.federalreserve.gov/releases/g19/current/ at note 4 (last visited Sept. 8, 2006).

[4] Mortgage debt data is found in the Federal Reserve's *Flow of Funds Accounts of the United States: Annual Flows and Outstandings*; the most recent data is on page 85 of the Report found at: http://www.federalreserve.gov/Releases/z1/Current/annuals/a1995-2005.pdf (last visited Sept. 8, 2006).

[5] Consumer debt = Total consumer credit outstanding (see n. 1 *supra*). The data for personal income is published by the Bureau of Economic Analysis at: http://www.bea.gov/bea/dn/home/personalincome.htm (last visited Sept. 8, 2006).

[6] Credit card charge-off rates are published by the Federal Reserve (starting with 1985) and can be found at http://www.federalreserve.gov/releases/chargeoff/default.htm (last visited Sept. 8, 2006).

[7] See *id.* for credit card delinquency rates. The Fed's statistics begin in 1991.

Table 7 (Appendix) contains the statistical data for these ten independent variables, with the non-business bankruptcy filing rate as the dependent variable. In addition, one-year and two-year time lags from the independent to the dependent variable are calculated for several of the categories – total consumer credit, revolving consumer credit, home mortgage debt, and total debt. Testing at a 95% confidence level, statistically significant correlations to the non-business bankruptcy filing rate were found for every independent variable except for credit card delinquencies. Correlation coefficients of greater than 90% were found for six of the independent variables – total consumer credit, revolving consumer credit, revolving credit as a percentage of total credit, home mortgage debt, total debt, and the ratio of total debt to personal income. Revolving consumer credit showed a correlation coefficient of .974. It is important to bear in mind that this data shows only that these economic data sets likely are *correlated* to non-business bankruptcy filings; it does not mean that these factors *cause* consumer bankruptcy.

Table 3 (Appendix) sets out the data for consumer credit (total, revolving, and non-revolving), which is shown visually in Charts 11-16. Recall from Table 7 discussed above that each of these three independent variables correlates with statistical significance to the non-business bankruptcy filing rate. For total consumer credit, the correlation is especially close when a two-year time lag (Chart 12) is used. This is partially consistent with the findings of Professor Robert Lawless in a forthcoming paper, *The Paradox of Consumer Credit*. Professor Lawless, examining filing rates from 1933 to 2004, found that "[i]n the long run, increasing consumer credit leads to increased bankruptcy filings."[8] However, he also found that in the short term, increased consumer credit actually led to a decrease in bankruptcy filings (thus the "paradox"). This paper did not find a similar negative short-term correlation for the period from 1980-2006., but instead found that increased total consumer credit correlated with increased non-business bankruptcy filings with no time lag, a one-year time lag, and a two-year time lag.

Chart 11

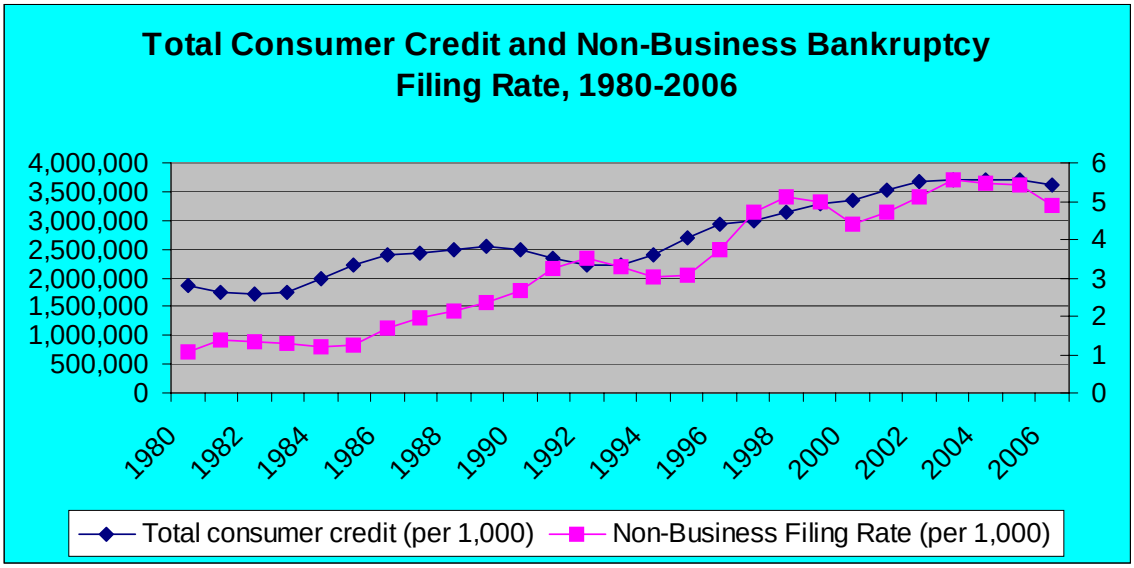
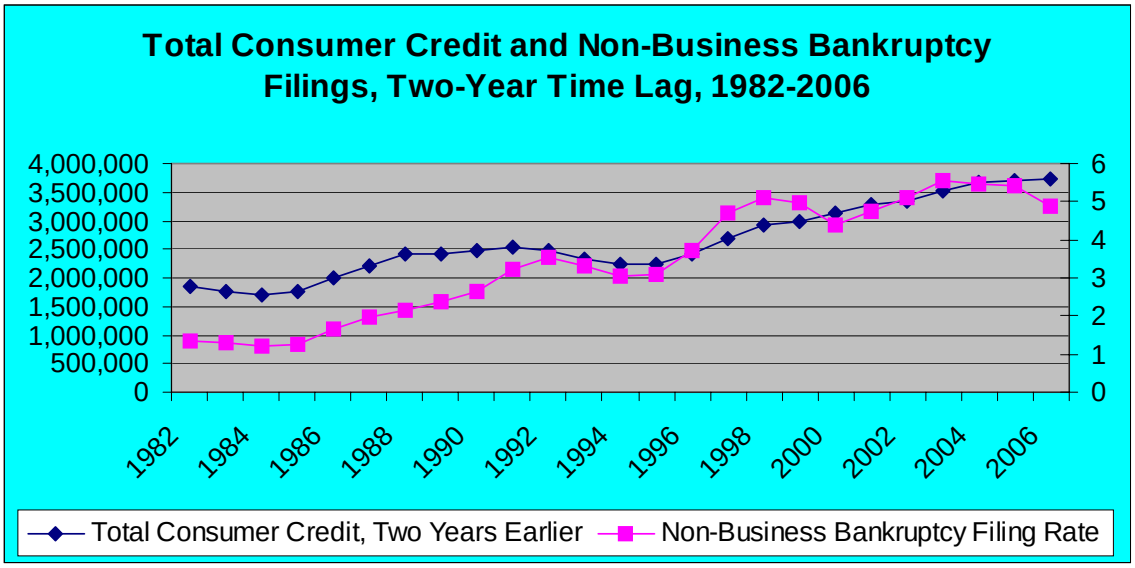


Chart 12

[8] Robert M. Lawless, *The Paradox of Consumer Credit*, 2006 U. Ill. L. Rev., at 24 (forthcoming).



How does the picture look when the two components of total consumer credit (revolving and nonrevolving credit) are considered separately and compared to the non-business bankruptcy filing rate? Consider revolving credit (typically credit card debt) first.

Chart 13

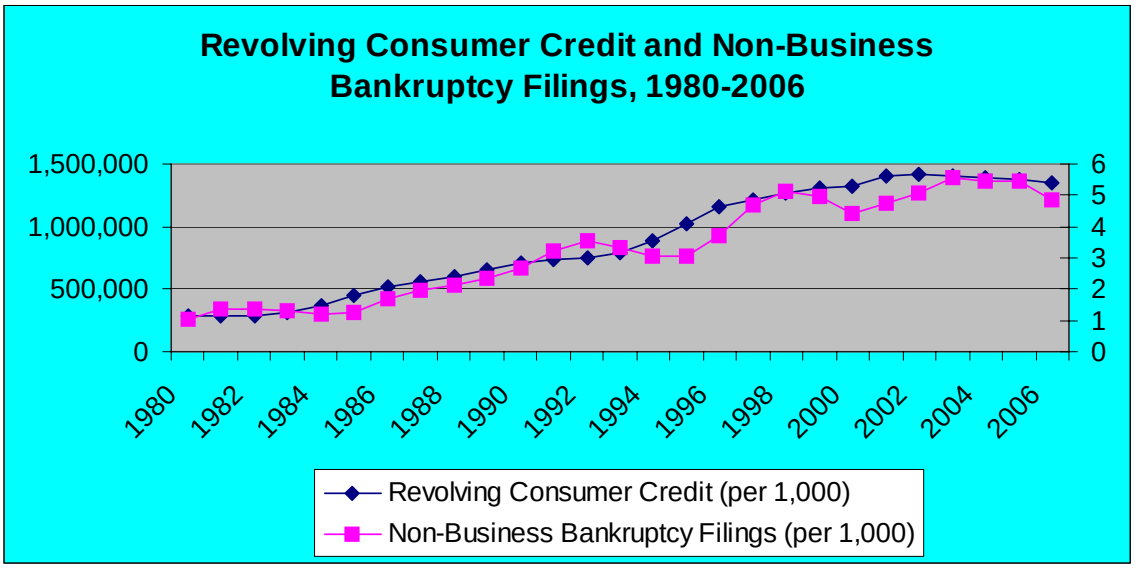
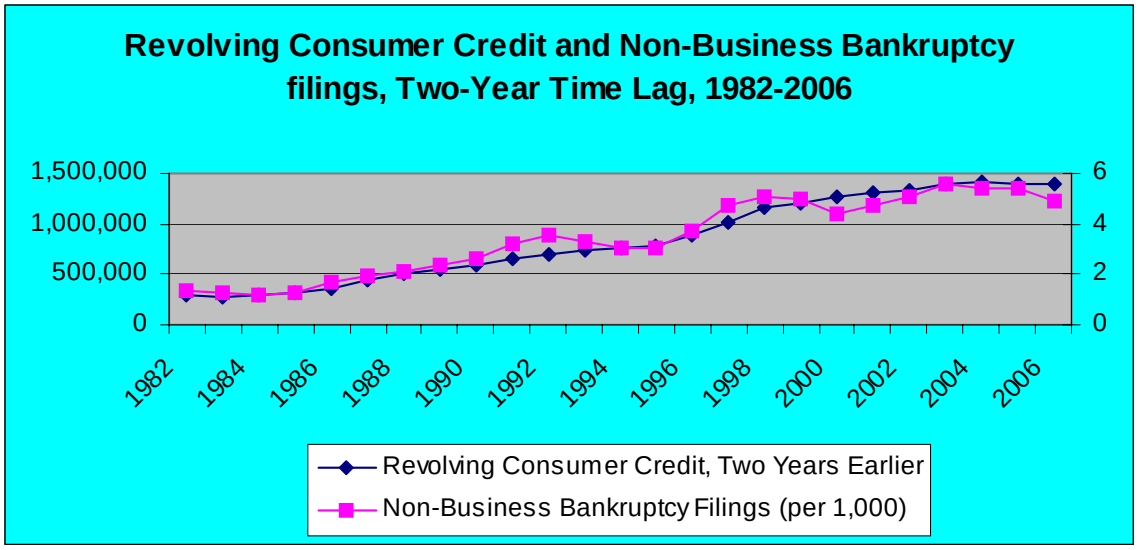


Chart 13 reveals an extremely close relationship between the amount of revolving consumer credit and the non-business bankruptcy filing rate for the past quarter century. Table 7 indicates that this visual picture is not misleading: revolving consumer credit has a correlation coefficient with

non-business bankruptcy filings of over 97%, and correlates with a P value of less than 0.01. If a time lag (two years) between the revolving credit and the non-business filings is used, a similar very close relationship exists. Chart 14 presents that data.

Chart 14

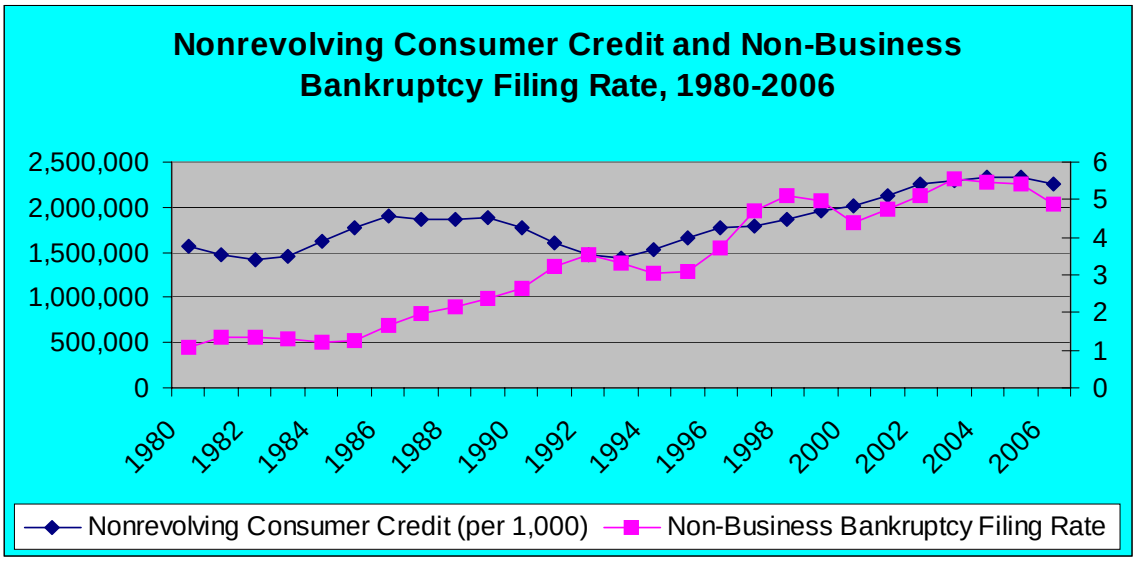


Given that revolving credit is principally credit card debt, Charts 13 and 14 indicate that the enormous increase in credit card debt in the past quarter century may have helped trigger the correlative jump in, and closely predicts the rate of, non-business bankruptcy filings. This conclusion suggests that changing the bankruptcy law to make it harder for consumer debtors – as Congress did in 2005 – may be a fools' errand. If revolving credit continues to grow, or even to remain stable, then this data suggests that non-business bankruptcy filings are likely to follow in like measure (unless BAPCPA can somehow change history). The post-BAPCPA drop in filings is likely to end, and soon, given the amount of outstanding revolving consumer credit. Thus, if Congress really wants to slow or even reverse the increase in bankruptcy filings, the real target should be the underlying cause – credit card debt – and not the bankruptcy law itself.

If one believes that the close relationship between revolving consumer credit and non-business bankruptcy filings is likely to persist, the logical question then would be, what will happen to the amount of revolving credit in the future? Looking at Table 3 and Charts 13 and 14, we can see that the amount of revolving consumer credit has remained fairly constant since 1999, after more than quadrupling from 1983 to 1998. Each year since 2002, revolving credit has gone down by very slight amounts. We may be approaching a market saturation point; by this time, there may be few untapped candidates for revolving consumer credit out in the marketplace. At the very least, it seems unlikely that we ever again will see the sort of explosion in revolving credit that occurred from 1983 to 1998 – and correlatively, also unlikely that we ever again will see the sort of exponential increase in consumer bankruptcy filings that occurred during that same time period. Recall that the rate of non-business filings has hardly changed at all in the past decade – in 1997, it was 4.717 per 1,000 population, and in the year ending June 2006, it was 4.872 per 1,000. Bottom line: bankruptcy filings will return to close to pre-BAPCPA levels, and soon, but will probably stay in that range for some years to come.

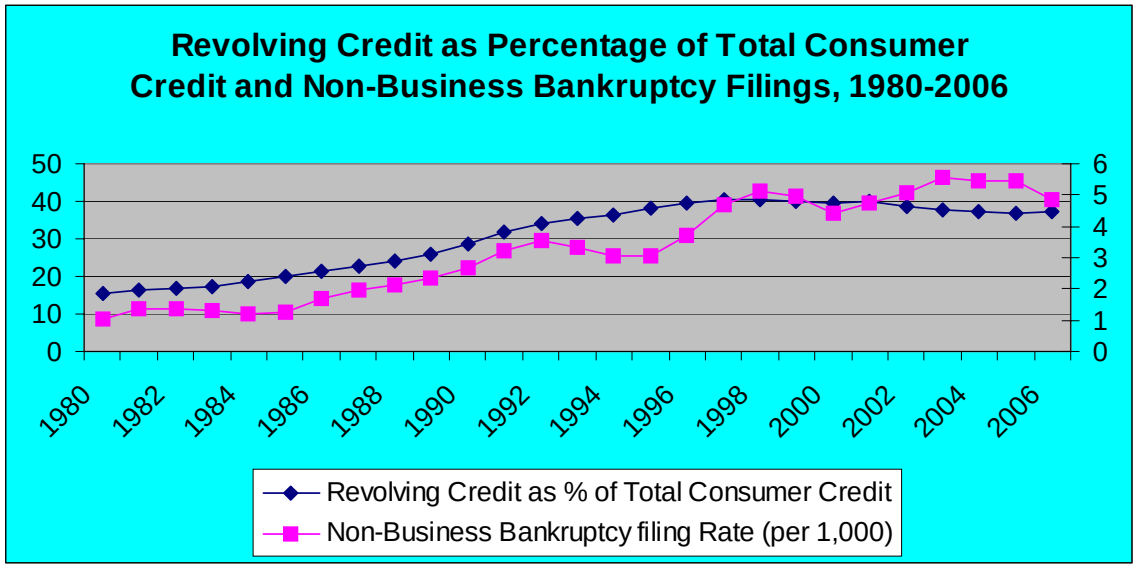
How do the data for non-revolving credit correlate with non-business bankruptcy filings? According to Chart 15 and Table 7: they correlate, but not as well. The correlation coefficient is only 72%, but the correlation is statistically significant. Chart 15 suggests that the mapping of nonrevolving credit and non-business bankruptcy filings has been closer since 2001 than it was before..

Chart 15



Given that revolving credit is such a good indicator of filing rates, and nonrevolving credit less so, I examine whether an even better indicator would be the percentage of revolving credit of the total amount of consumer credit. As Chart 16 and Table 7 show, this percentage is correlated with statistical significance with non-business bankruptcy filings, but not quite as closely as the total amount of revolving credit. So, the better measure remains total revolving credit.

Chart 16

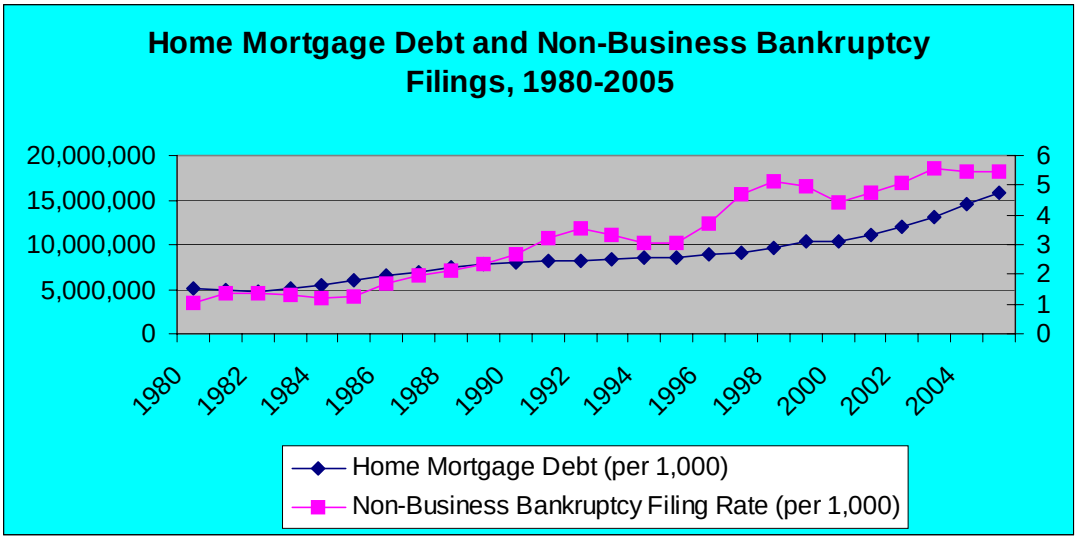


The debt measures considered so far exclude real estate debt. Real estate debt burdening consumers, however, far exceeds non-real estate debt (as a comparison of Tables 3 and 4 shows, by a factor of four, in fact), and thus a full consideration of the possible relationship of debt to bankruptcy should account for home mortgage debt. Table 4 includes data for personal, non-farm mortgage debt (i.e., "home" mortgages), and then adds together the data for total consumer credit (from Table 3) and home mortgage debt to get a total debt measure. As before, all data is adjusted for inflation and for population. Data for home mortgage debt only goes through 2005. The data is then compared to the non-business bankruptcy filing rate in Charts 17-20. For both data sets, a zero-time-lag chart and a two-year time-lag chart is included.

According to Table 7, both of these independent variables – home mortgage debt standing alone, and home mortgage debt combined with total consumer credit – correlate positively and in a statistically significant way with the rate of non-business bankruptcy filings. The correlation coefficient for home mortgage debt is 92% and for total debt (consumer plus mortgage) is just over93%. Prior studies likewise have found mortgage debt to be correlated to bankruptcy filings.[9] According to Table 7, the correlations hold whether a zero-time-lag (Charts 17 and 19), one-year time lag, or two-year time lag (Charts 18 and 20) is used.

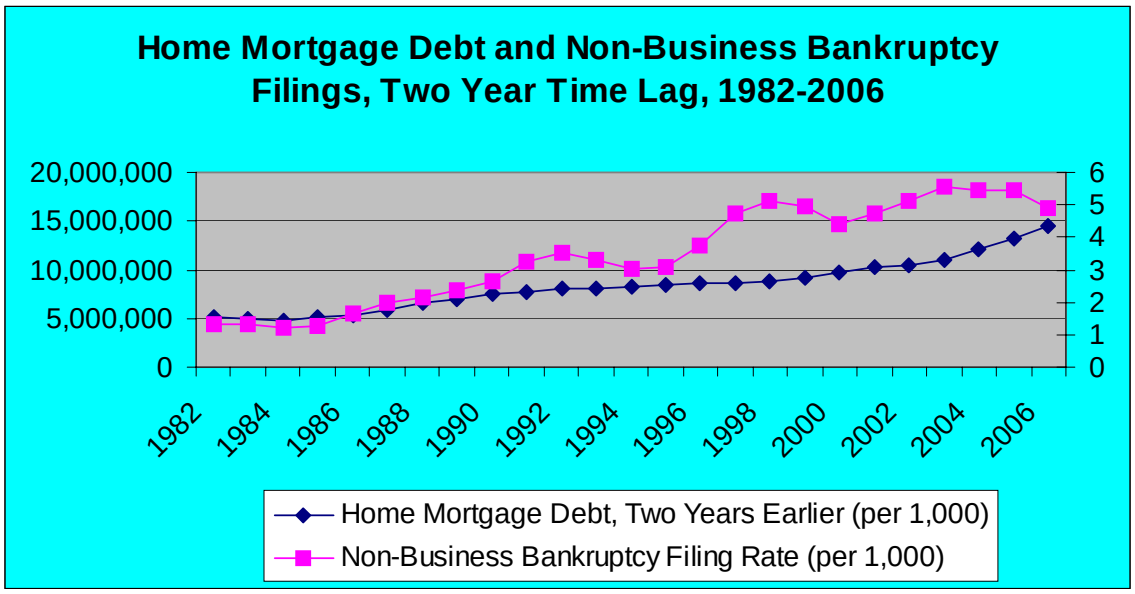
This data suggests that non-business bankruptcy filings may rise to above pre-BAPCPA levels, contrary to the predictions following from a consideration of non-real estate consumer debt alone, as discussed above. Why? Table 4 shows that home mortgage debt grew by more than 50% from 2000 to 2005. It will be intriguing to see what happens to consumer bankruptcy filings, as the new millennium has heralded a much different debt era than the 1980s and 1990s. Where non-real estate consumer credit (and especially revolving credit) jumped up dramatically in the 1980s and 1990s (and consumer bankruptcy filings spiked in tandem), the 2000s have been a time of tremendous growth in home mortgage debt, but of slight decreases in consumer credit. Indeed, home mortgage debt grew slightly more from 2000 to 2005 than it did from 1980 to 2000! Note from Table 7, though, that the regression coefficient for home mortgage debt as an independent variable is fairly small (0.494418), so the non-business bankruptcy filing rate increase may be relatively modest as well.

Chart 17



[9] See Robert M. Lawless, *The Paradox of Consumer Credit*, at 2, 5-6, 20-21, 2006 U. Ill. L. Rev. (forthcoming), and studies cited therein.

Chart 18



Charts 19 and 20 present the data for total debt, *viz.*, total consumer credit *plus* home mortgage debt, as compared with non-business bankruptcy filings. Very similar relationships are found as pertained for home mortgage debt standing alone.

Chart 19

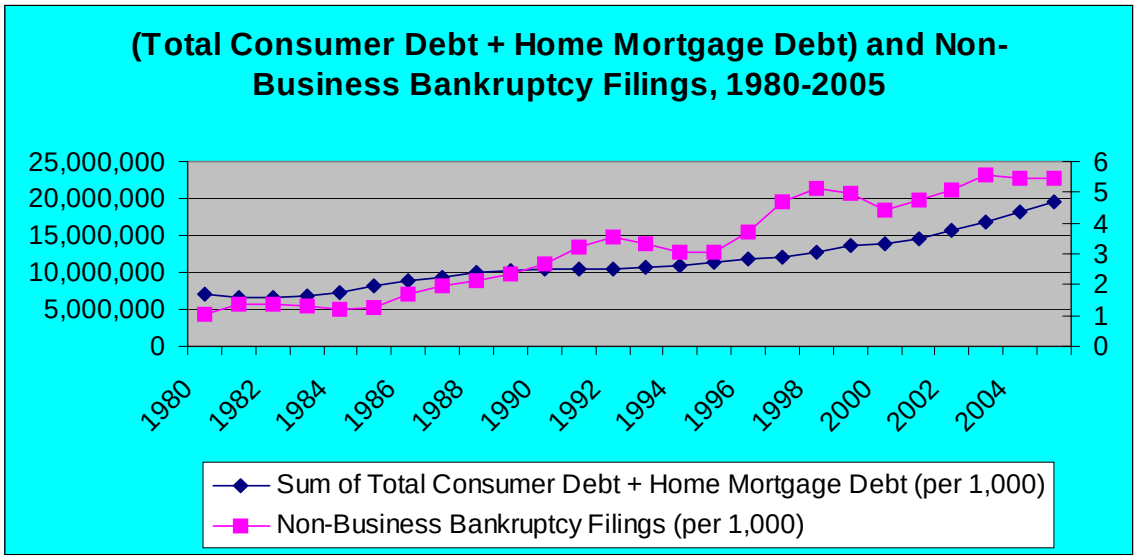
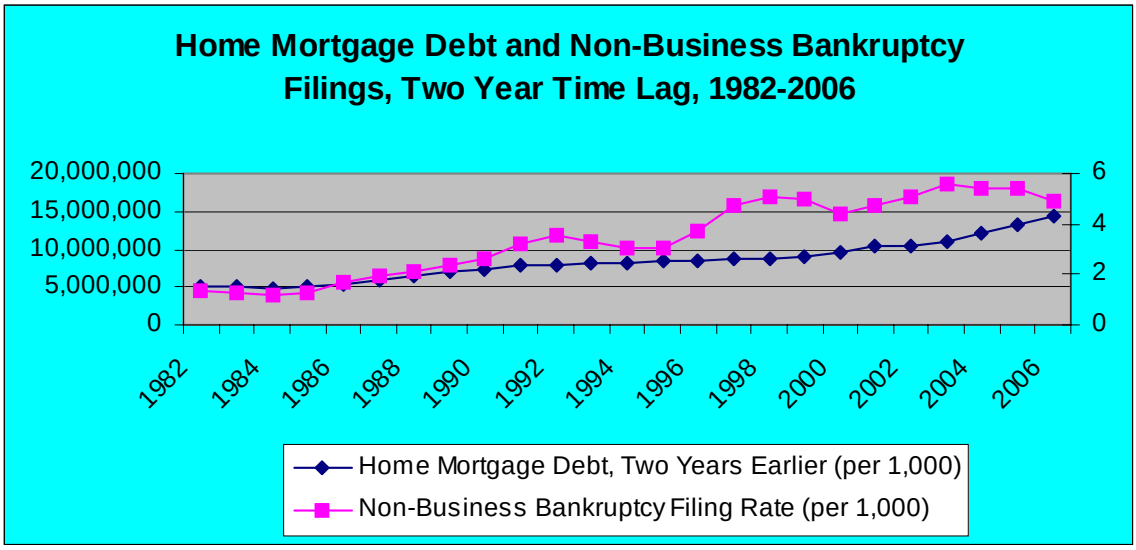


Chart 20



Some have posited that non-business bankruptcy filings might be correlated with the "debt to income" ratio. Intuitively, this idea makes sense – as the percentage of a debtor's income that must be devoted to debt service increases, that debtor is more likely to encounter financial distress. Table 5 contains data for the percentage of total consumer credit as compared to personal income and for the same comparison using instead the total of consumer plus mortgage debt. A statistical study of filing rates from 1947 through 1990 found that "the debt to income ratio is significant and positive."[10] Table 7 shows that both of the debt to income independent variables considered in this paper – total consumer credit alone, and total consumer credit plus home mortgage debt – are positively correlated with statistical significance to the non-business bankruptcy filing rate. The correlation coefficient for the sum of total consumer credit and home mortgage debt is slightly higher than for total consumer credit alone (about 90%, versus 84%). The data is presented visually in Charts 21 and 22, on the next page.

[10] Jagdeep S. Bhandari & Lawrence A. Weiss, *The Increasing Bankruptcy Filing Rate: An Historical Analysis*, 67 Am. Bankr. L.J. 1, 7 (1993).

Chart 21

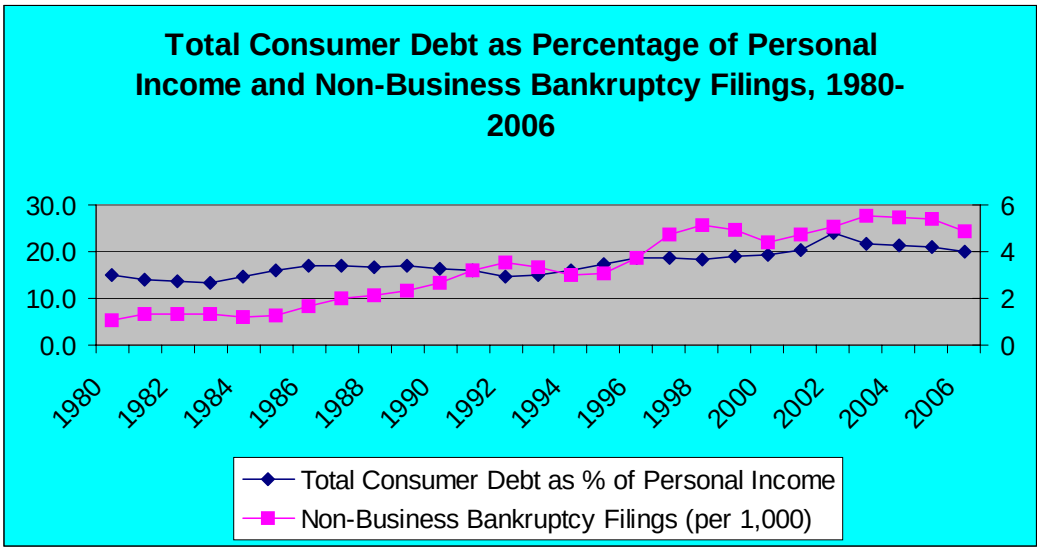
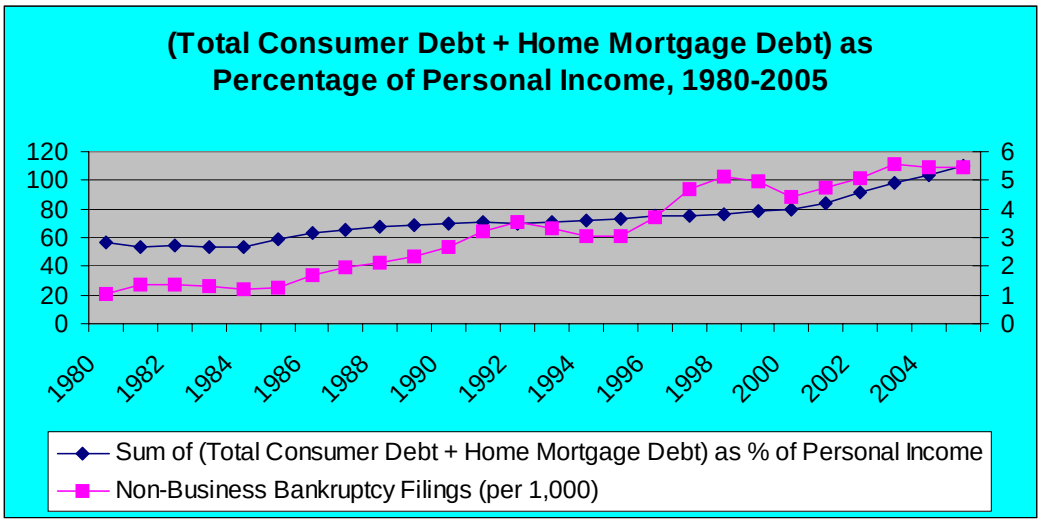


Chart 22



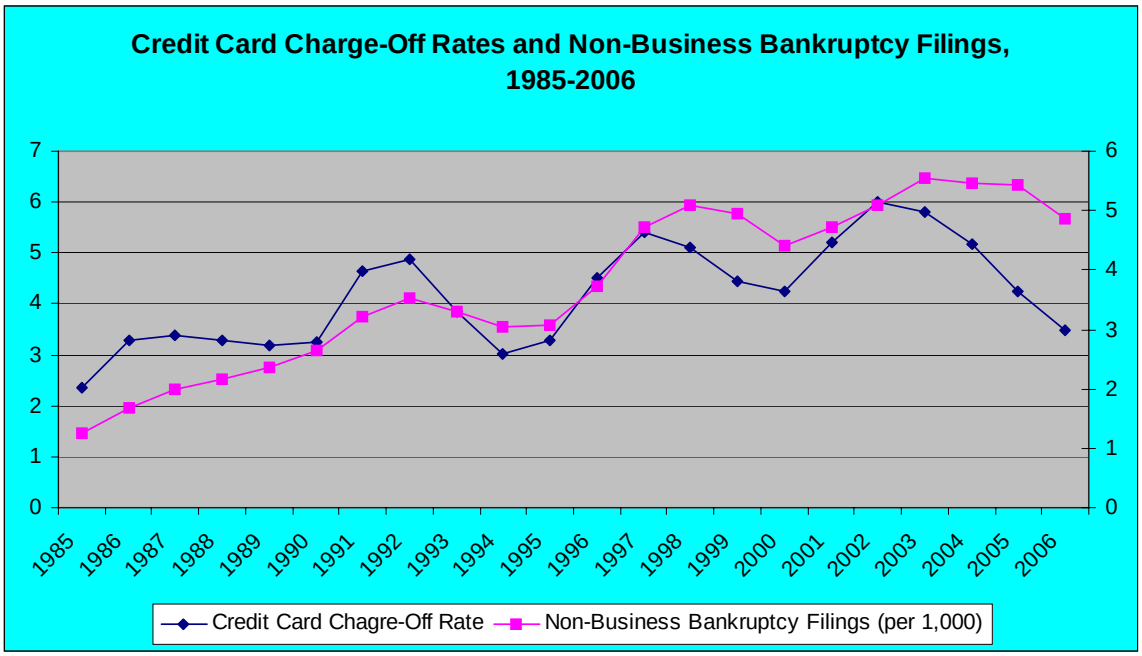
The next data sets to consider concern credit cards. The data are the rate of credit card charge-offs and the rate of credit card delinquencies. This data is published by the Federal Reserve. The data begins in 1985 for charge-off rates and in 1991 for delinquencies. It is published on a quarterly basis. I have selected the second quarter data, thus allowing consideration of the most recent 2006 data. The data is found in Table 6 and is presented visually in Charts 23-26. An earlier

study by economist Lawrence M. Ausubel, found a positive correlation between personal bankruptcy filings and credit card delinquencies from 1990 to 1996.[11]

According to Table 7, the credit card chargeoff rate is positively correlated to the rate of non-business filings, with statistical significance, but the data for the credit card delinquency rate does *not* demonstrate any statistical correlation. Note from Table 7 that the P value for credit card delinquencies is 0.789, which in simple terms means that any supposed connection between the independent and dependent variable is, in a word, garbage. If one did a scatter plot for delinquency rates, it would just be a big blob. Charts 23 and 24 present the data for credit card charge-off rates, first with zero time-lag (Chart 23) and then with a one-year time lag (Chart 24). The same approach is taken for the credit card delinquency rate (Chart 25 – zero time lag, Chart 26, one year time lag). Even for credit card chargeoff rates, the correlation coefficient is only 80%.

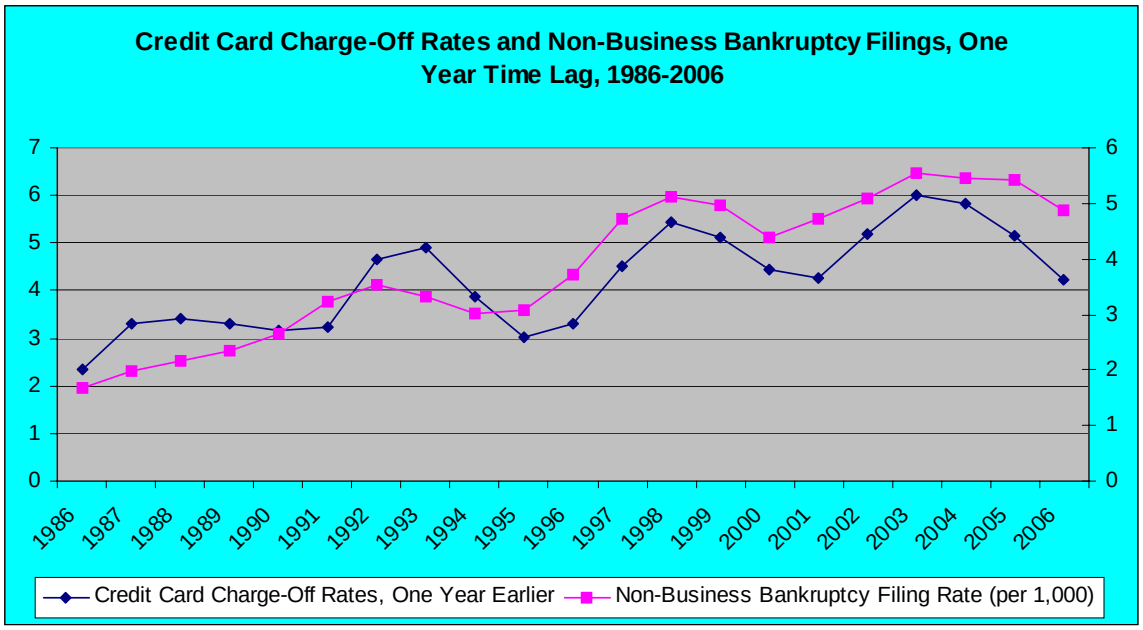
According to Table 6, credit card chargeoff rates have declined dramatically – from 6.0 % in the second quarter of 2002 to just 3.48 % in the second quarter of 2006. If the historical correlation with non-business bankruptcy filing rates holds, one would expect a drop in the near term in those bankruptcy filings. However, the regression coefficient is only 0.1189406 (for a one-year time lag, the coefficient is 0.2127374). So, any changes in bankruptcy filing rates would be modest, but according to this data, the rates would decline.

Chart 23



[11] Lawrence M. Ausubel, *Credit Card Defaults, Credit Card Profits, and Bankruptcy*, 71 Am. Bankr. L.J. 249, 253-54 and Figure 2 p. 253 (1997).

Chart 24



Charts 25 and 26 present the data on credit card delinquency rates and non-business bankruptcy filing rates. Recall that Table 7 found no statistical correlation between these variables.

Chart 25

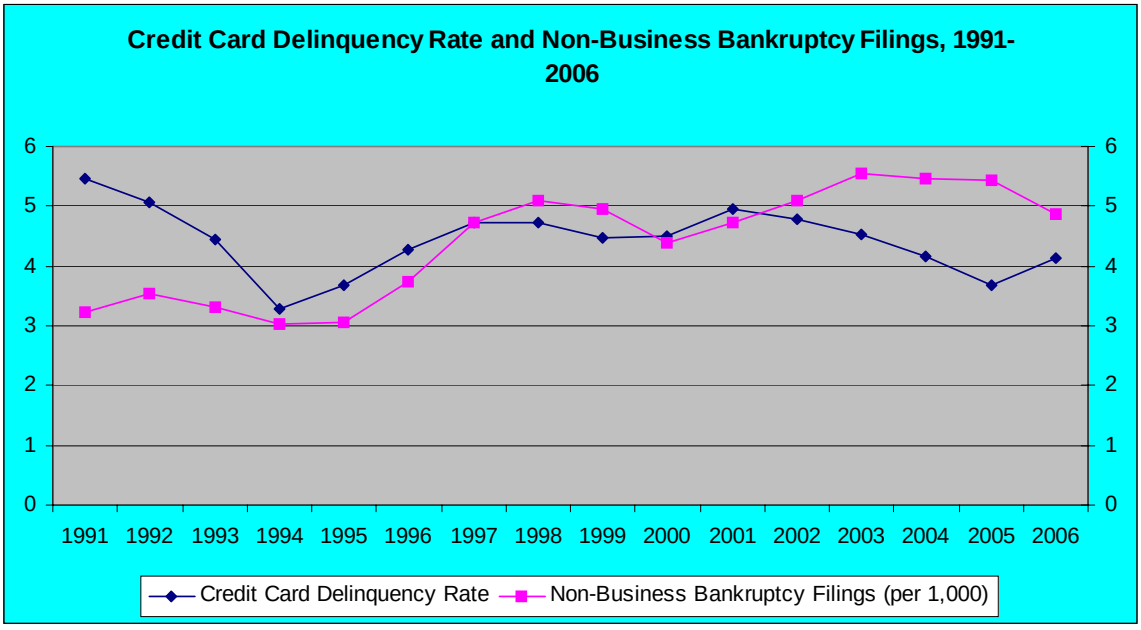
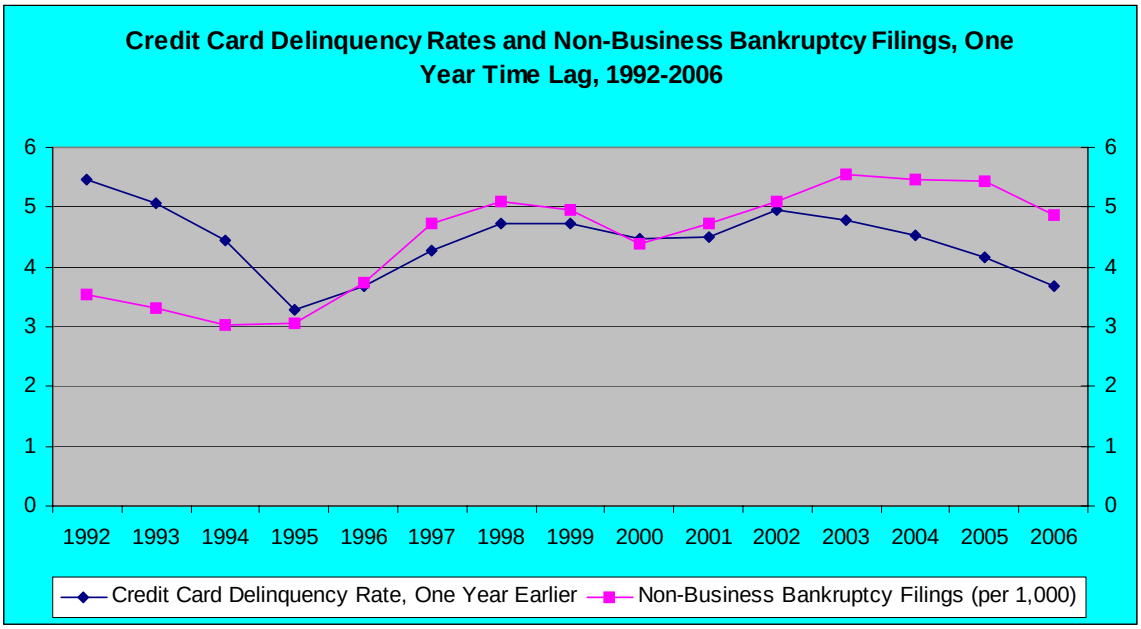


Chart 26



Conclusion

This paper has examined in detail the filing data and trends for non-business bankruptcies in the United States, and also has analyzed numerous sets of economic data looking for correlations with the non-business bankruptcy filing rate. Several conclusions may be drawn from this data. First, the huge decline in non-business bankruptcy filings following the effective date of BAPCPA is likely about to end. Filing rates probably will soon return to the range of pre-BAPCPA levels. However, those filing rates are likely to remain fairly stable over the next few years, as the amount of outstanding revolving consumer credit – historically an excellent predictor of consumer filing rates – appears to have leveled off. Having said that, two bits of data point in opposite directions: the recent increases in the amount of home mortgage debt may portend possible increases in non-business bankruptcy filings, but the dramatic drop in credit card chargeoff rates points the other way.

The data indicate that BAPCPA was based on a canard. It does not appear that consumers have made a quantum shift to chapter 13 from chapter 7, as Congress had hoped would happen under BAPCPA. More importantly, the data suggest that BAPCPA was predicated on (to be generous) a false hope, that making the law "tougher" would discourage consumer debtors from filing bankruptcy. The evidence shows that debtors file bankruptcy in very predictable numbers, depending not on what the bankruptcy law provides, but on how burdened they are with debt. This should not have been surprising. If Congress wants to drive down bankruptcy filings, it needs to take steps to drive down consumer debt burdens. Otherwise, bankruptcy filings will remain high. We can only hope that a decade from now lawmakers do not repeat the BAPCPA mistake when they see that it did not deliver the results intended.

APPENDICES

Table 1: Annual Non-Business Bankruptcy Filings, 1980-2006

Year (end June 30)	Total Non-Business Filings	Filings per 1,000
1980	241,450	1.063
1981	312,914	1.364
1982	311,443	1.344
1983	304,916	1.304
1984	282,105	1.196
1985	297,885	1.252
1986	401,575	1.672
1987	478,988	1.977
1988	526,066	2.152
1989	580,459	2.352
1990	660,796	2.649
1991	812,685	3.223
1992	899,840	3.528
1993	852,306	3.306
1994	788,509	3.029
1995	806,816	3.070
1996	989,172	3.730
1997	1,263,006	4.717
1998	1,379,249	5.104
1999	1,352,030	4.958
2000	1,240,012	4.394
2001	1,349,471	4.733
2002	1,466,105	5.092
2003	1,613,097	5.546
2004	1,599,986	5.449
2005	1,604,848	5.431
2006	1,453,008	4.872

Table 2: Quarterly Bankruptcy Filings, 2001-June 2006

Quarter	Total Bankruptcy Filings	Total Non-Business Filings	Non-Business Chapter 7	Non-Business Chapter 13	5-Month Average, total Non-Business
March 2001	366,841	356,836	254,895	101,750	
June 2001	400,394	390,064	287,040	102,804	
Sept 2001	359,518	349,981	244,713	105,100	
Dec 2001	364,921	354,908	244,590	110,106	
March 2002	379,012	369,237	259,447	109,527	364,205
June 2002	400,686	390,991	280,891	109,843	371,036
Sept 2002	401,306	391,873	275,594	116,033	371,398
Dec 2002	395,129	385,629	270,527	114,874	378,528
March 2003	412,968	404,154	285,883	118,029	388,376
June 2003	440,257	430,926	312,221	118,452	400,715
Sept 2003	412,989	404,543	287,187	117,119	403,425
Dec 2003	393,348	385,054	270,519	114,308	402,061
March 2004	407,572	397,006	285,787	110,939	404,337
June 2004	421,110	412,861	302,803	109,843	406,078
Sept 2004	396,438	388,864	274,196	114,454	397,666
Dec 2004	371,668	363,890	254,518	109,116	389,535
March 2005	401,149	393,086	289,239	103,646	391,141
June 2005	467,333	458,597	356,389	102,017	403,460
Sept 2005	542,002	532,526	422,467	109,833	427,393
Dec 2005	667,431	654,633	560,654	93,714	480,546
March 2006	116,771	112,685	63,250	49,314	430,305
June 2006	155,833	150,975	91,674	59,170	381,883

Legend:

Quarters Including Post-BAPCPA Enactment and Pre-effective Date

Quarters Entirely Post-BAPCPA Effective Date

Table 3

Year	Non-Business Filings (per 1,000)	Total Consumer Credit (per 1,000)	Revolving Consumer Credit (per 1,000)	Non-Revolving Consumer Credit (per 1,000)	Revolving Credit as % of Total Consumer Credit
1980	1.063	1,853,669	288,700	1,564,969	15.6
1981	1.364	1,748,407	283,266	1,465,141	16.2
1982	1.344	1,710,667	287,916	1,422,751	16.8
1983	1.304	1,758,400	307,110	1,451,290	17.5
1984	1.196	1,988,338	368,917	1,619,421	18.6
1985	1.252	2,217,514	446,126	1,771,388	20.1
1986	1.672	2,413,245	515,547	1,897,698	21.4
1987	1.977	2,425,615	553,471	1,872,144	22.8
1988	2.152	2,475,674	601,638	1,874,036	24.3
1989	2.352	2,536,217	651,894	1,884,323	25.7
1990	2.649	2,474,906	704,310	1,770,596	28.5
1991	3.223	2,341,038	738,837	1,602,201	31.6
1992	3.528	2,230,325	756,775	1,473,552	33.9
1993	3.306	2,227,066	789,811	1,437,255	35.5
1994	3.029	2,413,503	881,199	1,532,304	36.5
1995	3.070	2,690,989	1,021,297	1,669,692	38.0
1996	3.730	2,919,791	1,155,605	1,764,136	39.6
1997	4.717	2,994,577	1,211,050	1,783,527	40.4
1998	5.104	3,131,198	1,265,134	1,866,064	40.4
1999	4.958	3,279,536	1,313,574	1,965,962	40.1
2000	4.394	3,340,633	1,323,566	2,017,067	39.6
2001	4.733	3,522,248	1,400,902	2,121,346	39.8
2002	5.092	3,667,417	1,412,789	2,254,678	38.5
2003	5.546	3,703,716	1,404,454	2,299,262	37.9
2004	5.449	3,716,946	1,393,471	2,323,475	37.5
2005	5.431	3,709,726	1,374,447	2,335,279	37.0
2006	4.872	3,612,470	1,356,394	2,256,076	37.5

Table 4

Year	Non-Business Filings (per 1,000)	Home Mortgage Debt (per 1,000)	Total Consumer Credit + Home Mortgage Debt (per 1,000)
1980	1.063	5,116,514	6,970,183
1981	1.364	4,937,986	6,686,393
1982	1.344	4,786,242	6,496,909
1983	1.304	5,093,416	6,851,816
1984	1.196	5,391,285	7,379,673
1985	1.252	5,933,407	8,150,921
1986	1.672	6,543,040	8,956,285
1987	1.977	6,979,268	9,404,883
1988	2.152	7,447,065	9,922,730
1989	2.352	7,772,902	10,309,119
1990	2.649	8,020,395	10,495,301
1991	3.223	8,103,413	10,444,451
1992	3.528	8,247,265	10,447,590
1993	3.306	8,357,028	10,584,094
1994	3.029	8,535,418	10,948,921
1995	3.070	8,616,339	11,307,328
1996	3.730	8,828,597	11,748,388
1997	4.717	9,095,016	12,089,593
1998	5.104	9,666,016	12,797,504
1999	4.958	10,286,001	13,565,537
2000	4.394	10,443,953	13,784,586
2001	4.733	11,033,594	14,555,842
2002	5.092	12,054,205	15,721,622
2003	5.546	13,127,731	16,831,447
2004	5.449	14,474,127	18,191,073
2005	5.431	15,849,330	19,559,056

Table 5

Year	Non-Business Filings (per 1,000)	Total Consumer Debt as % of Personal Income	Total Debt (Consumer + Mortgage) as % of Personal Income
1980	1.063	15.0	56.6
1981	1.364	14.1	53.8
1982	1.344	13.8	54.2
1983	1.304	13.3	53.9
1984	1.196	14.8	53.8
1985	1.252	16.1	59.2
1986	1.672	17.1	63.3
1987	1.977	16.9	65.6
1988	2.152	16.8	67.5
1989	2.352	16.9	68.8
1990	2.649	16.5	70.2
1991	3.223	15.9	71.0
1992	3.528	14.8	69.9
1993	3.306	14.9	70.9
1994	3.029	15.9	72.3
1995	3.070	17.5	73.6
1996	3.730	18.6	75.0
1997	4.717	18.6	75.1
1998	5.104	18.5	76.0
1999	4.958	19.1	79.0
2000	4.394	19.2	79.5
2001	4.733	20.4	84.2
2002	5.092	24.1	91.7
2003	5.546	21.6	98.2
2004	5.449	21.2	103.7
2005	5.431	21.0	110.6
2006	4.872	20.1	n/a

Table 6

Year	Non-Business Filings (per 1,000)	Credit Card Charge-off Rates (2nd Q)	Credit Card Delinquency Rates (2nd Q)
1985	1.252	2.36	n/a
1986	1.672	3.29	n/a
1987	1.977	3.40	n/a
1988	2.152	3.30	n/a
1989	2.352	3.18	n/a
1990	2.649	3.24	n/a
1991	3.223	4.64	5.45
1992	3.528	4.89	5.08
1993	3.306	3.86	4.45
1994	3.029	3.02	3.27
1995	3.070	3.30	3.69
1996	3.730	4.52	4.26
1997	4.717	5.42	4.72
1998	5.104	5.12	4.74
1999	4.958	4.44	4.47
2000	4.394	4.26	4.51
2001	4.733	5.20	4.96
2002	5.092	6.00	4.79
2003	5.546	5.81	4.54
2004	5.449	5.16	4.15
2005	5.431	4.23	3.67
2006	4.872	3.48	4.13

Table 7

Independent Variable	Correlation Coefficient	Coefficient	Standard Deviation	T-Stat	P value	95% Confidence Interval	
Total Consumer Credit	0.9256	2.156648	0.1763923	12.23	<0.01	1.793362	2.519935
TCC – lag 1		2.162658	0.1717506	12.59	<0.01	1.808183	2.517134
TCC – lag 2		2.190491	0.1838891	11.91	<0.01	1.810087	2.570894
Revolving Consumer credit	0.974	3.632757	0.1691152	21.48	<0.01	3.284458	3.981057
RCC – lag 1		3.606922	0.1412085	25.54	<0.01	3.315482	3.898362
RCC – lag 2		3.574769	0.1598924	22.36	<0.01	3.244006	3.905532
Non-Revolving Consumer Credit	0.7246	3.856713	0.7336557	5.26	<0.01	2.345721	5.367705
Home Mortgage Debt	0.9221	0.494418	0.0423623	11.67	<0.01	0.406986	0.5818493
HMD – lag 1		0.4668943	0.0491452	9.5	<0.01	0.3654635	0.5683251
HMD - lag 2		0.5273347	0.0534333	9.87	<0.01	0.4167996	0.6378698
Credit Card Chargeoff Rate	0.8	1.074003	0.1800913	5.96	<0.01	0.6983392	1.449667
CCC lag 1		1.076896	0.1409171	7.64	<0.01	0.7819531	1.371839
Credit Card Delinquency Rate	0.0729	0.1189406	0.4350668	0.27	0.789	-0.8141848	1.052066
CCD lag 1		0.2127374	0.4263601	0.5	0.626	-0.7083575	1.133832
Debt to Income	0.8425	48.75931	6.234594	7.82	<0.01	35.91892	61.5997
Total Debt: Consumer + Mortgage	0.9308	0.4107816	0.0329161	12.48	<0.01	0.3428461	0.4787171
C + M lag 1		0.3913116	0.0375215	10.43	<0.01	0.3138711	0.468752
C + M lag 2		0.4320014	0.0404014	10.69	<0.01	0.3484247	05155781
© + M) to Income	0.9034	0.0935246	0.0090597	10.32	<0.01	0.0748264	0.1122228
Revolving as % of TCC	0.9187	0.1575312	0.0135415	11.63	<0.01	0.1296419	0.1854206