Differences in Financial Actions between Chapter 13 Bankruptcy Filers and Non-filers

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We determine that there are significant differences in 21 of 28 financial actions between Chapter 13 bankruptcy filers and non-filers living in the Middle District of North Carolina. The significant financial actions fall in the following areas: goal planning, income, budgeting, purchasing, insurance, credit, savings, retirement, and mortgages. The results of this study can be used to get a deeper insight into bankruptcy characteristics. They can also be used to restructure financial literacy education efforts to reduce personal bankruptcy.

INTRODUCTION

According to the Financial Corps (2014), in 1787, President John Adams sent a letter to Thomas Jefferson stating that most of the challenges in the United States were not from issues with the confederation but from a lack of understanding how money worked. Over 200 years later, the President's Advisory Council on Financial Literacy (2009) assert that the market turmoil and credit crisis of 2008 are evidence of the critical need for improved financial literacy in the United States. Similarly, Fox, Bartholomae, and Lee (2005) identify American's alarming rates of bankruptcy, high consumer debt levels, low savings rates, and other negative outcomes as indicators of the need for financial education.

Personal financial bankruptcy continues to be a significant problem in the United States. Nationally, for the year preceding June 30, 2016, there were 793,932 personal bankruptcies (Chapters 7, 11, and 13) in the U.S. and 38 percent (298,556) of those were Chapter 13 filings. For the same period, North Carolinians filed 14,893 personal bankruptcies (Chapters 7, 11, and 13) with 60 percent (8,903), a rate significantly above the national, classified as Chapter 13 (http://www.uscourts.gov/report-name/bankruptcy-filings).

With this high level of personal financial bankruptcy, we ask the question, "Do people who officially filed for bankruptcy differ on key financial management behaviors (actions) as opposed to those who have not filed?" We examine this question by analyzing financial data taken from Chapter 13 filers and non-filers (people who do not file for bankruptcy) from the Middle District of North Carolina. We reviewed the literature and do not find any research comparing these two groups. We believe that the results of this research will add to the literature, and be useful in improving personal financial management education. This can serve to inform public policy designed to reduce financial bankruptcies.

LITERATURE SURVEY

Financial Literacy and Financial Characteristics

Key financial characteristics that support sound financial management include financial literacy, financial actions, financial attitudes, planning actions, mortgage decisions, budgeting habits, goal planning, retirement planning, credit management, income planning, insurance planning, mortgage debt ratios, savings planning, investment planning and financial self-control.

Financial literacy has been shown to influence financial actions (Lusardi & Mitchell, 2007a). Danes et al. (1999) reported that students who took financial education courses (taking the action of becoming financially literate), showed an improvement in financial knowledge, attitudes, and behaviors. Chen and Volpe (1998) found a positive relationship between financial literacy and students' financial attitudes and opinions.

Planning actions take the form of discussing future financial decisions with one's family, or it may involve having a very detailed 5-year financial projection (plan). Lusardi and Mitchell (2007b) find that planning and economic literacy are important predictors of savings and investment success and those who plan have higher financial literacy and retirement wealth.

Mortgage decisions range from acceptable debt-to-income levels to the length of mortgage contract in terms of months. Numerous mortgage decisions have to be analyzed, such as the type of mortgage (adjustable, fixed, or interest only) (Campbell, 2006). Lusardi and Mitchell (2007b) find planning and financial literacy are associated with the decision to own a home.

Understanding mortgage ratios helps households to understand financial risk and allows households to measure how they are doing compared to various benchmarks (Norvilitis et al., 2006). For example, a household could track its debt-to-income ratio to see if they are establishing a good or bad trend. By viewing it on paper, they could use trend analysis to see the big picture.

Budgeting habits are important to financial literacy (Worthington, 2006). Budgeting habits support spending less than earnings and include tracking variable expenses, trimming where possible, and estimating periodic expenses. Those who fail to adopt correct habits increase their financial risk, potentially without knowing it.

Goal planning helps to motivate households (Mandell & Klein, 2007). The steps of goal planning consist of writing down goals, prioritizing goals, communicating goals, making a habit of goal planning, and using SMART goals (S = Specific, M = Measurable, A = Assignable, R = Realistic, and T = Time based).

Financial literacy influences retirement planning (Lusardi & Mitchell, 2007a). Retirement planning consists of determining (a) future funding needed to replace earned income, (b) the years until retirement, and (c) strategies to be used to accumulate the appropriate amount of retirement savings. According to Lusardi (2008), financial illiteracy across the United States has undermined retirement savings actions and lowered the amount of retirement savings.

Credit management is another element of financial literacy (Lusardi & Mitchell, 2007a). The elements that make up credit scoring are important factors of financial literacy. Examples of those elements are payment history, debt-to-income ratio for unsecured debt, available credit vs. debt levels, amounts of revolving credit accounts, and credit habits. Courchane and Zorn (2005) discussed financial behaviors that affected credit worthiness. Study findings note a correlation between credit knowledge and those financial behaviors. For example, if participants of the study scored higher than average on the portion of the financial quiz dealing with mortgages, and their questionnaires showed positive mortgage behavior, then one could conclude that mortgage behaviors were important factors in teaching financial literacy.

Income planning is an integral part of financial literacy (Lyons, Chang, & Scherpf, 2006). This process involves writing down a strategy to increase income over a specific period of time. Those who fail to write down a strategy may never keep up with the true cost of inflation. Effective inflation is not a traditional finance term; however, it measures a household's effective inflation risk. For example, if automobile gas prices increase, a family with an annual income of $50,000 suffers much more than another family earning $100,000 annually.

Insurance planning is important in case of death, illness, or accident in the family. The correct use of insurance planning could reduce potential household liabilities, thus reducing financial risk (Lusardi & Mitchell, 2007a).

Savings planning is important. Without a strategy, many households would save money just to take it out of the bank and spend it on household goods. Financial literacy has shown to be a deciding factor on household savings (Lusardi & Mitchell, 2007a). Savings are essential to meeting unexpected expenses and provide capital for investment.

Financial self-control has been discussed in the literature. As there are many financial decisions a household will face, it is important to understand the principles of finance in order to make prudent financial decisions (Agarwal, Sumit, Driscoll, & Xavier, 2009). Understanding those principles will help households use financial self-control.

Copur and Bird (2013) find that both Turkish and North Carolina students receive the most useful information about personal finances from their parents (78.4 percent for North Carolina, 70.9 percent for Ankara).

DATA AND METHODOLOGY

Primary data are collected from a sample of people living in the Middle District of North Carolina (NC) in the cities of Winston-Salem, Greensboro, and Durham. Of the 559 participants, 314 are Chapter 13 filers and 245 are non-filers. Chapter 13 filers are assessable to one of the authors, who is a trainer of Chapter 13 filers in NC.

The non-debtors group represent a wide cross section of participants from the Middle District of NC, namely the cities of Durham, Raleigh, and Winston-Salem. An online survey is created through Survey Monkey. Those who complete the survey receive a $15 coupon for Cold Stone Creamery or a complimentary financial management class. The survey is advertised online, and at various Cold Stone Creamery stores, and Steals and Deals in the Middle District. In addition, letters are sent to churches, schools, and other organizations in the region. Due to requests from the survey, four complimentary financial management classes are offered. The breakdown of non-debtors is: 142 participants from online across three cities, 34 from First Pentecostal Church, 33 from Cathedral of Faith, 20 from Neighbor's Grove School, and 17 other individuals.

All participants (debtors and non-debtors) are asked to complete a financial quiz and a comprehensive questionnaire. The questionnaire is divided into 16 blocks of questions, including: 1) one demographic block; 2) one psychological block; and 3) fourteen financial blocks. The 14 financial blocks of questions are: 1) financial actions; 2) financial attitudes; 3) planning actions; 4) mortgage decisions; 5) budgeting habits; 6) goal planning; 7) retirement planning; 8) credit management; 9) income planning; 10) insurance planning; 11) mortgage debt ratios; 12) savings planning; 13) investment planning; and 14) financial self-control .

This study analyzes the largest block of questions, financial actions, with 28 different financial actions. These are: 1) avoid unnecessary purchases; 2) save regularly to achieve your goals; 3) discuss goals with spouse and/or family members; 4) take charge of your personal finances; 5) pay bills on time; 6) avoid pay-day lenders; 7) avoid rent-to-own purchases; 8) avoid living paycheck-to-paycheck; 9) make job choices that will increase your income; 10) assess income potential of various jobs you are considering; 11) obtain additional education if needed, to increase your earning potential; 12) review credit report every year; 13) pay more than the minimum amount due on credit card bills; 14) save money to prepare for homeownership; 15) compare different types of mortgage loans; 16) visit only houses within your price range; 17) identify the best type of mortgage for your needs; 18) save for retirement; 19) track expenses prior to budgeting; 20) compare prices when shopping; 21) live paycheck to paycheck; 22) regularly review my total financial situation; 23) use cash for all purchases; 24) evaluate my insurance needs; 25) understand the true cost of credit; 26) know the components that make up your credit score; 27) understand the steps of goal planning; and 28) understand how to increase income. Ordinal scales of measurement are used for the financial actions with '1' given the lowest score and '5' the highest score.

We want to determine if there are significant differences in financial actions between Chapter 13 filers and non-filers in the Middle District of North Carolina. The hypothesis is:

H_1: There are differences in financial actions between Chapter 13 filers and non-filers.

The financial action variables to test this hypothesis are described above.

We provide descriptive statistics for each of the financial actions and key demographic characteristics of both Chapter 13 filers and non-filers. For Likert scale data, the Mann-Whitney U test is considered appropriate to test for differences between the two groups. We also conduct a binary logistic regression analysis with filing status (filer = 0, non-filer = 1) as the dependent variable, the financial actions as the independent variables, and the demographic variables as the control variables. All analyses are conducted using the statistical software, SPSS.

RESULTS

Descriptive Statistics for Demographic Variables

We provide summaries of 12 key demographic variables (Table 1). The first is gender. Chapter 13 debtors include 43.3 % males and 56.7 % females while non-filers include 29.3 % males and 70.7 % females. Both groups have more females with non-filer having a higher percent (14 % difference).

The second demographic characteristic is age. From ages 18 to 25, there are only 4 filers (1.3 %) compared to 47 (19.1 %) non-filers, a big difference. From ages 26 to 35, there are 35 (11.1 %) filers compared to 42 (17.1 %) non-filers. The distribution of filers is more concentrated in the higher ages. For example, for ages 36 and above, there are 275 (87.7 %) filers compared to 157 (63.8 %) non-filers.

The third demographic characteristic is finance training. For finance training, 59 (18.8 %) and 81 (32.9 %) of Chapter 13 filers and non-filers, respectively, receive finance training. That is, non-filers have a higher percent of participants trained in finance. However, both groups have high percentages of no financial training.

The fourth demographic characteristic is education. For high school or less, there are 129 (41.1 %) filers compared to 46 (28.6 %) non-filers. For community college or some college, both groups have similar percentages 135 (43.0 %) for filers and 110 (44.7 %) for non-filers). For college graduate, filers have 36 (11.5 %) compared to non-filers with 55 (22.4 %), a big difference. For masters' graduates, there are 13 (4.5 %) filers and 29 (11.8 %) non-filers. For doctorate graduates, there are 3 (1.0 %) filers and 6 (2.4 %) non-filers. Non-filers appear to be more educated than the Chapter 13 filers.

The fifth demographic variable is racial diversity. Chapter 13 filers comprise of 163 Whites (51.5 %) and 137 (43.6 %) Blacks while non-filers comprise of 144 (58.5 %) Whites and 88 (35.8 %) Blacks. These samples are primarily Whites and Blacks.

The sixth demographic variable is level of personal income. For incomes of less than $20,000 per year, there are 62 (19.7 %) filers and 64 (26.0 %) non-filers. However, for incomes between $21,000 and $45,000, there are 181 (57.6 %) filers and 116 (47.1 %) non-filers, a big difference. Also, for incomes from $46,000 to $75,000, there are 58 (18.5 %) filers and 38 (15.5 %) non-filers. However, for incomes over $76,000, there are 13 (4.1 %) filers and 28 (11.4 %) non-filers. Hence, there are more non-filers in the lower and higher income categories. This implies that the filers are more distributed in the middle-income categories.

The seventh demographic variable is marital status. For Chapter 13 filers, 263 (83.8 %) are married or have a partner, compared to 160 (65.0 %) non-filers, a big difference. The 'Single' category accounted for

37 (11.8 %) and 76 (30.9 %) for filers and non-filers, respectively, a sizeable difference. Hence, the percentage of filers who are married or have a partner is much higher than that for non-filers, implying more singles in the non-filers group.

The eighth demographic variable is the number of times married. 'Married Once' has 181 (57.6 %) filers and 116 (47.2 %) non-filers. 'Married Twice' has 80 (25.5 %) for filers and 45 (18.3 %) for non-filers. 'Marrying three times' has similar percentages (5.4 % and 4.1 % for filers and non-filers, respectively). However, only 36 (11.5 %) filers are single compared to 75 (30.5 %) of non-filers, a sizeable difference.

For the ninth demographic variable, ownership of primary residence, 262 (83.4 %) filers own their own primary residence compared to only 102 (41.5 %) non-filers, a huge percentage difference. The tenth demographic variable is ownership of a second property. There are 253 (80.6 %) filers who do not own a second property compared to 178 (72.4 %) non-filers. Hence, owning a second property may not be a significant factor for bankruptcy filing.

The eleventh demographic variable is number of children. There are 35 (11.1%) filers who do not have any children compared to 70 (28.5 %) non-filers, a much higher percent. There are 70 (22.3 %) filers who have one child compared to 47 (19.1 %) non-filers. For 'two children,' there are 114 (36.3 %) filers compared to 61 (24.8 %) non-filers, a big difference. For three, four, and five or more children, the percentages are similar for the two groups. Two children are the modes for the two groups.

The twelfth demographic variable is education of parents of filers and non-filers. For filers, 18 (5.7 %) of their parents have no education compared to 1 (0.4 %) non-filer, a sizeable difference. There are 61 (19.4 %) filers whose parents have only a middle school education compared to 31 (12.6 %) non-filers. There are 156 (49.7 %) filers whose parents only had a high school education compared to 88 (35.8 %) non-filers, a big percentage difference. For parents' having some college or a community college education, there are 36 (11.5 %) filers and 53 (28.4 %) non- filers, another big percentage difference. For parents' having a bachelor's education, there are 20 (6.4 %) filers and 32 (13.0 %) non-filers, a big difference. For parents' having masters' or doctorate education, there are 8 (2.5 %) filers and 24 (9.7 %) non-filers, a huge difference. It appears that non-filers have parents with higher education levels than do filers.

Descriptive Statistics for Financial Variables

The frequency distributions are presented for all 28 financial actions (Table 2). All financial actions have responses of either 'Never,' 'Sometimes,' 'Most of the time,' 'Always,' or 'Does not apply.' The first financial action, 'avoid unnecessary purchases,' has similar distributions for both filers and non-filers. The modal group for both groups are 'Most of the time' with 50.0 % and 47.6 % of filers and non-filers, respectively.

For the second financial action, 'save regularly to achieve your goals,' 20.7 % of Chapter 13 filers never save compared to 11.4 % for non-filers, a big difference. For savings sometimes, 53.2 % of filers and 39.8 % of non-filers are in this category. For savings most of the time, 18.2 % and 26.4 % of filers and non-filers, respectively, are in this category. For saving ALL the time, 7.6 % and 26.4 % of filers and non-filers, respectively, are in this category. It appears that non-filers save more than do filers.

The third financial action is 'discuss financial goals with spouse and/or family members.' For filers, 12.1 % never discuss goals with spouse and/or family compared with 10.2 % for non-filers. For 'sometimes,' there are 29.3 % and 20.7 % for filers and non-filers, respectively. For 'most of the times,' there are 25.4 % and 31.7 % for filers and non-filers, respectively. For 'always,' there are 26.4 % and 28.5 % for filers and non-filers, respectively.

The fourth financial action is 'take charge of your personal finance,' with 3.2 % and 3.7 % of filers and non-filers, respectively, never taking charge. For sometimes taking charge, there are 30.9 % and 19.9 % of filers and non-filers, respectively, in this category, a sizeable difference. For taking charge most of the time, there are 39.8 % and 33.3 % of filers and non-filers, respectively. For always taking charge, there are 25.8 % and 40.7 % of filers and non-filers, a sizeable difference. It appears that non-filers seem to take more charge with their personal finance than do filers.

TABLE 1
DEMOGRAPHIC CHARACTERISTICS OF CHAPTER 13 BANKRUPTCY FILERS AND NON-FILERS

	Filer		Non-filer	
Item	**Number**	**Percent**	**Number**	**Percent**
Gender:				
Male	136	43.3	72	29.3
Female	178	56.7	174	70.7
Age:				
18 - 25	4	1.3	47	19.1
26 -35	35	11.1	42	17.1
36 - 50	149	47.5	79	32.1
51 - 60	85	27.1	49	19.9
61 +	41	13.1	29	11.8
Finance Training:				
Yes	59	18.8	81	32.9
No	255	81.2	164	66.7
Education:				
Middle School Graduate	17	5.4	6	2.4
High School Graduate	112	35.7	40	16.3
Some College, no Degree	92	29.3	77	31.3
Community College Graduate	43	13.7	33	13.4
Four-year College Graduate	36	11.5	55	22.4
Masters Level Graduate	11	3.5	29	11.8
Doctoral Level Graduate	3	1.0	6	2.4
Racial Diversity:				
White	163	51.9	144	58.5
Black	137	43.6	88	35.8
Hispanic	8	2.5	2	0.8
Asian	1	0.3	3	1.2
Other	3	1.0	9	3.7
Personal Income:				
< $20,000	62	19.7	64	26.0
$21,000 - $30,000	78	24.8	47	19.1
$31,000 - $45,000	103	32.8	69	28.0
$46,000 - $75,000	58	18.5	38	15.4
$76,000 - $150,000	11	3.5	25	10.2
> $150,000	2	0.6	3	1.2

TABLE 1, CONT.
DEMOGRAPHIC CHARACTERISTICS OF CHAPTER 13 BANKRUPTCY FILERS AND NON-FILERS

	Filer		Non-filer	
Item	**Number**	**Percent**	**Number**	**Percent**
Marital Status:				
Married	206	65.6	130	52.8
Partner	57	18.2	30	12.2
Single	37	11.8	76	30.9
Divorce	3	1.0	5	2.0
Widowed	8	2.5	3	1.2
Separated	3	1.0	2	0.8
Marital Status:				
Married	206	65.6	130	52.8
Number of Times Married:				
Once	181	57.6	116	47.2
Twice	80	25.5	45	18.3
Three Times	17	5.4	10	4.1
Never	36	11.5	75	30.5
Primary Residence:				
Own	262	83.4	144	58.5
Rent	51	16.2	101	41.1
Ownership of Second Property:				
None	21	6.7	37	15.0
Rental	28	8.9	21	8.5
Land	11	3.5	10	4.1
Vacation Home	1	0.3	-	-
No Response	253	80.6	178	72.4
Ownership of Second Property:				
None	21	6.7	37	15.0
Rental	28	8.9	21	8.5
Land	11	3.5	10	4.1
Vacation Home	1	0.3	-	-
No Response	253	80.6	178	72.4
Parents' Highest Level of Education:				
None	18	5.7	1	0.4
Middle School Graduate	61	19.4	31	12.6
High School Graduate	156	49.7	88	35.8
Some College, no Degree	34	10.8	49	19.9
Community College Graduate	16	5.1	21	8.5
Four-year College Graduate	20	6.4	32	13.0
Masters Level Graduate	8	2.5	21	8.5
Doctoral Level Graduate	-	-	3	1.2

The fifth financial action is 'pay bills on time.' For 'Never,' there 1.9 % and 0.4 % of filers and non-filers, respectively. For 'Sometimes,' there are 28.3 % and 13.4 % of filers and non-filers, respectively. For 'Most of the time,' there are 45.2 % and 35.4 % of filers and non-filers, respectively. For 'Always,' there are 24.5% and 48.0 % of filers and non-filers, respectively, a big difference. It seems that non-filers pay their bills on time more often than do filers.

The sixth financial action is ‘avoid pay day lending.’ Both filers and non-filers avoid payday lending with 66.2 % of filers always avoiding this type of loan compared to 73.6 % of non-filers. The seventh financial action is ‘avoid rent to own purchases.’ For both groups, 60.2 % of filers always avoid rent to own purchase compared to 72.8 % of non-filers. The eighth financial action is ‘avoid living pay check to pay check.’ For ‘Never,’ there are 20.4 % of filers compared 6.9 % of non-filers, a big difference. For ‘Always,’ there are 20.1 % of filers compared to 32.9 % of non-filers, another sizeable difference. Non-filers seem to avoid living paycheck to paycheck more than do filers.

The ninth financial action is ‘make job choices that will increase your income.’ Both groups have similar response distributions, with 40.1 % of filers and 37.4 % of non-filers always making job choices that will increase their income. The tenth financial action is ‘assess income potential of various jobs you are considering.’ Both groups have similar response distributions, with 38.5 % of filers and 40.7 % of non-filers always assessing their income potential of various jobs they are considering.

The eleventh financial action is ‘obtain additional education if needed, to increase your earning potential.’ For ‘Never,’ 16.2 % are filers compared to 6.9 % of non-filers, a sizeable difference. For ‘Always,’ 24.5 % are filers compared to 31.3 % of non-filers. It seems that non-filers have a higher percent of obtaining additional education if needed to increase their earning potential than do filers.

The twelfth financial action is ‘review credit card every year.’ For ‘Never,’ there are 25.8 % of filers and 18.3 % of non-filers. For ‘Sometimes,’ 37.9 % are filers compared to 27.2 % of non-filers, a sizeable difference. For ‘Most of the time,’ 19.7 % are filers compared to 24.0 % of non-filers. For ‘Always,’ 15.9 % are filers compared to 24.0 % of non-filers, another sizeable difference. Non-filers tend to review their credit card every year more often than do filers.

The thirteenth financial action is ‘pay more than the minimum amount due on credit card bills.’ For ‘Never,’ 13.7 % of filers and 7.7 % of non-filers choose this response. For ‘Sometimes,’ 40.1 % of filers and 18.7 % of non-filers choose this response, a sizeable difference. For ‘Most of the time,’ 17.8 % of filers and 21.1 % of non-filers choose this response. For ‘Always,’ 12.1 % of filers and 34.6 % of non-filers choose this response, another sizeable difference. It seems like non-filers more often pay more than the minimum amount due on credit card bills than do filers.

The fourteenth financial action is ‘save money to prepare for homeownership.’ For ‘Never,’ there are 24.2 % of filers and 15.0 % of non-filers, a sizeable difference. For ‘Sometimes,’ there are 25.5 % of filers and 18.3 % of non-filers. For ‘Most of the times,’ there are 12.7 % of filers compared to 17.9 % of non-filers. For ‘Always,' there are 11.1 % of filers compared to 20 3 % of non-filers, a big difference. It seems that non-filers save more money to prepare for homeownership than do filers.

The fifteenth financial action is ‘compare different types of mortgage loans.’ For ‘Never,’ there are 20.1 % of filers compared to 9.8 % of non-filers, a big difference. For ‘Sometimes,’ there are 18.5 % of filers compared to 14.6 % of non-filers. For ‘Most of the times,’ there are 15.6 % of filers compared to 17.9 % of non-filers. For ‘Always,’ there are 19.7 % of filers compared to 24.8 % of non-filers. It appears that non-filers compare different types of mortgage loans than do filers. The sixteenth financial action is ‘visit only houses within your price range.’ The distributions for both filers and non-filers are similar with 23.9 % of filers and 27.2 % of non-filers always visiting only houses within their price ranges. The seventeenth financial action is ‘identify the best type of mortgage for your needs.’ The distributions of both filers and non-filers are similar with 27.4 % of filers and 30.1 % of non-filers always identifying the best type of mortgage for their needs.

The eighteenth financial action is ‘save for retirement.’ For ‘Never,’ there are 18.5 % of filers and 15.0 % of non-filers. For ‘Sometimes,’ there are 28.3 % of filers compared to 19.9 % of non-filers, a big difference. For ‘Most of the times,’ there are 20.1 % of filers and 18.7% of non-filers. For ‘Always,’ there are 26 % of filers compared to 36.2 % of non-filers, a big difference. It seems that non-filers save for retirement more than do filers.

The nineteenth financial action is ‘track expenses prior to budgeting.’ For ‘Never,’ there are 16.6 % of filers and 9.3 % of non-filers, a big difference. For ‘Sometimes,’ there are 37.3 % of filers and 24.0 % of non-filers, another big difference. For ‘Most of the times,' there are 27.1 % of filers and 34.1 % of non-filers. For ‘Always,’ there are 17.8 % of filers compared to 29.3 % of non-filers, a big difference. It seems that non-filers track expenses prior to budgeting more than do filers.

The twentieth financial action is ‘compare prices when shopping.’ The distributions are similar with 50.3 % of filers and 52.8 % of non-filers always compare prices when shopping.

The twenty-first financial action is ‘do not live paycheck to paycheck.’ For ‘Never,’ there are 17.8 % of filers and 8.9 % of non-filers, a big difference. For ‘Sometimes,’ there are 38.9 % of filers and 28.9 % of non-filers, another big difference. For ‘Most of the times,’ there are 28.3 % of filers and 24.4 % of non-filers. For ‘Always,’ there are 13.4 % of filers and 26.0 % of non-filers, a big difference. It seems that non-filers do not live paycheck to paycheck as much as do filers.

The twenty-second financial action is ‘regularly review your total financial situation.’ For ‘Never,’ there are 8.9 % of filers and 5.3 % of non-filers. For ‘Sometimes,’ there are 43.3 % of filers and 31.7 % of non-filers, a big difference. For ‘Most of the times,’ there are 32.5 % of filers and 25.2 % of non-filers. For ‘Always,’ there are 15.0 % of filers compared to 35.4 % of non-filers, a big difference. It appears like non-filers more regularly review their total financial situation compared to filers.

The twenty-third financial action is ‘use cash for all purchases.’ For ‘Never,’ there are 8.6 % of filers compared to 8.1 % of non-filers. For ‘Sometimes,’ there are 45.5 % of filers and 35.8 % of non-filers, a big difference. For ‘Most of the times,’ 27.7 % are filers and 34.1 % are non-filers. For ‘Always,’ there are 17.8 % of filers and 19.9 % of non-filers. It seems that non-filers use cash for all purchases more often than do filers.

The twenty-fourth financial action is ‘evaluate my insurance needs.’ For ‘Never,’ there are 17.2 % of filers and 9.3 % of non-filers, a big difference. For ‘Sometimes,’ there are 40.8 % of filers and 40.2 % of non-filers. For ‘Most of the times,’ there are 24.5 % of filers and 26.0 % of non-filers. For ‘Always,’ there are 16.2 % for filers and 18.7 % for non-filers.

The twenty-fifth financial action is ‘understand the true cost of credit.’ For ‘Never,’ there are 15.3 % of filers and 10.6 % of non-filers, a big difference. For ‘Sometimes,’ there are 36.6 % of filers and 24.4 % of non-filers, a big difference. For ‘Most of the times,’ there are 26.8 % of filers and 30.9 % of non-filers. For ‘Always,’ there are 20.1 % of filers and 30.1 % of non-filers, a big difference. It seems that non-filers understand the true cost of credit more than do filers.

The twenty-sixth financial action is ‘know the components that make up your credit score.’ For ‘Never,’ there are 22.9 % of filers and 13.8 % of non-filers, a big difference. For ‘Sometimes,’ there are 37.3 % of filers compared to 30.1 % of non-filers. For ‘Most of the times,’ there are 22.3 % of filers and 28.0 % of non-filers. For ‘Always,’ there are 16.2 % of filers and 24.0 % of non-filers. It seems that non-filers know the components of their credit scores better than do filers.

The twenty-seventh financial action is ‘understand the steps of goal planning.’ For ‘Never,’ there are 13.1 % of filers compared to 7.3 % of non-filers. For ‘Sometimes,’ there are 43.0 % of filers compared to 30.5 % of non-filers, a big difference. For ‘Most of the times,’ there are 25.2 % of filers compared to 30.1 % of non-filers. For ‘Always,’ there are 17.8 % of filers and 28.9 % of non-filers, a big difference. It seems that non-filers understand the steps of goal planning better than do filers.

The twenty-eighth financial action is ‘understand how to increase income.’ For ‘Never,’ there are 12.4 % of filers and 7.3 % of non-filers, a sizeable difference. For ‘Sometimes,’ there are 35.4 % of filers and 29.7 % of non-filers. For ‘Most of the times,’ there are 28.7 % of filers and 33.3 % of non-filers. For ‘Always,’ there are 20.9 % of filers and 25.2 % of non-filers. It seems that non-filers understand how to increase their income better than do filers.

TABLE 2
FINANCIAL ACTIONS FREQUENCY DISTRIBUTIONS FOR CHAPERS 13 FILERS AND NON-FILERS

Item	Filers (n = 314)				
	Never (1)	Some-times (2)	Most of the Time (3)	Always (4)	Does not Apply (5)
	Percent				
Financial Actions:					
1. Avoid unnecessary purchases	1.3	37.3	50.0	11.5	0.0
2. Save regularly to achieve your goals	20.7	53.2	18.2	7.6	0.3
3. Discuss goals with spouse and/or family members	12.1	29.3	25.2	26.4	7.0
4. Take charge of your personal finances	3.2	30.9	39.8	25.8	0.3
5. Pay bills on time	1.9	28.3	45.2	24.5	0.0
6. Avoid pay-day lenders	4.8	8.9	11.1	66.2	8.9
7. Avoid rent-to-own purchases	7.0	9.9	10.5	60.2	12.4
8. Avoid living paycheck-to-paycheck	20.4	30.6	28.0	20.1	1.0
9. Make job choices that will increase your income	4.8	18.2	28.7	40.1	8.3
10. Assess income potential of various jobs you are considering	7.0	16.9	24.8	38.5	12.7
11. Obtain additional education if needed, to increase your earning potential.	16.2	27.1	21.0	24.5	11.1
12. Review credit report every year	25.8	37.9	19.7	15.9	0.6
13. Pay more than the minimum amount due on credit card bills	13.7	40.1	17.8	12.1	16.2
14. Save money to prepare for homeownership	24.2	25.5	12.7	11.1	26.4
15. Compare different types of mortgage loans	20.1	18.5	15.6	19.7	26.1
16. Visit only houses within your price range	8.0	14.3	14.3	23.9	39.5
17. Identify the best type of mortgage for your needs	11.1	15.3	16.9	27.4	29.3
18. Save for retirement	18.5	28.3	20.1	26.4	6.7
19. Track expenses prior to budgeting	16.6	37.3	27.1	17.8	1.3
20. Compare prices when shopping	2.2	17.5	29.9	50.3	0.0
21. Do not live paycheck to paycheck	17.8	38.9	28.3	13.4	1.6
22. Regularly review my total financial situation	8.9	43.3	32.5	15.0	0.3
23. Use cash for all purchases	8.6	45.5	27.7	17.8	0.3
24. Evaluate my insurance needs	17.2	40.8	24.5	16.2	1.3
25. Understand the true cost of credit	15.3	36.6	26.8	20.1	1.3
26. Know the components that make up your credit score	22.9	37.3	22.3	16.2	1.3

TABLE 2, CONT.
FINANCIAL ACTIONS FREQUENCY DISTRIBUTIONS FOR CHAPERS 13 FILERS AND NON-FILERS

	Filers (n = 314)				
	Never (1)	Some-times (2)	Most of the Time (3)	Always (4)	Does not Apply (5)
27. Understand the steps of goal planning	13.1	43.0	25.2	17.8	1.0
28. Understand how to increase income	12.4	35.4	28.7	20.7	2.9
Financial Actions:	Non-filers(n = 246)				
1. Avoid unnecessary purchases	2.4	32.9	47.6	15.4	1.6
2. Save regularly to achieve your goals	11.4	39.8	26.4	19.9	2.4
3. Discuss goals with spouse and/or family members	10.2	20.7	31.7	28.5	8.9
4. Take charge of your personal finances	3.7	19.9	33.3	40.7	2.4
5. Pay bills on time	0.4	13.4	35.4	48.0	2.8
6. Avoid pay-day lenders	2.8	6.9	8.1	73.6	8.1
7. Avoid rent-to-own purchases	2.0	4.9	11.8	72.8	8.5
8. Avoid living paycheck-to-paycheck	6.9	23.2	31.7	32.9	5.3
9. Make job choices that will increase your income	3.7	16.3	30.9	37.4	11.8
10. Assess income potential of various jobs you are considering	4.1	15.4	24.4	40.7	15.4
11. Obtain additional education if needed, to increase your earning potential.	6.9	23.6	25.6	31.3	12.6
12. Review credit report every year	18.3	27.2	24.0	24.0	6.5
13. Pay more than the minimum amount due on credit card bills	7.7	18.7	21.1	34.6	17.9
14. Save money to prepare for homeownership	15.0	18.3	17.9	20.3	28.5
15. Compare different types of mortgage loans	9.8	14.6	17.9	24.8	32.9
16. Visit only houses within your price range	7.7	9.3	18.7	27.2	37.0
17. Identify the best type of mortgage for your needs	6.9	13.8	15.0	30.1	34.1
18. Save for retirement	15.0	19.9	18.7	36.2	10.2
19. Track expenses prior to budgeting	9.3	24.0	34.1	29.3	3.3
20. Compare prices when shopping	0.4	13.0	32.5	52.8	1.2

TABLE 2, CONT.
FINANCIAL ACTIONS FREQUENCY DISTRIBUTIONS FOR CHAPERS 13 FILERS AND NON-FILERS

Item	Non-filers(n = 246)				
	Never (1)	Some-times (2)	Most of the Time (3)	Always (4)	Does not Apply (5)
	Percent				
21. Do not live paycheck to paycheck	8.9	28.9	24.4	26.0	11.8
22. Regularly review my total financial situation	5.3	31.7	25.2	35.4	2.4
23. Use cash for all purchases	8.1	35.8	34.1	19.9	2.0
24. Evaluate my insurance needs	9.3	40.2	26.0	18.7	5.7
25. Understand the true cost of credit	10.6	24.4	30.9	30.1	4.1
26. Know the components that make up your credit score	13.8	30.1	28.0	24.0	4.1
27. Understand the steps of goal planning	7.3	30.5	30.1	28.9	3.3
28. Understand how to increase income	7.3	29.7	33.3	25.2	4.5

Results for Financial Differences

Non-parametric Results

When using the Mann-Whitney U test, we find significant differences between filers or non-filers for 21 of the 28 financial actions (variables) (Table 3). Non-filers have HIGHER levels for all 21 significant financial actions. These are: 1) save regularly to achieve your goals (p-value = 0.000); 2) discuss goals with spouse and/or family members (p-value = 0.053); 3) take charge of your personal finances (p-value = 0.000); 4) pay bills on time(p-value = 0.000); 5) avoid living paycheck-to-paycheck (p-value = 0.000); 6) obtain additional education, if needed, to increase your earning potential (p-value = 0.002); 7) review credit report every year (p-value = 0.000); 8) pay more than the minimum amount due on credit card bills (p-value = 0.000); 9) save money to prepare for homeownership (p-value = 0.003); 10) compare different types of mortgage loans (p-value = 0.000); 11) identify the best type of mortgage for your needs (p-value = 0.000); 12) save for retirement (p-value = 0.000); 13) track expenses prior to budgeting (p-value = 0.000); 14) do not live paycheck to paycheck (p-value = 0.000); 15) regularly review your total financial situation (p-value = 0.000); 16) Use cash for all purchases (p-value = 0.035); 17) evaluate your insurance needs (p-value = 0.004); 18) understand the true cost of credit (p-value = 0.000); 19) know the components that make up your credit score (p-value = 0.000); 20) understand the steps of goal planning (p-value = 0.000); and 21) understand how to increase income (p-value = 0.007). All of these financial actions represent good personal financial management. In summary, non-filers have a higher level of personal financial management.

We find seven insignificant variables. These include: 1) avoid unnecessary purchases (p-value = 0.186); 2) avoid pay-day lenders (p-value = 0.147); 3) avoid rent-to-own purchases (p-value = 0.136); 4) make job choices that will increase your income (p-value = 0.406); 5) assess income potential of various jobs you are considering (p-value = 0.139); 6) visit only houses within your price range (p-value = 0.951); and 7) compare prices when shopping (p-value = 0.119). These insignificant results may imply that both filers and non-filers are behaving similarly and applying these good financial management practices. For example, both groups have high percentages for avoiding payday lenders and comparing prices when shopping.

TABLE 3
FINANCIAL DIFFERENCES FOR CHAPTER 13 FILERS AND NON-FILERS USING A NON-PARAMETRIC TEST

Sub-categories of Financial Characteristics	p-value from Mann–Whitney U test	1 = Non-Chapter 13 Filers higher, 2 = Chapter 13 Filers higher, and 3 = Similar
Financial Actions:		
1. Avoid unnecessary purchases	0.186	3
2. Save regularly to achieve your goals	0.000***	1
3. Discuss goals with spouse and/or family members	0.053*	1
4. Take charge of your personal finances	0.000***	1
5. Pay bills on time	0.000***	1
6. Avoid pay-day lenders	0.147	3
7. Avoid rent-to-own purchases	0.136	3
8. Avoid living paycheck-to-paycheck	0.000***	1
9. Make job choices that will increase your income	0.406	3
10. Assess income potential of various jobs you are considering	0.139	3
11. Obtain additional education if needed, to increase your earning potential	0.002**	1
12. Review credit report every year	0.000***	1
13. Pay more than the minimum amount due on credit card bills	0.000***	1
14. Save money to prepare for homeownership	0.003**	1
15. Compare different types of mortgage loans	0.000***	1
16. Visit only houses within your price range	0.951	3
17. Identify the best type of mortgage for your needs	0.058*	1
18. Save for retirement	0.002**	1
19. Track expenses prior to budgeting	0.000***	1
20. Compare prices when shopping	0.119	3
21. Not living paycheck to paycheck	0.000***	1
22. Regularly reviewing my total financial situation	0.000***	1
23. Using cash for all purchases	0.035**	1
24. Evaluating my insurance needs	0.004**	1
25. Understanding the true cost of credit	0.000***	1
26. Knowing the components that make up your credit score	0.000***	1
27. Understanding the steps of goal planning	0.000***	1
28. Understanding how to increase income	0.007**	1

Logistic Regression Results

When using the logistic regression analysis, we find 6 financial actions and 8 demographic characteristics to be statistically significant (Table 4). The first significant financial action is 'discuss goals with spouse and/or family members' (estimated beta = 0.777, Exp(beta) = 1.560, and a p-value = 0.002). This implies that those who discuss goals with their spouses and/or family members are 1.56 times more likely to be non-filers. The second significant financial action is 'avoid payday lenders' (estimated beta = 0.572, Exp(beta) = 1.771, and a p-value = 0.001). This implies that those who avoid payday lenders are 1.771 times more likely to be a non-filer. The third significant financial action is 'make job choices that will increase your income' (estimated beta = 0.269, Exp(beta) = 1.309, and a p-value = 0.027). This implies that those who make job choices that will increase their income are 1.309 times more likely to be a non-filer. The fourth significant financial action is 'pay more than the minimum amount due on credit cards' (estimated beta = 0.280, Exp(beta) = 1.324, and a p-value = 0.004). This implies that those who pay more than the minimum are 1.324 times more likely to be non-filers. The fifth significant financial action is 'save money to prepare for home ownership' (estimated beta = -0.278, Exp(beta) = 0.757, and a p-value = 0.004). The means that those who do NOT save money to prepare for home ownership are 0.757 times likely to be filers. (Filers have 49.7 percent who never or seldom save for home ownership compared to 33.3 percent for non-filers.) The sixth significant financial action is 'understand the steps of goal planning' (estimated beta = 0.327, Exp(beta) = 1.387, and a p-value = 0.027). This implies that those who understand the steps of goal planning are 1.387 times more likely to be non-filers.

The first significant demographic variable is 'gender' (estimated beta = 0.469, Exp(beta) = 1.599, and a p-value = 0.053). This implies that females are 1.599 times more likely to be non-filers. The second significant demographic variable is 'financial training' (estimated beta = -0.505, Exp(beta) = 0.604, and a p-value = 0.051). This implies that those that do NOT have financial training are 0.604 times more likely to be filers. (Only 18.8 % of filers have financial training compared to 32.9 percent of on-filers.) The third significant demographic variable is 'education' (estimated beta = 0.323, Exp(beta) = 1.382, and a p-value = 0.000). This implies that those who have education are 1.382 times more likely to be non-filers. The fourth significant demographic variable is 'level of personal income' (estimated beta = -0.272, Exp(beta) = 0.762, and a p-value = 0.009). This implies that those who seek a higher level of personal income are 0.762 times more likely to be filers. This can reflect the shortage of financial resources felt by filers. The fifth significant demographic variable is 'marital status' (estimated beta = 0.223, Exp(beta) = 1.250 and a p-value = 0.042). This implies that those who are single are 1.250 times more likely to be non-filers. The sixth significant demographic variable is 'level of religious commitment' (estimated beta = 0.324, Exp(beta) = 1.383 and a p-value = 0.009). This implies that those who have high levels of religious commitment are 1.383 times more likely to be non-filers. The seventh significant demographic variable is 'importance of immediate gratification' (estimated beta = -0.346, Exp(beta) = 0.708 and a p-value = 0.012). This implies that those who give a high rating to importance of immediate gratification are 0.708 times more likely to be filers. The eighth significant demographic variable is 'parents highest income' (estimated beta = 0.281, Exp(beta) = 1.324 and a p-value = 0.000). This implies that those whose parents have high income are 1.324 times more likely to be non-filers.

TABLE 4
LOGISTIC REGRESSION RESULTS FOR THE DEPENDENT VARIABLE, FILING STATUS, WITH INDEPENDENT VARIABLES, FINANCIAL ACTIONS AND DEMOGRAPHIC CHARACTERISTICS

	B	S.E.	Wald	df	Sig.	Exp(B)
Financial Actions:						
1. Avoid unnecessary purchases	-0.217	0.187	1.345	1	0.246	0.805
2. Save regularly to achieve your goals	-0.031	0.179	0.030	1	0.862	0.969
3. Discuss goals with spouse and/or family members	0.444	0.146	9.295	1	0.002**	1.560
4. Take charge of your personal finances	-0.181	0.120	2.293	1	0.130	0.834
5. Pay bills on time	-0.111	0.160	0.482	1	0.487	0.895
6. Avoid pay-day lenders	0.572	0.174	10.755	1	0.001***	1.771
7. Avoid rent-to-own purchases	-0.083	0.144	0.332	1	0.564	0.920
8. Avoid living paycheck-to-paycheck	0.136	0.136	1.008	1	0.315	1.146
9. Make job choices that will increase your income	0.269	0.122	4.867	1	0.027**	1.309
10. Assess income potential of various jobs you are considering	-0.138	0.127	1.181	1	0.277	0.871
11. Obtain additional education if needed, to increase your earning potential.	-0.027	0.107	0.064	1	0.800	0.973
12. Review credit report every year	0.091	0.110	0.682	1	0.409	1.095
13. Pay more than the minimum amount due on credit card bills	0.280	0.098	8.116	1	0.004**	1.324
14. Save money to prepare for homeownership	-0.278	0.095	8.518	1	0.004**	0.757
15. Compare different types of mortgage loans	0.077	0.107	0.526	1	0.468	1.080
16. Visit only houses within your price range	0.057	0.136	0.178	1	0.673	1.059
17. Identify the best type of mortgage for your needs	-0.128	0.155	0.680	1	0.410	0.880
18. Save for retirement	0.084	0.116	0.518	1	0.472	1.087
19. Track expenses prior to budgeting	0.073	0.132	0.309	1	0.578	1.076
20. Compare prices when shopping	0.058	0.143	0.163	1	0.687	1.059
21. Do not live paycheck to paycheck	0.107	0.141	0.572	1	0.450	1.113
22. Regularly review my total financial situation	-0.038	0.159	0.056	1	0.813	0.963
23. Use cash for all purchases	-0.011	0.150	0.006	1	0.939	0.989
24. Evaluate my insurance needs	-0.025	0.142	0.030	1	0.862	0.976
25. Understand the true cost of credit	0.213	0.135	2.494	1	0.114	1.238

TABLE 4, CONT.
LOGISTIC REGRESSION RESULTS FOR THE DEPENDENT VARIABLE, FILING STATUS, WITH INDEPENDENT VARIABLES, FINANCIAL ACTIONS AND DEMOGRAPHIC CHARACTERISTICS

	B	S.E.	Wald	df	Sig.	Exp(B)
26. Know the components that make up your credit score	-0.024	0.149	0.025	1	0.874	0.977
27. Understand the steps of goal planning	0.327	0.148	4.899	1	0.027**	1.387
28. Understand how to increase income	-0.192	0.120	2.564	1	0.109	0.825
Demographic Variables:						
1. Gender	0.469	0.243	3.737	1	0.053*	1.599
2. Financial Training	-0.505	0.259	3.805	1	0.051*	0.604
3. Education	0.323	0.093	12.179	1	0.000***	1.382
4. Race	-0.135	0.150	0.815	1	0.367	0.874
5. Level of Personal Income	-0.272	0.104	6.785	1	0.009**	0.762
6. Marital Status	0.223	0.110	4.116	1	0.042**	1.250
7. Number of Children	-0.131	0.082	2.534	1	0.111	0.877
8. Religion	-0.062	0.058	1.119	1	0.290	0.940
9. Level of Religious Commitment	0.324	0.125	6.738	1	0.009**	1.383
10. Importance of Immediate Gratification	-0.346	0.137	6.357	1	0.012**	0.708
11. Parents highest income	0.281	0.074	14.347	1	0.000***	1.324
Constant	-4.503	1.570	8.230	1	0.004**	0.011

CONCLUSION

We look for significant differences in financial actions between Chapter 13 bankruptcy filers and non-filers. Data are taken from the Middle District of North Carolina (Durham, Raleigh, and Winston-Salem). Using the Mann-Whitney U test, 21 of 28 financial actions are found to be significantly different between the two groups, with non-filers having higher levels for all 21 variables (Table 5). These include: 1) save regularly to achieve your goals; 2) discuss goals with spouse and/or family members; 3) take charge of your personal finances; 4) pay bills on time; 5) avoid living paycheck-to-paycheck; 6) obtain additional education, if needed, to increase your earning potential; 7) review credit report every year; 8) pay more than the minimum amount due on credit card bills; 9) save money to prepare for homeownership; 10) compare different types of mortgage loans; 11) identify the best type of mortgage for your needs; 12) save for retirement; 13) track expenses prior to budgeting; 14) do not live paycheck to paycheck; 15) regularly review your total financial situation; 16) Use cash for all purchases; 17) evaluate your insurance needs; 18) understand the true cost of credit; 19) know the components that make up your credit score; 20) understand the steps of goal planning; and 21) understand how to increase income. These results show that non-filers are applying higher levels of personal financial management practices than do filers.

The seven insignificant variables include: 1) avoid unnecessary purchases; 2) avoid pay-day lenders; 3) avoid rent-to-own purchases; 4) make job choices that will increase your income; 5) assess income potential of various jobs you are considering; 6) visit only houses within your price range; and 7) compare prices when shopping. These results are also important in that these financial actions can be similar to both groups.

TABLE 5
SUMMARY OF RESULTS FOR FINANCIAL ACTION DIFFERENCES BETWEEN CHAPTER 13 FILERS AND NON-FILERS (MANN-WHITNEY U TEST)

Financial Actions	Significant	Not Significant
Financial Goals:		
1. Discuss goals with spouse and/or family members	x	
2. Understanding the steps of goal planning	x	
Financial Charge:		
1. Take charge of your personal finances	x	
2. Regularly reviewing my total financial situation	x	
Income:		
1. Make job choices that will increase your income		x
2. Assess income potential of various jobs you are considering		x
3. Obtain additional education if needed, to increase your earning potential	x	
4. Understanding how to increase income	x	
Budgeting:		
1. Track expenses prior to budgeting	x	
Purchasing:		
1. Avoid unnecessary purchases		x
2. Avoid rent-to-own purchases		x
3. Compare prices when shopping		x
4. Using cash for all purchases	x	
Payment of bills:		
1. Pay bills on time	x	
2. Pay more than the minimum amount due on credit card bills	x	
Living Paycheck to Paycheck		
1. Avoid living paycheck-to-paycheck	x	
2. Not living paycheck to paycheck	x	
Borrowing (including mortgages):		
1. Compare different types of mortgage loans	x	
2. Identify the best type of mortgage for your needs	x	
3. Visit only houses within your price range		x
1. Avoid pay-day lenders		x
Saving:		
1. Save regularly to achieve your goals	x	
2. Save money to prepare for homeownership	x	
3. Save for retirement	x	
Credit:		
1. Review credit report every year	x	
2. Understanding the true cost of credit	x	
3. Knowing the components that make up your credit score	x	
Insurance:		
1. Evaluating my insurance needs	x	
Total:	21	7

TABLE 6
SUMMARY OF RESULTS FOR FINANCIAL ACTION DIFFERENCES BETWEEN CHAPTER 13 FILERS AND NON-FILERS (LOGISTICS REGRESSION)

Financial Actions	Significant	Not Significant
Financial Goals:		
1. Discuss goals with spouse and/or family members	x	
2. Understanding the steps of goal planning	x	
Financial Charge:		
1. Take charge of your personal finances		x
2. Regularly reviewing my total financial situation		x
Income:		
1. Make job choices that will increase your income	x	
2. Assess income potential of various jobs you are considering		x
3. Obtain additional education if needed, to increase your earning potential		x
4. Understanding how to increase income		x
Budgeting:		
1. Track expenses prior to budgeting		x
Purchasing:		
1. Avoid unnecessary purchases		x
2. Avoid rent-to-own purchases		x
3. Compare prices when shopping		x
4. Using cash for all purchases		x
Payment of bills:		
1. Pay bills on time		x
2. Pay more than the minimum amount due on credit card bills	x	
Living Paycheck to Paycheck		
1. Avoid living paycheck-to-paycheck		x
2. Not living paycheck to paycheck		x
Borrowing (including mortgages):		
1. Compare different types of mortgage loans		x
2. Identify the best type of mortgage for your needs		x
3. Visit only houses within your price range		x
2. Avoid pay-day lenders	x	
Saving:		
1. Save regularly to achieve your goals		x
2. Save money to prepare for homeownership	x	
3. Save for retirement		x
Credit:		
1. Review credit report every year		x
2. Understanding the true cost of credit		x
3. Knowing the components that make up your credit score		x
Insurance:		
1. Evaluating my insurance needs		x
Total Financial Actions:	6	22

TABLE 6, CONT.
SUMMARY OF RESULTS FOR FINANCIAL ACTION DIFFERENCES BETWEEN CHAPTER 13 FILERS AND NON-FILERS (LOGISTICS REGRESSION)

Demographic Variables:		Significant	Not Significant
1.	Gender	x	
2.	Financial Training	x	
3.	Education	x	
4.	Race		x
5.	Level of Personal Income	x	
6.	Marital Status	x	
7.	Number of Children		x
8.	Religion		x
9.	Level of Religious Commitment	x	
10.	Importance of Immediate Gratification	x	
11.	Parents highest income	x	
Total Demographic Variables:		8	3

Using logistic regression analysis, we find 6 financial actions and 8 demographic variables that are significantly related to being a filer or non-filer (Table 6). The significant financial actions (non-filers having higher odds of occurring) include: 1) discuss goals with spouse and/or family members; 2) avoid payday lenders; 3) make job choices that will increase your income; 4) pay more than the minimum amount due on credit card bills; 5) save money to prepare for home ownership; and 6) understand the steps of goal planning. Five of the eight demographic variables are associated with non-filers having higher odds of occurring. These include: 1) gender (females having higher odds); 2) financial training; 3) education; 5) religious commitment; and 6) parents' higher income. Three of the eight demographic variables where filers have some higher odds of occurring include: 1) marital status (those who are married or have a partner having higher odds); 2) those who are seeking higher level of income; and 3) those who give more importance to immediate gratification.

This study shows significant financial action differences between filers and non-filers. The results of this study suggest that Chapter 13 filers suffer from the accumulation of poor practices across several key financial management behaviors and that those poor practices contribute, at least in part, to seeking financial relief through the bankruptcy process.

Individuals, financial educators, non-profit organizations, and government can utilize these results. Targeted financial education prior to financial distress may assist more consumers in avoiding the need to file for bankruptcy. For example, parents can provide more financial education to their children as this can reduce their odds of bankruptcy in the future. In addition, the findings from this study are useful for government policy changes to improve people's financial lives and to reduce personal financial bankruptcies, particularly in the locations studied. Hence, government, (federal, state, and county) can provide more financial literacy education to all citizens as this has a positive benefit of reducing personal bankruptcy to the society.

This study excludes economic variables like employment type. As data are cross-sectional, the evaluation of behaviors in business cycles cannot be done. Also, all of the different sub-sections of financial literacy (e.g. estate planning, and types of insurance) are not tested. This study could be extended into several new areas. First, more data can be generated from across different counties in North Carolina and other states. Psychological and demographic variables can be included. This will help to reinforce or counter the findings from this study.

REFERENCES

Agarwal, S., Sumit, R., Driscoll, J., & Xavier, J. (2009). The age of reason: Financial decisions over the lifecycle. *Brookings Papers on Economic Activity*, 51-117.

Campbell, J. Y. (2006). Household finance. *Journal of Finance*, 61, 1553-1604.

Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, 7(2), 107-128.

Copur, Z. & Bird, C. L. (2013). An international study of college students' personal financial wellness perceptions. *The Forum for Family and Consumer Issues*, 18 (3).

Courchane, M., & Zorn, P. (2005, April). Consumer literacy and creditworthiness. Washington, DC: Federal Reserve System Community Affairs Research Conference.

Danes, S. M., Casas, C. H., & Boyce, L. (1999). Financial planning curriculum for teens: Impact evaluation. *Financial Counseling and Planning*, 10(1), 25-37.

Financial Corps, 27 January 2014 find at https://financialcorps.com/history-of-financial-literacy-the-first-200-years/.

Fox, J., Bartholomae, S., & Lee, J. (2005). Building the case for financial education. *Journal of Consumer Affairs*, 39(1), 195-214.

http://www.uscourts.gov/report-name/bankruptcy-filings

Lusardi, A. (2008). Financial literacy: An essential tool for informed consumer choices? In E.S. Belsky (Ed.), Borrowing to live: Consumer and mortgage credit revisited (pp. 1-34). Washington, DC: Brookings Institution Press.

Lusardi, A., & Mitchell, O. (2007a). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics*, 42, 35-44.

Lusardi, A., & Mitchell, O. S. (2007b). Baby boomer retirement security: The role of planning, financial literacy, and housing wealth. *Journal of Monetary Economics*, 54, 205-224.

Lyons, A. C., Chang, Y., & Scherpf, E. M. (2006). Translating financial education into behavior change for low-income populations. *Financial Counseling and Planning*, 17(2), 8-34.

Mandell, L., & Klein, L. S. (2007). Motivation and financial literacy. *Financial Services Review*, 16, 105-116.

Norvilitis, J. M., Merwin, M. M., Osberg, T. M., Roehling, P. V., Young, P., & Kamas, M. M. (2006). Personality factors, money attitudes, financial knowledge and credit card debt in college students. *Journal of Applied Social Psychology*, 36, 1395-1413

President's Advisory Council on Financial Literacy. (2009). Annual report. Washington, DC: Government Printing Office.

Worthington, A. C. (2006). Predicting financial literacy in Australia. *Financial Services Review*, 15(1), 59-79.