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What's Inside:

Background	1
Findings	2
How do financial outcomes and behaviors differ between military and civilian households?	2
How do financial outcomes and behaviors differ between military members by service?	4
How do financial outcomes and behaviors differ between military members by component?	6
Discussion & Summary	7
Notes	9
Methodology Appendix	10

The Financial Welfare of Military Households

Background

Despite significant interest in the welfare of military service members and their families, there has been little scientific research on their household financial situations. More specifically, to the author's knowledge, there have been very few comparative analyses between military members and their civilian counterparts, between members of the different military services or between different military service components (active duty, Reserve and National Guard)—and none that have controlled for important demographic differences.¹ Using data from the 2009 and 2012 National Financial Capability Studies (Military and State-by-State), this paper provides initial descriptive evidence on military members' household finances using a large national survey of military members and their civilian counterparts.

The paper investigates the following research questions:

- ▶ How do financial outcomes and behaviors differ between military and civilian households?
- ▶ How do financial outcomes and behaviors differ between military members by service?
- ▶ How do financial outcomes and behaviors differ between military members by component?

Military members have better solvency and savings outcomes, but worse credit card outcomes, relative to comparable civilians.

I find that military members have better solvency and savings outcomes, but worse credit card outcomes, relative to comparable civilians. Within the military, I find few differences in the financial outcomes between members of the services and similarly few differences between the components. Future research can build on this initial analysis and might provide causal insights into the observed

1. The FINRA Investor Education Foundation's report entitled *Financial Capability in the United States: 2012 Report of Military Findings* made several basic comparisons of financial capability between a national and military sample.

differences. In addition, highlighting the differences in the observed outcomes conditional on appropriate observable characteristics could improve policy design.

The National Financial Capability Study (NFCS) contains a large number of financial outcomes of interest to economists, policy makers and stakeholders. In this paper, I analyze a set of outcomes that highlight basic financial conditions and behaviors and that facilitate meaningful comparisons between military and civilian groups. I analyze 10 outcomes in the following three areas.

- ▶ Recent conditions (spending greater than monthly income in the past 12 months, difficulty covering expenses, and declared bankruptcy in the past two years).
- ▶ Routine financial activities (number of credit cards, costly credit card behavior index [*e.g.*, paying late, making only minimum payments, using for a cash advance], presence of a three-month emergency fund and having savings outside of retirement).
- ▶ Use of alternative financial services (payday loans, auto title loans and refund anticipation loans) in the past five years.

The NFCS surveys also contain a reasonably large set of self-reported characteristics that I will incorporate in my analysis. These characteristics (and the restrictions I place on the sample in this analysis) include the following.

- ▶ Demographics such as gender, age (individuals 18 – 45 years old), marital status, children and minority status.
- ▶ Military rank (enlisted members of the Army, Navy, Air Force and Marines).
- ▶ Education level (individuals with less than a college degree).
- ▶ Annual income (individuals with less than \$75K in annual household income).
- ▶ Financial literacy and financial confidence measures.

Findings

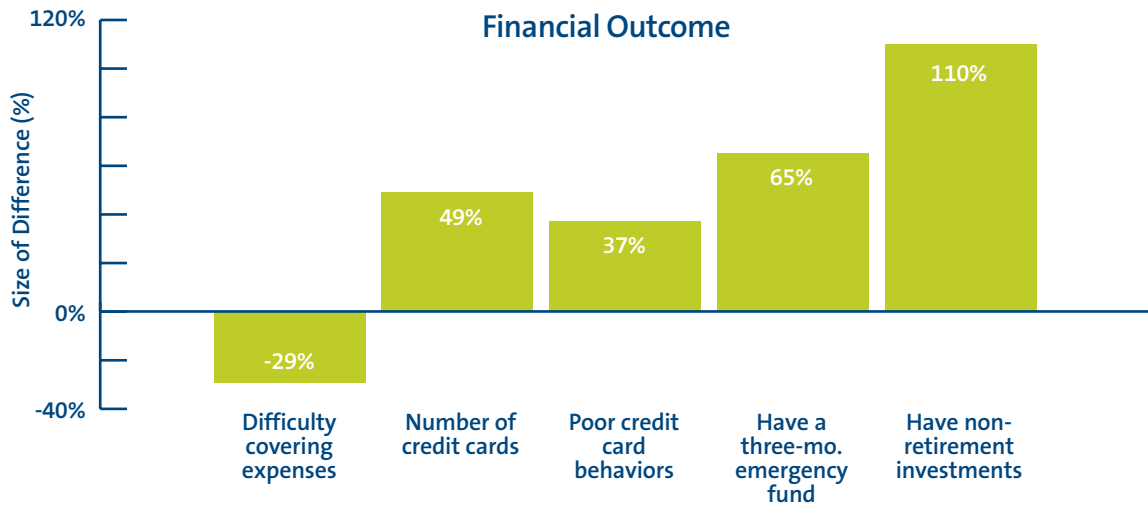
In this section, I complete descriptive analyses for each of the three questions. Due to the nature of the study, none of the results in this paper should be taken as causal evidence on the financial effects of military service, serving in a specific service or serving in a specific component. For each analysis, I provide background and motivation for the question, highlight the differences between the groups and summarize the analyses.

How do financial outcomes and behaviors differ between military and civilian households?

Given the voluntary nature of military service and the significant differences in military and civilian life, we expect differences in the characteristics of those who serve and those who do not. To provide initial insight into some of these observable differences, I report summary statistics that describe how members of the military and civilian samples differ by observable characteristics and in their financial outcomes.

The results suggest that on average, military members are younger, less likely to be female and slightly less likely to be a minority. They are about equally likely to be divorced and about equally likely to have children. They are more likely to be married and slightly more educated (among my non-college degree sample). They also have higher income, higher financial literacy scores and more financial confidence relative to their civilian counterparts.

Figure 1. Military-Civilian Financial Differences



Source: 2009 and 2012 NFCS Military and State-by-State Surveys. The size of the difference (y-axis) reflects the difference (regression adjusted) between military and civilian sample members for each outcome divided by the average outcome level for civilian sample members, yielding a percentage figure. I restrict the outcomes here to those where the differences are statistically significant at the 10% level.

I summarize the differences in financial outcomes below and present them in Figure 1.

In their recent financial outcomes, members of the military compare to civilians as follows.

- ▶ They do not differ in their likelihood of having monthly spending greater than income.
- ▶ They do not differ in their likelihood of having declared bankruptcy in the past two years.
- ▶ They report being 22 percentage points (about 29% based on a mean outcome of 77 percentage points among civilian respondents in this sample) less likely to have difficulty covering their monthly expenses.

One potential explanation for this difference is that military members enjoy greater income stability than their civilian counterparts, though military spouses may enjoy less stability given the challenges of relocations and increased responsibilities when service members are deployed.

For routine financial decisions, members of the military compare to civilians as follows.

- ▶ They have 0.82 (49%) more credit cards.

- ▶ They have 0.50 (37%) more costly credit card behaviors (on a scale of 0-6).
- ▶ They are 12.94 percentage points (65%) more likely to have a three-month emergency fund.
- ▶ They are 18.07 percentage points (110%) more likely to have non-retirement investments.

These results suggest that military members appear to be more at risk with credit cards and less at risk with savings and investments.

These results suggest that military members appear to be more at risk with credit cards and less at risk with savings and investments. While emergency funds are generally considered an important measure of insurance for families in the event of unplanned expenses or income shocks, the relative stability of military employment might suggest, all else equal, a lower need for such savings for military households. The higher levels of savings among military members might be better used in other investments or to reduce credit

card balances, especially if credit cards are being used to finance short-term savings.

In their use of alternative financial services (AFS), members of the military compare to civilians as follows.

- ▶ They do not differ in their use of payday loans.
- ▶ They do not differ in their use of auto title loans.
- ▶ They do not differ in their use of tax refund anticipation loans.

These findings contrast somewhat with media and policy reports concerning levels of AFS use by members of the military. Reports of high levels of AFS use contributed to congressional passage of the 2007 Military Lending Act and have generated continued attention from federal agencies (*e.g.*, the Consumer Financial Protection Bureau). The findings do not refute the fact that military members, on average, use these products at higher rates than the full civilian population, but instead suggest that when compared to civilian individuals similar in age, education, income and the other individual characteristics used here, military members are no more or less likely to use AFS.

How do financial outcomes and behaviors differ between military members by service?

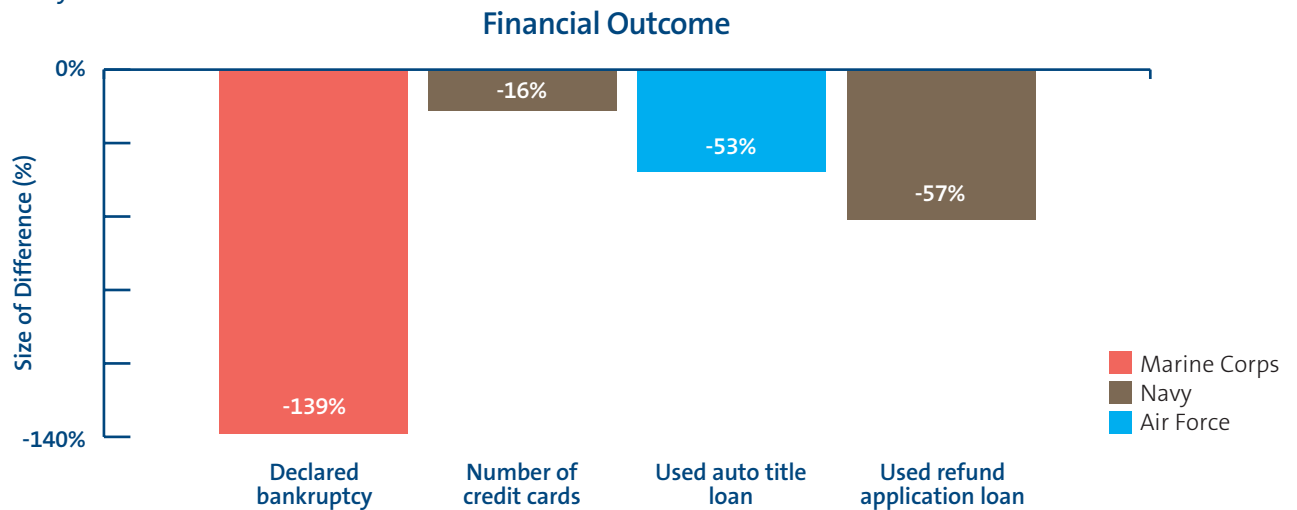
The U.S. military service branches differ significantly on a number of dimensions that might affect financial outcomes. Two important inter-service differences are the probability of overseas service (more likely for Army and Marine Corps members during the sample period) and the different assignment locations within the U.S. The probability of overseas unaccompanied service or deployment to combat locations has significant ramifications for individuals' financial outcomes mediated by family considerations (*i.e.*, the additional compensation and reduced expenditures may benefit single soldiers without dependents while the increased stress and marginal reductions in spending may harm families or individuals with children). The differences in assignment locations mean that military members and their families experience different economic conditions (*e.g.*, different labor markets for spouses or military members seeking outside employment) and differential exposure to financial products (*e.g.*, payday lending) and laws with financial implications (*e.g.*, no-fault auto insurance).

When compared to civilian individuals similar in age, education and income, military members are no more or less likely to use AFS.

Since the Army is the largest service (nearly 40% of active duty forces) and perhaps the most "typical" military force, I focus my analysis on the differences between each service and the Army, as opposed to all of the potential inter-service differences. While explaining the reasons for these demographic differences by service is beyond the scope of this brief, different service rank pyramids, recruiting standards, levels of attrition and available vocations could all help explain the observed results.

- ▶ Relative to the soldiers in the Army, sailors in the Navy are, on average, older, more often female, more likely to be married and more likely to be divorced, and they have higher income and higher financial literacy scores. They are less likely to have children, less likely to be a minority and slightly less educated, and they have lower financial confidence index scores relative to their Army counterparts.
- ▶ Relative to soldiers in the Army, airmen in the Air Force are, on average, older, more likely to be married and more educated, and they have higher incomes, higher financial literacy scores and higher financial confidence. They are less often female, less likely to be divorced and less likely to have children. They are also less likely to be a minority relative to their Army counterparts.
- ▶ Relative to the soldiers in the Army, Marines are, on average, younger, less often female, less likely to be married, less likely to be divorced, less likely to have children and less likely to be a minority. They are comparably educated and have comparable incomes, financial literacy scores and financial confidence index scores relative to their Army counterparts.

Figure 2. Military Service Financial Differences



Source: 2009 and 2012 NFCS Military and State-by-State Surveys. Comparisons are between each service and the Army. The size of difference (y-axis) reflects the difference (regression adjusted) between the services for each outcome divided by the average outcome level for Army sample members, yielding a percentage figure. I restrict the outcomes here to those where the differences are statistically significant at the 10% level.

I briefly summarize the differences in the financial outcomes by military service below and present them in Figure 2.

In their recent financial outcomes, members of the different military services, on average, have few differences.

- ▶ Members of the Navy, Air Force and Marines do not differ from their Army counterparts in the probability that they spend more than their monthly income.
- ▶ Members of the Navy, Air Force and Marines do not differ from their Army counterparts in the probability of having difficulty paying their bills.
- ▶ Navy and Air Force members do not differ from Army members in the probability of declaring bankruptcy, but Marine Corps members are 7.93 percentage points (139%) less likely to have declared bankruptcy in the past two years than Army members.

For routine financial decisions, members of the different military services, on average, have very few differences.

- ▶ Members of the Navy, Air Force and Marine Corps do not differ from their Army counterparts in their costly credit card behaviors, their probability of having a

three-month emergency fund or their probability of having non-retirement investments.

- ▶ Air Force and Marine Corps members do not differ from Army members in their number of credit cards, but Navy members have 0.49 (16%) fewer credit cards than Army members.

In their use of AFS, there are a few differences between members of the different military services.

- ▶ Members of the Navy, Air Force and Marine Corps do not differ from Army members in the probability of having used payday loans.
- ▶ Members of the Navy and Marine Corps do not differ from Army members in the probability of having used auto title loans, but Air Force members, on average, have an 8 percentage point (53%) lower probability of having used an auto title loan than their Army counterparts.
- ▶ Air Force and Marine Corps members do not have statistically significant differences in their reported use of refund anticipation loans relative to Army members, but Navy members, on average, have a 6 percentage point (57%) lower probability of having used a refund anticipation loan.

How do financial outcomes and behaviors differ between military members by component?

The military service components differ substantially in their requirements for service members. Active duty members serve full time in the military, often live on a military installation, typically relocate to a new duty station every few years and deploy as required by their unit.

Reserve and National Guard members normally serve in a more limited capacity, completing their service requirements during one weekend per month and a several-week training period each year. However, Reserve and National Guard members can also be required to deploy overseas and many have done so over the past decade. They often hold civilian jobs or pursue education while serving, though some Reservists and Guard members are full-time military employees. Reservists and Guard members typically live near their unit, and these locations are often smaller than active duty military installations. Reserve forces units are directed and resourced by the federal government, while National Guard units are directed primarily by their state. The military pay and benefits also differ by component commensurate with their service requirements. Given these different requirements and conditions, we would

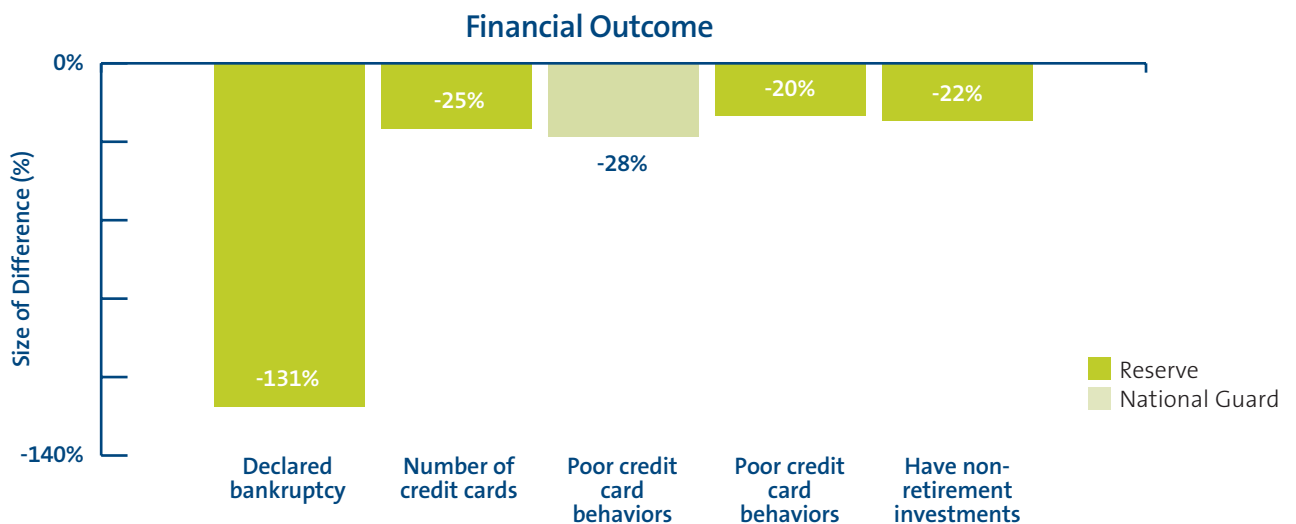
expect service members to self-select into the different components and to differ from one another.

I focus my service component analysis on the potential differences between individuals serving on active duty and those serving in the Reserves or the National Guard, as opposed to all of the potential inter-component differences.

On average, members of the Reserve component are younger (in this age-restricted sample), less likely to be married, less likely to have children and less likely to be a minority, and they have lower incomes, lower financial literacy scores and less financial confidence relative to their active duty counterparts. They are more often female, comparably likely to be divorced and slightly more educated than active duty members.

Relative to their active duty counterparts, members of the National Guard are less likely to be married, less likely to be divorced, less likely to have children, less likely to be a minority and less educated, and they have lower income, lower financial literacy scores and less financial confidence. They are more likely to be female and older, on average, than active duty members.

Figure 3. Military Component Financial Differences



Source: 2009 and 2012 NFCS Military and State-by-State Surveys. Each bar compares a service component with the active duty for the labeled outcome. The size of difference (y-axis) reflects the difference (regression adjusted) between the components for each outcome divided by the average outcome level for active duty sample members, yielding a percentage figure. I restrict the outcomes here to those where the differences are statistically significant at the 10% level. So for example, there is only one statistically significant difference (Poor credit card behaviors) between active duty and National Guard members.

I briefly summarize the differences in the financial outcomes by military component below and present them in Figure 3.

In their recent financial outcomes, members of the different military components, on average, have few differences in their recent financial conditions.

- ▶ Members of the Reserves and National Guard do not differ from active duty members in their probability of spending more than their monthly income.
- ▶ Members of the Reserves and National Guard do not differ from active duty members in their probability of having difficulty paying their bills.
- ▶ National Guard members do not have statistically different probabilities of declaring bankruptcy than active duty members, but Reservists have a 7.46 percentage point (131%) lower probability of having declared bankruptcy in past two years.

There appear to be some important differences in the routine financial decisions of members of the different military components when compared to active duty members.

- ▶ National Guard members do not differ in their number of credit cards, but Reserve component members have 0.75 (25%) fewer credit cards.
- ▶ National Guard members have 0.60 (28%) fewer costly credit behaviors and Reservists have 0.43 (20%) fewer costly credit behaviors.
- ▶ National Guard members do not have different probabilities of holding non-retirement investments, but Reserve component members are 9.17 percentage points (22%) less likely to have non-retirement investments.
- ▶ National Guard members and Reservists have comparable probabilities of having a three-month emergency fund relative to their active duty counterparts.

Reservists and National Guard members exhibit no difference in AFS use when compared to active duty members.

- ▶ They have comparable probabilities of having used payday loans.

- ▶ They have comparable probabilities of having used auto title loans.
- ▶ They have comparable probabilities of having used refund anticipation loans.

Discussion & Summary

This research investigates three important questions related to military household financial decision-making. Using a regression analysis of data from the 2009 and 2012 NFCS Military and State-by-State Surveys, I explore these questions and find a nuanced answer to each question. I find that military members have better solvency and savings outcomes but worse credit card outcomes relative to comparable civilians.

Within the military, there are a few cases in which Navy personnel (*i.e.*, number of credit cards and use of refund anticipation loans), Air Force personnel (*i.e.*, lower use of auto title loans) and Marine Corps members (*i.e.*, lower probability of having declared bankruptcy) appear better off than their Army counterparts. Conversely, in none of the 10 outcomes evaluated here do Army personnel have statistically significant beneficial differences relative to personnel in the other services.

Finally, I find a few differences between members of the different service components. Reservists have lower probabilities of having declared bankruptcy, fewer credit cards and fewer costly credit card behaviors than active duty members. They also report being less likely to have non-retirement investments. National Guard members have fewer costly credit card behaviors than active duty members.

There are several important shortcomings in this analysis worth highlighting. First, survey respondents may not be representative of the groups to which they belong; (*e.g.*, the individual services or the Department of Defense (DoD) in general). In the case of the military and civilian comparisons, the fact that the survey was completed online may exclude some of the lowest income civilian individuals because these individuals likely enjoy less access to the Internet than their low-income military counterparts, given the widespread availability of the Internet and computers to service members. This might lead the estimates for civilian respondents to be higher than for the full population.

Further, military members may be more concerned about participating in financial surveys or acknowledging poor financial behaviors if they believe their participation could place them at risk at work, making the military estimates upward biased as well. The use of self-reported financial behaviors will always be imperfect and the results should be interpreted accordingly. The use of administrative data is much more difficult to obtain, but significantly increases the credibility of analyses of financial behavior. Since the number of employers and financial service providers is so large for civilians, there will always be challenges inherent in obtaining administrative financial records for large civilian samples. As a result, surveys like the NFCS will remain useful methods for completing comparative household finance analyses. However, the use of DoD administrative data, held at the DoD and service level, could significantly improve the inter-service and inter-component analyses presented here.

Second, the analyses here are only descriptive. While I exploit a relatively rich set of individual characteristics, including age, family situation, education, income, financial literacy and financial confidence, as well as restricting the samples to increase comparability across groups, there are undoubtedly other factors affecting financial decisions that I do not account for in my analysis. Accordingly, these estimates do not enable causal inference and simply provide a detailed descriptive picture of the differences in financial outcomes between several different groups of interest.

Third, the sample sizes for the NFCS, while the largest to date for military members, are still relatively small. The 2012 NFCS Military Survey, combined with military members responding to the State-by-State Survey, generated a larger sample size relative to its 2009 predecessor ($n=1,301$ in 2012 vs. $n=700$ in 2009). But the number of military respondents ($n=2,001$ total and $n=606$ in this restricted sample) in many cases prevents

precise estimation of the parameters of interest. As a result I am unable to determine if the lack of statistically significant differences in many areas (*e.g.*, the inter-component comparisons) is due to the small samples or if there are truly no differences between the groups. To address these issues, future surveys could incorporate larger samples ($n=10,000$ military members would be an ambitious but useful goal) or panel approaches (following the same individuals over time).²

To the author's knowledge, this is the first (relatively) large-scale analysis of the differences between military and civilian members for financial outcomes in a variety of domains. Similarly, it is the only existing analysis that attempts to control for the many differences between military and civilian individuals. While nothing in these analyses provide causal explanations for the observed differences, the fact that in many cases the differences are statistically insignificant once observable characteristics are controlled for can alleviate some concerns over whether military service itself generates unique requirements for additional assistance. Simply put, the military is largely a young, moderately educated population with low- to moderate-levels of income. These considerations should be kept in mind as policy makers evaluate the degree of special treatment for men and women in the military (*e.g.*, the Military Lending Act and the Servicemembers Civil Relief Act).

The findings here also suggest the need for surveys to collect additional data on currently unobserved characteristics (*e.g.*, detailed risk preferences, time preferences, behavioral considerations such as self-control and propensities to plan) to more precisely identify potential reasons for the observed outcome differences. Even better would be experimental survey approaches that isolate the reasons for an individual's decisions and actual experimental approaches to financial education and other service provisions.

Since the military services have the autonomy to develop and implement a wide array of policies (*e.g.*, training and education, quality of life, pre-deployment and post-deployment programs), as well as the ability to collect detailed administrative and survey data, this environment represents one of the most promising areas

2. As a noteworthy example, the FINRA Foundation worked with the RAND Corporation in 2013 to integrate the NFCS into the American Life Panel. See www.USFinancialCapability.org.

for research into household financial decision-making and for refinement of large-scale public sector program evaluation techniques. These efforts hold promise for more effectively preparing military members for the financial challenges of serving in today's all-volunteer force and for developing a better understanding of the effectiveness of public policy in serving members of low- and moderate-income households.

Notes

This paper summarizes the findings from a FINRA Investor Education Foundation-funded white paper entitled *The Financial Welfare of Military Households: Descriptive Evidence from Recent Surveys*. Complete copies of the paper can be found at: www.USFinancialCapability.org or by contacting the author.

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Methodology Appendix

Summary of the National Financial Capability Studies

This analysis utilizes data from the 2009 and 2012 National Financial Capability Studies sponsored by the FINRA Investor Education Foundation. The FINRA Foundation developed the surveys in consultation with the U.S. Department of Treasury and other federal agencies, leading academics and researchers and the President's Advisory Council on Financial Capability. The surveys were completed online in 2009 and 2012, and respondents were compensated for their participation. As a result, while the survey is national in scope and the methodology was carefully implemented, there may exist important sources of error that include selection into participation, non-response bias among participants and measurement error.³ In neither survey is the sample necessarily representative of the full U.S. or military populations, though I restrict the sample to mitigate some of these differences.⁴

Sample

In order to focus on the population of the most policy interest (*i.e.*, enlisted servicemembers and their low- to moderate-income counterparts), I restrict the sample to individuals aged 18-45 years old with less than a college degree and less than \$75K in annual household income.⁵ These restrictions generate a combined sample size of n=13,446 civilians from the 2009 and 2012 State-by-State Surveys and n=606 military servicemembers from the 2009 and 2012 State-by-State and Military Surveys.⁶

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3. The NFCS relies on self-reported demographic and financial outcome variables and, accordingly, may suffer from measurement error. Individuals might overreport behaviors perceived as desirable and underreport behaviors perceived as undesirable. However, since the paper relies on comparisons across groups (*e.g.*, military members vs. civilians or military services vs. each other), measurement errors are less concerning if the self-reports are biased equally across groups. Still, given the military's concern for servicemembers' financial affairs and its legal authority over many aspects of their lives, these self-report challenges might be more likely among servicemembers.
 4. The 2009 NFCS State-by-State, 2012 NFCS State-by-State and 2012 NFCS Military Surveys all have sample weights which attempt to present a reliable representation of the national population and the military population. But since the 2009 NFCS Military Survey lacks weights, I use unweighted data for this analysis.
 5. I restrict the sample to individuals with less than a college education since they are of primary policy interest for financial decision-making. For more details, see footnotes 5 and 14 in the full paper.
 6. I further restrict the military sample to enlisted members of the Army, Navy, Air Force and Marines.