CENTER for RETIREMENT RESEARCH at BOSTON COLLEGE

WHAT DO SUBJECTIVE ASSESSMENTS OF FINANCIAL WELL-BEING REFLECT?

Steven A. Sass, Anek Belbase, Thomas Cooperrider, and Jorge D. Ramos-Mercado

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Center for Retirement Research at Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467
Tel: 617-552-1762 Fax: 617-552-0191
http://crr.bc.edu

Steven A. Sass is a research economist at the Center for Retirement Research at Boston College (CRR). Anek Belbase is research project manager at the CRR. Thomas Cooperrider is an associate at the Berkeley Research Group LLC. Jorge D. Ramos-Mercado is a research associate at the CRR. The research reported herein was pursuant to a grant from the FINRA Investor Education Foundation. The findings and conclusions expressed are solely those of the authors and do not represent the views of the FINRA Investor Education Foundation or Boston College. All errors are the authors'.

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Abstract

Subjective financial assessments are used by social scientists as a measure of financial well-being and by households as the basis for action. Financial well-being, however, increasingly requires workers to build-up savings to meet hard-to-see future needs, specifically retirement, their children's education, and paying off student loans.

This paper analyzes data from the FINRA Investor Education Foundation's 2012 Financial Capability Survey to test whether subjective financial assessments 1) primarily reflect day-to-day, rather than distant, financial concerns; 2) increasingly reflect distant concerns if the household's day-to-day finances are in reasonably good shape; and 3) increasingly reflect distant concerns if the worker is financially literate.

The paper found that:

- Subjective financial assessments primarily reflect day-to-day conditions.
- This remains the case even if the household's day-to-day finances are in reasonably good shape.
- Financial literacy enhances sensitivity to the lack of a retirement plan and having a mortgage greater than the value of one's house, but it has no noticeable effect on sensitivity to life and medical insurance deficits, having an inactive retirement plan, not saving for college, or student debt burdens.

The policy implications of the findings are:

- Subjective financial assessments have become a poor measure of financial well-being.
- Workers by themselves cannot be expected to devote much effort to addressing distant deficits.
- Initiatives to improve well-being must raise awareness – or compensate for the lack of awareness – of hard-to-see distant future deficits.

Introduction

Peace of mind is one of the great benefits that comes from having one's financial house in order. Financial satisfaction is also often used as a measure of financial well-being. But bliss could be the fruit of ignorance. If so, subjective financial assessments would be imperfect measures of well-being and peace of mind hazardous to financial health.

Financial satisfaction is based on what one sees and values at a particular point in time. Financial well-being, however, involves protection against hard-to-see risks and the build-up of savings to meet future needs. So it would not be surprising if subjective assessments overlook deficits in dealing with issues distant from day-to-day concerns. Households are increasingly responsible for such issues, specifically paying off student loans and saving for retirement and their children's college education, as well as acquiring a home and paying off the mortgage before they retire. To the extent that subjective assessments overlook deficits in these areas, households could lack sufficient motivation to address these issues[1] and the deficits are likely to grow. Peace of mind then would diminish financial well-being.

This study examines the relationship between subjective financial self-assessments and financial well-being by testing the following three hypotheses:

1. Day-to-day concerns, such as the ability to cover current expenses and debt payments, have a significantly greater effect on subjective financial assessments than more distant concerns, such as protection against risk and having enough savings to meet future needs.
2. Subjective financial assessments follow a pecking order, with distant issues having a greater effect on subjective assessments once the household's day-to-day finances are in a reasonably good shape. To the extent that this is the case, motivation to address distant deficits should rise as concern over day-to-day deficits declines.
3. Financial literacy significantly enhances the sensitivity of subjective financial assessments to distant deficits. To the extent this is the case, initiatives that increase financial literacy would increase a household's motivation, as well as its ability, to improve its financial well-being.

The discussion proceeds as follows. The first section reviews the literature on subjective assessments as a measure of financial well-being. The second section describes the data and methodology used to test the three hypotheses. The third section presents findings consistent

[1] Isen (1987), Foote (2000).

with the first hypothesis, that subjective assessments largely reflect day-to-day financial concerns. The fourth section presents findings that are inconsistent with the second hypothesis, that distant issues have a significantly greater effect on subjective assessments once the household's day-to-day finances are in reasonably good shape. The fifth section presents findings that are inconsistent with the third hypothesis, that financial literacy significantly enhances the accuracy of subjective assessments, and especially the assessment of distant financial issues. The final section concludes that financial satisfaction is a poor measure of financial well-being and that initiatives to improve well-being must raise awareness – or compensate for the lack of awareness – of hard-to-see distant financial deficits.

Subjective Assessments of Financial Well-being

Financial well-being is measured not by income and wealth, but by the happiness and life satisfaction that income and wealth provide. Happiness and life satisfaction, however, are not easily measured. Researchers have thus used financial satisfaction – an individual's subjective assessment of his or her financial condition – as a yardstick to assess well-being.[2]

An extensive body of research has shown that the relationship between an individual's financial condition and his or her happiness and life satisfaction is rather indirect. Increases in national per capita income and wealth are associated with increases in self-assessed subjective well-being. But the relationship is weak, and it weakens dramatically as per capita income and wealth rise above relatively low levels. In prosperous economies, such as the United States, overall levels of self-assessed happiness and life satisfaction have remained largely unchanged over much of the last half century. At any point in time, however, an individual's subjective well-being is clearly related to the household's financial condition: the rich generally report they are happier and more satisfied with their lives than the poor. What seems to drive subjective well-being in prosperous economies is not income and wealth, but income and wealth relative to social reference groups, previous levels of income and wealth, and aspirations, which rise more or less in line with increases in income and wealth.[3]

[2] Another approach for assessing well-being is to identify household preferences from market behavior and uses these preferences to estimate the effect of actual or potential economic changes on happiness and life satisfaction.
[3] Easterlin (1974, 1995, and 2004); MacDonald and Douthitt (1992); Hsieh (2001); Bowling and Windsor (2001), Blanchflower and Oswald (2004), Stutzer (2004), Van Praag (2004), Ferrer-i-Carbonell (2005); Luttmer (2005), Easterlin (2006), Johnson and Kreuger (2006), Seghieri, Tanturri, and DeSantis (2006), Vera-Toscano et al. (2006),

Financial satisfaction would nevertheless be a reasonable yardstick for assessing financial well-being in prosperous economies if it reflected the household's ability to maintain or improve its income and wealth relative to its social reference groups and personal benchmarks. Subjective financial assessments would also be a valuable motivator, with dissatisfaction an incentive to improve the household's sense of well-being.

An anomaly reported in Mugenda et al. (1993) and Xiao et al. (2013), however, raises concerns about the use of subjective assessments as an indicator of financial well-being. These studies found that financial literacy reduces satisfaction.[4] The researchers suggested that financially literate individuals do not have weaker finances, but are better equipped to see deficits. This hypothesis is consistent with the notions that financial rationality is limited; that subjective assessments can mask serious deficits; and that less literate households are overly sanguine, and thus less likely to take action to improve their financial well-being. To the extent this is the case, initiatives to improve well-being must correct, or otherwise accommodate, inaccurate subjective assessments of the household's financial condition.

This study contributes to the literature by testing the three hypotheses listed above for working-age adults: 1) that subjective financial assessments are primarily associated with day-to-day concerns; 2) that these assessments follow a pecking order, increasingly reflecting distant concerns after day-to-day concerns are reasonably addressed; and 3) that financial literacy significantly enhances the sensitivity of subjective assessments to distant concerns. The findings address the use of subjective assessments as an indicator of financial well-being and as a yardstick motivating households to improve their well-being. The findings also address the design of initiatives to improve well-being by identifying: 1) issues that subjective assessments reasonably reflect, both initially and as day-to-day concerns subside; 2) the ability of financial literacy to improve the quality of subjective financial assessments, and thereby a household's motivation to improve its financial well-being; and 3) issues that require initiatives that correct or otherwise accommodate inaccurate subjective assessments.

Clark, Frijters, and Shields (2008), Dolan, Peasgood, and White (2008), Joo and Grable (2008), Plagnol (2010a, 2010b), and Xiao, Chen, and Chen (2012).

[4] Mugenda et al. (1990), Xiao, Chen, and Chen (2012).

Data and Methodology

Data. The study examines the relationship between the subjective financial assessments of working-age adults and their household's objective financial condition. It uses data collected in the 2012 FINRA Investor Education Foundation State-by-State Financial Capability Survey, an online survey of 25,509 American adults conducted from July to October 2012.[5] The sample used in this study excludes:

- 5,414 respondents who are under age 25, full-time students, or living with parents, friends, or roommates, to exclude respondents who are not fully engaged in the labor force or have not established an independent household.
- 6,648 of the remaining respondents who are retired or disabled or whose spouse is retired or disabled, as their financial condition is difficult to assess from the data collected in the Survey.
- 1,447 of the remaining respondents who say someone else in the household is more knowledgeable about saving, investing, and debt, as the study is interested in the quality of household assessments.
- 138 of the remaining respondents who indicated that they "don't know" or "prefer not to say" when asked how satisfied they are with their current financial condition.
- 1,284 of the remaining respondents who answered "don't know" or "prefer not to say" when asked about particular financial conditions.

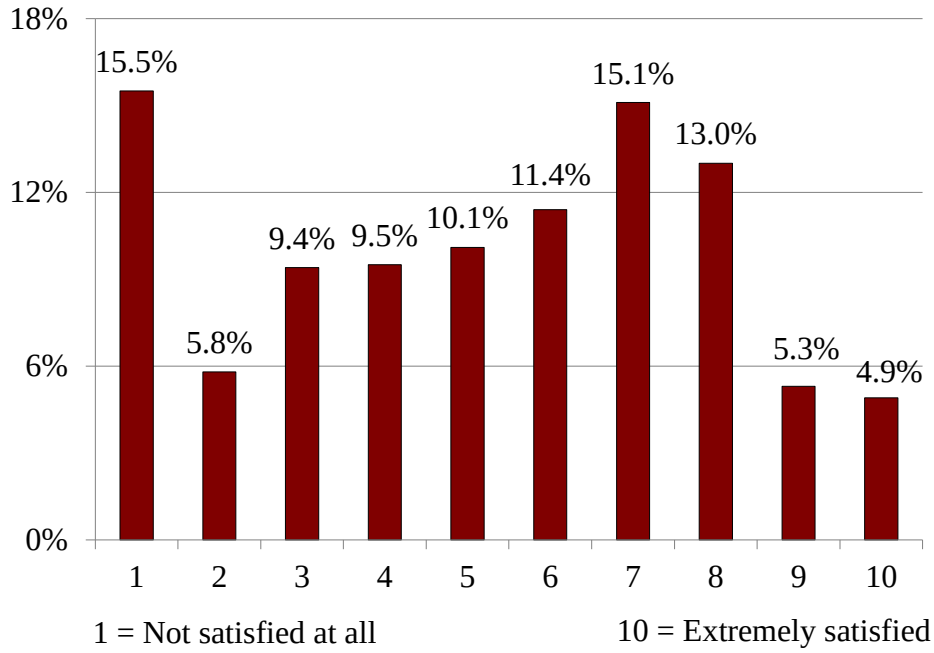
This leaves a sample of 10,578 respondents. The dataset includes population weights, which the study uses, to make this very large sample representative of the nation at large.

Subjective assessments of the household's overall financial condition are provided by responses to the question: "Overall, thinking of your assets, debts and savings, how satisfied are you with your current personal financial condition? Please use a 10-point scale, where 1 means 'Not At All Satisfied' and 10 means 'Extremely Satisfied.' The Survey asked this question at the beginning of the interview, before respondents were asked any questions that would lead them to

[5] The Survey sampled approximately 500 respondents in each state plus the District of Columbia, with the sample in each state approximating Census distributions by age, gender, ethnicity, education, and income. FINRA Foundation (2012a and 2012b).

review their finances. Their responses can thus be taken as representative of subjective financial assessments in the population at large.[6] The distribution of responses is given in Figure 1.

Figure 1. *Distribution of Subjective Financial Assessments Given on a Scale from 1 to 10 Households in the Labor Force, 2012**



* See text for description of the sample.
Source: Authors' calculations using data from FINRA Investor Education Foundation (2012a).

To assess relationships between this measure of financial satisfaction and the household's financial condition, the study uses the set of indicators listed in Table 1, which also gives their incidence in the sample.

[6] Different surveys ask different questions to assess financial satisfaction for different analytic reasons. This study analyzes the relationship between financial satisfaction and day-to-day as opposed to distant financial conditions. That the question in the FINRA Foundation Survey explicitly asks, "thinking of your assets, debts and savings," prompts respondents to consider issues other than day-to-day concerns and their responses might give distant concerns somewhat greater weight; that the question focuses on current stocks of "assets, debts and savings," on the other hand, might prompt respondents to make a present-minded, rather than forward-looking, assessment of their financial condition. All in all, the question seems well suited for this study.

Table 1. *Household Financial Indicators Included in the Study*

Day-to-day concerns	Incidence
Self-assessed difficulty covering expenses	
Not difficult	43%
Moderately difficult	42%
Very difficult	15%
Unemployment	
Neither the respondent nor a spouse or partner is unemployed	89%
Unemployed: respondent and/or a spouse or partner is unemployed	11%
Self-assessed current debt burden *	
Not too much debt	28%
Moderate debt burden	37%
Heavy debt burden	35%
Ability to access $2,000	
Could certainly or probably access $2,000	58%
Could not likely access $2,000	42%
Distant concerns	Incidence
Medical insurance	
Has medical insurance	81%
No medical insurance	19%
Life insurance	
Has life insurance	64%
No life insurance	23%
Life insurance not needed (no dependents or social security benefits deemed adequate)	13%
Retirement*	
Active retirement plan	61%
Inactive retirement plan	11%
No retirement plan	28%
Saving for college	
Saving for college	20%
College graduate not saving	8%
Non-graduate not saving	24%
No need to save (no financially dependent children)	48%
Housing	
Own free and clear	18%
Own with a mortgage	37%
Own, underwater	11%
Rent	34%

-cont'd-

Table 1. *Household Financial Indicators Included in the Study* (cont'd)

Distant concerns	Incidence
Student loans	
No student loans	78%
Concerned might not be able to repay	11%
Not concerned about repaying	11%

Notes: *Self-Assessed Current Debt Burden:* Based on responses to "How strongly do you agree or disagree with the statement 'I have too much debt right now?" on a scale from 1 to 7, with a response of 3 to 5 classified as "Moderate debt burden." *Retirement:* Respondents with "No retirement plan" have neither employer DB pension accruals nor 401(k)/IRA type retirement savings; respondents with an "Inactive retirement plan" have only 401(k)/IRA type savings and no one in the household is currently making regular contributions to such plans.
Source: Authors' calculations using data from FINRA Investor Education Foundation (2012a).

Previous research has shown that financial satisfaction varies by age, income, and various personal characteristics. It can also be expected to vary with local labor market conditions. The study thus controls for age, income, other personal characteristics, and local labor market conditions listed in Table 2.

Table 2. *Control Characteristics Included in the Study*

	Incidence
Age group	
25-34	23%
35-44	26%
45-54	28%
55-retirement	24%
*Adjusted income quartile**	
1st quartile (lowest)	25%
2nd quartile	25%
3rd quartile	25%
4th quartile (highest)	25%
Sex	
Female	52%
Male	48%
Marital status	
Never married	21%
Divorced, separated, or widower	15%
Married	64%
Ethnicity	
White	73%
Not white	27%

-cont'd-

Table 2. *Control Characteristics Included in the Study* (cont'd)

	Incidence
Education	
College or more	35%
Some college	35%
High school or less	30%
*Aversion to investment risk**	
Willing to take risks	20%
Moderately risk averse	50%
Risk averse	30%
Seen a financial advisor in the last 5 years	
Has seen a financial advisor	57%
Has not seen a financial advisor	42%
*Financial literacy**	
Not financially literate	51%
Financially literate	49%
County unemployment rate	
Less than 6.2%	26%
6.2-8.0% (the U.S. rate for 2012)	50%
Greater than 8.0%	24%

Notes: *Adjusted income quartile:* Each age group is divided into adjusted household income quartiles using the OECD equivalence scale (OECD n.d.). Each quartile includes all respondents in each age-specific quartile: the lowest quartile includes all respondents in the lowest adjusted income quartile in each age group. *Aversion to investment risk:* Based on responses to "When thinking of your financial investments, how willing are you to take risks?" on a scale from 1 to 10, with a response of 4 to 7 classified as "Moderately risk averse." *Financial literacy:* Based on number of correct answers to five standard financial literacy questions, with those answering four or five questions correctly coded as "Financially literate" and all others coded as "Not financially literate."
Source: Authors' calculations using data from FINRA Investor Education Foundation (2012a).

Methodology. The study does not attempt to identify causal relationships running from financial conditions to subjective assessments. Instead, it attempts to identify statistically significant associations either consistent with or conflicting with the above hypotheses. To identify relationships between subjective assessments and the household's financial condition, study estimates the model:

$$SFA = \beta_0 + \boldsymbol{\beta_{dy}}\boldsymbol{x_{dy}} + \boldsymbol{\beta_{ds}}\boldsymbol{x_{ds}} + \boldsymbol{\beta_C}\boldsymbol{x_C} + \varepsilon\,. \qquad (1)$$

with subjective financial assessments *SFA* dependent on β_0, the baseline assessment of those with no financial deficits or control characteristics associated with reductions in financial satisfaction; on day-to-day and distant financial deficits $\boldsymbol{x_{dy}}$ and $\boldsymbol{x_{ds}}$ and control characteristics associated with reduced assessments $\boldsymbol{x_c}$; and on $\boldsymbol{\beta_{dy}}$, $\boldsymbol{\beta_{ds}}$, and $\boldsymbol{\beta_c}$ reductions in financial

satisfaction associated with these deficits and characteristics. The estimated $\boldsymbol{\beta_{dy}}$ and $\boldsymbol{\beta_{ds}}$ coefficients then indicate the relationship between each day-to-day and distant deficit and the respondents' subjective financial assessments.

In this regression, the baseline "adequate" financial conditions and control characteristics associated with greater satisfaction are the first conditions and characteristics listed for each item in Tables 1 and 2, with the exception of 1) housing, where "own with a mortgage" is taken as the baseline "adequate" condition; 2) age and income, where the baseline is set in the middle of the age and income distribution – the 45 to 54 age group and the third income quartile; and 3) local labor market conditions, which is entered as a variable without any baseline condition.[7] The model is estimated using Ordinary Least Squares (OLS) with robust standard errors to correct for heteroskedasticity and population weights to correct for sampling bias.[8]

The first hypothesis asserts that day-to-day concerns have a significantly greater effect on subjective financial assessments than more distant concerns. To test this hypothesis, the study conducts an analysis of variance (ANOVA) to identify the extent to which financial satisfaction is associated with day-to-day as opposed to distant conditions alone, and whether the difference is statistically significant. The incidence of day-to-day and distant deficits is virtually the same. Respondents, on average, have 1.82 day-to-day deficits and 1.80 distant deficits.[9] So if the ANOVA results show financial satisfaction is primarily associated with day-to-day concerns, this would support the notion that financial satisfaction is significantly more sensitive to day-to-day as opposed to distant financial conditions.

The second hypothesis asserts that subjective financial assessments follow a pecking order, with financial satisfaction having a significantly stronger relationship with distant issues as concern over day-to-day deficits subsides. To test this hypothesis, the study constructs a proxy measure of an individual's concern over day-to-day deficits. That measure uses the estimated $\boldsymbol{\beta_{dy}}$ reductions in subjective financial assessments associated with dire day-to-day deficits in the sample as a whole – the reductions associated with covering day-to-day expenses

[7] See Mugenda, Hira, and Fanslow (1990) and Xiao, Chen, and Chen (2013) for studies that find financial literacy associated with reduced subjective financial assessments. For other characteristics see Hsieh (2001) and Joo and Grable (2004).

[8] The other models in this study were also estimated with OLS, robust standard errors, and sample weights.

[9] Day-to-day deficits are: 1) covering expenses is very or moderately difficult; 2) unemployment; 3) self-assessed current debt burdens are moderate or heavy; and 4) could not likely access $2,000. Distant deficits are: 1) no medical insurance; 2) no life insurance; 3) no retirement plan or an inactive retirement plan; 4) not saving for college; 5) a mortgage greater than the value of one's house or renting; and 6) having student loans.

being "very difficult," current debt burdens "heavy," at least one member of the household is unemployed, and if the respondent could not likely access $2,000 if need be. The proxy measure is the sum of the $\boldsymbol{\beta_{dy}}$ reductions associated with each of the individual's dire day-to-day deficits. For example, if the respondent indicated that covering day-to-day expenses is "very difficult" and their spouse is unemployed, the proxy measure of their concern over day-to-day deficits would be the sum of the two reductions in financial satisfaction associated with these deficits for the population as a whole. This measure is then standardized to vary from 0 to 1, with 1 representing a household with all four dire day-to-day deficits.[10]

To test whether subjective financial assessments follow a pecking order, the study then estimates the following model:

$$SFA = \beta_0^p + \boldsymbol{\beta_{dy}^p} \cdot \boldsymbol{x_{dy}} + \boldsymbol{\beta_{ds}^p} \cdot \boldsymbol{x_{ds}} + \boldsymbol{\xi_{ds}^p} \cdot s\boldsymbol{x_{ds}} + \boldsymbol{\beta_C^p x_C} + \varepsilon'' \qquad (2)$$

In this model, $\boldsymbol{\xi_{ds}^p} \cdot s\boldsymbol{x_{ds}}$ is the vector of changes in the relationship between financial satisfaction and distant deficits, $\boldsymbol{x_{ds}}$, while s, the standardized measure of concern over day-to-day deficits, varies from 0 to 1.[11] These changes are modeled as linear functions of *s*, so $\boldsymbol{\xi_{ds}^p}$ is a vector of constants. The relationship between financial satisfaction and each distant deficit x_{dsi} is modeled as the baseline reduction for that deficit, β_{dsi}^p, when *s* is equal to 0, plus a constant ξ_{dsi}^ptimes s, as s varies from 0 to 1. To the extent that the estimated $\boldsymbol{\xi_{ds}^p}$ coefficients are statistically and economically significant, the results would be consistent with the notion that subjective financial assessments become more sensitive to distant deficits as concern over day-to-day deficits declines.

The final hypothesis asserts that financial literacy increases sensitivity to the household's financial condition, and especially to more distant conditions. To test this hypothesis, the study estimates the following model:

$$SFA = \beta_0^f + \boldsymbol{\beta_{dy}^f x_{dy}} + \boldsymbol{\xi_{dy}^f x_{dy}} + \boldsymbol{\beta_{ds}^f x_{ds}} + \boldsymbol{\xi_{ds}^f x_{ds}} + \boldsymbol{\beta_C^f x_C} + \varepsilon'''. \qquad (3)$$

[10] The study tested more complex models but could not estimate many coefficients due to colinearity. These tests also provided the same statistically significant estimates as this simple model.
[11] The coefficients carry the superscript "p," because they differ from the coefficients in model (1).

In this model, $\boldsymbol{\beta}_{dy}^{f}$ and $\boldsymbol{\beta}_{ds}^{f}$ are vectors of marginal changes in the relationship between subjective assessments and day-to-day and distant deficits, $\boldsymbol{x}_{dy}$ and $\boldsymbol{x}_{ds}$, for financially non-literate individuals; $\boldsymbol{\xi}_{dy}^{f}$ and $\boldsymbol{\xi}_{ds}^{f}$ are vectors of marginal changes in these relationships for financially literate individuals relative to non-literate individuals. The regression results would be consistent with the hypothesis that financially literate individuals are more sensitive to deficits, and especially distant deficits, to the extent that the $\boldsymbol{\xi}_{dy}^{f}$coefficients, and especially the $\boldsymbol{\xi}_{ds}^{f}$ coefficients, are statistically and economically significant.

It is important to note that the reductions in subjective financial assessments identified in the study are reductions relative to an "adequate" baseline state. The reductions include both 1) reductions from an "initial" state among those with a deficit and 2) increases in subjective assessments above that "initial" state among those who address a particular issue and raise the "adequate" baseline constant. Thus the reduction associated with a lack of college saving includes both the reduction in financial satisfaction among those who are not saving and the increase in satisfaction among those who are. To the extent that the reductions identified in the study are due to increases in financial satisfaction above an initial state, they overstate the motivation the deficit generates to address a particular issue. Such overstatements are plausibly greater for distant deficits, whose existence and impact are more difficult to see.

Two limitations on the accuracy of the results should also be noted. The first is due to the fact that three indicators of the household's financial condition are subjective – the respondent's subjective sense of difficulty in covering every-day expenses, having too much current debt, and being able to repay student debt. This creates potential measurement error, as respondents with the same objective level of financial difficulty could have different subjective assessments. More troublesome, this reliance on subjective indicators could bias the results. This would be the case if objectively similar respondents have different dispositions and those with "gloomy" dispositions indicate greater difficulty with these issues and less satisfaction with their finances; and those with "sunny" dispositions report less difficulty and greater satisfaction with their finances. The regressions include a variable that reflects the respondent's disposition – the respondent's aversion to investment risk – which should limit "dispositional" bias. But to the extent that "dispositional" bias persists, the regression estimates would overstate the

relationship between financial satisfaction and these three issues, two of which are day-to-day issues of central importance to this study.

The second limitation is due to the fact that the objective measures are imprecise. The data do not allow an assessment of the adequacy of the household's employment, medical and life insurance coverage, accumulation of home equity, and college and retirement savings. The regressions estimate differences between a lack of employment, insurance, and savings and average employment, insurance, and savings. It cannot estimate the relationship between financial satisfaction and differences in the adequacy of these financial conditions.

Correlates of Subjective Assessments

The regression results estimating equation (1) are presented in Table 3. They show day-to-day deficits are associated with large reductions in subjective financial assessments and distant deficits with much milder reductions.

Table 3. *Correlates of Self-Assessed Financial Situation*

	Coefficient	Standard error
Day-to-day concerns		
Self-assessed ability to cover expenses		
Very difficult to cover expenses	-2.130***	[0.089]
Moderately difficult to cover expenses	-1.178***	[0.055]
Employment		
Unemployed	-0.525***	[0.076]
Self-assessed current debt burden		
Heavy debt burden	-1.329***	[0.067]
Moderate debt burden	-0.511***	[0.055]
Access $2,000		
Could not likely access $2,000	-0.697***	[0.061]
Distant concerns		
Insurance		
No medical insurance	-0.368***	[0.069]
No life insurance	-0.095	[0.056]
Life insurance not needed	0.033	[0.097]
Retirement		
No retirement plan	0.018	[0.064]
Inactive retirement plan	-0.282***	[0.066]

-cont'd-

Table 3. *Correlates of Self-Assessed Financial Situation* (cont'd)

Distant concerns	Coefficient	Standard error
Saving for college		
Graduate not saving	-0.610***	[0.082]
Non-graduate not saving	-0.654***	[0.075]
No need to save	-0.309***	[0.064]
Housing		
Own free and clear	0.301***	[0.061]
Own, underwater	-0.057	[0.074]
Rent	-0.427***	[0.058]
Student loans		
Concerned might not be able to repay	-0.123	[0.076]
Has loans, not concerned about repaying	-0.224***	[0.068]
Control characteristics		
Male	-0.032	[0.043]
Marital status		
Never married	-0.137*	[0.063]
Divorced, separated, or widower	-0.159*	[0.063]
Non-white ethnicity	0.063	[0.053]
Education		
Some college	-0.245***	[0.055]
High school or less	-0.109	[0.066]
Aversion to investment risk		
Risk averse	-1.576***	[0.072]
Moderately risk averse	-0.854***	[0.061]
Has not seen a financial advisor	-0.109*	[0.044]
Financially literate	-0.473***	[0.046]
County unemployment rate	0.004	[0.011]
Age group		
Ages 25 to 34	0.617***	[0.064]
Ages 35 to 44	0.159**	[0.057]
Ages 55 or older	0.08	[0.060]
Adjusted income quartile		
Lowest quartile	-0.023	[0.081]
Second quartile	-0.084	[0.060]
Highest quartile	0.391***	[0.058]
Constant	8.554***	[0.128]
N		10,578
R2		0.457

Note: * p<0.05; ** p<0.01; *** p<0.001
Source: Authors' calculations using data from FINRA Investor Education Foundation (2012a).

As shown in Table 3, significant difficulty in covering daily expenses is associated with a 2.1-point reduction. Heavy current debt burdens are associated with a 1.3-point reduction. Unemployment, in addition to making it more difficult to cover daily expenses and meet current debt payments, reduces subjective assessments by an additional 0.5 points. And a lack of access to $2,000 is associated with a 0.7-point reduction.[12] (As financial satisfaction is measured on a scale from 1 to 10, each 1-point reduction is equivalent to an 11 percentage point reduction in subjective financial assessments.)

Among distant concerns, the only deficits associated with more than a half-point decline are the 0.6- and 0.7-point reductions associated with a lack of college saving. These reductions, however, could be more apparent than real. The 0.3-point reduction associated with "no need to save," for households with no financially dependent children, suggests that saving for college is associated with a 0.3-point increase in satisfaction above an initial state, which raises the baseline constant. For households with dependent children, not saving for college would thus be associated with a much milder reduction in subjective financial assessments.

The only other distant deficits associated with any statistically significant reduction in subjective assessments are renting (-0.4 points), a lack of medical insurance (-0.4), and having an inactive retirement plan (–0.3). Relationships with other distant deficits – a lack of life insurance, no retirement plan, home ownership with a mortgage greater than the value of one's house, concern about repaying student loans, and having student loans but not concerned about repaying those loans – are all small and not statistically significant.

A surprising result is the relationship between subjective financial assessments and retirement saving. Households with no retirement plan – with neither traditional defined benefit pension accruals nor any 401(k)/IRA savings – are clearly in a more adverse condition than households with an inactive plan – households with 401(k)/IRA savings, and perhaps defined benefit pension accruals, but who currently do not "regularly contribute" to those plans. Having an inactive plan is associated with a 0.3-point reduction in subjective assessments relative to having an active plan. But having no plan has no apparent effect.

[12] The very large reductions in subjective financial assessments associated with risk aversion suggest that dispositional factors could indeed have a large effect on subjective assessments, including assessments of difficulty in covering day-to-day expenses and the weight of current debt burdens. But the very large reductions in subjective assessments associated with risk aversion also suggest that the inclusion of this variable controls much of the bias that dispositional factors would otherwise introduce in estimates of the relationship between in subjective assessments and these two day-to-day deficits.

This result is consistent with the notion that a lack of salience, not just present-mindedness, underlies the relatively weak relationship between subjective assessments and distant financial concerns. Day-to-day deficits are not just "present," they are also salient. Households are continually reminded of difficulty in covering current expenses, making current debt payments, wanting to work but lacking a job, and the fragility of their finances that lacking reliable access to $2,000 entails. This is not the case with deficits in retirement planning and other distant deficits. From a present-minded perspective, respondents with an inactive plan are better off than respondents without a plan. But respondents with an inactive plan seem aware of having a deficit. Those without a plan do not.

Turning to the control variables, the results find their relationship with financial satisfaction is generally small and statistically insignificant. Two characteristics, however, have economically and statistically significant relationships with subjective assessments: investment risk aversion and financial literacy. Strong risk aversion is associated with a large 1.6-point decline in financial satisfaction and moderate risk aversion with a 0.9-point decline. To the extent investment risk aversion reflects the respondent's financial "disposition," this strong association could reflect their "gloominess" or "sunniness." The inclusion of this variable could then control much of the bias that dispositional factors would otherwise introduce into estimates of the relationship between financial satisfaction and the respondents' subjective assessments of their ability to cover day-to-day expenses and having too much debt.

Consistent with earlier research, the results also show individuals ages 25 to 34 and individuals in the highest income quartile, all else equal, are significantly more satisfied with their finances. Consistent with the Mugenda/Xiao findings, the results show financial literacy to be associated with a 0.5-point decline in financial satisfaction.

Do Subjective Assessments Place More Weight on Day-to-Day Concerns?

To test whether this is the case, the study conducts an analysis of variance to identify the extent to which financial satisfaction is associated with day-to-day, as opposed to distant, conditions. The results show day-to-day conditions alone are associated with 11 percent of the variance in financial satisfaction, as opposed to just 2 percent for distant conditions. A *t*-test confirms that this difference is statistically significant at the 0.999 confidence level.

A complicating issue in assessing the relationship between distant concerns and financial satisfaction is that attending to distant concerns is costly. It takes income the household could use to meet their day-to-day needs – needs that the results indicate have an outsized effect on financial satisfaction. The relatively modest reductions in subjective assessments associated with distant deficits could be due, in part, to households with such deficits using their income to address day-to-day needs, which increases financial satisfaction. To the extent that this is the case, the results would underestimate the relationship between subjective assessments and distant concerns. To the extent that this is the case, subjective assessments would also be expected to follow a pecking order – to have a stronger relationship with distant issues as concern over day-to-day deficits, and the gain in satisfaction that comes from addressing such deficits, declines.

Do Subjective Assessments Follow a Pecking Order?

The results are *not* consistent with the pecking order hypothesis – that individuals become more sensitive to distant financial issues as concern over day-to-day deficits declines. The results, presented in Table 4, show only one distant issue clearly has a stronger relationship with subjective assessments as concern over day-to-day deficits changes: having a mortgage greater than the value of one's house. But the change is the opposite of what the pecking order hypothesis predicts. As day-to-day deficits and concern over those deficits rise, households become increasingly concerned about having a mortgage greater than the value of their house. It could be the case that households with increasingly severe day-to-day financial deficits increasingly fear losing their home. For such households, having a mortgage greater than the value of their house would no longer be a "distant" deficit.

Table 4. *Change in Relationship Between Subjective Financial Assessments and Distant Deficits as Proxy for Concern Over Dire Day-to-Day Deficits, s, Rises from 0 to 1*

Distant concerns	Correlates, s=0		Change in correlates as coefficient of *s*	
Insurance				
No medical insurance	-0.149	[0.154]	-0.31	[0.209]
No life insurance	0.065	[0.170]	-0.194	[0.200]
Life insurance not needed	0.149	[0.187]	-0.212	[0.260]
Retirement				
No retirement plan	0.294	[0.152]	-0.379	[0.196]
Inactive retirement plan	-0.168	[0.206]	-0.143	[0.241]
Saving for college				
Graduate not saving	-1.726***	[0.303]	1.356***	[0.341]
Non-graduate not saving	-1.380***	[0.268]	1.263***	[0.290]
No need to save	-1.605***	[0.269]	1.149***	[0.307]
Housing				
Own free and clear	0.224	[0.237]	0.081	[0.259]
Own, underwater	0.514*	[0.216]	-0.811**	[0.268]
Rent	-0.287	[0.176]	-0.17	[0.205]
Student loans				
Concerned might not be able to repay	0.101	[0.153]	-0.389	[0.226]
Has loans, not concerned about repaying	0.186	[0.263]	-0.497	[0.299]
N	10,578			
R2	0.460			

Note: * p<0.05; ** p<0.01; *** p<0.001
Source: Authors' calculations using data from FINRA Investor Education Foundation (2012a).

Saving for college could be one issue consistent with the pecking order hypothesis, but the results are difficult to interpret.[13] The study finds no other statistically significant changes in the relationships between financial satisfaction and other distant deficits. As concern over day-to-day deficits changes, subjective assessments have much the same relationship with medical and life insurance deficits, having no retirement plan, having an inactive retirement plan, renting, having student loans, and having student loans and also being concerned about repaying those loans.

[13] Among individuals with no dire day-to-day deficits, the results show a large 1.6-point reduction in subjective assessments for those with "no need to save." This suggests that saving for college is associated with a similarly large increase in financial satisfaction above an "initial state" for respondents with dependent children who save, which raised the baseline constant. Saving for college would thus have a significantly stronger positive relationship with subjective financial assessments as concern over day-to-day deficits declines – a pecking order effect.

The study thus finds no support for the notion that subjective assessments become significantly more sensitive to distant financial conditions as day-to-day deficits and the concern they create declines.[14] Thus households, by themselves, cannot be expected to address distant concerns once their day-to-day finances are in reasonably good shape.

Does Financial Literacy Improve Subjective Assessments?

The results are also *not* consistent with the third hypothesis – that financial literacy significantly enhances sensitivity to disant financial conditions. The results, presented in Table 5, find only two distant deficits associated with a greater reduction in the financial satisfaction of financially literate individuals: having no retirement plan and having a mortgage greater than the value of one's house. Current debt burdens, a day-to-day deficit, are also associated with greater reductions in the subjective assessments of financially literate respondents.

Table 5. *Difference in Relationship Between Financial Satisfaction and Household Financial Conditions, Financially Literate vs Not Financially Literate Individuals*

	Correlates of non-literate individuals		Difference, literate vs Non-literate individuals	
Day-to-day concerns				
Self-assessed ability to cover expenses				
Very difficult to cover expenses	-2.114***	[0.119]	-0.095	[0.174]
Moderately difficult to cover expenses	-1.210***	[0.081]	0.093	[0.108]
Employment				
Unemployed	-0.567***	[0.101]	0.125	[0.149]
Self-assessed current debt burden				
Heavy debt burden	-1.009***	[0.098]	-0.657***	[0.132]
Moderate debt burden	-0.291***	[0.085]	-0.410***	[0.111]
Access $2,000				
Could not likely access $2,000	-0.764***	[0.082]	-0.192	[0.120]
Distant concerns				
Insurance				
No medical insurance	-0.335***	[0.087]	-0.051	[0.140]
No life insurance	-0.189*	[0.084]	0.203	[0.111]
Life insurance not needed	0.051	[0.114]	-0.135	[0.193]

-cont'd-

[14] The study tested more complex models of dissatisfaction associated with day-to-day deficits that included moderate difficulty in covering day-to-day expenses and moderate debt burdens. The regressions, however, failed to estimate many coefficients due to colinearity; they also failed to identify any other statistically significant interactions.

Table 5. *Difference in Relationship Between Financial Satisfaction and Household Financial Conditions, Financially Literate vs Not Financially Literate Individuals* (cont'd)

	Correlates of non-literate individuals		Difference, literate vs Non-literate individuals	
Retirement				
No retirement plan	0.129	[0.082]	-0.248	[0.127]
Inactive retirement plan	-0.248*	[0.104]	-0.048	[0.133]
Saving for college				
Graduate not saving	-0.811***	[0.135]	0.409*	[0.163]
Non-graduate not saving	-0.888***	[0.104]	0.507***	[0.141]
No need to save	-0.489***	[0.095]	0.344**	[0.113]
Housing				
Own free and clear	0.316**	[0.097]	-0.05	[0.123]
Own, underwater	0.208	[0.107]	-0.604***	[0.145]
Rent	-0.398***	[0.084]	-0.026	[0.113]
Student loans				
Concerned might not be able to repay	-0.075	[0.096]	-0.159	[0.149]
Has loans, not concerned about repaying	-0.219*	[0.101]	0.038	[0.131]
Control characteristics				
Male	-0.026	[0.043]		
Marital status				
Never married	-0.135*	[0.062]		
Divorced, separated, or widower	-0.152*	[0.063]		
Non-white ethnicity	0.06	[0.053]		
Education				
Some college	-0.239***	[0.055]		
High school or less	-0.101	[0.066]		
Aversion to investment risk				
Risk averse	-1.546***	[0.072]		
Moderately risk averse	-0.834***	[0.061]		
Has not seen a financial advisor	-0.102*	[0.044]		
Financially literate	-0.171	[0.177]		
County unemployment rate	0.005	[0.011]		
Age group				
Ages 25 to 34	0.600***	[0.064]		
Ages 35 to 44	0.163**	[0.058]		
Ages 55 or older	0.074	[0.060]		
Adjusted income quartile				
Lowest quartile	-0.041	[0.082]		
Second quartile	-0.093	[0.060]		
Highest quartile	0.375***	[0.058]		
Constant	8.452***	[0.148]		
N	10,578			
R2	0.462			

Note: * p<0.05; ** p<0.01; *** p<0.001

Source: Authors' calculations using data from FINRA Investor Education Foundation (2012a).

Financial literacy, on the other hand, is associated with a statistically significant 0.2 point *increase* in financial satisfaction if the respondent lacks life insurance, an increase that offsets the 0.2 point reduction among non-literate respondents. The only other statistically significant change is a 0.3 point *increase* in satisfaction among college graduates not saving for their children's education. This increase could again be more apparent than real, as it is matched by a similar increase among finacially literate respondents with "no need to save." This suggests that 1) saving for college raises subjective assessments above the "initial state" much *less* for financially literate than for non-literate graduates; and 2) not saving for college is associated with *similar* reductions in satisfaction for financially literate and non-literate graduates.

The study finds no other statistically significant differences between financially literate and non-literate individuals: the relationship between subjective financial assessments and the ability to cover day-to-day expenses, unemployment, the ability to access $2,000, medical insurance coverage, having an inactive retirement plan, owning one's home free and clear, renting, having student loans, or being concerned about repaying those loans is much the same for financially literate and non-literate individuals. [15]

These results are consistent with the Mugenda/Xiao hypothesis that financial literacy reduces financial satisfaction because financially literate individuals are more sensitive to deficits. Financial literacy is associated with greater awareness of issues emphasized in financial education programs – current debt burdens, a day-to-day deficit; and two distant deficits: having a mortgage greater than the value of one's house and not having a retirement plan. But the study finds no significant effect on issues not generally addressed in such programs, such as life and medical insurance, saving for college, and paying down student debt.

Conclusions

Peace of mind is one of the great benefits of having one's financial house in order. The study's findings, however, show that financial satisfaction is a poor indicator of financial well-being and can actually impede the achievement of financial well-being.

[15] Since older and higher-income individuals are more likely to be financially literate, the study tested for differences in the correlates by age and income. It did so using a model consisting of a system of linear equations with each age or income group estimated individually. It then tested whether the correlates of financial literacy differ by age or income using a nested *F*-test. The results showed no statistically significant differences in the correlates by age or income.

The results strongly support the first hypothesis. Even though respondents were explicitly asked respondents "Overall, thinking of your assets, debts and savings, how satisfied are you with your current personal financial condition?" their assessments were highly correlated with day-to-day conditions and had a much more muted relationship with protection against risk and "assets, debts, and savings" to meet future needs. Financial well-being is measured by the happiness and life satisfaction that income and wealth provide – tomorrow as well as today. Given this intensely present-minded focus of subjective assessments, satisfaction is a poor measure of financial well-being. Nor can households by themselves be expected to devote much effort to addressing distant deficits.

The findings provide essentially no support for the second hypothesis, that subjective financial assessments follow a pecking order, with more distant issues having a greater effect on financial assessments once day-to-day issues are in reasonably good shape. Households thus cannot be expected to devote more effort to protecting themselves from risk or save to meet future needs once their near-term concerns are addressed.

The findings provide very limited support for the third hypothesis, that financial literacy enhances the sensitivity of subjective assessments to two distant issues. Financial literacy might significantly enhance a household's ability to improve its well-being. But it does not enhance awareness of most distant deficits, and thus the motivation to address those deficits.

The findings support the notion that for households to improve their financial well-being, the salience of issues distant from day-to-day concerns must be raised. Households are increasingly responsible for such issues, specifically saving for retirement, accumulating home equity, paying for their children's college education, and paying off their own student loans. The results show deficits in these areas associated at most with minor reductions in financial satisfaction. The importance of salience is highlighted by the finding that having an inactive retirement plan is associated with a reduction in satisfaction while not having plan – a more adverse but less visible condition – is not.

The findings support the importance of initiatives that broadcast simple rules-of-thumb, provide quick financial checkups, or otherwise raise the salience of financial challenges remote from day-to-day concerns. Defaulting all workers into a retirement plan, as is currently under way in the United Kingdom, should also increase retirement saving as it raises awareness of retirement saving deficits and reduces the cost of those without an employer plan to act on that

awareness. More broadly, the results support the greater use of defaults or mandates, or the transfer of responsibility from households to governments or employers, to reduce the nation's significantly increased reliance on individual household decision-making for basic financial well-being.

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