Responding to the downturn: How does information change behavior?

Authors: Norma B. Coe, Kelly Haverstick

Chestnut Hill, Mass.: Center for Retirement Research at Boston College, December 2010

CENTER FOR RETIREMENT RESEARCH at BOSTON COLLEGE

December 2010, Number 10-20

RESPONDING TO THE DOWNTURN: HOW DOES INFORMATION CHANGE BEHAVIOR?

By Norma B. Coe and Kelly Haverstick*

Introduction

Many workers nearing retirement experienced a dramatic decrease in their retirement assets due to the stock market downturn. In order to maintain their expected standard of living in retirement, workers will need to work longer, save more, or do both. To measure the response of older workers to this downturn, the Center for Retirement Research at Boston College (CRR) fielded the *CRR 2009 Retirement Survey* on a nationally representative sample of 45-59-year-old labor force participants with relatively high pre-downturn assets.[1]

This *brief* is the third of four based on the *CRR 2009 Retirement Survey*. The first *brief* described the *Survey* and highlighted its unique financial, employment, and behavioral factors.[2] The second *brief* explored the relationship between these factors and worker responses to the downturn.[3] This *brief* examines how providing simple information about the trade-offs involved in responding to the downturn impacts the responses.

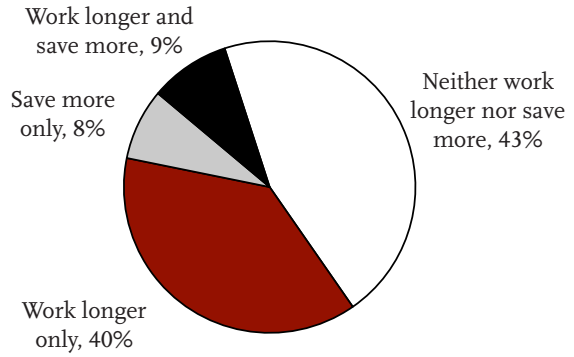
This *brief* is organized as follows. The first section provides a brief overview of the initial responses – work more, save more, both, or neither. The second section describes how these responses changed once the trade-off between working longer, saving more, and consuming less in retirement was made explicit. The third section then explains the relationship between the initial responses and the more informed responses. The fourth section identifies the characteristics associated with respondents who changed their response. The final section concludes that providing simple information on trade-offs appears to have a surprisingly large impact on changing responses.

How Do Respondents React Initially?

This *brief* covers a sub-sample of the full survey – those who had accumulated at least $50,000 in retirement savings before the downturn and had lost at least 10 percent of retirement assets at the time of the interview.[4] Figure 1 on the next page shows the distribution of initial responses for this group. These respondents have similar initial responses to the downturn as the full sample, with a substantial 43 percent intending to neither work longer nor save more.[5]

* Norma B. Coe is associate director of research at the Center for Retirement Research at Boston College (CRR). Kelly Haverstick is a research economist at the CRR.

Figure 1. Distribution of Initial Responses of Respondents Receiving Trade-off Information

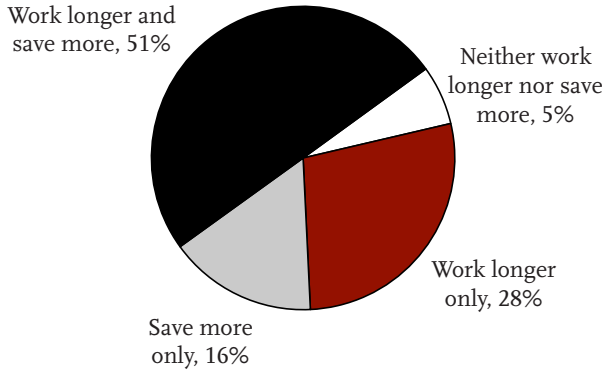


Source: Authors' calculations from Center for Retirement Research at Boston College, *CRR 2009 Retirement Survey*.

Intended Actions after Explicit Trade-off

After answering basic questions about financial well-being and reactions to the stock market downturn, the respondents were told, "If the financial decline is not reversed, the loss in retirement savings means households *must*: save more; work longer (retire later or work in retirement); and/or have less in retirement (spending less or leaving less as an inheritance). Indicate what you think those changes would be."

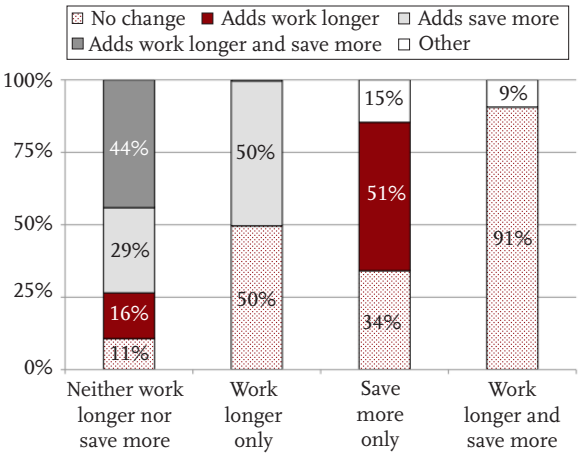
Figure 2. Distribution of Responses after Receiving Trade-off Information



Source: Authors' calculations from *CRR 2009 Retirement Survey*.

After receiving the explicit trade-off information, respondents then indicate their intended changes in retirement saving and retirement age in two separate questions. The distribution of these responses is shown in Figure 2. The most striking difference is the decrease in the proportion of respondents who plan to neither work longer nor save more, which shrinks from 43 percent to 5 percent. The largest increase occurs in the proportion planning to *both* work longer and save more – from 9 to 51 percent of the sample. Additionally, the proportion of respondents planning to only save more doubles, from 8 percent to 16 percent of the sample.

Figure 3. Planned Responses after Trade-off Information, by Initial Response



Note: "Other" refers to individuals who changed their response in a way that is difficult to interpret. For example, some who initially planned to "save more only" or "save more and work longer" switched to "work longer only" after the tradeoff was made explicit.
Source: Authors' calculations from *CRR 2009 Retirement Survey*.

Who Changes Their Plans?

How does receiving the trade-off information affect respondents' plans? Figure 3 shows the distribution of responses given after the trade-off by initial response. The vast majority of initial "non-responders" (89 percent) now state they will take some action, with planning to *both* work longer and save more as the most popular (44 percent). For those initially planning to only work longer, about half stuck with that plan while the other half added saving more to their

plan. About a third of those initially planning to only save more did not change their plan while about half decided to add working longer to their plans. Finally, over 90 percent of respondents initially planning to both work longer and save more stayed with that plan after receiving the trade-off. In short, those who planned to do nothing were spurred to action by having the trade-off made explicit and those who selected a single response were moved to diversify.

How Are the Non-Responders Reacting?

As discussed in previous *briefs*, the survey also includes various financial, employment, and behavioral factors that are often unavailable in other surveys. Using regression analysis, the following section evaluates which characteristics are associated with initial non-responders who decided to change their plans to include some action.

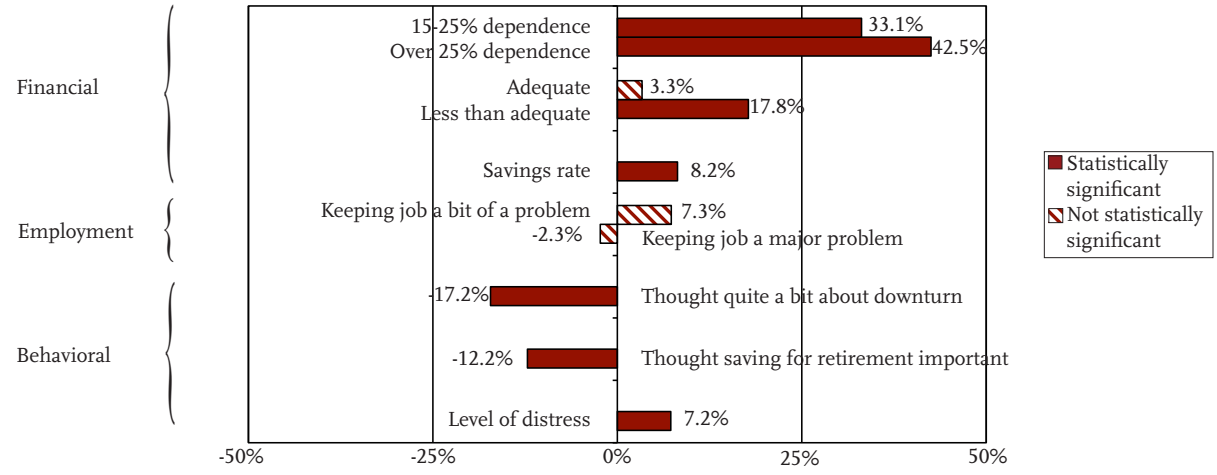
Save More

We conduct regression analysis to see what factors are correlated with these initial "non-responders" changing their stated saving decision. Selected results are presented in Figure 4.[6]

Numerous financial factors play an important role in the decision to change to saving more. Not surprisingly, respondents with greater dependence on their financial assets for retirement income are more likely to change their plan from doing nothing to saving more. In addition, respondents with less than adequate pre-downturn assets have an 18-percentage-point higher probability of changing to saving more than are those with more than adequate pre-downturn assets. Both of these financial factors indicate that the need for more retirement wealth is correlated with the decision to save more. One final financial factor, previous saving behavior, has a significant effect on planning to save more after receiving the trade-off information, suggesting that previously high savers may be more receptive to increasing saving than those who have not saved a high percentage of their income in the past.

Several behavioral factors are also associated with the way in which initial "non-responders" react to the explicit trade-off. Respondents who thought quite a bit about the impact of the downturn on their long-term financial situation have about a 17-percentage-point lower probability of planning to save more than those who thought less about it. Similarly, respondents indicating that retirement was a more important reason for saving than building an emergency fund or reducing debt have a 12-percentage-point lower probability of changing to the "save more" response.[7] These may be the individuals who already

Figure 4. Effect of Selected Factors on the Probability of Planning to Save More after Trade-off Information, Initial "Non-Responders"



Note: The effects shown are for a one-standard-deviation change from the mean for continuous variables and the effect of a change from 0 to 1 for other variables.
Source: Authors' calculations from *CRR 2009 Retirement Survey*.

had the trade-off in mind when making their initial decision and therefore are less likely to change their intentions. However, respondents who felt a distress response to the downturn comparable to that of 9/11 have about a 7-percentage-point higher probability of deciding to save more than those with more moderate distress.[8] These may be respondents who were "stunned" into inaction, and the simple task of pointing out the implicit choice they are making is enough to spur them into action.

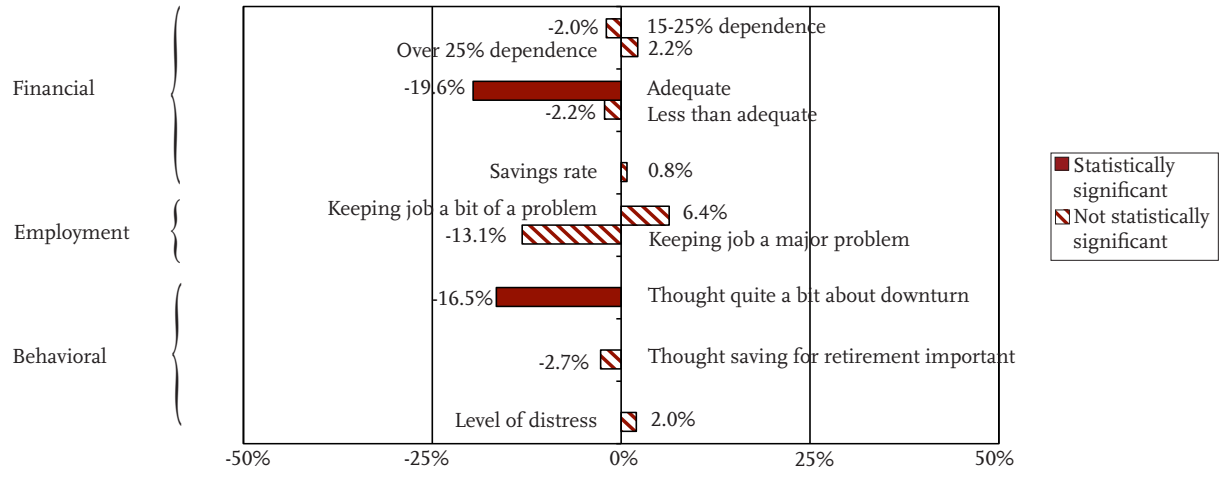
Work Longer

Initial "non-responders" were slightly less likely to be induced to work longer than to save more. Only a few factors have a significant impact on changing to working longer, either alone or along with saving more (see Figure 5).[9] One financial factor, pre-downturn retirement asset adequacy, shows an unusual pattern. Respondents who had adequate assets to maintain their current standard of living in retirement before the downturn have about a 20-percentage-point lower probability of switching their response to "work longer" than those with more than adequate assets. However, those with *less than adequate* pre-retirement assets respond similarly to those who had *more than adequate* assets prior to the downturn. One behavioral factor, the amount of thought given to the effect of the downturn on one's long-term financial situation, makes one less likely to change to work longer. Similar to saving more, it seems that individuals who had given a lot of thought to the effect of the downturn already took the trade-off into consideration in their initial response.

Save More and Work Longer

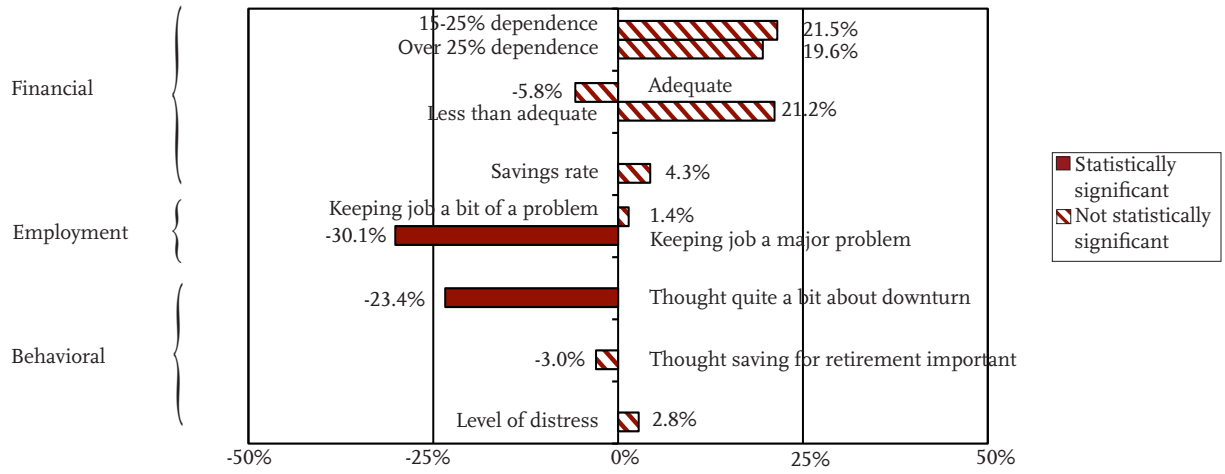
Figure 6 on the next page shows selected regression results of changing one's response to include both saving more and working longer.[10] One employment factor is important. Those who expect that keeping or finding a job will be a significant or major problem in working longer have a 30-percentage-point lower probability of planning to both save more and work longer. These individuals are likely more impacted by the recession than their financial losses in the stock market downturn, and thus are hesitant to include working longer and saving more in their plans. Consistent with the individual actions, respondents who thought quite a bit about the effect of the downturn have a 23-percentage-point lower probability of changing to include both saving more and working longer in their plan; clearly, these respondents have already taken the trade-off into account.

Figure 5. Effect of Selected Factors on the Probability of Planning to Work Longer after Trade-off Information, Initial "Non-Responders"



Note: The effects shown are for a one-standard-deviation change from the mean for continuous variables and the effect of a change from 0 to 1 for other variables.
Source: Authors' calculations from *CRR 2009 Retirement Survey*.

Figure 6. Effect of Selected Factors on the Probability of Planning to Work Longer and Save More after Trade-off Information, Initial "Non-Responders"



Note: The effects shown are for a one-standard-deviation change from the mean for continuous variables and the effect of a change from 0 to 1 for other variables.
Source: Authors' calculations from *CRR 2009 Retirement Survey*.

Conclusion

Almost half of respondents who lost a considerable amount of their retirement assets in the stock market downturn had not initially planned to either save more or work longer. Many of these respondents may have been stunned into inaction. Interestingly, once the trade-off between working longer, saving more, and having less in retirement is made explicit, 89 percent state that they will take some action. This *brief* identifies several financial, employment, and behavioral factors from the *CRR 2009 Retirement Survey* that are associated with the decision to change one's plan from taking no action to saving more, working longer, or doing both. One consistent finding is that respondents who had already thought a lot about the effect of the downturn on their long-term financial goals are less likely to change their minds.

Most of the characteristics that are associated with changing one's plan to include saving more, working longer, or both are as expected. Initial "non-responders" with greater dependence on their assets for retirement or with less adequate pre-downturn assets are more likely to plan to save more. Respondents with a history of high saving rates are also more likely to plan to save more. These findings suggest that individuals with greater needs in retirement, and those who have previously saved, are the most responsive to saving more. Those most impacted by the recession through job uncertainty are less likely to plan on taking significant action on both the saving more and working longer margins to counter their financial losses.

The final *brief* in this series will explore the impact of a second "information treatment," where respondents receive individualized advice about how much longer they would have to work, how much more they would need to save, or how much less they would have to consume in retirement based on their stated retirement savings goals.

Endnotes

1 Information about the sample design is available in Munnell et al. (2010).

2 Sass, Monk, and Haverstick (2010).

3 Coe and Haverstick (2010).

4 This sample is the 584 respondents with valid responses to the "work longer" and "save more" questions initially (q37_1, q31 and q32) and after receiving the trade-off information (q42_2 and q42_1). Additionally, initial "non-responders" were included only if they had valid responses to all the characteristics included in the regressions.

5 For more about the entire sample, see Coe and Haverstick (2010).

6 Full regression results are in the Appendix. In addition to the financial, employment, and behavioral factors emphasized in this *brief*, our analysis also included standard demographic variables such as age, education, and marital status. Male respondents were significantly less likely to change to "save more."

7 Other than saving for retirement, building an emergency fund and reducing debt had the highest average importance to respondents. The saving for retirement variable takes a value of one if retirement saving importance is greater than the average importance of an emergency fund and reducing debt.

8 This effect is for a one-standard-deviation change from a level of distress of 5.2 to 7.7 on a 0 to 10 scale.

9 See Appendix for full regression results.

10 See Appendix for full regression results.

References

Center for Retirement Research at Boston College. 2009. *CRR 2009 Retirement Survey*. Chestnut Hill, MA. Available at: http://crr.bc.edu/data_enclave/crr_2009_retirement_survey_data.html.

Coe, Norma B. and Kelly Haverstick. 2010. "How Do Responses to the Downturn Vary by Household Characteristics?" *Issue in Brief* 10-17. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Munnell, Alicia H., Norma B. Coe, Kelly Haverstick, and Steven A. Sass. 2010. "Overview of the CRR 2009 Retirement Survey." Working Paper 2010-15. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Sass, Steven A., Courtney Monk, and Kelly Haverstick. 2010. "Workers' Response to the Market Crash: Save More, Work More?" *Issue in Brief* 10-3. Chestnut Hill, MA: Center for Retirement Research at Boston College.

APPENDIX

Table A1. Summary Statistics of Variables Included in the Regressions

Variable	Mean	Standard deviation	Minimum	Maximum
Age	51.13	4.03	45	59
Education				
Some college	0.17	0.37	0	1
Bachelor's degree or higher	0.63	0.48	0	1
Married	0.76	0.43	0	1
Household income				
$50,000 to <$75,000	0.13	0.34	0	1
$75,000 or more	0.76	0.43	0	1
Race and ethnicity				
Non-White, non-Hispanic	0.10	0.31	0	1
Hispanic	0.07	0.25	0	1
Male	0.57	0.50	0	1
Region				
Midwest	0.16	0.36	0	1
South	0.33	0.47	0	1
West	0.30	0.46	0	1
Number of children in the household	0.56	0.90	0	5
Dependence on assets in retirement				
15-25% dependence	0.26	0.44	0	1
Over 25% dependence	0.62	0.49	0	1
Pre-downturn retirement asset adequacy				
Adequate	0.54	0.50	0	1
Less than adequate	0.25	0.43	0	1
Change in retirement savings since last year				
About 10-25 percent less	0.62	0.49	0	1
Little or no financial capability	0.07	0.25	0	1
Expectations of future stock returns	-0.01	0.76	-1	1
Pre-downturn retirement savings contribution rate	8.79	3.79	0	13
Change in job security over past year	-0.24	0.45	-1	1
How difficult to keep or find a job				
A little to somewhat of a problem	0.48	0.50	0	1
A considerable to major problem	0.11	0.32	0	1
Reason for choice of retirement age				
When want to retire or stop working	0.43	0.50	0	1
When would have enough money to retire	0.19	0.39	0	1
Number of years until specified retirement age	12.98	5.85	1	29
Level of distress in response to the downturn	5.18	2.56	0	10
Thought quite a bit about the effect of the downturn on long-term financial situation	0.33	0.47	0	1
Thought saving for retirement relatively important	0.79	0.41	0	1

Source: Authors' calculations from *CRR 2009 Retirement Survey*.

Table A2. Regression Results on the Probability of Planning to Save More, Work Longer, and Both after Being Informed of the Trade-off for Initial "Non-Responders"

Variable	Save more	Work longer	Both
	Marginal effect	Marginal effect	Marginal effect
Age	-0.015	0.008	-0.010
	(0.01)	(0.02)	(0.02)
Some college	-0.064	-0.076	0.014
	(0.13)	(0.18)	(0.17)
Bachelor's degree or higher	0.079	0.232 *	0.274 **
	(0.11)	(0.14)	(0.14)
Married	-0.118	-0.071	-0.133
	(0.08)	(0.12)	(0.12)
$50,000 to <$75,000 household income	0.082	0.174	0.264
	(0.10)	(0.15)	(0.17)
$75,000 or more household income	0.253	-0.093	0.109
	(0.16)	(0.16)	(0.15)
Non-White, non-Hispanic	0.110	-0.271	-0.148
	(0.08)	(0.17)	(0.15)
Hispanic	0.056	-0.012	0.033
	(0.12)	(0.16)	(0.17)
Male	-0.163 ***	-0.003	-0.172 *
	(0.06)	(0.10)	(0.10)
Midwest	-0.027	0.133	0.287 *
	(0.11)	(0.14)	(0.16)
South	0.064	-0.052	0.098
	(0.09)	(0.13)	(0.15)
West	0.004	0.148	0.238
	(0.10)	(0.14)	(0.16)
Number of children in the household	-0.065	0.039	-0.076
	(0.04)	(0.06)	(0.06)
15-25% dependence on assets in retirement	0.331 ***	-0.020	0.215
	(0.06)	(0.17)	(0.18)
Over 25% dependence on assets in retirement	0.425 ***	0.022	0.196
	(0.12)	(0.15)	(0.15)
Adequate pre-downturn assets	0.033	-0.196 *	-0.058
	(0.09)	(0.11)	(0.12)
Less than adequate pre-downturn assets	0.178 **	-0.022	0.212
	(0.07)	(0.14)	(0.13)
About 10-25 percent less in retirement assets	-0.084	-0.010	0.004
	(0.06)	(0.10)	(0.10)
Little or no financial capability	-0.008	-0.061	-0.064
	(0.14)	(0.18)	(0.18)
Expectations of future stock returns	0.005	0.057	0.059
	(0.05)	(0.06)	(0.06)

Table A2. Continued

Variable	Save more	Work longer	Both
	Marginal effect	Marginal effect	Marginal effect
Pre-downturn retirement savings contribution rate	0.019 **	0.002	0.012
	(0.01)	(0.01)	(0.01)
Change in job security over past year	0.007	0.037	-0.006
	(0.08)	(0.10)	(0.10)
A little to somewhat of a problem keeping a job	0.073	0.064	0.014
	(0.07)	(0.10)	(0.10)
A considerable to major problem keeping a job	-0.023	-0.131	-0.301 ***
	(0.12)	(0.16)	(0.10)
When want to retire or stop working	-0.023	-0.064	-0.023
	(0.08)	(0.11)	(0.10)
When would have enough money to retire	0.097	0.059	0.096
	(0.07)	(0.15)	(0.15)
Number of years until specified retirement age	-0.005	0.004	0.004
	(0.01)	(0.01)	(0.01)
Level of distress in response to the downturn	0.033 **	0.008	0.011
	(0.02)	(0.02)	(0.02)
Thought quite a bit about the effect of the	-0.172 **	-0.165 *	-0.234 ***
downturn on long-term financial situation	(0.08)	(0.10)	(0.09)
Thought saving for retirement relatively	-0.122 *	-0.027	-0.030
important	(0.06)	(0.12)	(0.12)
R-squared	0.255	0.141	0.220
Number of observations	221	221	221

Note: Robust standard errors are in parentheses. Marginal effects are evaluated at the mean for continuous variables and are the change from 0 to 1 for dummy variables. Marginal effects are significant at the 1 percent level (***), 5 percent level (**), or 10 percent level (*).
Source: Authors' calculations from *CRR 2009 Retirement Survey*.

CENTER FOR
RETIREMENT
RESEARCH
at BOSTON COLLEGE

About the Center

The Center for Retirement Research at Boston College was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and forge a strong link between the academic community and decision makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

Affiliated Institutions

The Brookings Institution
Massachusetts Institute of Technology
Syracuse University
Urban Institute

Contact Information

Center for Retirement Research
Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467-3808
Phone: (617) 552-1762
Fax: (617) 552-0191
E-mail: crr@bc.edu
Website: http://www.bc.edu/crr

The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement Research Consortium. The opinions and conclusions expressed are solely those of the authors and do not represent the opinions or policy of SSA, any agency of the Federal Government, or the Center for Retirement Research at Boston College.