

# Financial Education and Private Pensions

Dean M. Maki  
Putnam Investments  
One Post Office Square  
Boston, MA 02109  
dean\_maki@putnaminv.com

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## **Abstract**

Recent work has indicated that financial education—both in high school and in the workplace—has a positive impact on saving and wealth accumulation. In principle, financial education could change parameters in the household's utility function or its discount rate, but in this paper I argue that it is implausible that education primarily works through these channels. I use household survey data to look for evidence on a third possibility: Financial education increases a household's knowledge of the choices available to it. I find that exposure to financial education—both at the workplace and in high school—improves a respondent's knowledge of relative asset returns and their understanding of the features of their pension plan. I also examine the policy implications of this and other recent research findings on the effects of financial education.

## **I. Introduction**

American households increasingly shoulder the responsibility of planning for their retirement, because the U.S. pension system has shifted toward defined contribution pension plans over the past two decades. In order to fully take advantage of the opportunities available through this shift, households must possess sufficient financial knowledge to make wise decisions. Bernheim (1998) raises concerns about whether households are financially literate enough to make wise decisions regarding their pension plan participation and contributions.

A related concern of many analysts is the amount of personal saving by households in the United States. The personal saving rate as measured in the National Income and Product Accounts has dipped below zero in recent months, and it is the conclusion of many economists that additional measures to increase saving are needed to ensure that the baby boom generation will have an adequate standard of living when they retire. Indeed, tax-incentive plans such as 401(k)s and IRAs have been specifically created to increase the incentive for households to save.

In recent years there has been increased interest in financial education as one potential way to increase households' financial literacy, and hopefully thereby to improve their financial decision-making. An increasing number of employers have begun offering retirement education to their employees, often with the goal of increasing participation and contributions to 401(k) pension plans. Recently H.R. 4747, the Retirement Security Advice Act, was introduced as a bill into the House of Representatives; the bill aims to make it easier for firms to contract with financial institutions to give individualized financial advice to their employees without the firm being liable as a fiduciary adviser.

School-based financial education has a longer history. In the 1970s, a number of states

instituted policies to encourage or require financial education at the high school level. Although the pace of change slowed down markedly in the 1980s, a number of organizations currently promote financial education at the high school level, including the Jump\$tart Coalition for Personal Finance Education and the National Endowment for Financial Education.

In this paper, I review the literature that has attempted to assess the effects of financial education. Financial education has been found to increase household saving and wealth accumulation. I discuss possible reasons that financial education might affect saving behavior, including changing parameters in a household's utility function. I then use household-level data to investigate a different channel by which financial education may be having an impact: By increasing a household's knowledge of the nature of the financial choices that are available to it. I find that financial education in the workplace is associated with greater financial knowledge, both of relative asset returns and of the features of the household's pension plan. I then discuss the importance of this and other research findings for policy-makers.

The layout of the paper is as follows. Section 1 defines financial education. Section 2 reviews the literature on financial literacy and the effect of financial education on household saving. Section 3 discusses the data used in the analysis. Section 4 uses the data to test whether financial education has a measurable impact on household financial knowledge. Section 5 examines the policy implications of the results and Section 6 concludes.

## **2. What is Financial Education?**

There are two main types of financial education that are examined in this paper. The first is workplace financial education, which may consist of written materials, seminars, workshops, and newsletters. Topics covered often include asset allocation strategies and methods of

estimating the amount of money a household needs to save for retirement. Often these educational programs are linked to a firm's 401(k) plan, and sometimes they are implemented with the specific goal of increasing participation in and contributions to the 401(k) plan. See Bernheim and Garrett (2000) and Bayer, Bernheim and Scholz (1996) for a more detailed discussion of workplace financial education.

The second type of education analyzed in this paper is high school financial education. Financial education in high school may be required or elective, and may be either part of a course or a full course. The topics covered may include budgeting, money management, credit, and saving and investing. Within saving and investing, the topics may include discussion of various types of financial instruments, the relationship between risk and return, the effect of inflation and taxes on investments, and the advantages of portfolio diversification.

A number of states passed financial education mandates in the 1970s. Mandates differ in their impact; some require state education agencies to assemble and distribute materials to local districts, some require districts to offer financial education, and some require each student to receive instruction, either through a separate course or as part of an existing course. In this paper, I consider the effects of mandates that require each student to receive financial education. In all 14 states have or have had mandates of this form. See Bernheim, Garrett, and Maki (forthcoming) for a more detailed discussion of the types of high school financial education.

### **3. Previous Research**

In recent years, more employers have been offering financial education to their employees. Several recent papers have attempted to measure differences in behavior between households who were exposed to these educational programs and other households. Bayer,

Bernheim and Scholz (1996) used data from the KPMG Peat Marwick Retirement Benefits Survey, and analyzed differences in participation in and contributions to 401(k) plans between firms that offered financial education to their employees and firms that did not. Using cross-sectional variation, they found that employers who offered educational programs had significantly higher participation and contribution rates than employers who did not. Retirement seminars were found to be the most effective means of communication, raising participation rates by about eight percentage points and contribution rates by 2/3 percentage point. The effect was higher on non-highly compensated workers, with participation rates increasing by 11-1/2 percentage points and contribution rates rising by .8 percentage points. Similar results were found when *changes* in participation and contribution rates were regressed on changes in educational programs.

Clark and Schieber (1998) used a survey of firms collected by Watson Wyatt to analyze determinants of participation and contribution levels in 401(k) plans. They found that employer communication in the form of newsletters raised contribution levels, as did communication in the form of materials specifically tailored to the 401(k) plan. If both types of information were used, contribution levels were increased by 36 percentage points. Generic newsletters had no effect on the level of contributions, while specifically-tailored information raised contribution levels by about two percentage points.

Bernheim and Garrett (2000) also looked at the effect of workplace financial education using a survey of households conducted for Merrill Lynch in the fall of 1994. They found that being exposed to financial education raised a household's probability of participating in a 401(k) plan by 12 percentage points, and raised the median balance by \$2,800. Also, for households at

or below the median, exposure to financial education was associated with one to two percentage point higher *overall* saving rates. Because they were using a single cross-section of data, the authors investigated several alternative explanations for the relationship, but concluded that the higher saving rate was best explained as the result of the financial education and was unlikely to be caused by spurious correlation.

Berhneim, Garrett, and Maki (forthcoming) look at the effect of financial education at the high school level on adult financial decision-making. The authors compile a database of state financial curriculum mandates, and show that a wave of mandates was passed in the 1970s as part of the broader consumer education movement. This wave of mandates provides a unique opportunity to compare households exposed to the mandate with other households. The data are matched with a survey of households conducted for Merrill Lynch in the fall of 1995 that obtained information on household demographics, saving rates, and most importantly, whether the respondent took financial education courses in high school, whether they were required, and in which state the household attended high school. The authors find that financial education mandates raised the likelihood that a household took financial education in high school, and are associated with higher levels of saving and net worth by households in their adult life.

Presumably because of implementation lags, the effects of mandates on exposure to financial courses and on saving appear to rise with the number of years that have passed since the mandate was enacted. Five years after the mandate, saving rates were 1-1/2 percentage points higher for an exposed household compared to one that has not been exposed. Net worth was estimated to be higher among exposed households—when compared to unexposed households—by about one year’s worth of earnings.

Muller (2000a) uses the Health and Retirement Survey (HRS) to look at the effect of retirement education on asset allocation in defined contribution pension plans. No general effects were found, though for households with a “high” degree of risk aversion (the second highest of four risk aversion categories), there did appear to be an effect. Muller notes that the relatively coarse nature of the survey question—it asked whether the households’ assets are mostly or all in stocks, mixed, or mostly or all in bonds—may have masked small changes in portfolios as a result of exposure to education.

Muller (2000b) uses the HRS to analyze the effect of retirement education on whether a household spends or saves a lump sum distribution from its DC pension. Little effect was found for the sample for a whole, but separating the sample suggested that younger workers—especially men—who were exposed to financial education were more likely to save their distribution after receiving financial education, while better educated households—especially women—were more likely to spend their distribution after receiving financial education. Muller suggests one possible explanation for the divergent results—younger workers might be more likely to realize the importance of retirement savings through the education and therefore make greater efforts to save their distribution. On the other hand, college graduates may be more likely to have ample outside assets and may learn through the education that they can access their money—albeit with penalties—and may be more willing to treat their pension plan as a short-run saving instrument. Muller’s work emphasizes that the effects of retirement education may be heterogeneous, with different workers learning different lessons from the education. Learning more about these differences would be a useful area for future research.

The existing literature points to one strong conclusion: Financial education, either at the

workplace or at school, raises household saving and wealth. In the next section, I discuss the possible reasons for this relationship.

### **3. Why Does Financial Education Raise Saving?**

The finding that financial education raises saving is not easily reconciled with standard models of consumption and saving behavior. Simple versions of the life-cycle model assume that there is no uncertainty, and that households optimally allocate their consumption across periods in preparation for retirement. More sophisticated models of intertemporal choice allow for households to be uncertain about future income and to build precautionary balances to prepare for possible future income shocks. The intertemporal consumption capital asset pricing model allows for uncertainty about the return on a risky asset. Even within these types of models of household decision-making under uncertainty, it is not clear why financial education would have an impact. Even though households don't know what particular draw they will receive from the distribution of future income and returns, they are assumed to have full information about the distribution itself.

One way to reconcile the results on education with standard models would be to assume that some parameter in the household's utility function is changed by financial education. One possibility is that financial education might lead to higher saving by reducing a household's discount rate. However, why this might occur is not obvious. Typically, financial education at the firm level covers topics like the features of a firm's pension plan, asset allocation strategies, and historical returns on different types of assets. There is no clear link between these topics and the discount rate—which measures the amount of consumption a household is willing to give up today for a dollar more of consumption tomorrow. It seems especially implausible that other

behaviors that are affected by a household's discount rate, such as the propensity to smoke, would be affected by exposure to financial topics.

Another parameter to consider is a household's level of risk aversion. One might imagine that, if anything, exposure to the types of topics covered in a financial education course might cause households to become less risk averse as they learned that riskier assets such as corporate equities have typically done better than other investments over the longer term. However, in order for financial education to raise saving in most models of saving under uncertainty, financial education would have to make households *more* risk averse. It is not at all clear which topics covered in financial education courses would have this effect.

Thus, it seems implausible that financial education is having its primary effect on saving by changing the parameters of households' utility functions such as risk aversion or discount rates. A third possibility is that education changes a household's knowledge of its choice set. While this explanation might seem plausible, it is a radical departure from the standard assumptions used in saving models. The analysis in this paper will provide evidence on a necessary, though not sufficient, condition for this third possibility to be plausible: Households who are exposed to financial education must become more knowledgeable about their choices through the education.

#### **4. Data**

The analysis in this paper is based on a unique cross-sectional household survey fielded in November, 1995.<sup>1</sup> Respondents were between the ages of 30 and 49. Most presumably

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<sup>1</sup>The survey was designed in cooperation with Doug Bernheim, and fielded for Merrill Lynch by Survey Communications, Inc. The original purpose of the survey was to monitor the adequacy of saving among members of the baby boom generation (see Bernheim, 1996).

graduated from high school between 1964 and 1983, a period which spans the transition to high school financial education mandates in many states. A total of 2,000 surveys were completed. The survey gathered standard economic and demographic information, including household earnings, total income, self-reported rates of saving, assets and liabilities,<sup>2</sup> pension coverage,<sup>3</sup> employment status, gender, marital status, age, ethnic group, education, and household composition. It also solicited information on childhood influences of potential relevance to future financial decisions. Most importantly, it asked respondents to identify the state in which they attended high school, and it solicited information concerning exposure to financial education, both in high school and at the workplace.

Table 1 contains summary statistics for the full sample.<sup>4</sup> The net worth and income figures are higher than benchmarks such as the Survey of Consumer Finances (SCF); this pattern is to be expected in a phone survey, since homeowners are more likely to answer the phone. Bernheim, Garrett, and Maki (forthcoming) find that when the sample is adjusted for demographic variables such as home ownership status, marital status, and age, the net worth and income of respondents line up reasonably well with the SCF. Columns 2 and 3 show the figures

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Unfortunately, existing public use data sets such as the Survey of Consumer Finances (SCF) and the Panel Study of Income Dynamics (PSID) do not contain data on the state in which the respondent attended high school, or on exposure to financial education curricula.

<sup>2</sup>Respondents were asked separately about the value of financial assets, houses, other real property, business interests, and debt.

<sup>3</sup>Respondents were asked to identify the type of pension (defined benefit, voluntary tax-deferred salary reduction plan, or other defined contribution), and to provide total assets for defined contribution plans.

<sup>4</sup>Earnings are defined as income from employment or self-employment. Net worth equals the sum of financial assets (including defined contribution pension plan balances), home equity, other real property, and business interests, net of debt.

separately for households who were exposed to financial education mandates versus those who were not. Differences in demographic variables are relatively minor, but, as would be expected, households who were exposed to mandates were significantly more likely to have been required to take a course in personal finance than households who were not covered by mandates. Median net worth was higher among households exposed to mandates.

## **5. Results**

As noted in Section 2, the goal of the empirical work in this paper is to investigate whether financial education changes households' financial knowledge. Specifically, we will check whether financial knowledge increases a household's knowledge of relative asset returns. Also, Gustman and Steinmeier (this volume) point out another area where households' knowledge is quite imperfect; they find that many households do not understand the features of their pension plan. This seems like a particularly likely area for financial education to have an impact, so the analysis here will also test whether financial education increases a household's knowledge of the features of their pension plan.

In the 1995 Merrill Lynch survey, households were asked "Over the last 20 years, which of the following investments would have offered you the best returns on your money? Stocks, bonds, a savings account, or certificates of deposits (CDs)?" As noted by Ibbotson Associates (2000), stocks have been the highest-yielding investment over every 20-year period since 1926 (when the Ibbotson data started), including the period from 1976-1995—the twenty-year period immediately preceding the survey. Yet only fifty two percent of households in the survey correctly chose stocks as the investment with the highest return. In the analysis to follow, I use a dummy variable which equals one if the household answered this question correctly, and zero if

they did not, and refer to this variable as *KNOW\_RETURN*.

The first analysis will assess whether financial education influenced a household's ability to answer the question correctly. Thus I use *KNOW\_RETURN* as the dependent variable, and use demographic control variables and a dummy variable equal to one if the household received financial education at the workplace. To focus on households who received information relevant to this type of decision in their education, only households whose employer offered education that included information on asset allocation or options in their investment plan (about 83 percent of all households who received any form of employer-based financial education) are counted as having received financial education. Also, for comparability with later results on knowledge of an employee's pension plan, the sample is restricted to households whose employer offers a 401(k)-type of defined contribution plan, leaving 848 respondents in the sample. The first column of Table 2 shows the results of this estimation. The coefficient estimates indicate that households whose employers offer financial education are about 10 percent more likely to answer correctly that stocks had the best returns, and the coefficient is significant at the 5 percent level. Other coefficients indicate that females are less likely to answer correctly, as are blacks (though the coefficient is significant only at the 10 percent level). Households with more education are more likely to answer correctly, as are older households.

To investigate the effect of education at the high school level, I next use as an independent variable a dummy equal to one if the household was exposed to a financial education mandate and zero otherwise. To control for the possibility that households in states that imposed mandates are somehow different from households in other states, I also include a variable that equals one if the respondent's state *ever* imposed a mandate. The regression is

essentially a “difference-in-difference” estimation, where we examine the difference between households in mandate and non-mandate states, and see whether this difference is changed by financial education mandates.

The results of this estimation are shown in Column 2 of Table 2. The coefficients indicate that households whose state ever imposed a mandate were nearly 10 percent less likely than other households to answer the question correctly. However, the coefficient on “exposed to mandate” indicates that households who were exposed to mandates were nearly 15 percent more likely to answer the question correctly than unexposed households living in states that eventually imposed mandates, and this estimate is significant at the five percent level. In other words, households who were exposed to the mandates were about five percentage points more likely to answer the question correctly than households living in non-mandate states, while households who lived in mandate states but were not themselves exposed to the mandates scored about 10 percentage points lower than households in states that never imposed a mandate. Thus, the results indicate that mandates were successful in increasing the number of households answering the relative return question correctly.

Next, we look at whether households are more likely to understand the features of their pension plan if their employer offers financial education. In the survey, respondents are asked whether they are given choice about the allocation of their funds, whether those choices include equity mutual funds, whether their employer matches contributions to the pension plan, what this matching rate is, and whether the plan has a provision allowing employees to take loans against their plan balances. To test the respondent’s understanding, I constructed an “ignorance” variable for each of these features that equals one if the respondent replied “I don’t know” or

refused to answer the question. In addition I constructed another dummy variable equal to one if the respondent responded “I don’t know” or refused to answer *any* of the five questions. To test whether financial education reduces ignorance, I use probit regressions where the ignorance dummies are the dependent variable, and the dummy variable for employer education and demographic variables are the independent variables. Results of these estimations are shown in Table 3. Very few of the demographic variables are significant. Notable exceptions are that higher income respondents are less likely to be ignorant about the presence of a loan option, and part-time workers are more likely to be ignorant about the employer’s match rate.

The striking result of Table 3 is that for every feature of the pension plan, respondents whose employer offers financial education are less likely to be ignorant of the features of the pension plan, with the percent of “I don’t know”s being decreased anywhere from 5 percentage points for the question about the presence of an employer match to 14 percentage points for the question about the option of taking out a loan against the pension plan balance. As shown in column 6, respondents whose employer offers financial education are 20 percentage points less likely to be ignorant of at least one feature of their pension plan. In column 7, I test whether financial education at the high school level is related to respondent’s knowledge of their pension. The results indicate that respondents who were subject to mandates were 11 percent less likely to be ignorant of at least one feature of their pension plan, and the effect is significant at the five percent level. The coefficient on “State ever imposed mandate” is 12 percentage points, so that respondents in “mandate” states who were not subject to the mandate were more likely to be ignorant than households in non-mandate states. The coefficient on “exposed to mandate” indicates that this differential was largely wiped out for those households who were subject to

the mandate. This is an important result, which implies that a high school financial education course has long-lasting effects on a household's propensity to acquire knowledge of their pension plan.

Thus, both employer and school-based financial education appear to reduce employees' ignorance of their pension plans. The finding that high school financial education also improves households' knowledge of relative asset returns and their knowledge about their pension plans gives considerable support to the idea that the workplace-based financial education results are not due to some type of spurious correlation.

## **6. Policy Implications**

Recent research has found that financial education increases a household's saving and net worth, and the results in this paper indicate that education may work by increasing a household's understanding of the choices available to it. These results have a number of policy implications. Policy-makers who aim to increase savings should consider financial education as a policy tool; this tool seems to have a number of advantages over other potential tools such as increasing the limits on saving incentives like Individual Retirement Accounts (IRAs) and 401(k)s. First, there is substantial disagreement among economists about whether these incentives actually increase saving or simply substitute for other forms of saving (see Engen, Gale and Scholz (1996) and Poterba, Venti, and Wise (1996) for a review of the debate). Even if one believes that these incentives raise saving, one may be concerned about the regressive nature of the benefits of the incentives, since wealthy households make disproportionate use of these incentives.

The tool of financial education has neither of these potential drawbacks. There is no possibility of substitution; if financial education raises total household saving as several studies

have found, it does not come at the expense of some other kind of saving (except for the relatively small cost of the educational materials, which would come out of business or government saving).<sup>5</sup> In addition, to the extent that one group might benefit most from these educational programs, it would seem to be lower-income households. Bayer, Bernheim and Scholz (1996) found that workplace financial education seemed to raise the 401(k) contributions of non-highly compensated workers most, and Bernheim, Garrett and Maki (forthcoming) found that the effects of high school financial education were highest among households who reported that their parents did not save more than the average household.

In addition, financial education—especially at the high school level—might have other benefits beyond its effects on saving. Presumably, households who are more knowledgeable about finances will make better decisions in other contexts in addition to the question of how much to save. Some suggestive evidence on this point comes from Mandell (1998), who finds that states where students have greater financial literacy have lower levels of personal bankruptcy filings.

For all of these reasons, it would seem that financial education is a policy tool that should attract little opposition from most economists. While I am not aware of work that tries to quantify the direct financial costs to the government of financial education, it seems that they would be relatively minor in comparison to the potential benefits. This is especially true for employer-based education, where private employers pay the costs and the government need only

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<sup>5</sup>It is important to distinguish here between the finding that financial education raises 401(k) participation and contributions versus the finding that financial education raises total household saving. In the first case, there is the usual possibility of shuffling between retirement and non-retirement saving. However, for the studies which found that financial education raises *total* household saving, there is no corresponding fall in other saving. It is to these latter findings

encourage and reduce barriers to its use. At the high school level, the costs are likely similar to those of any other course. Of course, the opportunity costs of requiring students to take financial education may be important, in that students will then take less of some other course. Given the relatively large benefits that appear to emerge from this education, however, it seems that requiring students to acquire at least some knowledge of personal finance during high school would be justified. One possibility would be to require a course in personal finance, but to allow students to test out of the course if they can show they have mastered the concepts through independent study.

Finally, the results suggest that policy-makers should not rely solely on the results of standard intertemporal optimization models to assess the effects of policy changes on household behavior. While these models may give accurate predictions for some households, the results here suggest that at least some households imperfectly understand their choice set.<sup>6</sup> The results from standard optimization models need to be rigorously checked against the data before policy is made on the basis of these models. In addition, developing formal models of household saving behavior that allow at least some households to be imperfectly aware of their choices seems like a profitable area for future research.

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that the text refers.

<sup>6</sup>One might argue that the standard modeling approach can fit the data if transaction costs are added to the model. The argument would be that there is a cost to acquiring financial knowledge, and that households for whom financial choices are especially important—such as those who are near retirement or who have large amounts of assets to manage—are more willing to incur this cost. However, given the enormous consequences of under-saving or misallocating retirement assets over a lifetime and the large effect on behavior that the knowledge obtained in a short seminar appears to have, in my view the transaction costs of learning basic asset allocation and saving strategies would have to be implausibly large to deter a household from getting this information. It seems more plausible that households who have not taken a seminar don't *understand* the large potential payoff and the small cost of such a seminar.

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**Table 1: Summary Statistics**

Variable and Subsample	Full sample	Covered by fin. ed. mandate	Not covered by fin. ed. mandate
Percent married	67.9	67.7	68.0
Percent single male	16.5	16.2	16.5
Percent single female	15.6	16.2	15.5
Percent white	80.4	75.3	81.0
Percent non-white	19.6	24.7	19.0
Percent no degree	5.9	4.5	6.1
Percent high school degree only	61.8	64.1	61.6
Percent college degree	32.3	31.3	32.3
Percent homeowners	71.7	66.2	72.3
Average age of respondent	39.6	34.7	40.1
Percent required to take consumer ed. course with financial topics	11.4	21.2	10.4
Median household earnings	50,000	45,000	50,000
Median net worth	77,000	93,000	75,250

**Table 2: Probit estimations for knowledge of relative asset returns.  
Dependent variable equals one if answered correctly.**

Variable	(1)	(2)
Availability of financial education at respondent's workplace	0.096 (2.31)	
State ever imposed mandate		-0.096 (-1.93)
Exposed to mandate		0.145 (2.21)
Marital status	0.163 (0.66)	0.183 (0.72)
Female	-0.109 (-2.71)	-0.112 (-2.79)
Black	-0.114 (-1.68)	-0.107 (-1.59)
Other non-white	-0.054 (-0.99)	-0.053 (-0.97)
Education, respondent	0.054 (4.40)	0.054 (4.47)
Education, spouse	0.022 (1.16)	0.020 (1.09)
Age, respondent	0.009 (2.30)	0.012 (2.90)
Age, spouse	-0.004 (-1.12)	-0.005 (-1.20)
Log earnings, respondent	0.050 (2.72)	0.057 (3.12)
Log earnings, spouse	-0.009 (-0.37)	-0.010 (-0.41)
Self-employed, respondent	-0.089 (-1.50)	-0.131 (-2.23)
Self-employed, spouse	-0.030 (0.44)	0.041 (0.59)
Not working, spouse	-0.071 (-0.58)	-0.089 (-0.71)
Part-time, respondent	0.094 (1.50)	.074 (1.18)
Part-time, spouse	0.099 (1.26)	.086 (1.08)
Observations	848	848

Notes: t-statistics in parentheses. Sample includes all households eligible to participate in a 401(k)-type of defined contribution pension. Coefficients are scaled to reflect incremental effects on probability evaluated at sample means.

**Table 3: Probit estimations for ignorance of pension plan features.**  
**Dependent variable equals one if respondent answered “I don’t know” or refused to answer.**

Variable	(1) Asset Choice	(2) Equity	(3) Match	(4) Match Rate	(5) Loan	(6) Any Feature	(7) Any Feature
Availability of financial education at respondent’s workplace	-0.064 (-4.48)	-0.066 (-2.90)	-0.048 (-3.01)	-0.087 (-2.41)	-0.140 (-5.15)	-0.200 (-5.61)	
State ever imposed mandate							0.122 (2.91)
Exposed to mandate							-0.114 (-2.29)
Marital status	0.060 (1.96)	-0.013 (-0.13)	-0.005 (-0.06)	0.002 (0.01)	0.063 (0.54)	0.188 (1.17)	0.186 (1.13)
Female	0.007 (0.65)	0.017 (0.99)	0.007 (0.50)	-0.024 (-0.75)	-0.011 (-0.45)	0.008 (0.23)	0.013 (0.38)
Black	0.422 (2.04)	0.004 (0.13)	-0.003 (-0.13)	0.009 (0.19)	-0.008 (-0.20)	0.017 (0.31)	0.008 (0.15)
Other non-white	-0.013 (-1.03)	-0.009 (0.44)	0.006 (0.33)	0.030 (0.71)	0.003 (0.09)	0.023 (0.52)	0.018 (0.40)
Education, respondent	-0.002 (-0.62)	0.007 (1.39)	-0.001 (-0.27)	0.001 (0.06)	0.007 (0.93)	0.009 (0.95)	0.006 (0.59)
Education, spouse	-0.010 (-1.95)	-0.003 (-0.48)	0.003 (0.40)	0.005 (0.36)	-0.007 (-0.60)	-0.011 (-0.74)	-0.010 (-0.65)
Age, respondent	-0.001 (-0.98)	-0.001 (-0.88)	0.001 (0.41)	-0.002 (-0.51)	0.003 (1.35)	-0.001 (-0.31)	-0.004 (-1.17)
Age, spouse	-0.001 (-1.11)	0.002 (1.70)	-0.002 (-1.38)	-0.002 (-0.49)	-0.003 (-1.17)	-0.003 (-0.78)	-0.002 (-0.54)
Log earnings, respondent	0.000 (0.07)	-0.003 (-0.53)	-0.006 (-1.45)	-0.009 (-0.76)	-0.017 (-2.02)	-0.030 (-2.24)	-0.041 (-3.01)
Log earnings, spouse	-0.008 (-2.02)	0.001 (0.15)	-0.001 (-0.17)	-0.003 (-0.14)	-0.008 (-0.68)	-0.022 (-1.27)	-0.023 (-1.29)
Self-employed, respondent	0.000 (0.01)	-0.020 (-0.98)	0.007 (0.40)	0.041 (0.83)	-0.017 (-0.55)	0.030 (0.62)	0.103 (2.09)
Self-employed, spouse	-0.002 (0.10)	-0.009 (-0.34)	0.032 (1.19)	-0.049 (-0.89)	0.046 (1.09)	0.018 (0.32)	0.016 (0.28)
Not working, spouse	-0.025 (-2.13)	-0.011 (-0.25)	-0.002 (-0.05)	-0.038 (-0.42)	-0.064 (-1.22)	-0.139 (-1.81)	-0.126 (-1.57)
Part-time, respondent	0.027 (1.50)	-0.000 (-0.02)	0.015 (0.69)	0.106 (1.97)	0.020 (0.53)	0.095 (1.72)	0.152 (2.71)
Part-time, spouse	-0.015 (-0.93)	-0.002 (-0.07)	-0.02 (-0.74)	-0.028 (-0.48)	-0.015 (-0.35)	-0.063 (-1.05)	-0.055 (-0.88)

Observations	848	566	848	538	848	848	848
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Notes: t-statistics in parentheses. Probit coefficients are scaled to reflect incremental effects on probability evaluated at sample means. Sample includes all households eligible for a 401(k) pension plan, except for Columns 2 and 4, which restrict to those who report having a choice of investments in their pension and those who have an employer match, respectively. Each column is a question about a feature of the household's pension plan. Column 1 refers to whether the household has a choice of investments in their pension plan, Column 2 to whether the household has an equity mutual fund as a choice in their plan, Column 3 to whether the employer matches employee contributions, Column 4 to the matching rate the employer offers, Column 5 to whether the plan allows participants to borrow against their balances, and Columns 6 and 7 to whether the household answered "I don't know" or refused to answer any of the questions in the first five columns.