

401[k]now

FALL 2006

In this issue:

- *Psychological barriers to saving*
- *Using automatic enrollment to increase participation*
- *Using automatic saving increases effectively*

Behavioral Finance Research Digest
for plan sponsors and their advisors

Brought to you by Dr. Shlomo Benartzi
Associate Professor and co-chair of the
Behavioral Decision Making Group

The Anderson School at UCLA

benartzi@ucla.edu

PSYCHOLOGICAL BARRIERS TO SAVING

Many eligible employees do not save in their company's retirement plan. Those who do save, often save too little. In fact, 68 percent of employees feel their saving rate is "too low," 31 percent feel their saving rate is "about right," and less than one percent believe their saving rate is "too high" (Choi et al, forthcoming).

Individuals have three psychological barriers working against them when it comes to saving: hyperbolic discounting, loss aversion and the tendency toward inertia.

Behavioral economics and behavioral finance research offers some insights into why employees do not save enough and provides some solutions. This article addresses three psychological principles that could explain the low saving rate we observe in the U.S., the U.K. and Canada, among other countries. More details on these psychological barriers are available in Thaler and Benartzi (2004).

The first psychological barrier to saving is "hyperbolic discounting." Standard economic theory justifies choosing immediate gratification over delayed gratification, very much like the theory suggests that a dollar today is worth more than a dollar tomorrow. Hyperbolic discounting refers to an *extreme* tendency to look for immediate gratification. Hyperbolic discounting could also be characterized by the lack of self-control to follow one's long-term goals.

A useful illustration of hyperbolic discounting is offered by Read and Leeuwen (1998). They asked subjects to choose between a healthy snack (bananas), and an unhealthy snack (chocolates). When asked a week in advance, only 26 percent predicted they would be tempted to consume chocolates over bananas. However, when faced with the actual choice just one week later, 70 percent selected chocolates.

Only 26% predicted they would be tempted to select chocolates over bananas, but 70% actually ended up selecting chocolates.

There are interesting similarities between the snacks experiment and retirement saving. When thinking about the future, many people imagine themselves spending less and saving more, very much like they envision themselves choosing bananas over chocolates. However, when faced with the actual choice, many people end up spending too much and saving too little, very much like they end up consuming chocolates.

The second psychological obstacle to saving is “loss aversion,” which refers to the notion that losses loom larger than gains (Kahneman and Tversky, 1979). Employees who consider increasing their saving rates also face a corresponding reduction in take-home pay. To the extent the reduction in take-home pay is viewed by the employee as a loss, loss aversion predicts that the employee would find it difficult to save. Note, however, the same employee might find it palatable to increase the saving rate when combined with a pay raise. A pay raise greater than the increase in saving rate makes it possible to save more and increase take-home pay.

Losses loom larger than gains.

The third barrier to saving is inertia, and the equally troublesome obstacle of procrastination. Ameriks and Zeldes (2004) documented that nearly half of plan participants made no changes to their portfolios over a 10-year period. Inertia and procrastination also affect saving rates, since procrastinators never get around to joining the retirement plan or increasing their deferral rate.

Nearly half the plan participants did not rebalance their portfolios over a 10-year period.

To summarize, several underlying principles of human behavior – including the temptation for immediate gratification, aversion to losses and the tendency toward inertia – present barriers to saving. Hopefully, plan sponsors and their advisors are not discouraged by the psychological barriers to saving, since behavioral economists also offer programs to help people save more. These programs include automatic enrollment and automatic saving increases, which are the focus of the next two articles.

USING AUTOMATIC ENROLLMENT TO INCREASE PARTICIPATION

In a traditional opt-in environment, employees must take an action to join the retirement plan. As a result, inertia is often a barrier to saving, since procrastinators never get around to taking the action to enroll – whether it is completing and returning a paper form or simply going online. Inertia, however, could be used to help employees save by changing the default, so that procrastinators are automatically enrolled into the plan. Note that automatically enrolling employees into the plan does not preclude freedom of choice, since employees could always opt-out of the plan.

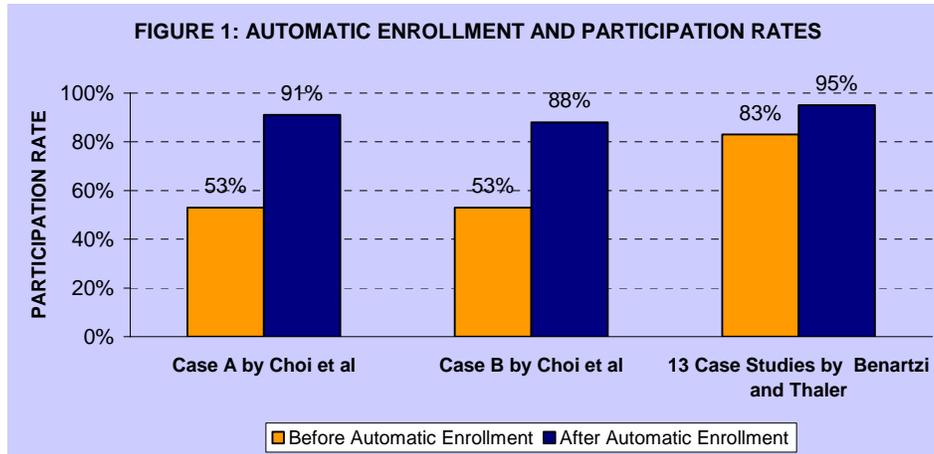
Policy makers around the world are increasingly interested in the design of retirement saving plans and how to set the default choice. Many are advocating automatically enrolling employees into a retirement plan. In the U.S., the Pension Protection Act of 2006 encourages automatic enrollment and automatic saving increases. In particular, the Act offers incentives to employers that: (a) automatically enroll new and existing employees at a minimum deferral rate of three percent of pay, (b) gradually increase the deferral rate to a minimum of six percent and a maximum of 10 percent, and (c) offer matching contributions. For more details, see analysis by the Retirement Security Project (2006).

Policy makers around the world are trying to use inertia to help people save more.

The U.K. and New Zealand have taken a more paternalistic approach, mandating automatic enrollment by 2012 and 2007, respectively. In both countries, employers will be required to automatically enroll employees at a deferral rate of four percent. The U.K. has added the requirement to reenroll employees who opted out every three years, an interesting provision from a behavioral perspective.

Given the global trend toward automatic enrollment, plan sponsors and their advisors might be asking how automatic enrollment affects participants' behavior. Behavioral economists have documented that many more employees save for retirement when automatically enrolled into the plan. Figure 1 illustrates the changes in participation rates following the implementation of automatic enrollment at two companies studied by Choi et al (2004). For employees with two years of tenure or more, participation rates at both companies have increased from approximately 50 percent to 90 percent. A more recent study by Benartzi and Thaler (2006) looked at a large sample of 13 plans with an overall

participation rate of 83% prior to automatic enrollment. Even for this relatively high participation rate, automatic enrollment was effective at raising the rate to 95%.



The bad news with respect to automatic enrollment, however, is that employees tend to stick to the default deferral rate and the default investment fund. Table 1 below confirms a dramatic increase in the percentage of participants staying with the default deferral rate and the default investment fund after automatic enrollment was implemented. In the two case studies described here, the default deferral rates were two percent and three percent, respectively, and the default investment funds were a stable value fund and a money market fund. With the low default deferral rate and the conservative default fund, participants who remain at the defaults are unlikely to accumulate sufficient retirement funds.

TABLE 1	Participants At The Default Deferral Rate		Participants In The Default Fund	
	Before	After	Before	After
COMPANY A	12%	53%	5%	41%
COMPANY B	9%	53%	2%	44%

To summarize, the same psychological principle that makes automatic enrollment so successful at helping employees start to save (i.e., inertia) also causes participants to stick to the low default deferral rate, often saving very little. Again, plan sponsors and their advisors should not get discouraged, since behavioral economists have devised other solutions to make more people save more (see next article).

USING AUTOMATIC SAVING INCREASES EFFECTIVELY

Behavioral economists have documented that automatic enrollment programs make more people save. However, they have also found that automatically enrolled participants tend to stick to the default deferral rate, often a low rate of just two or three percent. How can plan sponsors and their advisors help employees save more? Luckily, behavioral economists again have a solution to offer.

About a decade ago, Professor Richard Thaler from the University of Chicago and I proposed an automatic saving increases program, which we dubbed Save More Tomorrow™. The program is straight forward: employees pre-commit to save more every time they get a pay raise. The program could be implemented on an opt-in basis (requiring an employee to take action), or alternatively, employees could be automatically enrolled in the increase program.

The program was devised to address psychological barriers to saving. The temptation for immediate gratification, for example, prevents people from saving today, but it does not prevent them from committing to saving more in the future (remember the commitment to eating bananas *in the future*). Similarly, inertia typically prevents people from revising their saving rate, but the automatic feature of the increases actually makes use of inertia to help employees save more. And, by synchronizing saving increases with pay raises, employees never see their take-home pay go down, and hence, they are unlikely to view saving increases as a loss.

Policy makers around the world are expressing great interest in behavioral solutions to the saving crisis. In the U.S., the Pension Protection Act encourages employers to automatically enroll employees into retirement plans and gradually increase their deferral rate to a minimum of six percent and a maximum of 10 percent. In the U.K., employers will have three years to get automatically enrolled employees to a deferral rate of four percent. How effective are these “escalator programs” and how should they be designed for maximum effectiveness?

In one case study, program participants increased their deferral rates from 3.5% to 13.6% in less than four years.

Escalator programs could have a dramatic effect on deferral rates. In the first case study, we helped employees at a midsize company who had the opportunity to chat with a financial planner (Thaler and Benartzi, 2004). Only those who were struggling financially and could not increase their deferral rate right away were offered to increase their deferral rate by 3% of pay every time they get a raise. Seventy-eight percent accepted the offer and their deferral rates have increased from 3.5 percent to 13.6 percent in less than four years.

Since our first case study, many plan providers have implemented similar programs. We have noticed, however, dramatic differences across plans in employee signup rates, ranging from low single digit to adoption rates of over 90 percent. What could explain the observed differences in signup rates and make the program more effective? The main lessons learned by Professor Thaler and I over the last decade are summarized in the table below. Readers who are interested in more details are welcome to review our recent paper on this topic (Benartzi and Thaler, 2006).

TABLE 2: KEY LESSONS ABOUT AUTOMATIC SAVING INCREASES	
When is the best time to implement the saving increases?	Many employees find it easier to imagine themselves saving more next January.
Is it possible to increase savings on a set date rather than synchronize with pay raises?	Yes. The program is almost as effective when implemented on a set date, like every January.
What participation rates should I expect if employees are automatically enrolled in this program?	About 85% of employees are likely to remain in the program, and just 15% would opt-out of the saving increases.
Is an annual increment of 2% too ambitious in the current economic environment of low pay raises?	Signup rates for this program are virtually the same whether the increment is 1% or 2%.
Are employees sensitive to the “cap”? (i.e., the saving rate at which the increases are automatically stopped)	Signup rates are the same with a cap of 10% and 20%. However, setting an unrealistically high cap is demotivating.

To summarize, escalator programs could be extremely effective at helping more employees save more. However, the dramatic differences in signup rates across plans suggest that the devil is in the implementation details. Plan sponsors and their advisors should pay careful attention to the choice of plan design features. If automatically enrolling employees into the program, adoption will be nearly universal. Alternatively, if employees have to opt into the program, it is important to keep the signup process as simple as possible.

I hope you enjoyed reading the 401(k)now research digest. If you have any comments, suggestions or feedback, feel free to email me at benartzi@ucla.edu.

Sincerely,



Shlomo Benartzi, Ph.D

REFERENCES

Ameriks, John, and Stephen P. Zeldes, 2004, "How do Household Portfolio Shares Vary with Age?" working paper, Columbia University, <http://www1.gsb.columbia.edu/mygsb/faculty/research/pubfiles/16/Ameriks%5FZeldes%5Fpage%5FSept%5F2004d%2Epdf>

Benartzi, Shlomo, and Richard H. Thaler, 2006, "Understanding the Psychology of the Save More Tomorrow™ Program," working paper, UCLA.

Choi, James, David Laibson, Brigitte Madrian, and Andrew Metrick, forthcoming, "Saving for Retirement on the Path of Least Resistance," in Ed McCaffrey and Joel Slemrod, eds., *Behavioral Public Finance*.

Choi, James, David Laibson, Brigitte Madrian, and Andrew Metrick, 2004, "For Better or For Worse: Default Effects and 401(k) Savings Behavior," in David Wise editor *Perspectives in the Economics of Aging*, Chicago, IL: University of Chicago Press, pp. 81-121.

Kahneman, Daniel, and Amos Tversky, 1979, "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica* 47, pp. 263-291.

Read, Daniel, and Barbara van Leeuwen, 1998, "Predicting Hunger: The Effects of Appetite and Delay on Choice," *Organizational Behavior and Human Decision Processes* 76.2 (Nov.), pp. 189-205.

Retirement Security Project, 2006, "Analysis of the Pension Protection Act of 2006: Increasing Participation through the Automatic 401(k) and Saver's Credit," http://www.retirementsecurityproject.org/img/File/RSP_Scorecard.Final.final-1.pdf

Thaler, Richard H., and Shlomo Benartzi, 2004, "Save More Tomorrow: Using Behavioral Economics to Increase Employee Savings," *Journal of Political Economy* 112.1, Part 2, pp. S164-S187.