

**Selected Chapter from “Behavioral Finance & Wealth Management” John Wiley & Sons.
Forthcoming March 2006. Michael M. Pompian, author.**

CHAPTER 14 – SELF CONTROL BIAS

"Self-reverence, self-knowledge, self-control - these three alone lead to power"

- Alfred, Lord Tennyson (1880)

BIAS DESCRIPTION

Bias Name: Self-Control Bias

Bias Type: Emotional

General Description. Simply put, self-control bias is a human behavioral tendency that causes us to consume today at the expense of saving for tomorrow. Money is an area in which people are notorious for displaying a lack of self-control. Attitudes towards paying taxes provide a common example. Imagine that you, a taxpayer, know for a fact that you must remit exactly \$3,600 in income taxes one year from now. So, which of these choices, in the meantime, seems more ideal: would you rather contribute \$300 per month, over the course of the next twelve months, to some savings account earmarked for tax season? Or, would you rather increase your federal income tax withholding by \$300 each month, sparing you the responsibility of writing out one large check at the end of the year? Rational economic thinking suggests that you would prefer the savings account approach since, this way, your money would accrue interest and you

would actually net more than \$3,600. However, many taxpayers chose the withholding option, because they realize that the savings account plan would be complicated in practice due to a lack of self-control.

Self control bias can also be described as a conflict between people's overarching desires and their inability, stemming from a lack of self-discipline, to act concretely in pursuit of those desires. For example, a student desiring an "A" in history class might theoretically forgo a lively party to study at the library instead. An overweight person desperate to shed unwanted pounds might, likewise, decline a tempting triple fudge sundae. Reality demonstrates, however, that plenty of people do sabotage their own long-term objectives in situations like the ones described, for temporary satisfaction.

Investing is no different; the primary challenge in investing saving enough money for retirement. Most of this chapter will focus on the savings behaviors of investors, and how best to promote self control in this often-problematic realm. Perhaps the best framework for understanding how to advise clients on self control bias, is done in the context of *life-cycle hypothesis*. This is a standard finance concept that we will examine, then entertain from a behavioral perspective.

Technical Description. The technical description of self-control bias is best understood in the context of the *life-cycle hypothesis*, the aforementioned rational theory of savings behavior. We will, therefore, briefly outline the hypothesis before defining self-control bias.

The *life-cycle hypothesis* describes a well-defined link between the savings and consumption tendencies of individuals and those individuals' stages of progress from childhood, through years of work participation years, and finally into retirement. The foundation of the

model is the *saving decision*, which directs the division of income between consumption and saving. The saving decision reflects an individual's relative preferences over present versus future consumption. Because the life-cycle hypothesis is firmly grounded in expected utility theory and assumes rational behavior, an entire lifetime's succession of optimal saving decisions can be computed given only an individual's projected household income stream vis-à-vis the utility function.

The income profile over the life cycle starts with low income during the early working years, followed by an increase in income that reaches a peak prior to retirement. Income during retirement, based on assumptions regarding pensions, is then substantially lower. To make up for the lower income during retirement, and to avoid a sharp drop in utility at the point of retirement, individuals will save some fraction of their income when they're still working, spending it later during retirement. The main prediction, then, of the life-cycle hypothesis is a lifetime savings profile characterized by a "hump"-shaped curve, with savings building gradually, maxing out, and finally declining again as a function of time.

Two common tendencies of individuals underlie spending patterns, according to the life cycle hypothesis. First, most people prefer a higher standard of living to a lower standard of living. That is, people want to maximize consumption spending in the present. Second, most people prefer to maintain a relatively constant standard of living throughout their lives. They dislike volatility and don't desire abrupt intervals of feast interspersed with famine. Basically, the life-cycle hypothesis envisions that people will try to maintain the highest, smoothest consumption paths possible.

Now that we have an understanding of the life cycle hypothesis, we can integrate behavioral concepts that account for real world savings behavior. In 1998, Hersh Shefrin and

Richard Thaler introduced a behaviorally explained life-cycle hypothesis¹, which is a descriptive model of household savings in which self-control plays a key role. The key assumption of the behavioral life-cycle theory is that households treat components of their wealth as “nonfungible” or non-interchangeable even in the absence of credit rationing. Specifically, wealth is assumed to be divided into three “mental” accounts: current income, current assets, and future income. The temptation to spend is assumed to be greatest for current income and least for future income.

Considerable empirical evidence supporting the behavioral life-cycle theory exists. In a survey of students’ expectations of future consumption, Shefrin and Thaler obtained direct support for the tenets of behavioral life-cycle theory. Specifically, they found that subjects envisioning themselves to be the beneficiaries of some financial windfall predicted that they would consume, immediately, a greater portion of that windfall during the same year if the money was coded as current income rather than current assets. Subjects said that they would consume the smallest portions of income coded as future income. For most people, consumption and income—that is, saving—are mediated by institutions, not individual decisions. Examples include home mortgage repayment schedules, 401(k) plans, and IRAs; often, these instruments represent an individual’s only real savings, with no additional funds being set aside.

Self-control has a cost, and people are willing to pay a price to avoid reigning in their natural impulses. Consumers act as if they are maintaining separate funds within their individual accounting systems, separating income into current income and wealth. The marginal propensity to consume varies according to the source of income (e.g.: salary versus bonus), even if the measure taken to activate or sustain the source of income (e.g., work) is the same. People are more likely to build assets or savings with money they view, or “frame”, as wealth, while they are less likely to build savings using what they consider to be current income. Many researchers

have continued to elaborate on the behavioral life-cycle model, particularly as it relates to retirement savings.

PRACTICAL APPLICATION

Encouraging people to save more is a task that constantly challenges financial advisors. The “Save More Tomorrow Program,” developed by Professors Richard H. Thaler of the University of Chicago and Shlomo Benartzi of the Anderson School of Business at UCLA², aims to help corporate employees who would like to save more but lack the willpower to act on this desire. The program offers many useful insights into saving behavior, and examining it will serve as our practical application discussion in this chapter.

The “Save More Tomorrow Program” has four primary aspects. First, employees are approached about increasing their contribution rates a considerable time before their scheduled pay increases occur. Secondly, the contributions of employees who join the plan are automatically increased beginning with the first paycheck following a raise. Third, participating employees' contribution rates continue to increase automatically with each scheduled raise, until rates reach a preset maximum. Fourth, and finally, employees can opt out of the plan at any time.

Let's examine the results of a trial of the Save More Tomorrow program by a midsize manufacturing company in 1988. Prior to the adoption of the SMT plan, the company suffered from a low participation rate as well as low saving rates. In an effort to increase the savings rates of the employees, the company hired an investment consultant and offered this service to every employee eligible for its retirement savings plan. Of the 315 eligible participants, all but 29 agreed to meet with the consultant and get his advice. Based on information that the employee

provided, the consultant used commercial software to compute a desired saving rate. The consultant also discussed with each employee how much of an increase in savings would be considered economically feasible. If the employee seemed very reluctant to increase his or her saving rate substantially, the consultant would constrain the program to increase the saving contribution by no more than 5 percent.

Of the 286 employees who talked to the investment consultant, only 79 (28 percent) were willing to accept the consultant's advice, even with the adjustment to constrain some of the savings rate increases to 5 percent. For the rest of the participants, the planner offered a version of the SMT plan, proposing that they increase their saving rates by 3 percentage points a year starting with the next pay increase. Even with the aggressive strategy of increasing saving rates, the SMT plan proved to be extremely popular with the participants. Of the 207 participants who were unwilling to accept the saving rate proposed by the investment consultant, 162 (78 percent) agreed to join the SMT plan.

The majority of these participants did not change their minds once the savings increases took place. Only 4 participants (2 percent) dropped out of the plan prior to the second pay raise, with 29 more (18 percent) dropping out between the second and third pay raises.[9] Hence, the vast majority of the participants (80 percent) remained in the plan through three pay raises. Furthermore, even those who withdrew from the plan did not reduce their contribution rates to the original levels; they merely stopped the future increases from taking place. So, even these workers are saving significantly more than they were before joining the plan.

Planning Point. The key lesson here is that people are generally poor at planning and saving for retirement. They need to have self discipline imposed upon them consistently in order to achieve savings.

Implications for Investors

As previously noted, the primary issue with regard to self control is the lack of ability to save for retirement. In addition, there are several other self-control behaviors that can cause investment mistakes. Table 14.1 summarizes some of these.

Self-Control Bias: Behaviors That Can Cause Investment Mistakes

1. Self-Control bias can cause investors to spend more today at the expense of saving for tomorrow. This behavior can be “hazardous to one’s wealth,” because retirement can arrive too quickly for investors to have saved enough. Frequently, then, people incur inappropriate degrees of risk in their portfolios in effort to make up for lost time. This can, of course, aggravate the problem.
2. Self-control bias may cause investors to fail to plan for retirement. Studies have shown that people who do not plan for retirement are far less likely to retire securely than those who do plan. Studies have shown that people who do not plan for retirement are also less likely to invest in equity securities.
3. Self-Control bias can cause asset allocation imbalance problems. For example, some investors prefer income-producing assets, due to a “spend today” mentality. This behavior can be hazardous to long term wealth because too many income-producing assets can inhibit a portfolio to keep up with inflation. Other investors might favor different asset classes, such as equities over bonds, simply because they like to take risks and can’t control their behavior.

4. Self Control Bias can cause investors to lose sight of basic financial principles such as compounding of interest, dollar cost averaging, and similar “discipline”-behaviors that, if adhered-to, can help create significant long term wealth.

Table 14.1 – Self-control bias: behaviors that can cause investment mistakes

PRACTICAL APPLICATION: RESEARCH REVIEW

This research review examines two academic studies done by Professor Annamaria Lusardi, of Dartmouth College. In 2000, Lusardi wrote, "Explaining Why So Many Households Do Not Save" and, in 1999, she wrote "Information, Expectations, and Savings for Retirement."^{3,4} Lusardi's work examines household savings and asset ownership behavior in an attempt to assess how differences in planning and saving across households are explained by various factors. In essence, the studies address whether *lack of planning* (which may be interpreted as lack of self-control) plays a key role in explaining differences in savings behavior. The analysis relies on data obtained from the Health and Retirement Study (HRS), a survey based on a sample of U.S. households born between 1931 and 1941; and the triennial, Federal Reserve sponsored Survey of Consumer Finances (SCF). Lusardi takes two measures to gauge the extent of retirement planning. First, planning is measured by responses to the question: "How much have you thought about retirement?" Responses, grouped at various income levels, are summarized in Figure 14.1. Lusardi classifies respondents as "planners" or "nonplanners" on the basis of their responses; those who have "hardly" thought about retirement are nonplanners, while those who have thought at least "a little" about retirement are planners.

(INSERT Figure 14.1 Here)

Second, planning is measured via a “planning index.” The index is constructed by assigning “points” to respondents based on survey results. Points are awarded to reflect the extent to which a respondent claims to have thought about retirement (“hardly” merits one point, while “a lot” earns four), and points are added if respondents report engaging in additional planning activities. For example, respondents who have asked the Social Security Administration to calculate their expected retirement benefits receive one extra point. Respondents also receive points for having attended retirement seminars.

Lusardi’s empirical analysis shows that households not planning for retirement tend to have much lower savings than households that have given thought to retirement. The study controls for numerous additional variables that might arguably impact savings, and also tries substituting various measures of asset accumulation (e.g., financial or total net worth) as proxy variables to provide alternative planning measures. Still, the result remains conclusive: savings levels depend, significantly, on whether or not a household has planned for retirement.

Additionally, planning may have an effect not only on wealth, but also on portfolio choice. If obtaining information about complex investment assets, such as stocks, required too much effort, families facing will be less likely to invest in those assets. Thus, the question of whether planning affects stock ownership is also important, and can be examined using regression analysis. Again, Lusardi incorporates a wide array of proxy variables to control for resource and preference attributes of households that, though not explicitly measurable, could be expected to bias results. Rather than considering total pension wealth, for example, the analysis distinguishes between households whose heads maintain defined contribution, defined benefit, or other types of pensions. The underlying logic here is that plan structure might impact the degree of discretion employees exercise over the allocation of pension assets and this, in turn, might

impact allocation of non-pension assets. The results of this analysis show that lack of planning is also a strong determinant of portfolio choice. Households that do not plan are less likely to invest in stocks; this result is consistent even after a variety of factors have been accounted for.

In the Health & Retirement Survey, respondents were asked to rate their retirement experiences, and to state how they felt retirement compared to their working years. See figure 14.2. More than 54% of those respondents who had not thought about retirement rated their retirement experiences poorly with respect to their pre-retirement years. A large proportion of respondents (79%) who thought “a lot” about retirement rate describe their quality of life during retirement as equaling or exceeding that of their pre-retirement years. This evidence suggestively coincides with the low amount of asset accumulation estimated for non-planners in Lusardi’s previous regressions. Rationally, households that accumulate less savings are probably more likely to experience an unpleasant “surprise” after retirement.

(Insert Figure 14.2)

Conclusion

A large percentage of U.S. households nearing retirement age inadequately plan for retirement. Although many explanations can be generated for these statistics, the reality is that people often simply do not think about retirement or do not want to sacrifice today to have future benefits. Lack of self control (planning), Lusardi demonstrates, correlates with low aggregate wealth, and results in portfolios that are less likely to contain high-return assets, such as stocks. Much research is needed to determine the reasons why households fail to plan for retirement, and whether the provision of information (e.g., Social Security and pension benefits) might perhaps improve the financial security of many American households.

DIAGNOSTIC

This section contains a brief diagnostic quiz that deals with issues of self control. Scoring guidelines follow.

Question 1. Suppose that you are in need of a new automobile. You have been driving your current car for seven years, and it's time for a change. Assume that you do face some constraints in your purchase as "money does not grow on trees." Which of the following approaches are you most likely to take?

- A) I would typically "under-spend" on a car, because I view a car as transportation, and I don't need anything fancy. Besides, I can save the extra money I might have spent on a fancy car and put it away in my savings accounts.
- B) I would typically purchase a medium-priced model, with some fancy options, simply because I enjoy a nice car. I may forego other purchases in order to afford a nice car. I don't imagine that I'd "go crazy" and purchase anything extravagant, but a nice car is something that I value to an extent and am willing to spend money to obtain this.
- C) When it comes to cars, I like to indulge myself. I'd probably splurge on a top-of-the-line model, and select most or all available luxury options. Even if I must purchase this car at the expense of saving money for the long term, I believe that it's vital to "live in the moment." This car is simply my way of living in the moment.

Question 2. How would you characterize your retirement savings patterns?

- A) I consult my advisors and make sure that every tax favored investment vehicle is “maxed out” (401k, IRA etc.), and I will often save additional funds in taxable accounts.
- B) I will usually take advantage of most tax-favored investment vehicles, though in some cases I’m sure that details may have escaped my attention. I may or may not save something in taxable investment accounts.
- C) I hardly ever save for retirement. I spend most of my disposable income, so very little remains available for savings.

Question 3. How well would you rate your own self-discipline?

- A) I always achieve a goal if it is important to me. If I want to lose 10 pounds, for example, I will diet and exercise relentlessly until I am satisfied.
- B) I can often attain my goals, but sometimes I have trouble sticking to certain difficult things that I have resolved to accomplish.
- C) I have a tremendous amount of difficulty keeping promises to myself. I have little or no self-discipline, and I often find myself reaching out to others for help in attaining key goals.

Scoring Guidelines

Questions 1, 2 and 3. People answering “B” or “C,” to any of these questions, may be susceptible to self-control bias. Please note that self control is a very common bias!

ADVICE

When a practitioner encounters self-control bias, there are four primary topics on which advice can generally be given. These are spending control, lack of planning, portfolio allocation, and the benefits of discipline.

Spending Control. Self-Control bias can cause investors to spend more today rather than saving for tomorrow. People have a strong desire to consume freely in the present. This behavior can be counterproductive to attaining long term financial goals, because retirement often arrives before investors have managed to save enough money. This may spur people into accepting, at the last minute, inordinate amounts of risk in their portfolios in order to make up for lost time – a tendency that actually places one’s retirement security at increased risk. Advisors should counsel their clients to “pay themselves first,” setting aside consistent quantities of money to ensure their comfort later in life, especially if retirement is still a long way off. If an advisor encounters investors that are past age 60, and have not saved enough for retirement, then a more difficult situation emerges. A careful balance must be struck between saving, investing, and risk-taking in order to increase the pot of money for retirement. Often, these clients might benefit from examining additional options, such as part time work (cycling in and out of retirement) or cutting back on consumption. In either case, emphasizing paying oneself first – that is, assigning a sufficient level of priority to future rather than present-day consumption -- is critical.

Lack of Planning. Self-control bias may cause investors to not plan adequately for retirement. Studies have shown that people who do not plan for retirement are much less likely not to retire securely than those who do plan. People who do not plan for retirement are also less likely to invest in equity securities. Advisors must emphasize that investing without planning is like

building without a blueprint. Planning is the absolute key to attaining long term financial goals. Furthermore plans need to be written down on paper so that they can be reviewed on a regular basis. Without planning, investors may not be apt to invest in equities, potentially causing a problem with keeping up with inflation. In sum, people don't plan to fail – they simply fail to plan.

Portfolio Allocation. Self-Control bias can cause asset allocation imbalance problems.

Investors subject to this bias may prefer income-producing assets, due to a “spend today” mentality. This behavior can be counterproductive to attaining long term financial goals because an excess of income producing assets can prevent a portfolio from keeping up with inflation. Self-control bias can also cause people to unduly favor certain asset classes – such as equities over bonds – due to an inability to reign in impulses towards risk. Advisors must emphasize the importance of adhering to a planned asset allocation. There is a litany of information on the benefits of asset allocation, which can be persuasively cited for a client's benefit. Whether they prefer bonds or equities, clients exhibiting a lack of self-control need to be counseled on maintaining properly balanced portfolios so that they can attain their long term financial goals.

Benefits of Discipline. Self-control bias can cause investors to lose sight of very basic financial principles, such as compounding of interest or dollar cost averaging. By failing to reap these “discipline” profits over time, clients can miss opportunities for accruing significant long term wealth. Perhaps the most critical issue is to counsel your clients on the benefits of compounding. There are a number of very effective software programs that can demonstrate that even a minimal, 1-2% disparity in returns, if compounded over decades, can mean the difference

between a comfortable and a sub par retirement. To return to an example that arises frequently in discussions of willpower – the matter of exercising, we might concede that the benefits of self-discipline in investing, as in physical fitness, are difficult to obtain. The results, however, are well worth it.