Policy-Based Financial Planning as Decision Architecture

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Executive Summary

- Since the 1970s, psychologists and economists have discussed the heuristics that typify people's "automatic system" of thinking, including the cognitive biases that can arise from these mental shortcuts. In more recent years, researchers in behavioral finance have also proposed ways to harness heuristics and biases in order to "nudge" individuals in the direction of better decision-making.
- Financial planners must often work to overcome the heuristics and cognitive biases that can lead clients to make poor financial decisions or fail to act on good ones.
- Policy-based financial planning, first proposed by Hallman and Rosenbloom (1975) and later developed by Yeske and Buie (2006), involves the formulation of compact decision rules that can support rapid decision-making in the face of changing external conditions. Policy-based financial planning can also be conceptualized as a form of "choice-architecture" as proposed by Thaler and Sunstein (2008).
- A six-step process for developing financial planning policies is offered, along with several examples of policies covering different areas of financial planning. A set of safe-withdrawal policies is also analyzed in terms of the elements of good choice architecture.

When working to help clients achieve positive changes in their lives, financial planners must grapple with the embedded heuristics and cognitive biases held by their clients that have been well documented since Daniel Kahneman and Amos Tversky published their groundbreaking work, "A Heuristic for Judging Frequency and Probability," in the early 1970s. Since then, psychologists and economists have continued to help deepen the planning profession's understanding of the two cognitive systems that people use for interacting with the world. These two systems have variously been referred to as (1) the automatic versus reflective systems (Thaler and Sunstein 2008); (2) fast versus slow thinking (Kahneman 2011); (3) bureaucracy of habits versus beginner's mind (Heller and Surrenda 1995); and (4) system one versus system two.

In recent years, researchers have moved from the mere description of biases and heuristics to developing new approaches for harnessing those biases to "nudge" individuals in the direction of better decision-making. For example, Thaler and Sunstein (2008) proposed principles of "choice-architecture" that can be used to structure choices in a way that helps individuals make better decisions. In this context, policy-based financial planning—a concept first introduced by Hallman and Rosenbloom (1975) and later developed and expanded upon by Yeske and Buie (2006)—can be conceptualized as a form of "decision architecture" that can help financial planners structure policies (compact decision rules) in a way that harnesses clients' natural biases in support of rapid decision-making in the face of a changing environment.

Furthermore, there is empirical evidence that policy-based financial planning is associated with higher levels of client trust and relationship commitment

(Yeske 2010). This is a non-trivial finding as higher levels of client trust and relationship commitment have, in turn, been shown to be associated with greater client propensity to disclose personal and financial information, to implement financial planning recommendations, and to engage in "functional conflict," which are all characteristics of a successful financial planning engagement (Anderson and Sharpe 2008; Christiansen and DeVaney 1998).

In this paper, we will briefly review common heuristics and biases in the context of the financial planning engagement and introduce the concept of "choice-architecture" as a way to "nudge" (to use a term popularized by Thaler) clients toward making better decisions. We will then describe the concept of policy-based financial planning as a form of "decision architecture" that can harness the insights of behavioral finance in developing compact decision rules that serve as a touchstone for clients, helping to keep them committed to a consistent course of action. We will also outline a six-step process for developing financial planning policies. Finally, we will evaluate a set of financial planning policies using Thaler and Sunstein's (2008) proposed principles of choice-architecture.

Thinking Fast and Slow

The automatic system of decision-making evolved because it helped people make rapid decisions in situations where there was high survival value need. For example, those whose ancestors had a propensity to see saber-toothed tigers everywhere—even where there were none—tended to live long enough to pass that genetic inheritance down to future generations. Of course, the asymmetric trade-off between a false positive (seeing the tiger that was not there) and a false negative (not seeing the tiger that was, in fact, lurking in the grass) gave rise to a propensity to overweight negative information that had survival value. But this, like so many heuristics, is less useful when making financial decisions. The automatic system is fast because it uses shortcuts (heuristics), which in turn give rise to biases, including the following:

- Anchoring
- Availability
- Representativeness
- Loss aversion
- Overconfidence
- Mental accounting

These heuristic shortcuts can lead to poor decision-making in the context of financial planning, whether the shortcut takes the form of acting on bad decisions or failing to act on good ones. Here are a few examples of these biases:

The availability heuristic leads clients to be biased by information that is easier to recall (Ricciardi 2008), such as highly impactful or more recent memories. For example, a client's willingness to buy life or disability insurance is often influenced by whether or not the client personally knows someone who has become disabled or died prematurely. Personal associations can likewise influence clients' willingness to plan for a long retirement or update their estate plan.

The representativeness heuristic can cause clients to see or anticipate patterns that do not exist (Tversky and Kahneman 1973). This can happen when someone relies on anecdotal information. Clients may, for example, make investment decisions based on the anticipated impact of a presidential election, even though a significant body of research suggests that no clear economic or financial market impact can be deduced from one political party or another occupying the White House (Siegel 2007).

Optimism, overconfidence, loss aversion, and anchoring will often interact in ways that lead to a cascade of one bad decision after another (Fischhoff, Slovic, and Lichtenstein 1977; Kahneman and Tversky 1984). For example, optimism and overconfidence led employees of technology companies to hold too much in employer stock during the tech boom. This allocation decision often went against the advice of their financial planners. Loss aversion and anchoring then caused technology stock holders to continue holding the stock after the tech bubble burst and prices fell (Shefrin and Statman 1986).

The Power of the Nudge

Although cognitive biases can lead to poor decision-making, Thaler and Sunstein (2008) have suggested that cognitive biases might be harnessed in ways that "nudge" individuals in the direction of better decision-making. In the same vein, Pink (2012, p. 141–142.) suggested that the most effective way to help clients make good decisions is to "give people an easy off ramp." He went on to suggest that "if the decision isn't pressure-packed, and they have an easy way to make a choice," clients will be much more inclined to accept advice.

However one describes it, the ways in which decisions or choices are structured has been shown to have an enormous impact on outcomes. A compelling example of the power of the nudge can be found in an examination of the respective organ donation rates of Germany and Austria (Thaler 2009). According to the European Social Survey, these two countries have a cultural similarity index of 0.846, which would suggest that they are very nearly identical from a social and cultural perspective. However, the organ donation rate in Germany is only 12 percent compared to an Austrian donor rate of 99 percent. The explanation for this difference can be found in the structure of the choices faced by each countries' citizens. The system for electing to be an organ donor in Austria requires individuals to opt

out, while Germany requires donors to opt in. This is an example of one of the findings from behavioral finance; namely, that default options and inertia are incredibly powerful forces when it comes to making and acting on decisions.

In their 2008 book, Thaler and Sunstein suggested six principles that must be addressed by the choice architect:

- Incentives
- Mapping
- Defaults
- Give feedback
- Expect error
- Structure complex choices

An incentive refers to the need to understand what might motivate a decision-maker by helping answer the following question: who benefits from the choice that is made and how?

Mapping refers to how choices are charted to consequences. For example, showing a consumer how much sooner their mortgage will be paid off, or how much less they will pay in interest for every extra $100 they pay in monthly principal reduction, clearly maps a choice to a consequence.

An example of the power of default choices has already been presented. Another example includes the way employers are allowed to structure their retirement plans, with firms offering opt-out 401(k) plans experiencing significantly higher employee participation.

Any system that provides decision-makers with unambiguous feedback with respect to the impact of their choices will tend to drive user engagement. For example, automobiles that not only warn that the gas tank is low but indicate how many miles of driving are available before running out of gas allow drivers to make more informed decisions about when to stop and refuel.

It is also important to expect error from users of any decision system. The system should be robust and error tolerant if it is to ultimately lead to better decision-making.

Finally, individuals most often find it easier to grapple with structured complex choices versus an unstructured choice. Complex decisions are easier to make if they are structured in a way that fits with how decision-makers think about the world around them.

Thaler and Sunstein (2008) reported that "people will need nudges for decisions that are difficult and rare, for which they do not get prompt feedback, and when they have trouble translating aspects of the situation into terms they can easily understand" (p. 74).

Policy-Based Financial Planning

Policy-based financial planning provides a methodology for dealing with, and even harnessing, heuristics and cognitive biases. The concept of financial planning policies was first introduced by Hallman and Rosenbloom (1975) in the first edition of their financial planning text, where they offered the following outline of the concept:

> Also involved in the planning process is the development of *personal financial policies* to help guide a person's financial operations. An example of such policies in investments would be deciding what percentage of an investment portfolio is to go into bonds (or other fixed-dollar securities) and what percentage into common stocks (or other equity-type investments). Another example, involving life insurance, is that a consumer may want to purchase mainly cash-value life insurance or decide to buy mostly term life insurance and place the savings dollars elsewhere. Unfortunately, many people do not follow consistent policies in making these decisions.

Yeske and Buie (2006) recalled this description while helping their clients cope with the challenges that arose from the combined bursting of the tech bubble, economic recession, and terrorist attacks that marked the beginning of this century. Clients were often comforted after a complete update to their financial plan revealed that they were still on track to achieve their goals or, at least, that an alternative path was within reach. Rebuilding every client's comprehensive financial plan was time consuming, however, and involved calculating numbers repeatedly only to arrive at the same decisions. While important and helpful at the time, reanalyzing client situations seemed inefficient and even, potentially, unsustainable in a way that would truly serve clients in an ever-changing world.

Yeske and Buie (2006) reasoned that the right kind of policies, though more time consuming to craft initially, would save time in the long run and might even work as a touchstone to keep clients committed to a consistent course of action. It is important to note that nearly every financial planning recommendation has an implicit policy at its core. Policy-based financial planning is the process of articulating and structuring those implicit policies as a form of decision architecture that can support rapid decision-making in the face of a changing external environment.

In an empirical examination of how client trust and relationship commitment was influenced by different forms of financial planning, Yeske (2010) found that policy-based approaches were most predictive of high trust and commitment on the part of clients. As previously noted, high trust and commitment have in turn been shown to be predictive of greater client openness and a greater propensity to implement recommendations—necessary elements of a successful financial planning engagement.

When describing financial planning policies, it is often helpful to begin with a description of what they are not. Policies are not, for example, any of the

following, although each of these elements may lead to or flow from a policy:

- Beliefs or values
- Observations
- Goals and aspirations
- Action items
- Implementation

Here is an example of how some combination of the foregoing elements can relate to financial planning policies.

- **Belief:** Too much inheritance blunts ambition.
- **Goal:** To provide for spouse without leaving too much money to our grown kids.
- **Policy:** We will own life insurance for our survivor needs, establishing charities only as contingent beneficiaries.
- **Action item:** Buy term insurance based on a capital needs analysis and projected time horizon; coordinate beneficiary designations; monitor regularly.

Financial planning policies can also be helpful in the area of charitable giving, where charitably inclined clients often find themselves beset by a seemingly endless stream of appeals for support. As an example of how policies can help, imagine a client who has decided that she would like to maximize her impact on the world by focusing on a single cause. Imagine further that she has embraced the evidence suggesting that preschool enrichment programs are one of the most powerful predictors of success in later life. Based on this, she has decided to focus her giving in this area. Here is what her charitable giving policies might look like.

- **Belief:** Preschool enrichment programs greatly enhance lifetime educational success.
- **Goal:** To devote a sustainable portion of my annual income to supporting preschool enrichment programs.
- **Policy:** I will focus my charitable giving exclusively on preschool enrichment programs, and I will annually donate to such organizations an amount not to exceed 10 percent of the annual safe withdrawal spending target for my portfolio.

This client can now much more easily deal with the many appeals for support that come her way by applying a straightforward, two-part filter: (1) does this organization support preschool enrichment programs; and (2) have I yet donated 10 percent of this year's safe-spending target?

Because policies are meant to be compact decision rules that support rapid decision-making, policies must satisfy a two-part test that ensures they can fulfill this function. The test requires one to answer the following questions:

1. **Is it a policy?** Specifically, does the proposed policy return new answers as external circumstances change? If not, it's probably a belief, observation, goal, or action item.
2. **Is it a good policy?** The dual characteristics of a good policy require that it must be broad enough to encompass any novel event that might arise, while being specific enough so that we are never in doubt as to what actions to take.

Here is an example of a policy covering the use of debt that satisfies this dual criteria: we will use credit cards for convenience only and for purchases that are part of the monthly budget. For purchases equal to 10 percent or less of our annual after-tax earnings, we will set aside funds monthly until the needed sum is accumulated. And, for purchases equal to more than 10 percent of our annual after-tax earnings, we will use amortized debt.

This three-part policy is broad enough to encompass any possible purchase, and at the same time, always returns an unambiguous answer as to how that purchase will be financed.

Six-Step Process for Developing Financial Planning Policies

Step one: Discovery. Discovery is the first step of the financial planning process. The development of good policies starts with a good discovery process. This is where financial planners uncover the client's personal history, beliefs, values, and specific goals. Discovery provides an opportunity to identify the cognitive biases to which the client may be particularly susceptible, and a structured discovery process will aid planners in this endeavor. Good discovery helps ensure that not only do clients see their personal goals and values reflected in their financial planning policies—a necessary condition if they are going to fully embrace the policies as their own—it also allows the financial planner to incorporate cognitive biases in a way that helps nudge clients toward wholesome actions.

Step two: Identify planning areas and related principles. This step helps form what planning areas the policies are going to address based on the client's goals and circumstances. This step also establishes best practices in each of those planning areas. Although there is not a single set of best practices for every financial planning question, planners should always attempt to identify those backed by the best available evidence for efficacy (Buie and Yeske 2011). From those available best practices, the ones relevant to the particular planning area at hand should then be chosen.

Step three: Combine client goals and values with planning principles. This is the point at which the planner begins to draft policies that he or she believes reflects the client's goals, values, and attitudes, as well as relevant financial planning principles. It is important that the policy reflects everything learned during the discovery process. Using the client's own words wherever possible will help ensure that

clients embrace the policy as their own. Frequently, more than one policy will be drafted for a given client and planning area, leading to the iterative process explained in step five.

Step four: Test policies and develop specific recommendations. At this step, the planner applies the two-part test described earlier, answering the following questions: is it a policy, and is it a good policy? In the case of the first question, the planner will test whether the policy returns different answers as circumstances change. If it does not, chances are good that it is a belief, observation, goal, or action item. Delving further into the "why" behind the statement will aid in getting to the actual policy underlying the statement. When addressing the second question, the planner will ask himself or herself if the policy is broad enough to encompass any changing circumstances and does it always return a clear answer.

Step five: Test policies with clients. This tends to be an interactive step in which draft policies are shared with clients. Sharing policies confirms that clients see enough of their own goals and values reflected that they will embrace the policies as an enduring touchstone. One approach at this step is to offer several proposed formulations for each policy and allow clients to choose the one that most resonates with them. Financial planners should not be afraid to wordsmith with clients; clients will feel that much more invested in the process and the policies.

Step six: Periodic review and update. Policies are meant to be an enduring guide in the midst of an ever-changing external environment. Policies should normally only change for structural or fundamental reasons, not due to cyclical changes in the environment or client situation. Changes in laws or regulations, financial planning best practices, or a client's goals or values might all require an update to a policy. However cyclical changes, such as recessions or financial market fluctuations, would not be expected to trigger an update.

Applicability of Policy-Based Financial Planning

As practicing financial planners, we believe that financial planning policies are appropriate and useful in every financial planning engagement. However, there are several situations where policies may be particularly helpful. One of these situations would be an hourly or one-time planning engagement. In such circumstances, where clients may be left to implement and monitor their financial plans on their own, policies may increase the probability that clients will stick with the plan through environmental and life changes.

Another group that can benefit from the kinds of simple decision rules embedded in financial planning policies are young people just starting their careers. In most cases, young people will experience many significant changes in a relatively short period of time, including multiple job changes, significant changes in pay or benefits, and numerous living arrangements, from shared apartments to buying homes. Policies can help them deal with multiple life changes without requiring them to reinvent the wheel with every move.

Here is a sample cash flow and savings policy appropriate for a young person that is easy to understand and simple to apply even with multiple changes in employer, pay, or benefits:

- I will save 10 percent of every paycheck;
- My savings will go first to my emergency fund until the account equals three months' worth of living expenses;
- Thereafter, my savings will go into my employer retirement plan to the contribution limit;
- Any remaining savings will go into an after-tax opportunity fund;
- Windfalls, such as bonuses, will be allocated 10 percent to a fun fund and 90 percent per the preceding policies.

Another area where policies can be particularly helpful is in accounting for contingent resources for which the value, timing, and probability of occurrence are highly uncertain, such as an inheritance, business sale, stock options, or bonuses. Policies can be used to establish in advance the appropriate actions to take if the contingent resource materializes.

Here is an example of such a cascading policy that allows the contingent resource to be accounted for in the financial plan, even though it cannot be explicitly incorporated into the financial projections:

Any windfall from (named contingent resource) will be allocated as follows:

- First, toward my nephew's college fund up to one-half the then projected four-year cost;
- Next, to the American Heart Association up to 10 percent of my then annual earned income;
- Next, to a kitchen remodel up to 5 percent of the house's then appraised value; and
- Any remaining funds will be added to my after-tax retirement savings account.

Using the Principles of Choice Architecture

As described here, policy-based financial planning has been positioned as a form of choice architecture as proposed by Thaler and Sunstein (2008). To further demonstrate this point, we will use Thaler and Sunstein's criteria for good choice architecture to evaluate a set of financial planning policies related to spending in retirement. As noted earlier, Thaler and Sunstein proposed six elements that every choice architect should take into account: incentives, mapping, defaults, feedback, expect error, and structure complex choices.

Figure 1: Safe Withdrawal Policies — Claire and Phil Dunphy

The financial planning policies to be evaluated were developed by Guyton and Klinger (2006) and first published in the *Journal of Financial Planning*. Guyton and Klinger employed several types of stochastic models to establish the initial withdrawal rate that corresponds to various portfolio allocations and probability thresholds when the following three policies are also in force.

Inflation rule. Target spending will be increased by the 12-month trailing CPI, except when the portfolio has a negative return and the current withdrawal rate exceeds the initial withdrawal rate.

Capital preservation rule. If target spending as a percent of portfolio is more than 20 percent larger than the initial withdrawal rate, target spending is reduced by 10 percent.

Prosperity rule. If target spending as a percent of portfolio is more than 20 percent smaller than the initial withdrawal rate, target spending is increased by 10 percent.

These policies were designed to be applied annually on a fixed anniversary date. Prior research on safe withdrawal rates (Bengen 1994, 1996, 1997; Cooley,

Hubbard, and Walz 1998) tended to focus on a static approach by determining an initial withdrawal rate that had a high probability of being sustainable over the course of retirement with no adjustment other than increases for inflation. By contrast, the dynamic approach developed by Guyton and Klinger (2006) satisfied all the requirements for a good financial planning policy as defined by Thaler and Sunstein (2008)—the policy changes as external circumstances change; the policy can account for any conceivable scenario; the policy always returns unambiguous answers. The policy also allows for a higher initial withdrawal rate because clients agree up front what to do in various scenarios that result from changing external circumstances. Figure 1 illustrates how the Guyton and Klinger policy can be built into a spreadsheet.

The safe withdrawal policies spreadsheet shown in Figure 1 has three parts that were designed to satisfy all of the elements of good choice architecture. The first section illustrates the *incentives* (trade-offs) related to choosing one portfolio allocation over another. Higher equity allocations, all other things being equal, result in higher initial withdrawal rates. This first section also serves a *mapping* function in that it clearly maps portfolio allocation choices to consequences.

The next section, "Applying the Safe-Spending Rules," provides a *structured approach* to making annual adjustments in spending targets based on the application of the three policies. These rules are applied annually on the safe spending anniversary date and the results are then shared with clients. The fact that the policies are simple to understand and apply helps clients feel that they are in control, even in the face of changing economic and financial market conditions.

The third section of the spreadsheet provides feedback, including the flagging of overspending (*expect errors*). This section shows the "thumbs up" that is displayed when spending during the preceding 12 months was equal to or less than target spending.

If client spending over the preceding 12 months exceeds the specified target, the comparison section displays a red circle X.

Structuring a complex set of decisions into a simple, easy-to-understand set of policies that is communicated clearly may have a positive impact on clients' perceptions that they are in control of their retirement.

> "Policies can help young people deal with multiple life changes without requiring them to reinvent the wheel with every move."

Incorporating Biases into Policies

Thaler and Benartzi (2004) proposed a choice architecture system called Save More Tomorrow that was designed to leverage several cognitive biases in order to achieve higher saving rates among retirement plan participants. The system involves adoption by retirement plan participants of a policy whereby they increase their savings rate by some set amount whenever a raise is received, starting with the next paycheck following the raise. Because it involves a commitment to save in the future, the system overcomes self-control limits that keep most people from taking action in the present. It also takes into account loss aversion biases by not immediately shrinking the participant's paycheck, which is something that often feels like a loss. The system also leverages the money illusion suffered by people who think in terms of nominal, not inflation-adjusted dollars. Thus, the fact that most of each raise goes into additional savings does not bother plan participants who do not evaluate their paychecks on an inflation-adjusted basis.

This type of policy depends to a significant degree on the psychological trait known as inertia. Once in the plan, few people drop out because doing so requires them to take some action to opt out. In a 1998 implementation of this plan at a small manufacturing firm, those participants who were saving the least and not willing to increase their savings immediately, but who were willing to join the Save More Tomorrow plan, ended the three-year study period with the highest contribution rate of any group in the company.

Conclusion

The field of behavioral finance has contributed much to the practice of financial planning over the past 30 years. New information about the heuristics and cognitive biases to which clients are susceptible has enhanced the profession of financial planning. Financial planners spend a significant amount of time and energy working to overcome the biases that can lead clients away from sound financial decisions.

Policy-based financial planning offers a form of decision architecture that can help deepen client relationships while offering clients a durable touchstone to keep them committed to a consistent course of action. Just as important, well-crafted financial planning policies can give clients a greater sense of confidence and control in the face of an

ever-changing and sometimes frightening economic and financial landscape. The extra time devoted to crafting sound financial planning policies will, in the long run, be paid back many times over in higher client compliance and less time spent revisiting prior analyses. ■

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