The Value of Goals-Based Financial Planning

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Financial planning, by definition, is a goals-based profession. Financial planners help clients determine how to accomplish their goals through advice and guidance on a variety of topics, such as saving, investing, and risk management. While investing well is generally an important part of the process of accomplishing a goal, achieving a goal generally requires advice beyond building appropriate portfolios (i.e., beta) and selecting investments that are expected to outperform their peers on a risk-adjusted basis (i.e., alpha). There is a growing body of research dedicated to quantifying the potential benefits of financial planning beyond alpha and beta, for example, Blanchett and Kaplan (2013), using their “Gamma” concept, find that a retiree can expect to generate 22.6% more in certainty-equivalent income in retirement through implementing five fundamental financial planning decisions/techniques.

This paper builds on the Gamma concept by determining the optimal goals-based strategy. While past research has focused primarily on determining (or building) optimal portfolios (or sub-portfolios) to fund different types of goals, the focus in this piece on choosing among which financial goals should be funded as well as how to save toward those goals over time. Certain goals, like retirement, are decomposed where the household is assumed to have varying levels of preference with respect to replacing different amounts of income. For example, replacing 50% of pre-retirement income may be very important (i.e., nondiscretionary expenses) with the remaining levels of replacement (up to 100% of pre-retirement income) becoming increasingly less important.

A utility model based on prospect theory is used to determine the optimal funding strategy for a household, based on the unique preferences and financial situation of that household. The results of the current analysis suggest that using a goals-based framework to determine which goals to fund and how to fund them can lead to an increase in utility-adjusted wealth of 15.09% for a hypothetical household versus a naïve strategy (focused only on funding retirement), which is equivalent to generating an annual alpha of 1.65% for the lifetime of the base scenario household. These potential gains suggest there is a significant amount of value using a goals-based financial planning approach that extends beyond traditional asset management (i.e., alpha and/or beta) decisions.
Defining Financial Goals

Goals are the basis of financial planning. In real life, each person has a continuum of goals he or she would like to accomplish, from making it to an appointment on time, to going on vacation, to saving for retirement. Within a financial planning context, goals are generally significant expenses that will be incurred at some point in the future. While aiming to take the family out to dinner over the weekend is a goal that may require cutting back on other expenditures during the week, this type of short-term goal is not something that is generally included in a financial plan, although it may be discussed during the budgeting process. Financial planning goals are generally significant expenses, such as paying for college, retiring, and/or leaving a bequest.

Saving is how we fund future goals too large to be included in an annual budget without a meaningful shock to consumption. For example, although some households could potentially pay for college with future earnings, it may be difficult given the significant cost of college, thereby reducing future consumption.

The "life-cycle hypothesis," originally introduced by Modigliani and Brumberg (1954), is a popular theory used to describe how individuals make financial decisions over time. If an individual wants to fund some level of consumption in the future, but will be unable to do so with future earnings, he or she must accumulate wealth (or take on future debt) to cover the consumption gap.

Money is effectively a resource that should be used to purchase the set of goods from which an individual (or couple) derive the most satisfaction, according to the life-cycle hypothesis. Creating a goals-based financial plan is relatively easy if there is a single goal (e.g., fund retirement) but becomes considerably complex when multiple goals are introduced, especially given resource constraints. Given the inability to fund everything a client wishes to accomplish, a financial planner must help determine which goals the client will be able to fund as well as how to go about funding the selected goals. Also, while households may seek to accomplish similar goals (e.g., accumulate wealth to fund retirement), the magnitude and relative importance of the goals they wish to accomplish are likely to vary significantly. Therefore, each goals-based financial plan would be unique to that client.
Goals-Based Financial Planning

There is a growing body of research that focuses on the potential benefits of helping clients accomplish their goals. This research generally moves beyond the potential benefits of a single strategy and takes a more holistic perspective with respect to the benefit of financial planning. While the majority of research on goals-based financial planning has been focused on determining how to create the optimal portfolio given a set of goals, as the industry increasingly focuses on goals-based strategies, the research in the space has become increasingly diverse.

Shefrin and Statman (2000) demonstrate that portfolios optimized using a behavioral approach will differ from mean-variance optimized portfolios and note that goals-based portfolios tend to combine low and high aspirations and are often depicted as layered pyramids where investors divide their current wealth between a bottom layer, designed to avoid poverty (which is invested conservatively), and a top layer, designed for a shot at riches (which is invested aggressively).

One approach is to create a “portfolio of subportfolios,” where a specific portfolio is designed to meet each specific client goal. This approach has been discussed by Brunel (2003), Nevins (2004), and Chhabra (2005), among others. Das, Markowitz, Scheid, and Statman (2010) demonstrate that this approach can still be efficient through a mental accounting approach, where the definition changes from the volatility of returns to the probability of failing to achieve a goal. An alternative approach to creating a portfolio in a goals-based framework is to do so holistically. Folwer and De Vassal (2006) introduce a “holistic optimization of goals” approach, whereby a single investment portfolio strategy is determined that best meets the combination of client goals, and assets are then spread across different locations based on relative tax efficiency.

There are a variety of perspectives being used to quantify the benefit of financial planning services, beyond traditional asset management metrics like alpha (which focuses on investment selection) and beta (which focuses on asset allocation). Bennyhoff and Kinniry (2011) call this “advisor’s alpha”; Scott (2012) calls this “household alpha”; Blanchett and Kaplan (2013) call this “gamma”; and Grable and Chatterjee (2014) call this “zeta.” Each of these pieces of research has a different approach to quantifying the potential benefit of financial planning, yet each appears to have a relatively similar goal: to demonstrate that the potential value of financial planning cannot be captured entirely through portfolio decisions. For example, Blanchett and Kaplan find that through implementing five fundamental financial planning decisions/techniques a retiree can expect to generate 22.6% more in certainty-equivalent income in retirement, an increase that has the same impact as an annual arithmetic return increase of 1.59% each year during retirement.

There is likely to be an increasing amount of literature in this space as more advisors, firms, and academics seek to quantify the potential benefit of the more qualitative aspects of financial planning.
A Goal-Based Utility Model

Classical economic models treat humans as rational utility-maximizing individuals (e.g., homo economicus) who determine their consumption based on whatever makes them happiest, given available resources. For example, one consumer may choose to buy a new car each year instead of using those funds to purchase a larger home because he values having new cars more than having a large home. Therefore, the consumer is choosing to use his available resources (i.e., compensation and other forms of wealth) to purchase the goods that maximize his utility. A different consumer may have opposite preferences and therefore different consumption choices.

A variety of methods (i.e., utility functions) may be used to estimate the satisfaction individuals receive from varying types of consumption. The purpose of this section is to lay out a framework for a goals-based utility function so that it can be used to help determine how to most effectively select among different potential goals as well as determine the optimal method to go about funding them for a client.

There are certain aspects regarding the shape of a goals-based utility function that are relatively straightforward. First, the utility should be higher for accomplishing goals that are more important. For example, if the client would rather fund his children's education versus buy a new car, he should receive more utility for paying for college than for buying a new car. What is less clear is what the magnitude of the differences should be between preferences (i.e., if accomplishing a goal is very important, how much more utility do I receive from accomplishing it versus a goal that is not very important?). It is also likely safe to assume that the utility from not accomplishing a goal at all (i.e., funding 0% of the goal) should be zero. While the utility should increase as the percentage of the goal is increased, it is less clear what the shape of the utility function should be, both before and after accomplishing the goal (if a surplus is possible). In other words, what is the marginal benefit of moving toward certainty with respect to accomplishing a goal?

The Constant Relative Risk Aversion (CRRA) utility function is one of the most commonly used models to quantify preferences. The CRRA utility function has a concave shape, which implies diminishing marginal utility. Diminishing marginal utility means that while each additional unit of consumption makes an individual happier, the rate in the increase in satisfaction decreases. For example, if you are very thirsty, one cup of water would make you very happy. An additional cup of water (after the first) would likely also make you happy, but less so than the first. The CRRA utility function is included in equation 1, where the utility \( u \) is a function of a given level of consumption \( c \) based on the individual's level of risk aversion \( y \).
A problem with a CRRA utility function from a goal-based perspective is that it implies that the majority of utility achieved from accomplishing a goal (i.e., assuming that $c$ is substituted for the percentage of the goal completed in Equation 1), could be obtained from partially completing it. For example, if we assume a risk aversion level ($\gamma$) of 4, approximately 80% of the total utility from accomplishing a goal would be obtained from only accomplishing 50% of the goal. Therefore, if an individual is faced with multiple goals and lacked the resources to fully fund all of them, a CRRA utility function (or approach) would imply he or she should partially fund each goal compared to choosing to fully pursue certain goals. Taken to the extreme, an individual would only fund a goal if all the other goals were also fully funded. This seems inconsistent with how most people would choose to allocate resources when faced with competing goals and limited resources.

Heath, Larrick, and Wu (1999) suggest that goals serve as reference points and that they systematically alter the value of outcomes as described by the psychological principles in prospect theory’s value function (Kahneman and Tversky, 1979). The prospect theory utility function has three important properties: It defines gains and losses with respect to a reference point; it is concave in gains and convex in losses; and it is steeper for losses than gains. The natural reference point in a goals-based framework is goal completion (i.e., the target percentage of the goal reached). Convexity below the reference point (i.e., completing the goal) suggests that individuals derive an increasing amount of satisfaction as they move toward completing a goal, which is consistent with research by Hull (1932), for example, who noted a tendency for animals to become more motivated as they approached a goal (e.g., rats ran faster as they came closer to the goal box). Heath, Larrick, and Wu (1999) also demonstrate this effect through surveys. Concavity above the reference point also seems consistent with goal accomplishment, as the relative utility from over-funding the goal should diminish.

De Giorgi (2011) uses model based on prospect theory to determine the optimal funding strategy for different goals.

The prospect theory utility function equation introduced by Tversky and Kahneman (1992) is included as equation 2, where the utility ($u$) achieved from an outcome ($x$) is a function of the coefficient of loss aversion ($\alpha$), the gain satiation coefficient ($\beta$), and the loss satiation coefficient ($\lambda$). It is generally assumed that $0 < \alpha < 1$, $0 < \beta < 1$, and $2 < \lambda < 4$, and that $\alpha = \beta$. Tversky and Kahneman (1992) suggest $\lambda = 2.25$, $\alpha = 0.88$, and $\beta = 0.88$. 

Equation 1:

$$u(c) = \frac{c^{1-\gamma}}{1-\gamma}$$
The traditional prospect theory utility equation can be adjusted to provide insight into the utility achieved from completing a goal, based on equation 3 where the utility ($u$) is a function of the percentage of the goal completed ($c\%$). It is also possible to add a preference factor ($p$), which is assumed to be the relative preference of the individual for completing a goal. Preference is an important consideration because goals often differ in their importance (e.g., some goals are very important while other goals are less so).

For the analysis it is assumed that $\alpha = 0.88$, $\beta = \lambda = 2.25$, consistent with the findings of Tversky and Kahneman (1992). While the actual coefficients are likely to vary when the equation is applied in a goals-based setting, Heath, Larrick, and Wu (1999) note similar coefficients through experiments. It is assumed that $p$ equals 0.6, 0.8, 1.0, and 1.2 for goals that are of low importance, moderate importance, high importance, and very high importance, respectively. The $p$ coefficient values are subjective and selected so that there would be a meaningful difference between different levels of relative importance. The resulting utility from varying goal preferences and levels of completion are included in Figure 1.

This approach can be used in a stochastic (i.e., Monte Carlo) setting to determine the utility achieved from different potential funding decisions. Within each run, the utility from the percentage of the goal completed (Equation 3) can be determined, where the average utility across all runs would be the assumed certainty-equivalent value (i.e., completion percentage) for the entire scenario.

To make the goals relative, especially those that occur over multiple periods (e.g., retirement), the net present value of each goal is estimated using a real discount rate of 2%. If an individual has a higher subjective discount rate (i.e., he or she cares more about consumption today versus tomorrow), this preference, with respect to a goal, would manifest itself via the preference factor in the current model, although an alternative approach would be to incorporate it in the discount rate.

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**Equation 2:**

$$u(x) = \begin{cases} 
-\alpha(-x)^\beta, & \text{if } x < 0 \\
\beta, & \text{if } x \geq 0 
\end{cases}$$

While it is possible the thought of funding a goal may provide some utility, this potential benefit is ignored.

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**Equation 3:**

$$u(c\%) = \begin{cases} 
(1-\alpha(1-c\%)^\beta) + \beta, & \text{if } c\% < 1 \\
((c\% - 1)^\beta) + \beta, & \text{if } c\% \geq 1 
\end{cases}$$

*For example, if the goal is to save $50,000 in 10 years, and the individual is able to save $30,000, the goal completion percentage would be 60%.
The total utility achieved from accomplishing each goal would be obtained by multiplying the net present value of the cost of the goal by the certainty-equivalent goal completion percentage. The total utility achieved across all goals would just be the summation of these values, which is called the utility-adjusted completion score. The goal for each individual would be to maximize the utility-adjusted completion score, which would imply the client achieved the most utility given his or her available resources and unique preferences.
Hypothetical Scenario

To quantify the potential benefits of a goal-based approach to financial planning, a hypothetical scenario is created. The scenario is based on a married couple, both age 30. The total assumed pretax annual income for the household is $120,000, which can be decomposed as $90,000 for the primary worker and $30,000 for the spouse. Total compensation is assumed to increase by 0.5% per year, in real terms, until retirement at age 67. The household is assumed to have 20% of pretax income available to save or use to fund other goals (e.g., save for retirement, pay down credit card debt, etc.). The effective ordinary income tax rate is assumed to be 20%. The assumed employer match available in the 401(k) plan is 50% on the first 6% of deferrals. All 401(k) monies are assumed to be pretax and the existing total 401(k) balance is $50,000. Taxes from the 401(k) account are paid only upon distribution, which is not available until retirement (i.e., the 401(k) account can only be used to fund the retirement goal).

There are three types of investible accounts assumed for the analysis: a 401(k) account (as noted previously), a 529 college-savings account, and a taxable account. The monies in the 401(k) account are assumed to be used only to fund retirement or to cover the bequest goal (because the other goals occur before retirement). The 529 monies are assumed to be used primarily to fund college; however, similar to the 401(k), the account can also be used to satisfy the bequest goal. The taxable monies can be used to fund any of the goals.

The bequest goal is to have $200,000 in today's dollars, after tax, available at the age of death, which is assumed to be at age 95 for both spouses. If there are any 529 or 401(k) assets used to fund the bequest goal there is an assumed 30% haircut to reflect potential taxes and/or nonqualified distributions. The maximum value assumed for the bequest goal is two times the target value. Note, real estate assets are ignored for this analysis (e.g., from a bequest perspective).

The taxable account is assumed to have a total current balance of $50,000. Opposed to modeling on an ongoing basis, the expected return for the account is reduced each year to reflect the potential impact of tax drag. For equities, the assumed annual return is reduced by 15%, which implicitly assumes that all gains are realized annually and taxed at the long-term capital gains rate. For cash, the annual return is reduced by 20% to reflect annual taxation at ordinary income rates. The fees for the 401(k) account, 529 plan, and taxable account are assumed to each be 0.5% annually.

The analysis assumes two investible asset classes: stocks and cash. Stocks have an annual assumed return of 9.0% and a standard deviation of 20%. Cash has an annual assumed return of 3.0% and standard deviation of 0% (i.e., cash is assumed to be a risk-free asset). The correlation between equities and cash is assumed to be zero and inflation is assumed to be 2.5% per year. The return
assumptions are based off the 2014 Ibbotson long-term capital market assumptions. The entire analysis is in real terms, so all monies are adjusted to today's dollars. The base scenario assumes the 401(k) is invested in an 80% stock portfolio where the equity allocation decreases by one percentage point per year for the entire simulation, that the 529 is invested in a 60% stock portfolio where the equity allocation decreases by three percentage points per year for the entire simulation, and the taxable account is assumed to be invested in a 20% stock portfolio for the entire simulation.

The household is assumed to have credit card debt of $20,000. The annual interest rate on the credit card debt is 20%; the minimum annual payment is 36% of the balance or $300, whichever is greater (which reflects common minimum payment terms for credit cards, but has been converted from a monthly to an annual basis).

The retirement income goal is to replace 90% of post-tax, post-savings compensation at age 67 (i.e., retirement). Social Security retirement benefits are assumed to commence upon retirement (age 67) and are based on the average historical earnings history of the individuals and the 2014 bend points. The after-tax Social Security retirement benefits for the analysis are approximately 60% of the post-tax retirement goal need, which leaves the remaining 30% to be funded with savings. The after-tax value of the Social Security retirement benefits are assumed to be 90% of the forecasted value. Retirement is assumed to last until age 95.

College is assumed to cost $25,000 per year and to last for four years, where the first child starts in 13 years and the second child starts in 15 years. College costs are assumed to increase at a rate that is two percentage points higher than inflation (i.e., 4.5% inflation versus 2.5% inflation). The current 529 plan balance is assumed to be $25,000.

Apart from the retirement, college, and bequest goals, there are three assumed lifestyle goals: weddings (goal 1), which are expected to cost $25,000 each and occur 25 and 26 years into the future; buying an RV (goal 2), which is expected to cost $40,000 in 10 years; and to buying a boat (goal 3), which is expected to cost $40,000 in 20 years. Figure 2 includes the annual required monies by age required to fund the seven goals. Note, these are the liabilities that must be funded through savings; the actual cost of retirement is higher, but the majority of the retirement need is covered from Social Security retirement benefits.

The retirement goal is assumed to have varying levels of preference, i.e., certain levels of retirement income are very important, while some are less important. This approach effectively distinguishes expenses between discretionary and non-discretionary so that an individual may decide to fund certain preretirement goals (with a higher goal preference) at the cost of additional retirement income (which may have a lower preference). The retirement income goal is assumed to be very high
preference for the first 55% of the retirement income goal, high preference for the next 20% of the retirement income goal, moderate preference for the next 15% of the retirement income goal, and low preference for the final 10% of the retirement income goal. The relative preference for the college, the three lifestyle goals (goal 1, goal 2, and goal 3) and bequest goals are very high, high, low, moderate, and moderate, respectively.
Solver

Given the hypothetical scenario, it is possible to determine which goals the household should fund and how the household could go about funding each respective goal from a savings perspective. The optimal strategy is determined by iterating through different potential combinations of whether to fund certain goals and then how to save toward them. The retirement and bequest goals are assumed to be attempted for all simulations (especially the bequest goal, as it is merely residual assets at death), while the other four goals (college and the three lifestyle goals) may or may not be attempted depending on which combination maximizes household utility.

There are 150 different savings scenarios and 16 different funding scenarios considered for the analysis (for a total of 2,400 scenarios). It is always assumed the household saves up to the employer match (i.e., saves at least 6% of total pretax compensation in the 401(k) plan), where the remaining savings are divided among the 401(k) plan, 529 plan, and the taxable account. Additionally, there are two credit prepayment scenarios, one where all excess savings (above the amount required to receive the maximum employer match) are directed toward paying off credit card debt, the other where only minimum payments are made.

A waterfall approach is used for directing savings, where once college is completed the monies thereafter are either saved in the retirement account (i.e., 401(k) plan) or taxable account, i.e., no further monies are directed to the 529 plan. The taxable account is assumed to fund goals pro rata across the analysis. For simplicity purposes no borrowing is allowed for goal funding purposes. In reality, loans are commonly used to fund some goals, such as education; however, introducing this would add complications beyond the scope of the analysis. Also, given the assumed fixed amount of monies to dedicate toward saving, future loan repayments would result in lower savings rates for the household. Each scenario is based on a 500-run Monte Carlo simulation.

Various naïve strategies are considered. The first naïve strategy assumes that the household is only concerned with funding retirement and does not consider other goals. Under this strategy the household is able to fund 94% of their retirement goal, on average, and 153% of their bequest goal. The second naïve strategy assumes the household attempts to fund all goals and to follow a relatively simplistic savings strategy.
Results

Figure 3 includes information about how optimal savings should be directed annually based on the goals and resources of the household in the hypothetical scenario. There are some important differences in the recommended savings strategy versus common recommendations from financial planning engines. First, while it is common to suggest individuals maximize their 401(k) plan contributions, initial monies beyond the employer match contribution level are used to pay off existing credit card debt for the first two years. This recommendation makes sense from a total wealth perspective because the effective cost of maintaining credit card debt is generally higher than the potential benefit that can be achieved through saving additional monies in a 401(k) plan.

Second, once the credit card is paid off, all monies (again, beyond the employer matching contribution) are directed toward saving for college. Funding college is a very important goal for the household, and saving money in a 529 plan is an efficient means to fund this goal because all growth in the monies inside the 529 plan used to pay for college expenses are tax-free. Finally, even after the college goal is funded, the taxable account receives a larger relative increase in savings than the 401(k) plan. This is because the individual has goals that will be incurred before retirement and cannot be funded with the 401(k) plan.

![Figure 3: Optimal Savings Strategy](image-url)
Figure 4 provides some perspective on the relative utility that can be obtained for different types of scenarios. Again, the naïve approach is assumed to be when the household attempts to fund only the retirement goal.

There are clear potential improvements in utility-adjusted wealth from implementing a goal-based strategy, where the optimal strategy creates 15.09% more utility-adjusted wealth than the naïve approach. Note, the second naïve approach, which is not included in Figure 4, where the household is assumed to attempt funding all goals is more efficient than attempting to fund only retirement, and if this were the assumed naïve approach the most efficient strategy would only generate 10.98% higher utility adjusted wealth (versus 15.09% when compared to funding only the retirement goal). The most efficient strategy assumes the household follows the savings strategy outlined in Figure 3, and attempts to fund all goals except goal 2, which is the RV purchase.

It is important to note that the potential benefits of any type of goals-based approach would vary based on the unique preferences and goals for each household. Also, similar to the output of a mean-variance optimization, the recommendation may need to be constrained for reasonableness purposes (depending on the attributes of the scenarios tested); however, this type of analysis provides a unique perspective on how to go about funding goals and which goals to potentially fund.

An alternative perspective to view the potential increases in utility-adjusted wealth values in Figure 4 would be to determine the alpha equivalent values, i.e., an in increase in forecasted returns (holding risk levels constant) that would result in the same level of utility had the goals-based...
approach not been utilized. This type of analysis provides information about the potential value of financial advising from a fee perspective, i.e., would a client potentially be better off working with a financial planner after considering fees? For this analysis a simulation is conducted where the return for each of the portfolios are increased from 0.0% per year to 7.0% per year in 0.25% increments. The resulting changes in relative utility for the first naïve strategy are included in Figure 5.

Figure 5: Alpha Equivalent Values

A fourth-order polynomial trendline is fit to the alpha equivalent values in Figure 5 (the R² of the trendline was 99.92%). Using the polynomial, it is determined that a 15.09% increase in utility has an alpha equivalent of 1.65% per year. In other words, to generate the same improvement in utility from an optimal goals-based strategy, an individual would need to create an excess risk-free return of 1.65% for each year of the simulation (which is 65 years). The second naïve strategy, which resulted in a 10.98% increase in utility-adjusted wealth, has an alpha equivalent of 1.07%.
The Goals-Based Financial Planning Process

The process for goals-based financial planning is depicted in Figure 6. The first step is to define the client’s goals. Next, resources that can be used to help fund the goals should be identified. While some may contend that resources should be identified first, it’s really the goals that will and should drive the financial plan. It is unlikely clients will be able to accomplish all of their goals, but it helps to understand what is important to each client before understanding the means available to fund the goals.

After the goals have been defined and the resources have been identified, the optimal strategy must be determined. Determining the strategy may require revisiting the resources available, as well as the goals. For example, if the optimal strategy is not consistent with the client’s wishes, it may result in the client having to save more than originally planned.

Once the plan has been determined it should be implemented. This may require opening up new accounts (e.g., a 529 plan) and potentially significant changes in how savings are directed (e.g., away from the 401(k) plan to paying off credit card debt). Finally, this is a dynamic process that should be reviewed annually, as well as upon any major life changes. An individual’s goals and resources are likely to change over time, and the strategy should be updated to reflect these changes.

Figure 6: The Goals-Based Financial Planning Process
Implementing a Goal-Based Financial Planning Process

Taking a goals-based financial planning approach may require a financial planner to take a different perspective when working with clients. Some potential considerations are outlined in this section.

- **Changing the Focus**: a goals-based financial planning process is obviously focused on accomplishing the goal. This is different focus than say, building portfolios that outperform some benchmark (e.g., their peers or some index) and therefore may require changing the information is relied to the client. One example is to change the emphasis on client communication away from a focus on performance to goal completion (e.g., take off account performance from the first page).

- **Take a Total Wealth Perspective**: most clients have a variety of goals and it’s going to take a collective approach to accomplish them. This requires taking a total wealth perspective on both assets and liabilities in order to understand the total resources available to the client, as well as the potential limitations.

- **Think Outside the Portfolio**: while some goals can be accomplished through investments alone, being knowledgeable and open to non-portfolio solutions, such as annuities, can provide clients with a wider range of potential options. Don’t generalize a product or approach and dismiss it without understanding the respective pros and cons.

- **Become a Behavioral Psychologist**: most planners have both hilarious (and terrifying) examples of clients behaving irrationally with their money. Understanding why clients make irrational choices, and how to “nudge” them to make better decisions, can better help clients accomplish their goals. Recent behavioral research suggests that goal attainment, for example weight loss, can be best achieved through first establishing a concrete goal and then setting achievable short-run goals that over time produce the long-run goal. For example, a client may set a goal of reducing credit card debt or total spending by $500 a month. In addition, automatic savings techniques that do not require active saving, for example salary deferral or scheduled electronic transfers from a liquid account into a savings account, may be more effective than relying on the long-term goal to motivate clients to make active savings decisions.

- **Correctly Defining Risk**: When thinking about risk it is common to focus on risk preference, i.e., how a client feels about taking risk (which is commonly proxied through a risk tolerance questionnaire). The other important component of risk is risk aversion, which is the amount of risk an individual should take given available resources (versus risk preference, which is how much risk the individual wants to take).
Building Smarter Portfolios: while it may be operationally simpler to have a single allocation for each equity risk-level, in reality different goals have different risks that should be incorporated into the portfolio optimization routine. For example, while a younger individual may be interested in maximizing return per unit of risk, an older individual may be more focused with maximizing return per unit of risk after considering inflation (e.g., on a real basis). These two different approaches can lead to materially different portfolio allocations, as noted by Blanchett and Kaplan (2013)

New Technology Solutions: implementing a goals-based approach is going take a variety of new technology solutions for things like determining how to optimally fund goals, how to build efficient portfolios over time, how to monitor progress, as well as how to communicate all this clients.
Conclusion

The profession of financial planning is built around helping people accomplish goals. While investing appropriately is generally an important part of the process of accomplishing a goal, achieving a goal generally requires advice beyond selecting investments that are expected to outperform their peers on a risk-adjusted basis (i.e., provide alpha) and building portfolios (i.e., beta).

A utility model based on prospect theory is used in this paper to help determine the optimal funding strategy for a household, based on the unique preferences and financial situation of that household. The optimal strategy provides guidance on which goals should be funded as well as how to save toward those goals over time. Certain goals, like retirement, are decomposed where the household is assumed to have varying levels of preference with respect to replacing different amounts of income, for example, replacing 50% of preretirement income may be very important (i.e., nondiscretionary expenses) with the remaining levels of replacement (up to 100% of pre-retirement income) becoming increasingly less important.

This research differs from the majority of past research on goals-based financial planning since this research is focused entirely on determining the optimal goals-based strategy for a specific household, while past research has focused primarily on determining (or building) optimal portfolios (or sub-portfolios) to fund different types of goals. The results of the analysis suggest that using a goals-based framework to determine which goals to fund and how to fund them can lead to an increase in utility-adjusted wealth of 15.09% versus a naïve strategy (focused only on funding retirement), which is equivalent to generating an annual alpha of 1.65% for the lifetime of the base scenario household. These potential gains suggest there is a significant amount of value using a goals-based financial planning approach that extends beyond traditional asset management (i.e., alpha and/or beta) decisions.
References


