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Goals-Based Investing

Prioritizing what matters most

Eric W. Taylor, CFA

National Investment Advisory Lead, Wilmington Trust Investment Advisors

The inception of modern portfolio theory (MPT) in the 1950s by Nobel Prize-winning economist Harry Markowitz revolutionized investment management. It created a mathematical framework for assembling an investment portfolio designed to maximize returns at a given level of risk.

In the decades that followed, this risk-based asset allocation approach largely governed how investors' portfolios would be built—and with good reason. However, time would eventually expose two key practical shortcomings to Markowitz's theory that relate to its effects on the portfolios of individual investors.

The first disconnect between academic theory and investor reality occurs between the relative perspective each attaches to investments. MPT argues that a single portfolio can accommodate multiple goals, even though each may have different time horizons and risk tolerance levels. Of course, that's mathematically possible to do, but it ignores the human inclination to separate savings into different accounts based upon the goal for those savings (often referred to as "mental accounting"). At first glance, this may not appear to be a meaningful distinction, but by collapsing multiple savings buckets into a single portfolio, it may create conditions that can lead to suboptimal investment decisions and investor returns.

Perhaps of greater consequence is how MPT defines "risk." Under MPT, risk is measured by the standard deviation of an asset's historical periodic returns, i.e., the degree to which actual returns deviate from their average. This is not how investors view risk. Individuals define risk in more practical terms; that is, the failure to attain one or more important financial goals.

To address the shortcomings of risk-based asset allocation, there has emerged a new approach that places the individual's goals front and center in building an investment strategy. It's called goals-based investing (GBI).

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Here, we explore the intrinsic differences between the two approaches to investing, what a goals-based planning process looks like, and how it changes the relationship individuals have with their wealth, their investments, and their advisors.

Goals-based investing: an unwavering focus on the destination

While MPT introduced a needed scientific discipline to the art of portfolio construction, it also had the consequence of obscuring why individuals invest. The simple truth is that individuals invest to achieve important personal goals, such as to fund their children's college education, or generate a desired level of retirement income.

The mathematical approach used to create risk-based asset allocations has had the effect of obscuring the very purpose and meaning of investing. The focus on investments under an MPT approach became clinical and detached and, in an effort to design "optimal portfolios," priorities got confused. The discussions of esoteric concepts—such as alpha (an investment's excess return vs. a benchmark or market index it tracks); down-market capture ratio (a statistical measure of an investment manager's overall performance in down markets); or Sharpe ratio (average return earned in excess of the risk-free rate per unit of volatility or total risk)—all overshadowed much more important concerns, such as the probability of successfully meeting a desired financial goal, and whether that likelihood of success improved or declined through time.

GBI maintains the mathematical rigor in creating portfolios, but does not allow the math to drive the process. Instead, it seeks to always keep the focus of investments on the attainment of stated goals. It does this in several key ways:

1. **Tailored strategies for each goal**
   GBI recognizes that individuals have different goals, each of which may have a unique time horizon and risk profile. This requires tailored savings and investing solutions. Accordingly, sub-portfolios are created for each goal to help ensure that they are managed to enhance an individual's likelihood of achieving those goals.

2. **Redefines performance benchmark**
   With GBI, investments are managed to an acceptable "success probability target." That means that if an individual is comfortable with a 90% probability of success for sufficiently funding his or her goals, then a portfolio is designed to reach and maintain that success benchmark. The measurement of portfolio performance against some market index is of secondary concern since it lends little insight into whether an individual is on track to reach his or her financial objectives.

3. **Protects against "worst-case" scenarios**
   While portfolios should be built to help individuals realize their dreams, they must also be managed to help avoid nightmares. Consequently, bottom-line probability targets are developed between an individual and his or her advisor to

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try and prevent disproportionate portfolio losses that could result in irreparable harm to long-term goal attainment.

4. **Sets continuous short-term goals**
   GBI appreciates that long-term goals are best achieved when interim, short-term goals are repeatedly set and met over time. The setting of short-term goals serves two very important purposes: a) It provides for quicker identification of possible funding shortfalls, allowing action to be taken sooner to prevent gaps from growing too wide; and b) It creates a valuable discipline of maintaining a persistent, single-minded focus on long-term goals.

GBI may also lead to a smarter, more efficient savings plan. By breaking up a portfolio into multiple, goal-specific sub-portfolios, it becomes simpler and clearer to ascertain relative progress toward each goal. This allows individuals to more effectively deploy finite savings, and monitor the chances of achieving desired goals. For instance, by tracking each goal separately, an individual may discover that retirement savings is well ahead of schedule, but that the college education goal is unlikely to be adequately funded. Knowing this, the individual may elect to cut back on 401(k) contributions (e.g., reduce them to a contribution level equal to the full employer match) and redirect those savings to the college funding portfolio to increase the chances of reaching that goal.

There is evidence to support that GBI may have a material, positive impact on portfolio performance. In an analysis by Morningstar, an industry leader in investment research, the goals-based framework "can lead to an increase in utility-adjusted wealth of 15.09% for a hypothetical household versus a naïve strategy focused only on retirement."[1]

What the goals-based investing approach looks like

The GBI schematic comprises four fundamental steps:

1. **Goal setting and prioritization**
   The process begins with identifying an individual's financial goals, from long-term goals, such as retirement or creating a legacy, to shorter-term objectives, such as college funding or purchasing a vacation home. Each goal is then prioritized by its relative importance to the individual.

   These goals are further fleshed out by determining the essential, important, and more ambitious or supplemental elements of each desired goal. For example, a retirement income goal may be set for $100,000 per year. However, that spending goal consists of essential spending needs (e.g., food, utilities, etc.), important spending needs (e.g., annual vacations with grandchildren), and supplemental spending needs (e.g., a 40-foot sailboat to cruise the Eastern seaboard). Breaking down each financial goal into these three components helps to provide a detailed and realistic analysis of the funding status of each goal and the subsequent progress in reaching important markers toward that goal. A time horizon is also identified for each goal (e.g., 20 years to retirement; 10 years to a child entering college).

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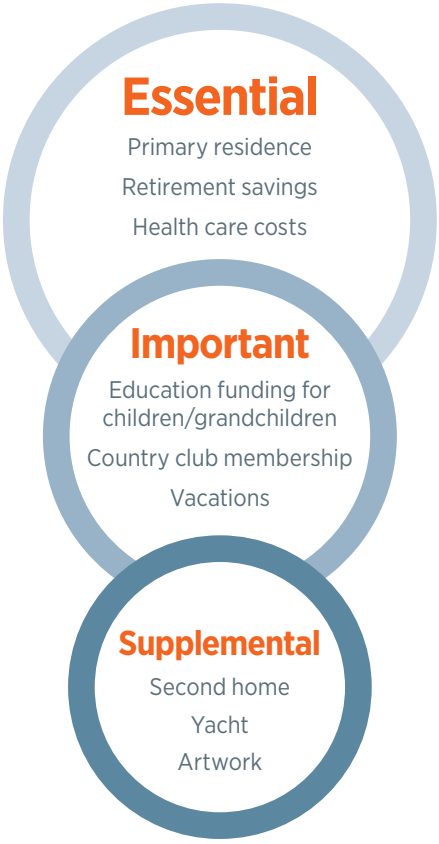
[1] https://www.onefpa.org/journal/Pages/JUN15-The-Value-of-Goals-Based-Financial-Planning.aspx.



Goals are further fleshed out by determining the essential, important, and supplemental elements of each desired goal.

Lastly, wealth targets—the amount of money needed to fund a goal—are calculated, along with establishing a success probability target, such as 85%, which will serve as the basis for developing an asset allocation strategy and the benchmark against which subsequent progress will be measured. By contrast, individuals may also elect to create wealth loss thresholds (minimum levels below which they are not willing to let assets fall).

2. **Review of current financial situation**
   The next step is to perform a review of an individual's current financial situation by detailing his or her existing assets and liabilities, determining which assets are presently assigned to which goals, and projecting future earnings that may be available to fund desired goals.

3. **Construction of goal-specific portfolios**
   Using the individual's goal-achievement probability target—again, of say, 85%—Monte Carlo probability analysis is used to determine the most efficient asset allocation that meets an articulated success probability target. The principal objective is to develop a portfolio that aligns the most important goals with the highest probability of a positive outcome at the lowest expected amount of investment risk.

   The resulting portfolios incorporate a concept commonly referred to as "risk buckets." For example:

   - Safety risk buckets may be invested in less volatile, more income-oriented investments such as bonds in order to meet required living expenses—the "essential" component of a consumption-based goal, like retirement income
   - Growth-seeking risk buckets look to capture the long-term growth potential of the capital markets in order to raise the probability of fully funding long-term goals, such as retirement or college education
   - Opportunistic-risk buckets with, say, private markets* or other illiquid assets may hold the potential for realizing the higher returns necessary to fund one's supplemental goals

   Developing a portfolio is not a one-and-done exercise. Goals-based portfolios adopt a "glide path" that regularly changes the mix of investments as the years go by to reflect the changing time horizon and relative funding progress that has been made.

4. **Ongoing goal monitoring**
   The traditional quarterly investment review between a financial advisor and a client is usually centered on investment performance: "What percentage gain or loss was experienced by the overall portfolio and its individual holdings?" "How did the investments compare to relevant market indices?" "Does the portfolio need to be rebalanced?" "Is it time to replace lagging performers?"

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* Private markets investments are only available to "qualified investors" who meet certain income and/or investable assets thresholds. They may not be suitable for all qualified investors and require a higher return target or return premium as compensation for the assumption of additional risks (see Disclosures).

The goals-based approach extends beyond just investments, in the recognition that there are inherent risks even a well-designed savings and investment strategy may not sufficiently address.

Compared to the traditional investing model, with GBI, the quarterly "how am I doing?" review is considerably more comprehensive and focused on the progress the individual is making toward achieving his or her goals, including an update on the:

- Percentage funded by each goal
- Percentage funded by the essential, important, and supplemental components of each goal
- Amount needed to be fully funded for each goal

Aside from the heightened specificity related to progress toward goal achievement, lagging performance is just one reason portfolio changes may be advisable. A GBI review is mindful of how portfolio changes may help individuals attain goals more efficiently. For instance, if a client's success probability target is 85% and the current probability of success stands at 95% (meaning that you are on track to achieve your goal sooner than is necessary), it may enable you to reduce the portfolio's investment risk profile by cutting back exposure to riskier asset classes and adding those funds to more conservative investments. This allows the individual to remain within his or her probability of success comfort zone, but with less investment risk.

While portfolios remain the primary vehicle for goal achievement, the goals-based approach extends beyond just investments, in the recognition that there are inherent risks even a well-designed savings and investment strategy may not sufficiently address. It is for this reason that insurance plays such an important, complementary role in helping individuals realize their financial dreams. Insurance may be used to hedge against potential future financial obligations, loss of anticipated future income as a source of guaranteed income, or as a vehicle to fund a desired legacy. For example, long-term care insurance may be purchased to protect against the depletion of assets resulting from future nursing care expenses, while life insurance may be purchased to protect against a potential loss in future income earnings.

Enriching individuals' relationships with their investments and advisors

Goals-based wealth management not only fundamentally changes the nature of portfolio construction, but it redefines the relationship between an individual and his or her investments and financial advisor.

For most Americans, the accumulation of wealth is not a competitive exercise where the top concern is finishing first or ahead of others. Rather, the primary aim of wealth is to secure the achievement of important financial goals. However, risk-based asset allocation subtly shifted the manner in which investors measured their financial progress. That measurement became singularly focused on how well their investments performed or how much they exceeded a market index, totally disconnecting their investments from their real purpose. Consequently, this led investors to unnecessarily worry about daily market volatility and periodic (and

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By maintaining a focus on success probability targets, GBI provides a clear, emphatic picture of where an individual stands in relation to his or her goals, regardless of the short-term (and usually inconsequential) market fluctuations.

wholly expected) market corrections, even though such price declines likely have little impact on the probability of reaching long-term goals.

By maintaining a focus on success probability targets, GBI provides a clear, emphatic picture of where an individual stands in relation to his or her goals, regardless of the short-term (and usually inconsequential) market fluctuations. It offers the possibility of greater peace of mind by inoculating investors from the anxieties that can be stirred up by doom-and-gloom-peddling talking heads or digital headlines in an effort to lure television viewers and internet surfers, respectively.

GBI also enhances the relationship between the individual and his or her advisor. It broadens and deepens the client-advisor conversation by going beyond the basic discussion of goals and optimal portfolios. It instead fosters an ongoing dialogue about the comparative importance of each goal and the relationship that alternative choices may have on the probability of successfully funding each goal.

These ongoing discussions serve as a reminder that hard and fast answers are rarely available and, also, that life (and therefore goals) is not static. As life evolves, so might one's financial goals and client-advisor interactions become important touchpoints to continually assess progress toward one's final destination.

To see what insights our risk assessment tool can reveal for your unique situation, and to find out more about a goals-based investing approach, reach out to your advisor today.

A comparison between risk-based asset allocation and goals-based investing

	Risk-based asset allocation	Goals-based investing
Portfolio construction	• Highest level of return at a specified level of risk • Single portfolio, regardless of multiple goals and time horizons	• Highest probability of a positive outcome at the lowest expected amount of investment risk • Distinct portfolios developed for each goal
Definition of risk	• Standard deviation: the variance of actual returns from the historical mean	• Failure to fund a goal
Risk management	• Diversification • Hedging (in some cases)	• Diversification • Hedging • Insurance • Setting wealth loss thresholds
Performance measurement	• Investment returns relative to relevant market indices	• Progress toward goal attainment

Asset allocation or diversification cannot ensure a profit or guarantee against a loss.

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Case study:
Mike and Nancy Casper*

Mike and Nancy are both 51 years old and have been married for 21 years. They have two children: Mike Jr., 16, and Becky, 13. With college fast approaching and a desire to retire in nine years, Mike and Nancy have decided to review their current investment strategy to determine if they are on track to achieve their financial goals. They currently have assets of $10.8 million.

Financial goals

Mike and Nancy have four goals:

1. Retirement income of $300,000 per annum, beginning at age 60 and continuing to age 90
2. College funding for Mike Jr. and Becky sufficient for a four-year undergraduate education and a two-year graduate degree program
3. A gift to a favored charity of $100,000 upon the death of the second to die
4. Leave a legacy in the amount of $1 million to their alma mater and $3 million to their children upon the death of the second to die

Setting priorities

Sitting with their advisor, the Caspers are asked to prioritize their goals and determine the goal components they deem essential (a minimum requirement), important (having a high value, though not essential), and supplemental.

After discussing it between themselves, Mike and Nancy have determined that their primary goal is funding retirement, with the bulk of their retirement income goal deemed essential. In their view, they have worked hard and sacrificed much, so they want to make sure they have the savings to pursue the dreams they have for retirement.

Funding their children's education is their second-highest priority. It is essential that they are able to fund, at a minimum, the cost of a four-year education at a good public university. It is important to them that, if one or both of their children are accepted at a prestigious private (and more expensive) university, they should be able to fund this opportunity. They also think Mike Jr. and Becky may choose to pursue master's degrees, but they feel that having the funds for that would be a "nice to have."

The Caspers have a favorite charity for which they would like to make a $100,000 gift from their estate. It's not essential, but it is important to them because of the good work this charity does.

* Names, data, and circumstances are hypotheticals, solely for illustrative purposes.

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Goals by priority

	Essential	Important (incremental cost increase vs. essential)	Supplemental (incremental cost increase vs. important)
Retirement income	$300,000/year	Additional $150,000/year	Additional $100,000/year
College funding	$158,040 per child at 4-year public university ($39,510/per year[1])	Additional $48,720 per child at 4-year private university ($51,690/per year[1])	Up to an additional $120,000 per child for master's degrees[2]
Legacy	$0	$2 million ($1 million per child)	Additional $1 million ($1 million per child; $1 million to their alma mater)

[1] https://research.collegeboard.org/media/pdf/trends-college-pricing-student-aid-2021.pdf Trends in College Pricing and Student Aid 2021 (collegeboard.org), Published Charges, 2020-21 and 2021–22, CollegeBoard.

[2] FinAid.org; varies according to the university and master's program. https://educationdata.org/average-cost-of-a-masters-degree

Finally, they would like to leave a legacy. Mike and Nancy dream of making a gift of $1 million to their alma mater since they feel that the education and support they received were instrumental to their success. It is also desirable to leave a combined meaningful inheritance of $3 million, but a bequest of at least $1 million to each child is important to them.

The table above outlines their prioritization decisions.

Gauging goal status and developing a goal attainment framework

Using GBI planning software, the Caspers' advisor runs an analysis of their goal funding status. The Caspers' assets are first allocated to the essential bucket of each goal in descending order of priority until all the amounts are funded, or the assets are exhausted. After funding the essential buckets, any assets remaining are then targeted toward the important buckets of each goal in the same descending order of priority. This process is repeated for supplemental goals, provided assets remain to fund them.

A comprehensive report is then generated that, among other things, compares Mike and Nancy's current portfolio against alternative asset allocation scenarios that may offer more advantageous outcome probabilities and improved risk management.

This exercise produces several key insights illustrated on the next two pages.

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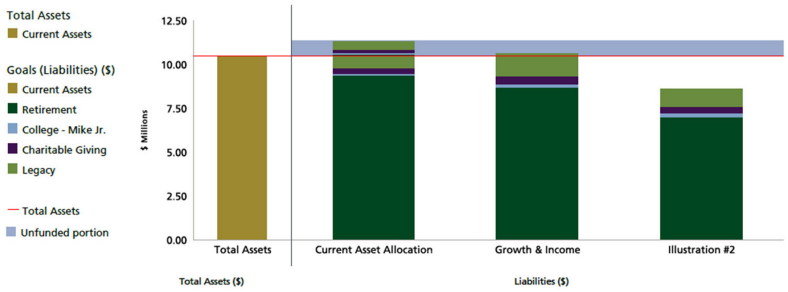
1 A "Balance Sheet Summary" illustrates the amount of current assets assigned to each goal (and related buckets) and the funding status in three different asset allocation scenarios.

Balance Sheet Summary

Total Assets and Liabilities



			Current Asset Allocation	Growth & Income	Illustration #2
Current Assets	10,500,000	Retirement	9,404,253	8,653,866	7,005,961
		College - Mike Jr.	219,077	215,744	200,853
		Charitable Giving	482,140	461,285	387,932
		Legacy	1,250,492	1,318,785	1,009,122
TOTAL	10,500,000	TOTAL	11,355,962	10,649,680	8,603,867
		Surplus (Deficit)	(855,962)	(149,680)	1,896,133

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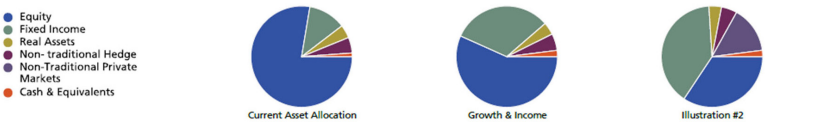
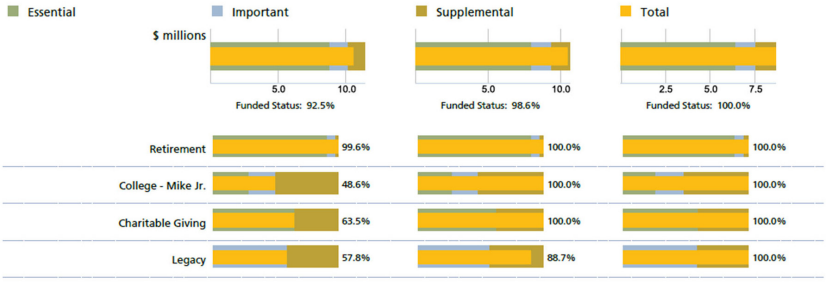
For illustrative purposes only.

2 A "Funded Status by Goal" analysis that indicates the percentage of the current funding for each goal.

Funded Status by Goal





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3 A detailed "Analysis by Goal" snapshot for a specific goal, breaking down how much of each bucket can be funded, including the amount required to reach a fully funded status.

Analysis by Goal: Legacy

Current Asset Allocation

Funded Status

Important - $722,162 | Supplemental - $528,330 | Assets - $722,162

You have 57.8% of the money required to fund Legacy goal
You can fund all 100.0% of the Important level of this goal
You can fund none of the Supplemental level of this goal
You would need an additional $528,330 in order to be 100% funded

Goal Specific Allocation

- 77.1% Equity
- 12.6% Fixed Income
- 4.2% Real Assets
- 5.0% Non- traditional Hedge
- 1.1% Cash & Equivalents

Dedicated Assets

Name	Nominal Inflow ($)	Effective Rate	Effective Horizon	Discounted Value ($)
		Total Future Inflows		-
		+Current Assets		-
		Total Dedicated Assets		-

Assets Required

Confidence	Nominal Inflow ($)	Effective Rate	Effective Horizon	Discounted Value ($)
Essential	-	-	32.00	-
Important	2,000,000	3.2%	32.00	722,162
Supplemental	2,000,000	4.2%	32.00	528,330
			Total Assets Required	1,250,492
			Dedicated Assets	-
			Non Dedicated Assets	722,162
			Funded%	57.8%

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From this report, the Caspers can see they are in reasonably good shape to fund the highest-priority goals, but may need to address some identified shortfalls. The Caspers can now work with their advisors to discuss a variety of ways to improve or modify the funded status of their goals, including reprioritizing objectives, saving more, reducing goal amounts, accepting more shortfall risk, altering the time horizon of goal fulfillment, or changing their asset allocation strategy.

Key risks of investing in private markets

Private markets investments can be important contributors and diversifiers in the context of a broader portfolio. However, investors should require a higher return target or return premium as compensation for the assumption of additional risks. Prior to committing capital to a private markets fund, the following risks need to be fully understood and carefully evaluated:

- Limited liquidity exists because the underlying assets held by private markets funds generally cannot be quickly and easily sold at full price. For this reason, general partners of private equity funds typically structure their funds as long-term investment vehicles, greatly limiting the ability of limited partners to redeem their investments at any given time. Investors generally look for an illiquidity premium in the form of a higher return target to compensate for the higher risk.
- Operational risk is the risk of loss from inadequate internal controls or processes and is particularly important in private markets because of the illiquidity of investments and limited regulation. Operational risk exists at both the general partner level, where it can be mitigated through effective manager due diligence, and at the underlying portfolio company level, where it can be mitigated by the general partner's due diligence.

Continued

- **Leverage includes the use of additional debt by general partners to finance transactions. Leverage is commonly used by fund managers in private markets to increase returns and optimize the capital structure of their companies. However, the use of leverage also increases risk.**
- **Less regulation and transparency are the case with private funds. They are not subject to the same U.S. SEC registration as mutual funds and can instead rely on exemptions from such registration. What's more, investors have less transparency on underlying investments, generally committing capital to the fund prior to the fund having made any investments. These limitations make thorough due diligence particularly important when researching private CFA® Institute marks are trademarks owned by the Chartered Financial Analyst® Institute.**

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