# Investing in a Transforming World:

## The Wealth Allocation Framework

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*In the last 60 years, Modern Portfolio Theory has become an established cornerstone of prudent investment strategy through its emphasis on portfolio diversification. However, the theory as implemented today places the market at the center of investment strategy, without sufficient accommodation for individual investors' needs and goals. The Wealth Allocation Framework represents an important evolution in wealth management philosophy by shifting focus from the market at the center to the investor at the center. It underlies a goals-based wealth management approach by effectively asking every investor: "What do you want your wealth to do for you?"*

Investing is the way individuals participate in the growth of the world, and while a diversified market portfolio is core to most investors' financial strategies, alone it is not enough. This market-centric wealth management philosophy is important but limited, because markets are unpredictable. Even broadly diversified portfolios can experience unpredictable and extreme volatility. Investors have a desire for safety and personal financial obligations they want to meet regardless of market conditions. Also, many investors have aspirations that often entail taking risks and pursuing returns beyond those of a well-diversified market portfolio.

To move to a more investor-centric, goals-based wealth management approach, the Wealth Allocation Framework accounts for an investor's total wealth, recognizing not just market investments but all assets and liabilities including private businesses, home, insurance and instances of concentrated market assets such as alternative investments and stock options. The Wealth Allocation Framework categorizes resources according to their intended purpose and shared risk-return characteristics with the objective of increasing transparency into the potential risks and returns of an investor's total wealth. Organizing investors' assets and liabilities in this way helps to expand the notion of risk in the wealth management philosophy.

This view, when combined with understanding an investor's priorities and goals, provides a practical structure to allow investors to compare their goals and resources and helps to illuminate how to better connect the two with a financial strategy. The resulting framework is powerful in its implications, providing a strategic foundation for pursuing individual goals in a transforming world.

The Wealth Allocation Framework provides a strategic foundation for pursuing individual goals in a transforming world.

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## Markowitz and Modern Portfolio Theory

When we invest, we strive to capture market growth most efficiently. As Harry Markowitz demonstrated through his pioneering Modern Portfolio Theory in 1952, diversified market portfolios help investors achieve efficient levels of risk and return. The efficient frontier outlines how much return (on average) an investor can expect to get given how much volatility (on average) he or she is willing to accept in a portfolio.

In the sixty-plus years since Modern Portfolio Theory was introduced, diversification has become a widely embraced standard. Today, access to a broadening array of asset classes and types makes diversifying beyond stocks and bonds easier than ever before.

Investors need a framework for managing wealth that builds upon Markowitz's Modern Portfolio Theory.

## Beyond markets (and Markowitz)

However, a market-centric framework—one that keeps its scope to financial capital and uses diversification to accommodate the volatility of market risk—is not sufficient to help an investor successfully pursue all of his or her goals. It fails to account for two important realities in investors' lives:

1. **A desire for safety.** *Market performance is measured in aggregate, so while it may eventually grow overall, individual investors have a desire for safety and personal financial obligations they want to meet regardless of market conditions*—like making sure their money lasts, maintaining their home, covering potential healthcare costs, or protecting their income in case of an injury or disability. The crash of 2008–2009 is a recent example that markets are inherently unpredictable and that they may be subject to periods of prolonged instability. While a well-diversified market portfolio is relatively less vulnerable than a non-diversified portfolio in a downturn, diversification does not protect against unpredictable and extreme volatility. It's impossible for an investor to predict how long he or she would have to wait for an upturn or what level of return he or she would get from the market. So, investors look to things that are expected to help reduce downside risk and provide potential safety, like their home, emergency funds (cash), reliable income streams or insurance policies, to help them protect a basic standard of living—and willingly accept returns that are below-market on average as a tradeoff.

2. **The pursuit of aspirations.** *Many individuals become wealthy not by seeking to achieve efficient levels of risk and return but by applying their individual talents, expertise and passions in pursuit of aspirational endeavors.* For example, successful entrepreneurs dedicate most of their resources and talents to help grow their businesses. And corporate executives who have accumulated stock options may purposefully expose themselves to concentrated market risk through a significant holding of their company's stock, with the belief that the company and those options will increase in value at a rate of return higher than the general market. Another example is real estate investors who use non-recourse leverage to substantially increase their wealth. These examples defy the standard of diversification and demonstrate how individuals achieve meaningful wealth mobility. On its own, a broadly diversified market portfolio will only increase a person's wealth incrementally; to move up the wealth spectrum in a substantive manner (e.g., from the 40th percentile to the 60th), one needs to take risks and purse returns beyond those of a diversified market portfolio.[1] If and when taking high risks in pursuit of aspirational endeavors succeeds, investors can apply their significant wealth gains to pursue their passions and interests, support their favorite causes and secure a legacy that lasts beyond their lifetime.

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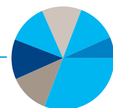


Today, access to a broadening array of asset classes and types makes diversifying beyond stocks and bonds easier than ever before.

Many individuals become wealthy not by seeking to achieve efficient levels of risk and return but by applying their individual talents, expertise and passions in pursuit of aspirational endeavors.

Because of these issues with a market-centric view, investors need a framework for managing wealth that builds upon Markowitz's Modern Portfolio Theory by shifting the focus of the wealth management approach from the market at the center to the investor at the center.

[1] Chhabra, Ashvin. "Beyond Markowitz: A Comprehensive Wealth Allocation Framework for Individual Investors." *Merrill Lynch Wealth Management Institute*. Fall 2007.

## Expanding how we think about wealth and risk

In order to move to this new framework, it is necessary to first expand the frame of reference regarding the notions of wealth and risk. To better align with an investor-centric wealth management philosophy, the Wealth Allocation Framework expands the definition of wealth to recognize all assets and liabilities—an investor's total wealth:

- *Tangible capital* such as home, home mortgage, insurance, investment real estate and art
- *Financial capital* such as investments and cash
- *Human capital,* such as an individual's skills, knowledge and unique intangible capabilities, contributes to earning potential. To represent the value of human potential as part of an individual's total wealth, he or she can determine the present value of cash flows (current salary, expected bonuses and future Social Security income) and also judge how reliable a given cash flow is.[2]

Looking at capital beyond traditional investments and cash broadens the scope of risk in the wealth management philosophy from the volatility of a market portfolio to include the possibility that the investor won't achieve his or her goals. In the case of aspirational goals, an investor may also feel regret if he or she didn't try to achieve them. The Wealth Allocation Framework recognizes three specific types of risk that contribute to the possibility that an investor won't achieve his or her goals:

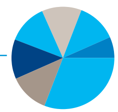
- *Personal risk* that could jeopardize your basic standard of living (e.g., from loss of income, natural disaster, death or disability)
- *Market risk* that comes from exposure to financial markets (the widely known dimension of risk)
- *Idiosyncratic risk* that is specific to one asset, like a business, or small group of assets with a risk of substantial loss of capital

A diversified market portfolio seeks to minimize market risk through optimal asset allocation. In contrast, the Wealth Allocation Framework distinguishes two additional types of risk—personal and idiosyncratic—and seeks to help investors balance the risks and returns of all three simultaneously as they pursue individual goals.

Depending on the nature and purpose of a given asset or liability, it will hold one of these three types of risk.

The Wealth Allocation Framework identifies three types of risk that an investor may take on for specific purposes:.

**Protect basic standard of living**
To safeguard essential goals, investors can hold lower-risk assets—but they have to accept lower returns in exchange.



**Invest to maintain lifestyle**
A well-diversified portfolio provides risk and return in line with efficient market performance—very efficient, but also uncertain.

**Potential for significant wealth mobility**
To pursue goals that require higher-than-market returns, investors often need to take higher and concentrated risks.

[2] As part of an investor's total wealth, human capital (earning potential) represented as the present value of current and future cash flows holds personal risk. However, depending on how stable a given cash flow is, an individual should decide the degree to which the cash flow can be relied upon to help protect a basic standard of living. For example, if it is unreliable an individual may want to decrease the amount of aspirational risk on their balance sheet. Alternatively, an individual may decide to continue to earn on a limited basis after retiring and this earning potential in excess of other reliable income may make him or her feel confident about holding aspirational risk

## The Wealth Allocation Framework

To align with an investor-centric philosophy, we look at an investor's total wealth organized by intended purpose and shared risk-return characteristics.

| Asset Category | Personal | Market | Aspirational |
|---|---|---|---|
| **Need addressed** | Downside protection | Participation in market growth | Great upside and great downside |
| **Risk type** | Personal risk | Market risk | Idiosyncratic risk |
| **Examples** | • Cash (emergency fund)<br>• Primary home and mortgage<br>• Traditional annuities (safe source of income, hedges longevity risk)<br>• Insurance | • Equities: Broadly diversified size/style/sector exposure<br>• Fixed income: Credit quality and duration diversification<br>• Cash (reserved for opportunistic investing)<br>• Alternative investments (e.g., commodities and hedge funds)<br>• Structured products | • Investment real estate<br>• Family business<br>• Concentrated stock and stock option positions<br>• Art collection |
| **Risk-return characteristic** | Often lower risk, but low return | Risk and return in line with market performance | High risk, but with the potential for above-market return |
| **Benchmark** | **Inflation:** personal assets are expected to help reduce downside risk and provide potential safety | **Risk-Adjusted Market Return:** all traditional portfolio performance measures are applicable for market assets | **Absolute Return:** assets in the Aspirational bucket are intended to significantly outperform the market if and when they succeed |

## Categorizing assets and liabilities by risk-return characteristics

Keeping in mind an investor's total wealth, the figure above illustrates how assets and liabilities break out across categories. Each asset and liability will hold one of three risk types, depending on its nature and purpose.

Categorizing assets and liabilities in this manner is a simple but powerful step that helps to transform a statement of an investor's total wealth from a static laundry list into a dynamic working tool. The categorization also offers a transparent view of an investor's unique risk allocation—his or her assets and liabilities organized by risk-return characteristics. An investor can then look at his or her risk allocation alongside individual goals and priorities and ask: "What do I want my wealth to do

for me?” Dependent on and proportional to the answer to this question, an investor’s optimal risk allocation should help him or her meet these objectives to varying degrees:

- Protect a basic standard of living (i.e., protect from personal risk).
- Provide the potential means to maintain or improve a standard of living (i.e., keep up with family and friends). In order to do this, investors must earn a rate higher than inflation and thus take on market risk.
- Provide an opportunity to increase his or her wealth substantially or create impact. This involves taking on some idiosyncratic risk.

This is the balance sheet, reimagined through the Wealth Allocation Framework with the focus on an investor’s priorities and goals. It becomes a snapshot for evaluation and a starting place for building a goals-based financial strategy, with resources and risk aligned to what an investor wants to achieve.

## Putting the Wealth Allocation Framework into Practice

The Wealth Allocation Framework provides a practical structure for comparing an investor’s goals and resources, revealing any potential misalignments and illuminating how to better connect the two with a financial strategy. It focuses on keeping the investor at the center, to manage total wealth in clearer, more comprehensive terms.

When preparing to consider an investor’s risk allocation alongside his or her individual goals, it’s important to explore how investors can connect their tolerance for risk with their priorities in the Wealth Allocation Framework. Looking at risk as the possibility that an investor won’t achieve his or her goals reflects the direct relationship between risk and return in the pursuit of personal goals. To achieve higher returns you often have to take on higher risks, and to lower your risks you often have to accept lower returns. For goals that are essential, important or aspirational, investors can weigh the risk they are willing to take in pursuit of funding a goal against the possibility they won’t achieve it.

The Wealth Allocation Framework dovetails with a goals-based wealth management approach that takes into account investors’ life priorities, goals and total wealth to help them create financial strategies that align resources and risk with pursuit of personally meaningful goals. A wealth management approach focused on individual goals encourages investors to track progress toward their goals over time— not just performance against investment benchmarks. As their lives and the markets change, investors and their Financial Advisor can review and revise how resources and risk are allocated in their financial strategies to help them stay on track to achieving their goals.

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Previously, he was the Chief Investment Officer at the Institute for Advanced Study for six years. He managed the Institute's endowment in conjunction with the Investment Committee of the Institute's Board of Trustees.

Dr. Chhabra first worked at Merrill Lynch from 2001 to 2007 as Managing Director and head of Wealth Management Strategies and Analytics for Merrill Lynch's Global Private Client Group. Prior to joining Merrill Lynch in 2001, Dr. Chhabra was head of Quantitative Research at J.P. Morgan Private Bank.

Dr. Chhabra holds a PhD in Applied Physics from Yale University and is recognized as a leader in the fields of Investment Management, Risk and Asset Allocation, and Risk Management. His recent work integrates behavioral finance with modern portfolio theory. He has lectured at Yale University, Carnegie Mellon University, Columbia Business School, Baruch College CUNY and the University of Chicago. Dr. Chhabra is a member of the Board of Fellows for The Program in Financial Mathematics, Courant Institute at New York University; the Board of Regents for the Financial Analysts Seminar, CFA Institute; the International Advisory Board of EDHEC Risk Institute; the Board of Trustees of the Stony Brook Foundation and the Investment Committee of the Institute for Advanced Study.

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