Asset Allocation

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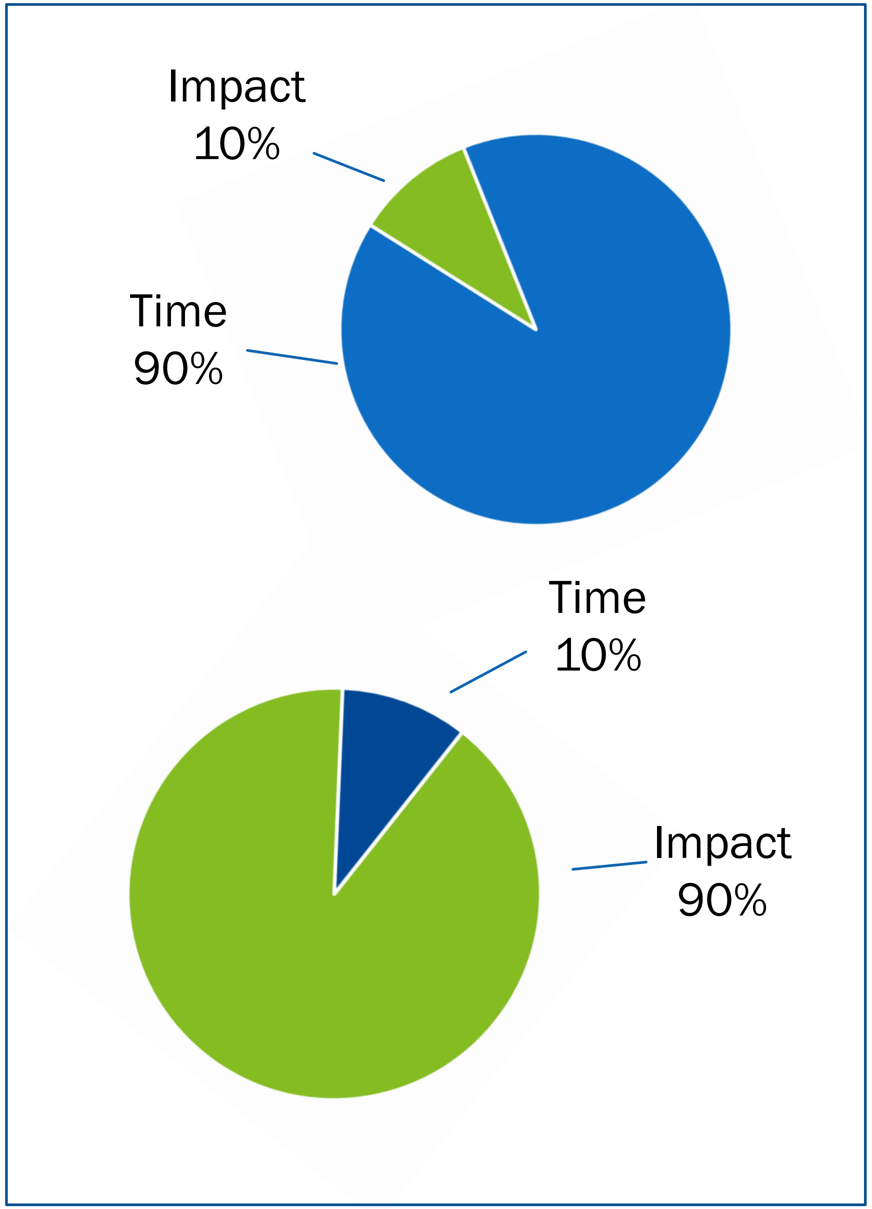
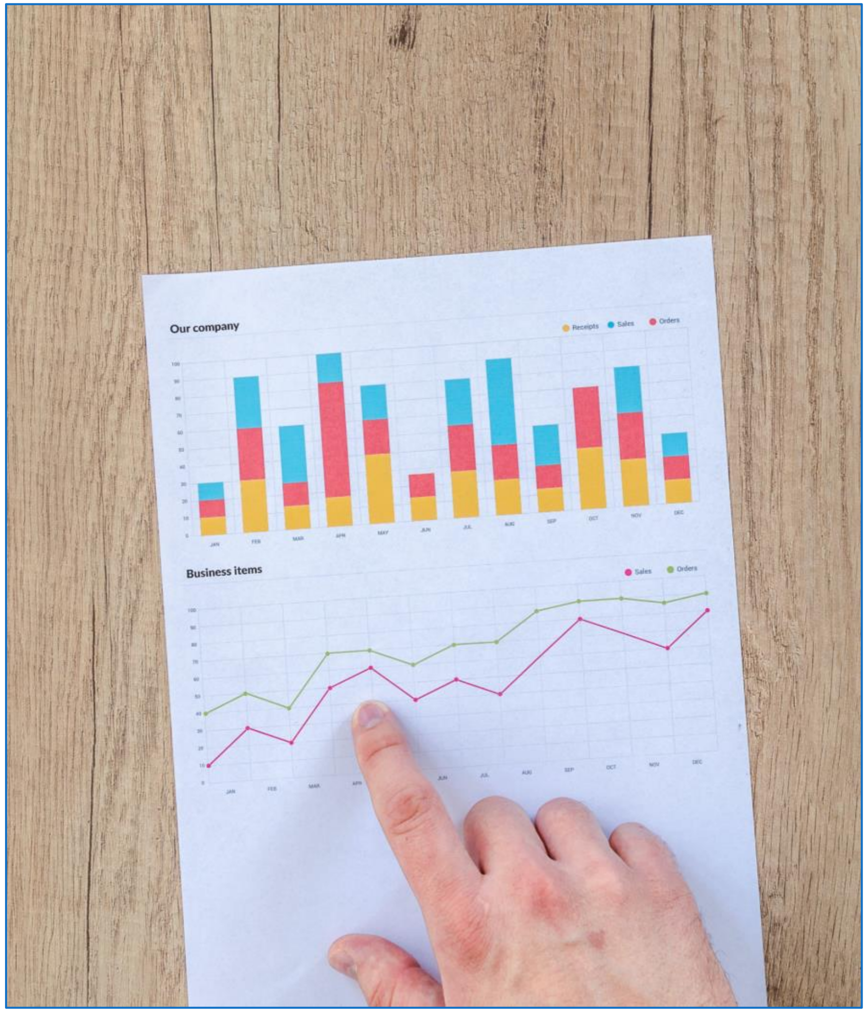
FOCUS OF ATTENTION: THE ISSUES

- The Little Issues…
  - Active versus Passive Management
  - Hiring & Firing Managers

- The Big Issues…
  - Asset Allocation
  - Fees
  - Verifying Reality





WHAT IS AN ASSET CLASS?

- An asset class has two common characteristics:
  - Assets within the same class have similar **STRUCTURE**
  - Assets within the same class have similar **PERFORMANCE**

- Assets may be placed into one of five categories:
  - Equity: stocks (both domestic and international), private equity
  - Fixed income: bonds, cash, government money markets, CD’s, bank deposits
  - Real assets: real estate, timber, commodities, farmland, infrastructure
  - Currency: dedicated strategies, also inherent in unhedged international exposure
  - Diversified: assets that combine the first four (tactical asset allocation, hedge funds)

WHY DIVERSITY MATTERS

Modern Portfolio Theory (MPT), introduced by Harry Markowitz in 1952, argues that the risk/return tradeoff can be improved through diversification. Consider uncorrelated securities A and B with the following returns:

	Year 1	Year 2	Year 3	Year 4	Annual Return
Security A	20%	0%	20%	0%	10%
Security B	0%	20%	0%	20%	10%
50/50 Mix	10%	10%	10%	10%	10%

Each security returns 10% annually, on average.

Each security varies significantly from year to year.

A mix of these securities has a 10% return with **NO** variation.

These securities are negatively correlated.

Perfect positive correlation is 1; uncorrelated, 0; perfect negative correlation, -1

In the real world most securities are positively (but not perfectly) correlated

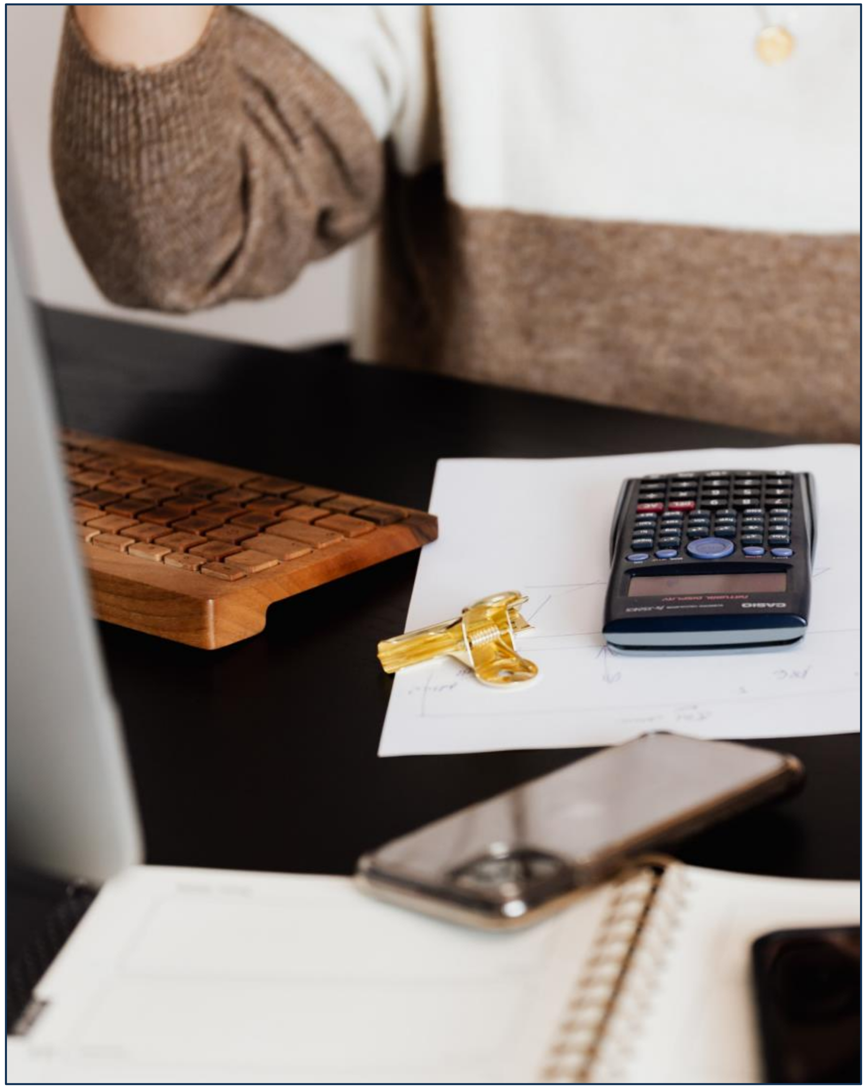
Risk (volatility) is reduced (***not*** eliminated) by creating portfolios of uncorrelated securities

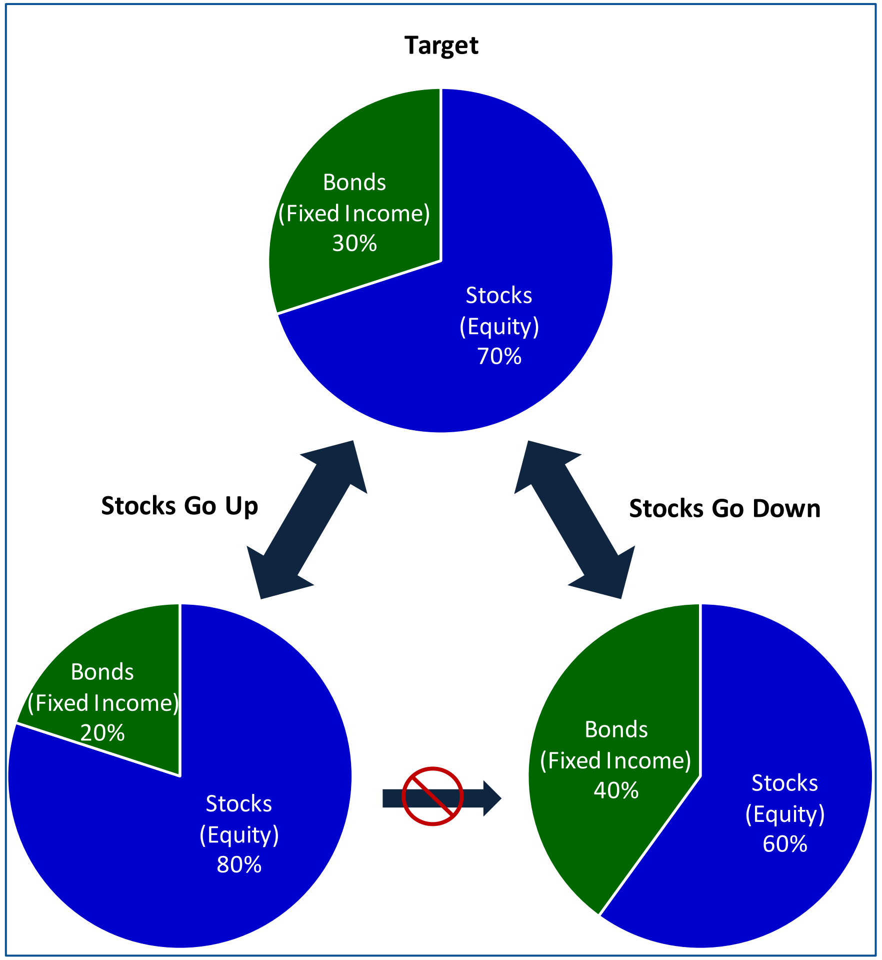
ASSEMBLING THE PORTFOLIO

- Goal of a portfolio is to achieve a targeted return while minimizing risk
  - Short-term risk (volatility) is the potential for loss in the near term, usually one year
    - Risk as measured by volatility (standard deviation) declines as the time period increases
  - Long-term risks are the permanent loss of capital and the chance of not achieving the targeted return over 10-20 years

- To begin with, an allocation can be divided into equity assets and fixed income assets
  - **Equity assets:** all equity, commodities, MLPs
  - **Fixed income assets:** investment grade debt

- Stock/bond mix and trade offs
  - Most modern portfolios are within the 60/40 to 70/30 range based on this definition
  - Some portfolio use alternative assets, such as hedge funds, as a substitute for equity to reduce short-term risk
  - Bond substitutes (real estate, timber) have been used to protect against rising interest rates





REBALANCING

The act of bringing the asset allocation back to pre-determined targets

- To meet our goal of achieving our target return while minimizing risk

Why rebalance?

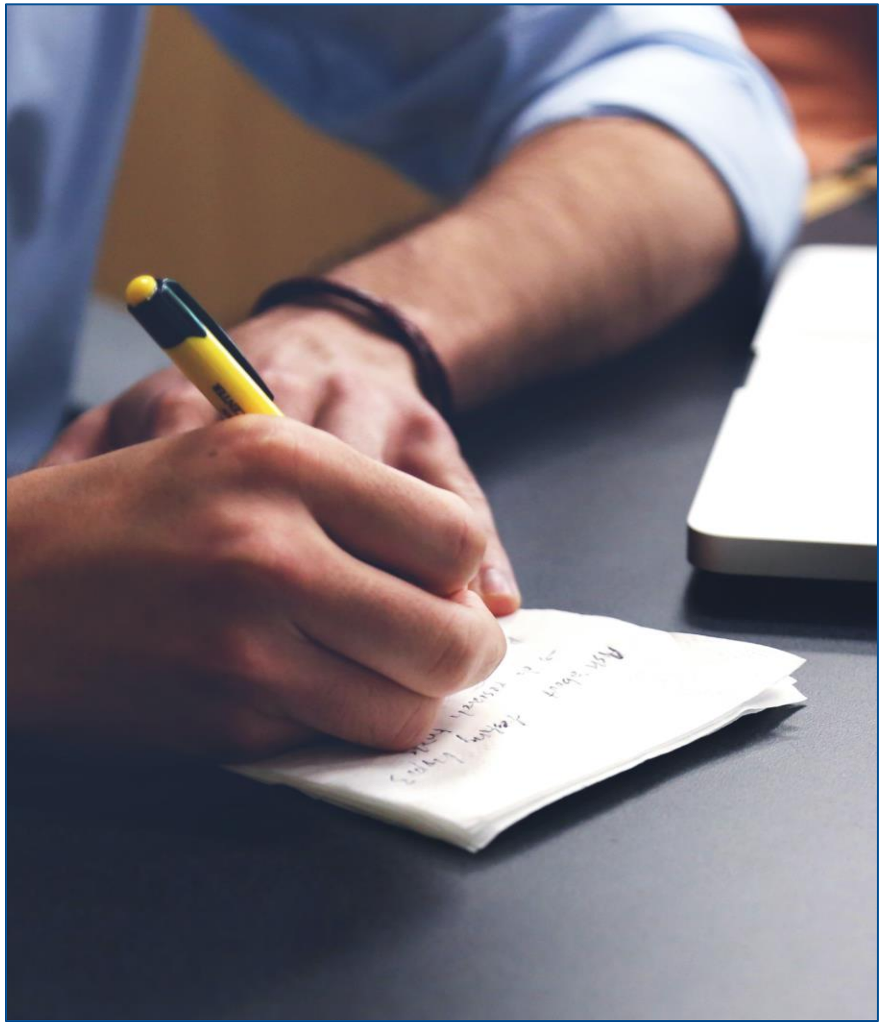
- Risk mitigation
  - Keeps risk exposure within expected ranges
  - Reduces emotion affecting our decisions
  - Forces us to sell high and buy low
- Adding value
  - Especially during times of stress (March 2020, December 2018, March 2009)

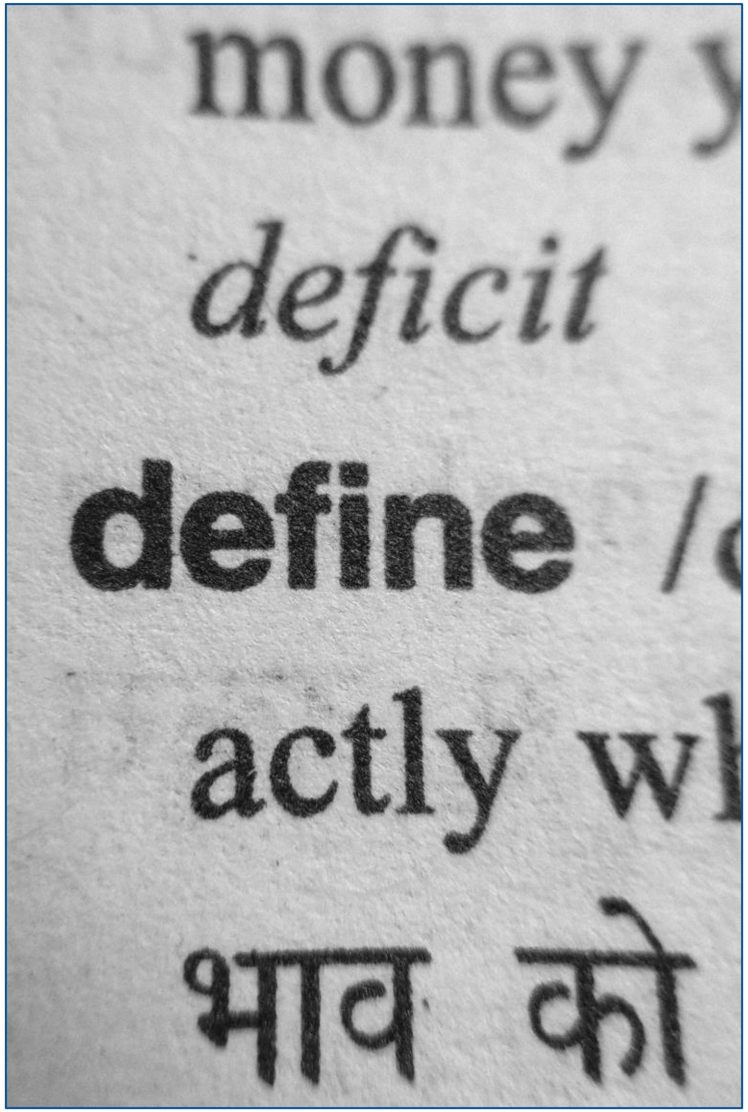
KEY TAKEAWAYS

- Academic theory and fiduciary responsibility require portfolio diversity.
- Asset classes and investment managers are meant to work together over the long term in different market regimes.
- Rebalance during times of peak stress.
- Focus the attention on the big issues.
  - Asset allocation
  - Fees
  - Verifying reality

"It's not necessary to do extraordinary things to get extraordinary results"

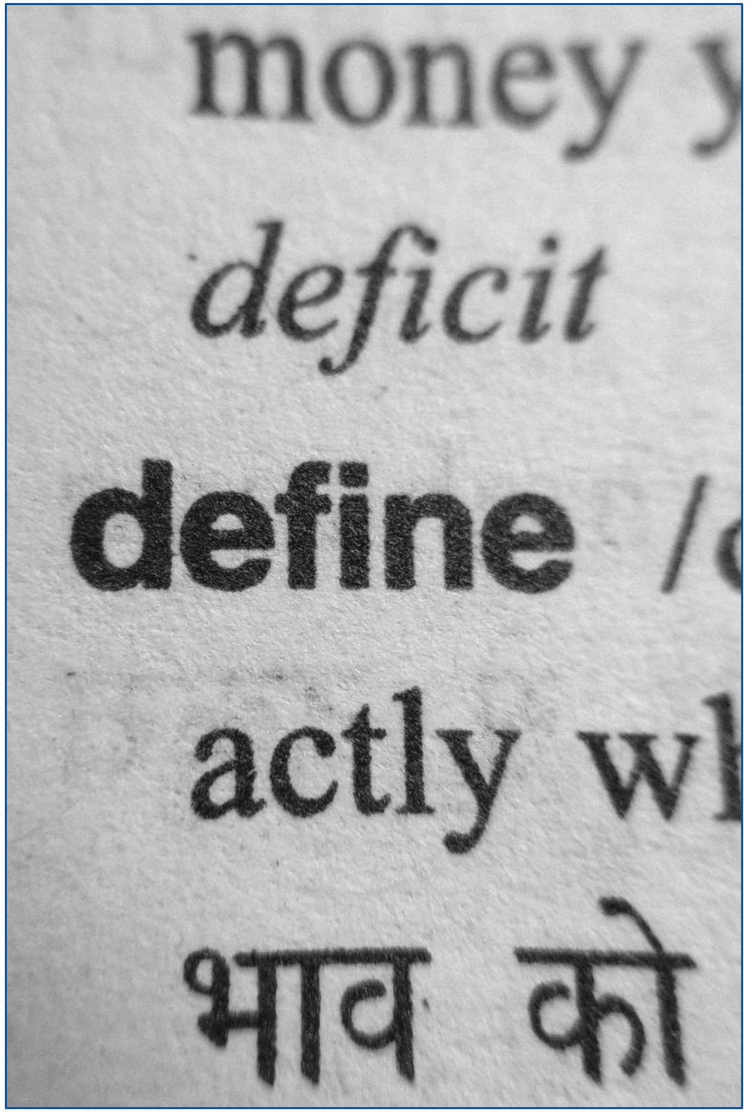
– Warren Buffett





KEY TERMINOLOGY

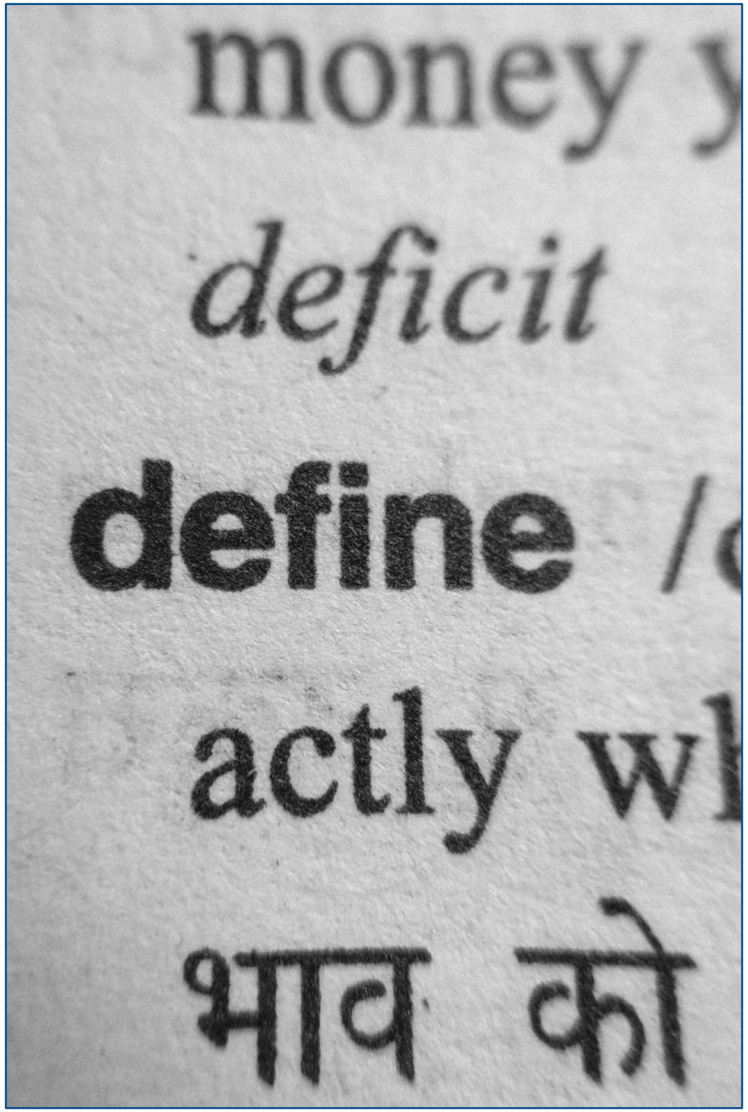
- **Active Management:** A strategy that seeks to beat a target benchmark by taking active bets relative to the securities in the benchmark. This is the opposite of passive (or index) investing.
  - Active Portfolio managers seek to beat the market by utilizing their research, skill and experience to identify and invest in securities that they believe will outperform their target benchmark.   This style of investing cuts both ways. The manager may outperform or underperform the target benchmark.
- **Asset Class:** A group of investments that have a similar structure and exhibit similar performance attributes.
- **Bond (aka Fixed Income):** A contractual obligation made by the borrower (issuing company) to the lender (investor purchasing the bond). The borrower typically agrees to pay the lender interest on the loan and the principal back when the bond matures.



KEY TERMINOLOGY

- **Correlation:** Asset class correlation is a measurement of the relationship between two or more assets and their dependency to each other. Correlation measurement is expressed as a number between +1 and -1.
  - Correlation measures how one thing moves in relation to another. However, these relationships change over time and can change abruptly during times of stress, as we saw in 2008 when all correlations converged to +1.0
  - Correlation Scale
    - **+1.0 (Perfect correlation)** – When Security A goes up, Security B goes up (the same relationship holds when the security goes down)
    - **0.0 (uncorrelated)** – there is no predictability or relationship. When Security A goes up, Security B will either go up or down (this relationship is something to keep in mind when somebody is trying to sell “uncorrelated” strategies.
    - **-1.0 (perfect inverse correlation)** – When Security A goes up, Security B goes down (or when A goes down, B goes up)

- **Index:** A portfolio consisting of a broad representation of investment holdings that signify a segment of the financial markets.



KEY TERMINOLOGY

- **Market Capitalization (aka Market Cap):** How much the company is worth as the total of the market value of all outstanding shares (stock). Market cap is also used to define how the size of the company (i.e., large cap, mid cap, small cap).

- **Passive Investment (aka Index Fund):** An investment fund (or account) composed of securities with the characteristics to produce a return that will duplicate (or substantially duplicate) a designated securities index.

- **Rebalancing:** The process of adjusting the asset allocation to bring it in line with target allocations.
  - This is often easy to say but hard to do. Rebalancing is selling some of your winners and buying more of your losers. Over the long run this strategy has historically paid off, simply because almost nothing can go up forever.

- **Standard Deviation (aka Volatility or Risk):** A statistical measure of variation of a data set around its historical average. It is widely used as a measure of risk for portfolio investments.

- **Stock (aka equity or equity security):** Instrument that signifies an ownership position in a corporation.