# Diversification Is Always Working

*...however, sometimes you will like the results, and sometimes you won't.*

Investors diversify because they are uncertain about future returns. Therefore, they should not be surprised if their diversified portfolio sometimes underperforms versus one that is more concentrated.

While diversification is a fundamental tenet of investing, it does not guarantee consistent, positive results. It is a tool for managing risk—avoiding putting all your eggs in one basket[1] —rather than a means to increase return. Extending the "eggs in one basket" analogy: managing risk is about getting home with more of your eggs intact, while increasing returns is about finding more eggs on your way home.

Sometimes, diversification will reduce exposure to an asset that will perform well in the future. That does not mean that diversification did not work. It is just that sometimes good ex-ante decisions result in poor ex-post outcomes. However, when done properly, diversification reduces ex-ante risk without reducing expected returns.[2]

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## How Diversification Works in a Portfolio

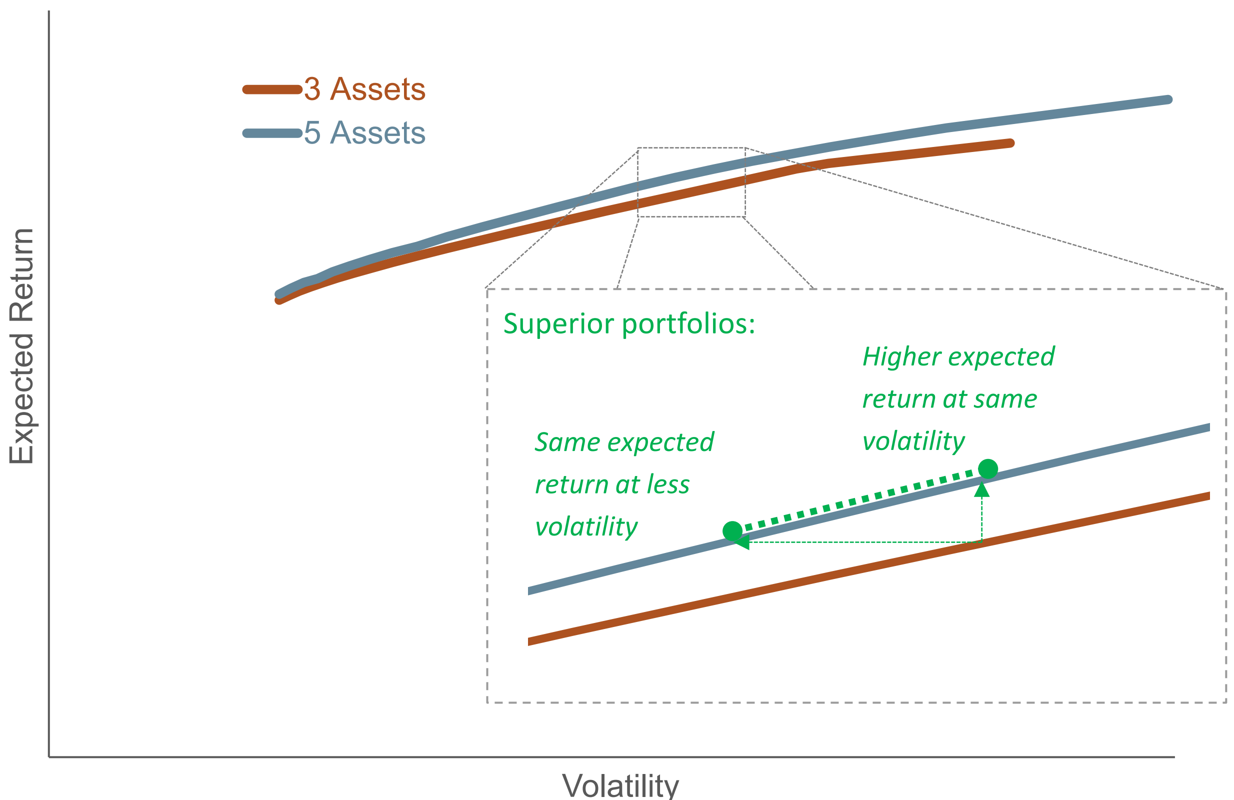
Chart 1 illustrates the potential benefit from diversification in an investment portfolio. The red line is an efficient frontier constructed with three asset classes: US Stocks, Core US Bonds and Real Estate. The blue line then shows what happens when you add two more, International Stocks and High Yield Bonds, to the opportunity set.

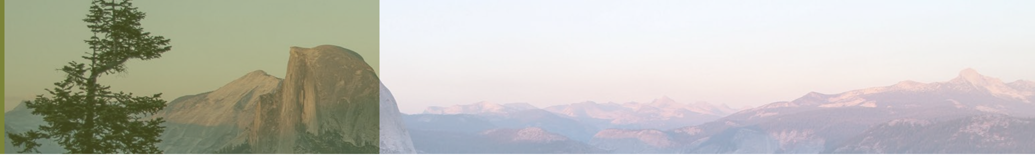
The result highlights diversification's impact on the efficient frontier. By including International Stocks and/or High Yield Bonds, an investor can:

- Increase the portfolio's expected return without increasing risk
- Decrease risk without lowering the expected return
- Combination of the two

All the portfolios on the green segment of the efficient frontier are superior to the starting portfolio.

Chart 1: Efficient Frontiers of 3 and 5 Asset Classes





## The Behavioral Challenges to Maintaining Diversification

While all investors understand that investment decisions have uncertainty, some may reject diversification after they experience a poor outcome. Their rationale tends to be behaviorally rather than economically based. Flawed thinking in response to negative results from one's judgement and decision, a.k.a. cognitive biases, intersect with investing often.

Examples include:

- **Hindsight Bias:** Investors that focus on outcomes, not their decision process, will be tempted to assume that they or their investment manager "should have known" that the diversifying asset was going to underperform. It ignores how unpredictable past events were at the time. Instead, investors should reflect on whether the forecast that suggested a less diversified portfolio was reasonable using the information that was available at the time.
- **Anchoring Bias:** Human nature and popular narratives often assume that recent trends will persist. Language that describes performance in the present tense (e.g., the market is going up) is one example of this behavior. This recent information anchors all other decisions, unjustifiably. To counteract this bias, investors should keep in mind the disclaimer "Past performance is no guarantee of future results".
- **Recency Bias:** It is more comfortable for investors to focus on and continue to hold their "winners" rather than their "losers". Change happens. Ignoring that leads to unwise decisions. Instead, focus on how an investment fits within the aggregate portfolio's performance, rather than on individual asset classes, and asking "what if?"
- **Confirmation Bias:** Investors may steadfastly hold investments with which they are familiar and conform to their understanding, even if it results in a more concentrated portfolio. The solution here is to learn about less familiar, but potentially diversifying investments. Also, focus on the portfolio, not the individual investments.
- **Blind Spot Bias**: Successful investing requires examination of one's own decision-making process. There will always be another portfolio that had superior performance, even over longer periods. Was it the decision or the result? Overcoming this bias requires accepting that investing will sometimes result in poor returns, even with the most robust investment process.
- **Bandwagon Effect:** There is comfort in being like the crowd—everyone believes it, so it must be true—even if it sacrifices potential opportunities to diversify. Instead, perform your own analysis. If you want to use the crowd, examine their portfolios to understand the factors that lead them to position their portfolios the way they do. Then, ask if their models are "reasonable", or if they used unrealistic inputs. Also, ask if any other investors face constraints or have objectives that do not apply to you.

## Solutions

The way to maintain diversification after it detracts from performance (in other words, avoiding buyer's remorse) is to focus on the rationale behind the decision to diversify. Institutional investors' goal is to decrease the portfolio's risk without reducing expected return.

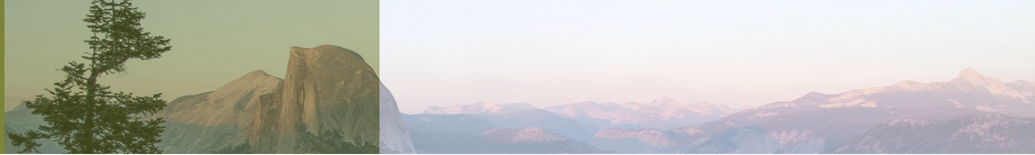
Behaviors that help include:

- **Maintain a long-term perspective** Shorter-term market returns are forecastable by few, if any, investors. Ask yourself frankly if you have that skill. If not, you must accept the volatility that comes with achieving your long-term objectives.
- **Investment decisions should be forward-looking** Construct your portfolio using your forecasts of the likely distributions of future returns. Recent returns tell us little, if anything, about them.
- **Do not chase returns** Resist the urge to sell recent losers and buy recent winners. In the near-to medium term, risky assets' prices move because of news, and how investors react to the news. Chasing returns implicitly assumes that investors underreact. In practice, investors are just as likely to overreact.
- **Have realistic expectations** Accept that some assets will underperform. If everything in the portfolio performed well, the portfolio may not be well-diversified.
- **Be realistic about your forecasting ability** Holding a concentrated or poorly diversified portfolio implicitly assumes that your portfolio's holdings have materially higher expected returns than the investments you excluded. How confident are you in your forecasts of the relative returns? How confident are you in your ability to make such forecasts?
- **Discipline and patience** Remember why you chose to hold a diversified portfolio. It wasn't to achieve that highest return. It was to achieve your target return at the lowest risk.

## Summary

Diversification is a crucial component of risk management within portfolio construction. Not as a promise of higher returns, but to improve risk management. If diversification resulted in lower exposure to assets that outperformed, it does not necessarily indicate an investment's failure. Rather, one must acknowledge that sometimes good decisions still result in poor outcomes.

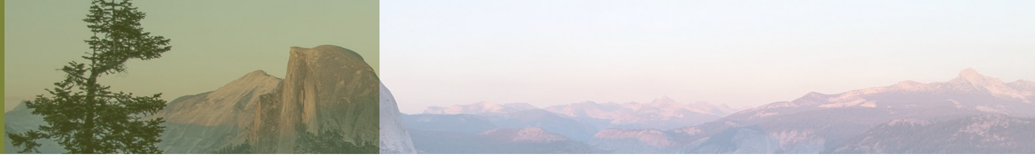
Investors should make themselves aware of behaviors such as regret, hindsight bias and recency bias that can tempt them to abandon diversification after a poor outcome. Instead, they should maintain a long-term perspective and base their decisions on forecasts of risks and returns rather than past performance. They should have realistic expectations, stay disciplined and patient, and focus on risk management over return maximization.



## Appendix – Types of Diversification

This appendix illustrates the types of diversification available to investors.[3] Note that in some of the examples the assets have different expected returns, so the choice to hold both is not just a question of diversification. An asset allocation study is required to understand if the asset is truly diversifying , and how allocating to it might improve the portfolio.

- Asset Classes: Stocks, Bonds, Real Estate, Infrastructure, …
- Stocks: US, Developed International, (Emerging and frontier markets are more about return seeking than diversification. Country-specific allocations also tend to be more tactically focused.)
- Stock Styles: Growth vs Value, Large vs Small-Cap, …
- Investment Grade Bonds: US Treasuries, Agencies, Corporates, Asset Backed, Mortgages, …
- Less than Investment Grade Bonds: Corporate High Yield, Syndicated Loans, Emerging Markets, …
- Real Estate: Region, Property Type (Office, Industrial, Retail, Multi-Family, Timber, Farmland, …)
- Active Equity: Fundamental vs Quant, Growth vs GARP vs Value, …
- Active Fixed Income: Credit Analysis vs Macro (Sectors, Yield Curve, Quality)



## Endnotes

1. In this context the “eggs” may be asset classes, countries, economic sectors, investment styles, or individual investment managers.
2. Note that some describe low-risk assets as diversifying. While holding them reduces portfolio risk, it is not via diversification. Diversification reduces risk by creating a portfolio of risky assets with low correlations.
3. Note that the opportunities listed are available to asset owners and asset allocators. Portfolio managers would focus on different dimensions.

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