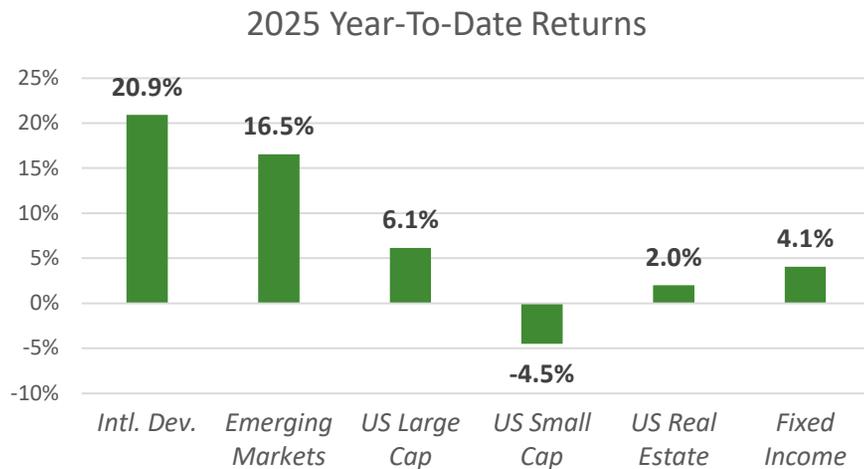


What Is Modern Portfolio Theory?

The first half of 2025 has truly been a tale of two markets. For US stocks, it has been a period of extreme volatility, driven primarily by uncertainty around tariffs and trade policy. For non-US stocks, it has been a tremendous start to the year, with gains driven by a falling US Dollar and an unleashing of international fiscal and monetary stimulus. The following chart shows the performance of various asset classes thus far.



Source: Morningstar

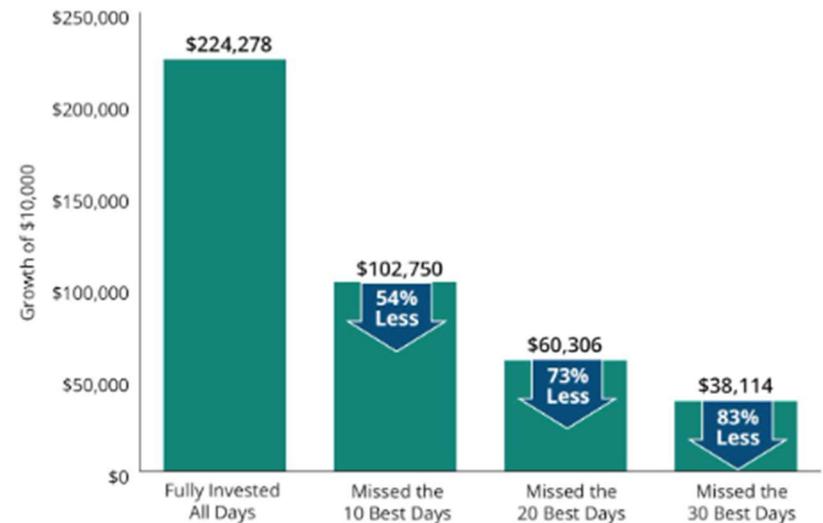
After several years of US equity outperformance, this chart is a compelling reminder of the importance of diversification. While that term is thrown around often, building a properly diversified portfolio is anything but simple. In the 1960's, a few economists from the University of Chicago won a Nobel Prize in Economics for developing the foundation of what we now call "Modern Portfolio Theory (MPT)". In a nutshell, MPT is the study of long-term investing, and how to build a portfolio that can maximize long-term, risk-adjusted returns. This quarter we will delve into the core tenets of Modern Portfolio Theory and what its teachings mean for our own portfolios.

One of the first and most important conclusions of MPT is that long-term investors should not be stock pickers. It is very difficult to pick individual stocks and consistently outperform the market. In the infamous words of Vanguard's founder Jack Bogle, "the average can't beat the average", citing a mathematic certainty that the average investor can't beat the average of the market – which means that any attempt to do so increases portfolio risk more than it increases returns.

Furthermore, long-term investors should not be market-timers. It is very difficult to consistently predict the correct day, week, month, or even year to sell and get out of the market. What's more, the attempt to do so adds much more risk to the portfolio than one might assume. The following chart shows the consequences of guessing wrong even just slightly.

Missing the Market's Best Days Has Been Costly

S&P 500 Index Average Annual Total Returns: 1995–2024



Source: Visual Capitalist; JP Morgan

We all generally understand the importance of diversification as a way to minimize downside risk – not putting all your eggs in one basket, so to speak. This is called “concentration risk”, and we can mitigate this risk by spreading a portfolio out among a wide number of diverse holdings. What MPT demonstrates is that diversification at a more macro level can also boost long-term portfolio growth.

Humans have a strong tendency towards recency bias, which for investing purposes means believing that whatever has had the best recent performance will likely have the best future performance. This is rarely true – in fact the opposite is often true. Diversifying a portfolio at the macro level among various global asset classes ensures at least some exposure to the strongest performing areas of the market and eliminates the risk of having exposure only to weaker performing areas of the market. The following chart shows how various global asset classes have performed over 5-year intervals in recent decades, going back as far as we have valid data.

2000 - 2004	2005 - 2009	2010 - 2014	2015 - 2019	2020 - 2024	2025
US Small Cap 29.1%	Emerging Markets 109.0%	US Small Cap 92.6%	US Large Cap 57.6%	US Large Cap 81.9%	International Developed 20.9%
Emerging Markets 25.2%	International Developed 22%	US Large Cap 82.8%	US Small Cap 38.5%	US Small Cap 33.8%	Emerging Markets 16.5%
International Developed (-4.0%)	US Small Cap (-3.6%)	International Developed 32.6%	International Developed 35.0%	International Developed 29.1%	US Large Cap 6.1%
US Large Cap (-17.5%)	US Large Cap (-7.0%)	Emerging Markets 11.0%	Emerging Markets 33.9%	Emerging Markets 11.0%	US Small Cap (-4.5%)

Source: Yahoo Finance; MSCI; Cumulative Returns; Price Return

As the previous chart shows, winners and losers among global stock markets shift regularly, and MPT demonstrates the value of diversifying among all asset classes.

There is an added benefit to diversifying among global asset classes: imperfect correlations. Not only do global asset classes often change their order of returns, they also often do not move up and down in lock step with each other. This creates an opportunity for a diversified portfolio to perform better than the sum of its component parts.

For example, let us imagine a portfolio comprised of two investments that have totally different returns in any given year, but both annualize exactly 10% in the long term. Mathematically, allocating 50% to each of those investments and holding them for the entire time will give us a 10% annual return as well. However, because the pattern of returns is different, we can rebalance them back to their original 50% target allocation annually.

Year	Investment A	Investment B	Portfolio Value (Without Rebalancing)	Portfolio Value (Annual Rebalancing)
0	\$500,000	\$500,000	\$1,000,000	\$1,000,000
1	-3%	38%	\$1,178,000	\$1,178,000
2	10%	4%	\$1,254,906	\$1,261,638
3	26%	-21%	\$1,241,920	\$1,290,656
4	34%	0%	\$1,469,250	\$1,507,486
5	-9%	24%	\$1,522,802	\$1,621,301
6	8%	25%	\$1,757,769	\$1,882,330
7	32%	-7%	\$1,979,691	\$2,118,563
8	17%	19%	\$2,324,272	\$2,491,430
9	16%	9%	\$2,628,631	\$2,801,613
10	-26%	22%	\$2,450,050	\$2,745,581
11	20%	12%	\$2,830,357	\$3,176,637
12	12%	10%	\$3,136,998	\$3,521,302
Annualized Return	10%	10%	10%	11%

In this example, the rebalanced portfolio outperforms its underlying investments by 1% per year due to the low correlation of those underlying investments. MPT provides the mathematical framework on how to use correlations across multiple asset classes to boost the performance of a portfolio beyond the performance of its individual parts.

In summary, Modern Portfolio Theory gives empirical evidence and mathematical backing for optimizing risk-adjusted returns. These concepts drive our portfolio construction process, and the first half of this year is serving as a compelling reminder of why that process is so important.

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