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5 myths about diversifying investments

Although a commonly used term, diversification is often misunderstood, even by traders

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Most people have probably heard of the adage: "Do not put all your eggs in the same basket". Applied to investments, it advises that you should not invest all your money into a single security.

This seems like a very intuitive way to invest. Moreover, it seems that spreading your portfolio around more securities would reduce the probability that you lose most of your wealth. But yet, extensive academic research on individual investors consistently finds that the average number of stocks held in a trading account is less than 10. Although a commonly used term, diversification is often misunderstood, even among successful traders. In this article, we discuss five common fallacies about diversification.

1. Investing in more assets always leads to more diversification

It might seem logical to think that as long as an investor increases the number of unique assets in his portfolio, he would always get additional diversification benefits. However, whether additional assets provide diversification benefits depends crucially on whether they tend to move together – a concept called covariance.

Diversification benefits are larger for assets with low or negative covariance. In the latter case, when one asset goes up, another goes down. At first glance, this may seem like an inefficient way to invest since investments appear to cancel each other out. However, when one goes up, and the other goes down slightly, the average of both assets increases, and overall the portfolio can grow on a more steady path.

On the other hand, diversification benefits may be lower or even absent for highly correlated assets. Therefore, simply adding more stocks to your portfolio may not increase diversification if all the securities that are being added are extremely highly correlated.

Thus, it is more beneficial to own a limited amount of assets with contrary characteristics than many assets with similar properties, perhaps operating in the same sector or country, which tend to be more redundant in their price movements.

2. Investing in additional asset classes always leads to more diversification

A natural extrapolation from the previous point is then that investors should consider investing across multiple asset classes. This could be done by investing in currencies, bonds, or real estate – the latter through publicly traded Reits (real estate investment trusts). However, a similar intuition applies across asset classes just as it applies within asset classes. The diversification benefit will solely rely on how the additional asset classes tend to move together with the existing portfolio.

Suppose an investor holds stocks exclusively in his portfolio and decides to diversify by investing in a Reit. Although he would expect to have consequently diversified his portfolio, this is not exactly the case. In practice, stocks and Reits are closely moving together to a level comparable to how Apple and Microsoft shares do. It is therefore paramount for diversification purposes to evaluate the properties and similarities of the asset classes.

3. When facing two similar investment opportunities, investing in either is the same

Suppose someone presents you with two stocks to consider. Stock A is expected to generate 10 per cent returns with 20 per cent volatility. Stock B is also expected to generate 10 per cent returns with 20 per cent volatility. You might think investing in either stock is the same, so you might as well just flip a coin and pick one.

However, it turns out you can do better if you split your bet between the two. If the stocks do not always move together, it will make more sense to split your money in both. So let's forget stock investing for a minute and think about a simple example of coin flips.

Suppose you can bet $20 on a coin flip, where you get $100 if it is heads and lose $50 if it is tails. The expected payout is $25, corresponding to a return of 20 per cent on the $20 initial investment. In this case, there is a 50 per cent chance of losing the $50. Suppose you decide to flip two coins instead, with a $10 bet on each flip where you get $50 or lose $25. The expected payout hasn't changed, but the risk of losing $50 dropped to 25 per cent.

Hence, rather than picking between two investments, splitting your bets across more investments would lower the risk without affecting the returns.

4. A well-diversified portfolio is risk-free

Diversification benefits tend to reduce the portfolio's overall volatility, so we might think there is no risk remaining when maximally diversified. But it is not that simple. Even when maximally diversified, there is still some underlying fundamental level of risk that does not go away in practice.

Risk can be classified into two broad categories. The first one is called "idiosyncratic" risk. For instance, if the CEO of company X gets caught for tax evasion, this would impact company X's stock price. However, this event does not have the same implications for other stocks' prices aside from the one considered. This type of risk is, therefore, a stock-level risk and can be eliminated through diversification.

The second risk is called "systematic" or, in other words, "undiversifiable" risk. It represents the risk associated with the underlying positive covariance across many securities. On average, all risky things are somewhat positively correlated with one another. For stocks, we call the systematic risk "market risk."

The idea is that no matter how many different individual stocks you own, if the whole market is tanking, your portfolio will tank as well. In turn, systematic risk cannot be wiped out through diversification.

5. You cannot beat the market if you are diversified

You diversify your stock portfolio by owning multiple stocks, and the maximum number of stocks you can own is the overall number of stocks in the market. So it would seem natural to think that a well-diversified stock portfolio can never generate greater returns than the market. But the market has multiple sources of systematic returns, apart from just the market effects, which can generate outperformance.

Over five decades of research in empirical finance has shown that there are multiple sources of returns driving stock returns apart from the market. Therefore, a well-diversified and designed portfolio can leverage changes in different market forces, like the value (companies whose market value is less than its fundamental or book value) or momentum (buying stocks that have had high returns in the past and selling the underperforming ones) investing themes without being exposed to idiosyncratic stock-level risk.

Thus, diversification and systematic return drivers are the foundations upon which all quantitative investing is built.

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