# How to compare investments using meaningful risk metrics

When you compare investments, looking at returns alone can be misleading. Two assets might deliver similar gains over a year, yet one may have exposed you to far more volatility along the way. The question is: which risk metrics actually help you tell the difference? The answer depends on what kind of risk matters most to you.

Risk is not a single number. It can mean the chance of a sudden loss, the size of a temporary decline, or how much an investment moves in step with the broader market. Each of these dimensions tells you something different about an investment's behaviour. To compare investments fairly, you need to look at several metrics together rather than relying on one.




## Volatility and standard deviation

The most common starting point is volatility, usually measured as standard deviation of returns. This tells you how much an investment's returns have varied from its average over a given period. A higher standard deviation means wider swings in price, both up and down. For

a long-term investor, a bit of volatility is normal. But if you need to sell at short notice, high volatility can turn into real losses.

When comparing two investments, standard deviation gives you a sense of which one has been more erratic. However, it treats upside and downside moves the same way. Most investors care more about downside volatility - the size and frequency of losses - than they do about upside spikes. That is where other metrics come in.

## Maximum drawdown

Maximum drawdown measures the largest peak-to-trough decline an investment has experienced over a specific time frame. Unlike standard deviation, it focuses purely on losses. If an investment dropped 40 percent during a market crash and then recovered, its maximum drawdown is 40 percent. Comparing this figure across assets helps you see which ones have been more resilient during stressful periods.

A low maximum drawdown does not guarantee future safety, but it does suggest that the investment has historically held up better in downturns. That can be useful when you are deciding between a growth stock and a diversified fund, for instance. The fund may have a lower maximum drawdown because it spreads risk across many holdings.



## Beta and correlation

Beta measures an investment's sensitivity to movements in a benchmark index, usually the S&P 500. A beta of 1.2 means the investment has historically moved 20 percent more than the index on average. A beta below 1 means it has been less reactive. Beta is useful when you

want to know how much market risk an investment carries. But it has limits: it only captures linear relationships and can be misleading during unusual market conditions.

Correlation goes a step further. It tells you how closely an investment's returns move in relation to another asset or the market as a whole. A correlation of +1 means they move in perfect lockstep. A correlation of zero means no relationship. Negative correlation means they tend to move in opposite directions. When building a portfolio, you want assets that are not perfectly correlated with each other. That way, when one falls, another may hold steady or rise.

## Risk-adjusted return metrics

Raw returns say nothing about the risk taken to achieve them. That is why risk-adjusted return metrics exist. The Sharpe ratio, for example, divides an investment's excess return (over a risk-free rate) by its standard deviation. A higher Sharpe ratio means you got more return per unit of risk. This makes it possible to compare a high-volatility stock with a low-volatility bond on a more equal footing.

Another common metric is the Sortino ratio, which uses downside deviation instead of total standard deviation. It penalises only the bad volatility, not the good. For many investors, the Sortino ratio feels more relevant because it focuses on the risk that actually hurts returns. These metrics are especially useful when you are choosing between funds that have similar performance records but very different risk profiles.

## Sector exposure and portfolio weighting

Risk is not just about how an investment behaves on its own. It also depends on how it fits with everything else you own. Sector exposure tells you which industries an investment is concentrated in. If you already hold a lot of technology stocks, adding another tech-heavy fund increases your sector risk, even if the fund itself has low volatility. Similarly, portfolio weighting matters. A small holding in a volatile stock may add less overall risk than a large holding in a stable one.

Understanding these factors helps you avoid accidental concentration. A common mistake is to think diversification is achieved simply by owning many investments. In reality, if all those investments are correlated and exposed to the same sectors, the diversification benefit is minimal.



## Tools for evaluating risk in practice

To apply these metrics, you need good data and a way to compare them side by side. Many investors use a risk analytics platform that pulls together standard deviation, beta, maximum drawdown, Sharpe ratio, and correlation data in one place. This saves time and reduces the chance of cherry-picking a single metric that makes an investment look safer than it is. A proper platform also lets you slice the data by time period, so you can see how risk changed during bull and bear markets.

There are many tools for measuring investment risk available. Some are built into brokerage accounts, others come from independent research services. The key is to use more than one metric and to understand what each one is telling you. No single number can capture all the ways an investment might surprise you.

One practical approach is to start with volatility and maximum drawdown to get a sense of an investment's historical behaviour. Then check its beta and correlation to see how it interacts with the market and with your existing holdings. Finally, look at risk-adjusted returns to decide

whether the potential reward justifies the risk you are taking. This sequence gives you a rounded picture without drowning you in data.

Timing also matters. Risk metrics calculated over a full market cycle - including both booms and crashes - are more informative than those based on a short period. A fund that looks calm during a bull market may show its true volatility only when conditions turn. Always check the longest available time frame that is relevant to your holding period.

Another consideration is that past risk does not predict future risk with certainty. Markets change, correlations shift, and a company's fundamentals can deteriorate quickly. Risk metrics are a guide, not a guarantee. Use them to form a baseline expectation, but stay alert to new information that might change the picture.

When you compare investments side by side, remember that lower risk often comes with lower return potential. The goal is not to eliminate risk but to take it in a way that matches your tolerance and time horizon. A young investor saving for retirement may accept higher volatility for greater long-term growth. A retiree drawing income may prioritise low drawdown and steady returns. The same set of risk metrics can serve both, but the weight you give each one will differ.




Finally, be wary of metrics that look too good. An investment with an exceptionally high Sharpe ratio and very low volatility may be using leverage or derivatives in ways that introduce hidden

risks. Always dig into the underlying data and understand how the numbers are calculated. The best **tools for measuring investment risk** are those that let you see the full picture, not just the flattering parts.

Comparing investments on risk is not about finding a single perfect number. It is about understanding the trade-offs and making informed choices. With the right metrics and a clear sense of what matters to you, the process becomes straightforward and far more reliable than relying on returns alone.