InvesTips

Rebalancing an investment portfolio – what, why, how and when?

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WS Global CIO Office

At Standard Chartered, we believe that asset allocation – which takes into account an investor's risk tolerance, time horizon, and investment objectives – is the most important first step in the portfolio construction process. Rebalancing is a simple, yet crucial, tool to improve the chances of long term investment success.

"If asset allocation is the compass that can help guide investors to stay the course in their investment journey, rebalancing is the process of regularly adjusting the magnetized needles so that the compass always points to true north, despite all the turbulence and obstacles along the way."

What is portfolio rebalancing?

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Rebalancing is the process of purchasing and selling portions of a portfolio in order to set the weight of each asset class back to the target percentages established in your investment plan. The need to rebalance arises from the uneven performance of different investments under various market and economic conditions.

Alternatively, if an investor's investment strategy or risk tolerance level has changed, rebalancing can also be used to reflect the new desired mix of asset classes or securities. Ideally, this should be done in response to a change in personal financial circumstances rather than as a reaction to recent market performance.

Why is it important to rebalance your portfolio regularly?

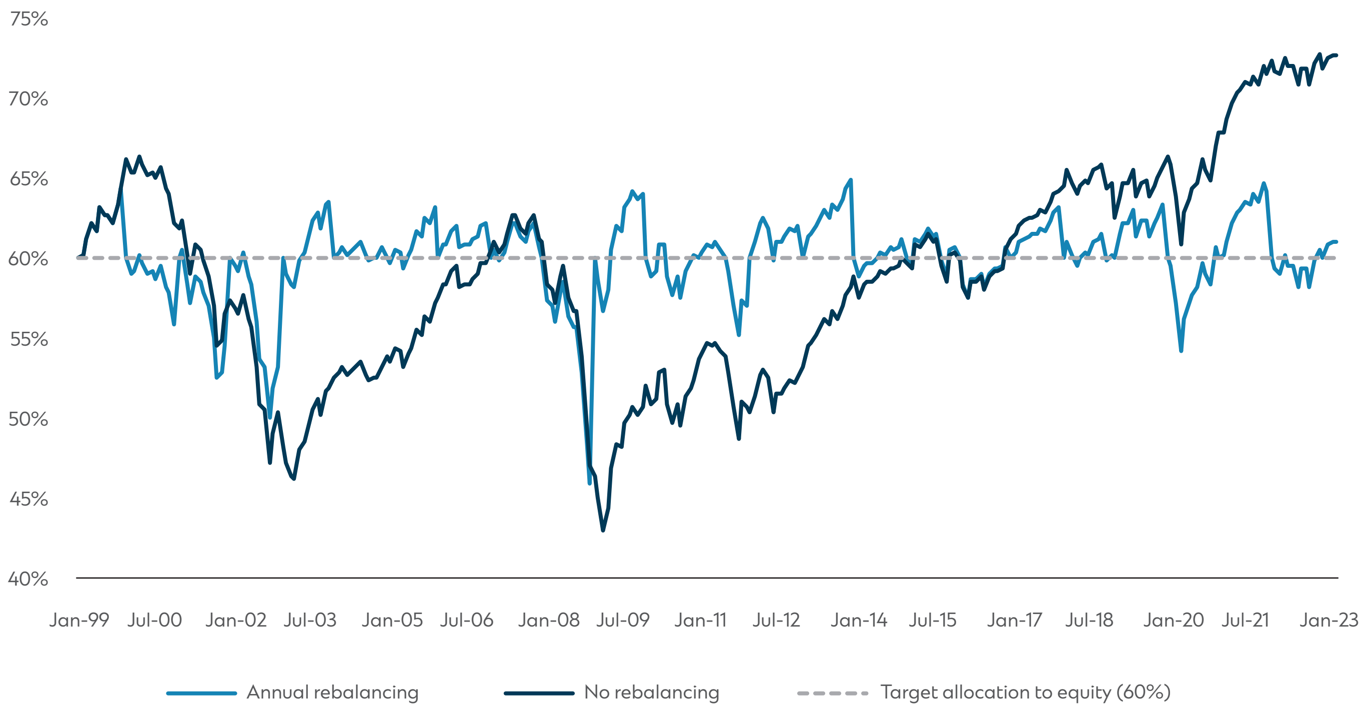
Maintain the intended asset allocation

When investors select an asset allocation, they choose a mix of assets that is expected to produce returns to help them meet their financial goals with a level of risk they can tolerate. Over time, this allocation will drift away from the intended targets – with the weight of the better-performing, and often riskier, assets increasing. The resulting allocation will alter the forward-looking expected return and risk profile of the portfolio. Rebalancing plays an important role in ensuring the portfolio realigns to the intended risk and return profile.

For instance, as shown in the chart below, a portfolio with target weights of 60% global equities at the end of 1999 would have had close to 75% in equities at the end of 2022 - in stark contrast to an annually rebalanced portfolio.

Allocation drift can be very significant, especially over multi-year time horizons

Equity allocation in a non-rebalanced versus an annually rebalanced portfolio*

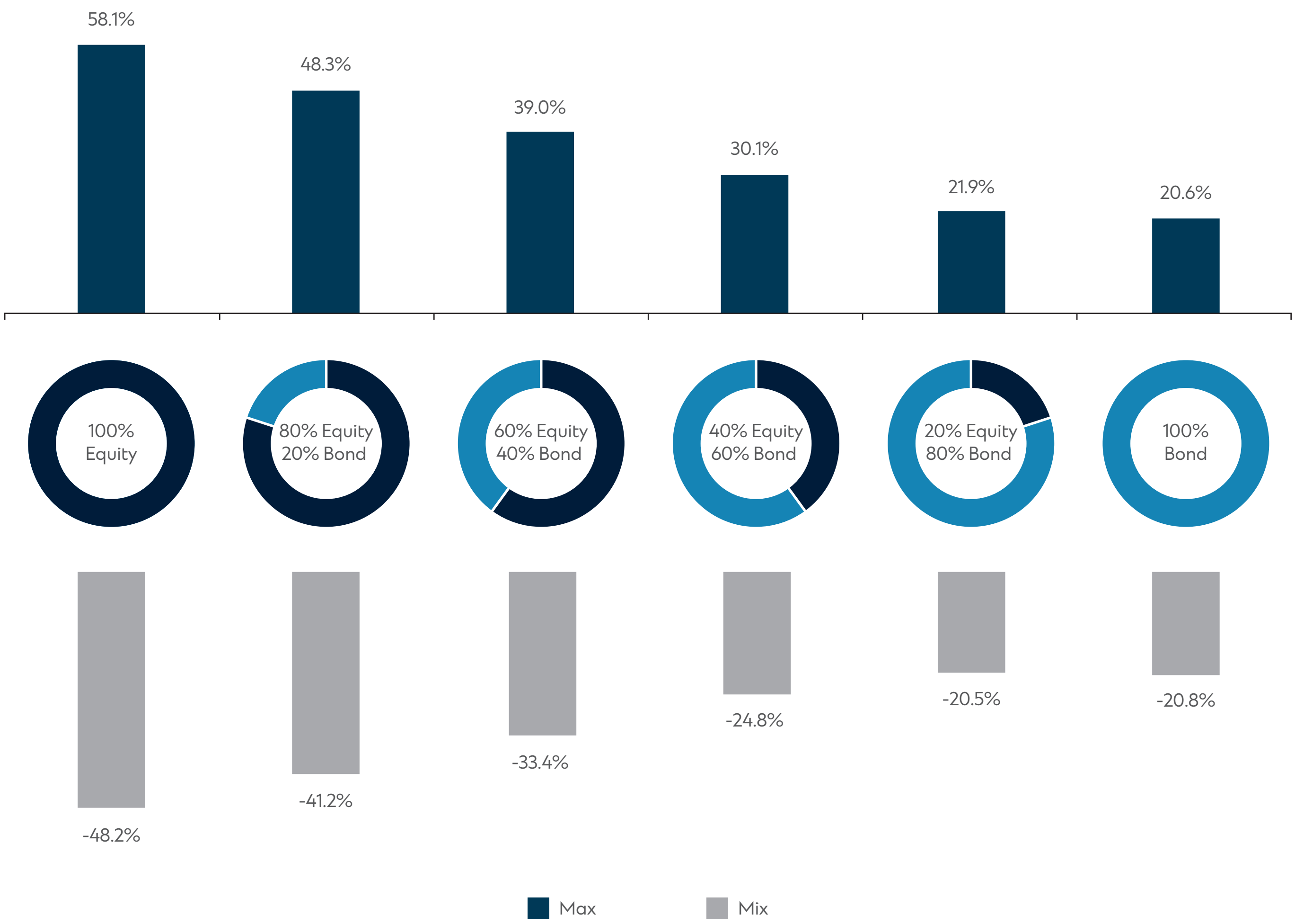


*A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds.
Source: Bloomberg, Standard Chartered

When a portfolio's asset allocation changes from lower risk profile (more bonds, less equity) to higher risk profile (less bonds, more equity), the risk of misalignment between portfolio risk and investor's risk tolerance increases. During periods of heightened volatility, this misalignment can cause painful experiences for investors. For example, without any rebalancing, an investor who can only tolerate a potential loss of 33.4% could experience a financial loss up to 41.2% from their investment if market conditions worsen.

The portfolio's asset allocation defines the spectrum of risks

Min/max ranges of 12-month returns from various asset allocation mixes of a balanced portfolio* (Jan 1999 to Feb 2023)



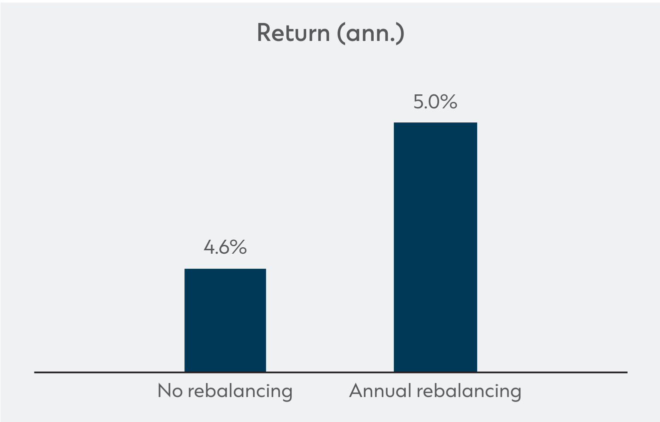
*A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds.
Source: Bloomberg, Standard Chartered

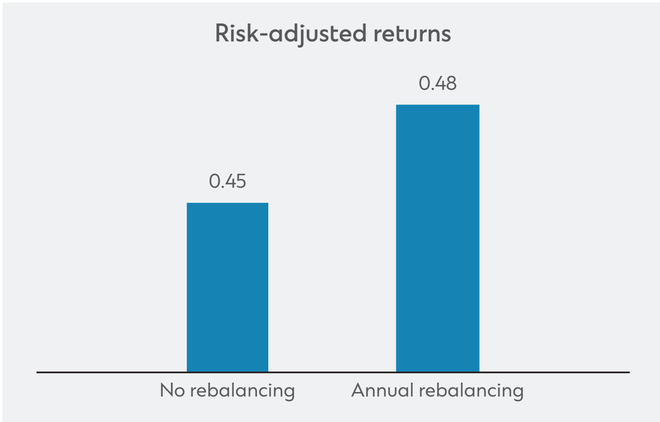
Improve return potential over the long run

The primary purpose of rebalancing is to manage risk and help an investor stay invested through the economic cycle. However, it can enhance long term returns as well, as rebalancing will encourage investors to consistently sell assets that have outperformed and redirect the proceeds to assets that have underperformed. Assuming a tendency of asset valuations to mean-revert, this can help bolster expected returns over the long run. Our analysis shows that, historically, a rebalanced portfolio (60% in global equities and 40% in global bonds) can enjoy higher absolute returns as well as risk-adjusted returns.

Rebalancing proved to be beneficial for investors over the long term

Various performance statistics of a non-rebalanced versus annually rebalanced portfolio*
(Jan 1999 to Feb 2023)





*A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds.
Source: Bloomberg, Standard Chartered

A simple tool to remove emotion from the complex investment process

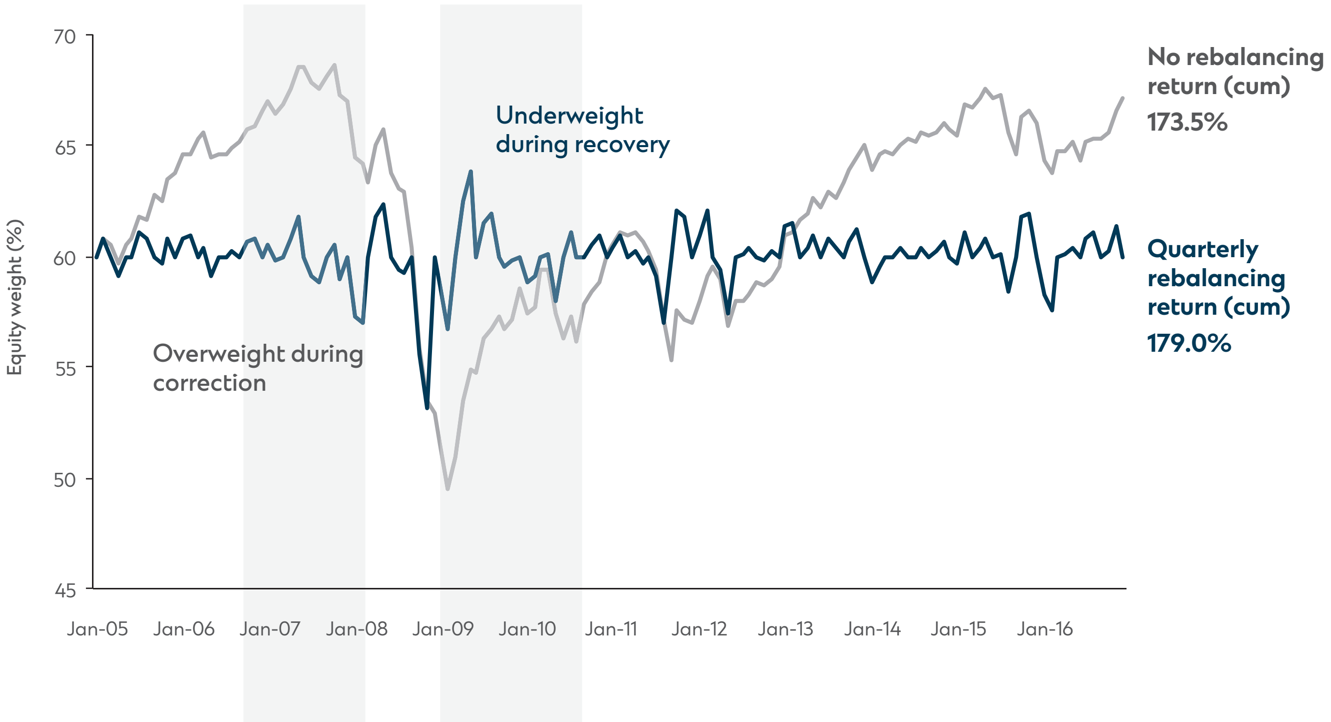
Investor emotions are a crucial yet often overlooked factor in investment plans. Rebalancing can be used as a discipline and emotional control in volatile markets.

The chart below shows how the equity allocations in both a rebalanced portfolio and a non-rebalanced portfolio change over time – from the period leading up to and several years after the global financial crisis. In this case, investors who didn't rebalance might have enjoyed success in the run-up to the crisis, but would have found themselves overallocated to equities during the correction, precisely when being overexposed would have hurt them the most.

Similarly, without a consistent rule-based approach to rebalance, their portfolios would have been underinvested into equities during the recovery. This is usually the case because, at the bottom of the crisis, many investors tend to be bearish and lack the confidence to rebalance toward equities after experiences prior painful losses. To quantify this opportunity cost, we measured performance of these two hypothetical portfolios. The results show that the non-rebalanced portfolio's return would have trailed that of the rebalanced portfolio by 5.5 percentage points over the course of 10 years.

Rebalancing as a simple tool to remove emotion from investment decision process

Hypothetical equity weights in a buy-and-hold portfolio versus a quarterly rebalanced portfolio*



*A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds.
Source: Bloomberg, Standard Chartered

How and when does rebalancing work?

When it comes to rebalancing, there are two main methods for investors to choose from - calendar-based and threshold-based.

Calendar-based rebalancing

This is a simple and easy method to implement. In this approach, investors to choose a frequency to rebalance portfolio exposures back to the target asset allocation. Common choices of frequency are monthly, quarterly, semi-annual and annual.

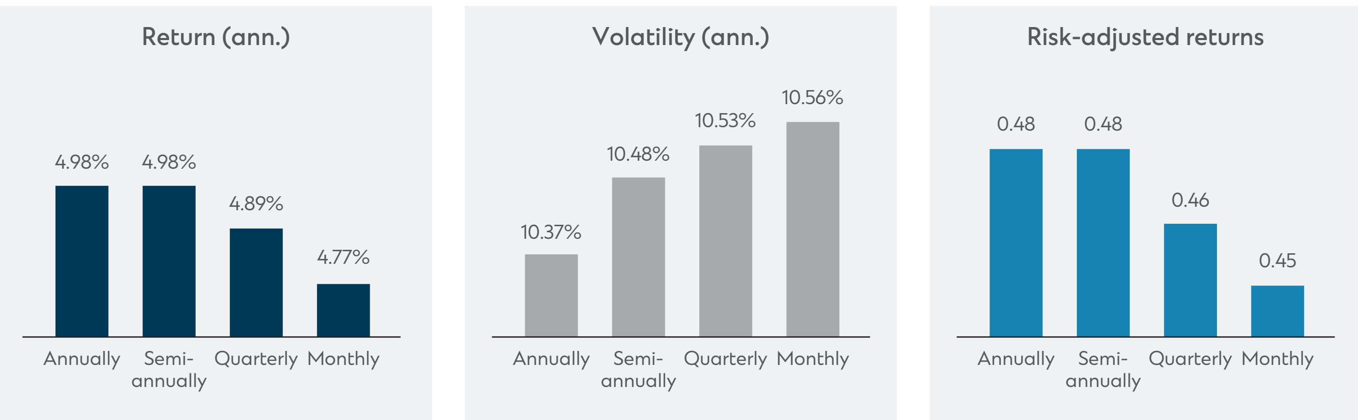
From our analysis looking at various performance statistics when implementing different calendar-based rebalancing rules, three observations emerge:

1. Annually rebalancing has been most optimal for a balanced portfolio. This is evident in highest total return, lowest risk and hence, higher risk-adjusted return from this rule when compared with others;
2. There are little differences in term of portfolio returns when choosing between annually versus semi-annually rebalancing. However, historically, a semi-annually rebalancing rule appears to experience higher volatility;
3. Monthly rebalancing, perhaps, is not only the most costly option in real life, but the risk/return trade off offered by this approach also seems to be the least attractive.

Additionally, it is worth nothing that while too-frequent rebalancing can lead to higher transaction costs and incur (in some countries) larger tax implications (which are not factored into the analysis above), rebalancing too infrequently or following no-rebalancing strategy can cause the portfolios to drift too far from the target allocation over time, resulting in a disconnect with the investor's risk tolerance.

Annually rebalancing approach proved to be the most optimal for a balanced portfolio

Historical returns, volatilities and risk-adjusted returns of a balanced portfolio following different frequency based rebalancing rules (Jan 1999 to Feb 2023)



*A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds.
Source: Bloomberg, Standard Chartered

Threshold-based rebalancing

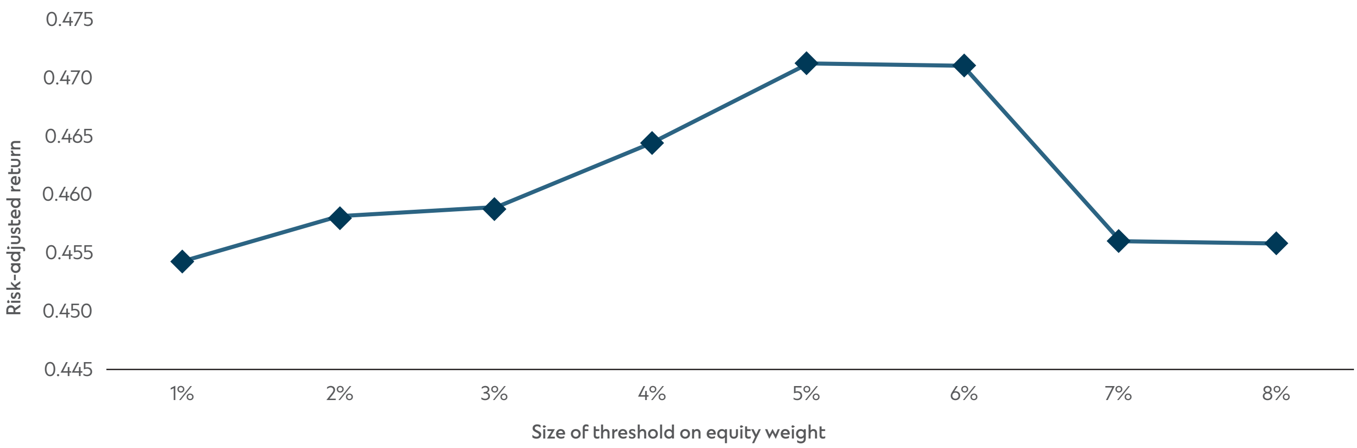
This method allows portfolio allocation to drift within a tolerance threshold, with rebalancing triggered only when the pre-determined threshold is breached. There is no one perfect rule to determine the size of threshold. Generally, this decision is made based on key considerations such as:

1. **the inherent volatility of underlying assets:** a high threshold for volatile assets can lead to large deviations from intended asset allocation. However, if the threshold is too low, rebalancing can be triggered frequently during volatile times, which implies potentially higher trading costs for the period.
2. **your risk tolerance:** risk averse investors tend to prefer smaller thresholds as it limits the risk of a disconnect between portfolio risk and potential loss what they are prepared to take.

One way to help evaluate different sizes of threshold to use is to compare risk-adjusted returns from the implementation of different threshold on the same portfolio. As shown in the chart below, the optimal threshold for rebalancing equity weights in a balanced portfolio (60% in equities and 40% in bonds) should be around 5%-6% for earning the most returns for any additional unit of risk taken.

The optimal threshold for rebalancing equity weights in a balanced portfolio should be around 5%-6%

Risk-adjusted returns of a balanced portfolio* using different thresholds for rebalancing equity weight (Jan 1999 to Feb 2023)



*A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds..
Source: Bloomberg, Standard Chartered

Should we rebalance during extended bear markets?

Put differently, the question to ask is whether we should sell bonds or any safe-haven assets and use the proceeds to purchase equities when poor performance reduces the equity exposure in the portfolio?

The good news is regular rebalancing should mean investors do not enter bear markets with a portfolio overconcentrated in risk assets, which should reduce the size of losses to some extent. The challenge is that the length and severity of bear markets can be very different, but this is very difficult to predict.

The short answer to the question posed is that we believe investors should use sharp equity sell-offs or bear markets to rebalance into equities. However, the choice of frequency or the size of threshold matters – not only for the potential loss during drawdown period, but also for the recovery that follows.

Looking at the historical performance of different rebalancing strategies during past crises (that lasted for more than a year), three important takeaways to note:

1. Annually rebalancing stands out as the optimal with the highest upside/downside ratio - the ratio of the average 12-month return during the recovery relative to the average drawdown during the bear market;
2. No rebalancing offers lower drawdowns during the crisis because of continued erosion of equity allocation as the equity markets fall. However, this also drives significant under-performance in the recovery;
3. The higher the threshold for rebalancing, the smaller the drawdown can be seen during corrections and the lower the potential gain during the recovery phase.

Historically, annually rebalancing rule has proved to be most efficient

Comparison of historical average drawdowns and subsequent 12-month returns of a balanced portfolio* using different rebalancing strategies (Jan 1999 to Feb 2023)

		Calendar-based			Threshold-based		
	No balancing	**Monthly**	**Quarterly**	**Annually**	**1.0%**	**5.0%**	**15.0%**
Average drawdown during bear markets	-29.70%	-31.60%	-30.98%	-29.92%	-31.54%	-30.84%	-30.09%
Average 12-month return into recovery	25.85%	29.98%	29.91%	29.66%	30.01%	30.12%	29.21%
Upside / downside ratio*	0.87	0.95	0.97	0.99	0.95	0.98	0.97

*Bear markets in scope are Dot.com bubble in 2000-2002 and Global Financial Crisis in 2007-2008. A balanced portfolio's target asset allocation is proxied by 60% in global equities and 40% in global bonds.
Source: Bloomberg, Standard Chartered

A strong investment foundation with the right asset allocation mix is undoubtedly crucial, however, successful investing requires investors to adhere to their investment plan despite changes in market conditions and economic environments.

Rebalancing can be an effective tool that helps investors achieve that by maintaining investment risk aligned with their tolerance level while encouraging the discipline to stay the course. That said, while the math is simple and the steps are straight-forward, rebalancing can be a hassle for an average investor to execute – buying/selling on multiple instruments with different trading costs and potentially in different platforms.

In such instances, investors can opt to build their foundation portfolio by investing into a well-diversified investment solution that offers similar long term risk/return profile so that all investment decisions including regular rebalancing can be done consistently and systematically at minimal cost and effort.

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