MEKETA

Alternative Betas

Market capitalization weighted indices have historically been the most widely used strategies to achieve passive exposure to equity markets or capture equity beta.[1] However, there are also strategies called alternative betas (or "smart betas") that, using different index construction methodologies, aim to provide a passive, systematic exposure to alternative sources of equity returns, or equity factors.

While alternative index methodologies for investing in other asset classes exist, this paper examines equity indices that have seen broader adoption among institutional investors. It focuses on equity indices, rather than the underlying factors, given that many investors choose to maintain their exposure to equity markets while implementing that exposure in a manner they hope will outperform equities in the long run.

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[1] Beta is a measure of a stock's or portfolio's volatility relative to the overall equity market. A beta equal to one is exactly as volatile as the market, while a beta greater than one is more volatile and vice-versa.

Key takeaways

→ Alternative beta strategies, also known as "smart betas," aim to provide passive, systematic exposure to alternative sources of equity returns or equity factors. These strategies typically include the value, momentum, low volatility, and quality factors.

→ Among the four primary US alternative beta strategies, the momentum and quality strategies generated annualized returns above the broad US equity market historically. Unsurprisingly, min volatility had the lowest annualized volatility, while momentum exhibited the highest volatility.

→ Providers of alternative beta strategies employ various weighting schemes when constructing their portfolios. These strategies are generally rules-based, facilitating easy implementation and replication. The choice of weighting scheme is dictated by investor requirements regarding risk, return, and governance. From a risk and return perspective, most weighting schemes can be adjusted to either maximize Sharpe or information ratios of the resulting portfolios, prioritizing return versus either absolute or benchmark-relative risk.

Background

Index funds and other passive equity strategies can be utilized to achieve very broad diversification with low management fees and low operating costs. For example, by owning an S&P 500 index fund, an investor can be assured that a portion of their portfolio will track the performance of the largest capitalization segment of the US domestic stock market cheaply and efficiently.

Although the first market capitalization equity index was introduced by Standard & Poor's in 1923, it is only in recent decades that capitalization weighted indices have been widely used by investors to implement portfolios, as opposed to simply measure their performance. As capitalization weighted portfolios have become more pervasive, investor attention has turned to similarly inexpensive and straightforward index approaches to achieve different return profiles or risk exposures. Alternatively weighted indices, also known as "alternative beta" or "smart beta" indices, have been utilized as one such alternative. These types of indices are constructed using different weighting methodologies besides market capitalization. They are often constructed with specific objectives such as targeting exposure to one or more risk factors (e.g., value, momentum, size, quality, etc.), lowering volatility, or reducing stock-specific risks.

Market cap weighted indices

Market capitalization weighting is the most important and most widely used method of index construction. Each stock is represented by its respective market cap, which is the number of shares outstanding multiplied by the share price.[2] Market cap weighted indices reflect the relative importance of companies in the stock market, where higher weights are assigned to the most valuable companies.

In a CAPM world,[3] the market cap weighted portfolio (often proxied by a market cap weighted index) is the most efficient portfolio (e.g., has the maximum Sharpe ratio) and could be combined with a risk-free asset to achieve the desired level of risk.

Furthermore, since market cap weighted indices of broad equity markets are consistent with a buy and hold strategy, there is no need to rebalance for corporate events like stock splits, only to reinvest dividends. They also satisfy most of the characteristics required of a good index or benchmark, which make them easy to replicate at low costs. Market cap weighted indices are comprehensive, investable, have objective construction rules, and exhibit low turnover.

However, market cap weighted indices have disadvantages, the main one being that more highly priced securities have a greater influence on the index,[4] which can result in a more highly concentrated portfolio.

[2] In practice, the market capitalization used to construct index portfolios is the amount of market capitalization readily available for trading (i.e., the "float-adjusted" market capitalization). The float-adjusted figures remove market capitalization attributable to insiders, governments, and other strategic investors and in some markets may also adjust for foreign ownership limitations and other market restrictions.

[3] The Capital Asset Pricing Model ("CAPM") helps to measure the systematic risk of a particular security by calculating the security's expected return given its level of risk relative to the overall market. The formula is as follows: Expected Return of the Stock = Risk Free Rate + [Beta * (Expected Return of Market − Risk free Rate)]

[4] One such example of stocks having an outsized influence over a market cap weighted index are the Magnificent 7 stocks in the Russell 3000 and S&P 500.

Alternative beta strategies

While there are many different kinds of alternative beta strategies, most of them are based on one or more of four primary "premia."[5] They are listed and described in the sections below.

Value

The value premium is one of the most widely recognized risk premia in the equity space. It has various definitions, but generally, it targets stocks that have low ratios of price to book value, price to earnings, price to cash flows, or other valuation-based metrics. In other words, it seeks to own stocks that are cheap, relative to the market, and essentially "bets" that they will outperform the higher priced stocks in the market.

Although the existence of this premium is generally well established, researchers and academics have debated the reasons for its existence. There are two main explanatory frameworks. The first, based on market efficiency, states that the value effect is a different source of risk premium in equities not explained by the market; put another way, there are common variations in the returns of value stocks that are not explained by the returns of the market. The second view, a more "behavioral" perspective, argues that investors consistently undervalue value stocks and overvalue growth stocks for several reasons, including overconfidence, extrapolation of past returns, etc.,[6] which gives value stocks more opportunity for appreciation than growth stocks when they revert to their "true" fundamental valuation.

The value premium is based on investing in a contrarian, or counterintuitive, way, as it targets stocks with depressed multiples (e.g., low P/E or low P/B) with the belief that mean reversion in the markets will deliver higher performance in the future. The nature of this contrarian strategy may present advantages in implementation because it aims to buy stocks that the market generally wants to sell (at depressed multiples) and sell stocks that the market wants to buy, which may lead to lower transaction costs through better execution.

Momentum

The momentum strategy seeks to take advantage of directional trends, or momentum, in the market. It involves buying prior stock "winners" and, if permitted, selling prior stock "losers," based on the assumption that the winners will continue to do well, and the losers will continue to do poorly. This is fundamentally different than the value strategy which evaluates stocks based on characteristics inherent to their company's accounting such as earnings, cash flows, and book value. Momentum is defined only in terms of price; it does not consider any other company specific characteristics. Although the time period referenced can vary, it ultimately reflects a bet that recent winners will keep winning, while recent losers will keep losing.

There is open debate about why momentum exists, and whether it should continue to exist in the future. Behavioral finance argues that momentum exists mostly due to behavioral shortcomings in investors such as herding, confirmation bias, and under-

[5] In this context, a premium refers to the additional return an investor expects to earn from non-traditional sources of risk beyond the typical risk premium associated with investing in the equity market.

[6] Overconfidence bias refers to when people overestimate their own abilities and knowledge when investing. The extrapolation of past returns bias refers to using past historical returns to predict future returns (i.e., assumes past trends/returns will continue in the future).

reaction to information,[7] which implies that prices take time to incorporate new information and thus a trend, or "momentum," is created. Traditional finance argues that momentum is yet another source of risk premium in equity that is not explained by the market. Another theory is that momentum may be considered compensation for taking on additional risk, as these strategies typically exhibit higher volatility. However, given that momentum is only determined by price movements, it is more difficult to construct a rational economic explanation for it. Nevertheless, academics and practitioners have found evidence of equity returns being explained by momentum across several time periods and different geographies, contributing to its validity as a differentiated source of return.[8]

Low volatility / minimum volatility

Low, or minimum, volatility[9] is an alternative beta not based on a formal equity return factor but rather defined as an anomaly that has been found empirically.[10] Finance theory is based on the relationship between return and risk. The premise is that to achieve higher returns one needs to take more risk and vice versa. According to the CAPM model, riskier stocks (as defined as high beta stocks) should have higher expected returns than less risky, or lower beta, stocks. However, the low volatility anomaly shows that, over long periods of time, low volatility (or low beta) portfolios have outperformed higher volatility (or higher beta) portfolios. In other words, these lower risk portfolios have achieved higher returns.

This anomaly contradicts CAPM and most basic tenets of modern finance theory, but behavioral finance and real-world market dynamics offer important insights into why this anomaly exists and why it may continue to exist in the future. The risk-return relationship that is held in CAPM is based on the fact that if an investor wants to take more risk, then they will lever their position by borrowing at the risk-free rate and investing the proceeds in the most efficient portfolio (i.e., the market portfolio). However, in reality, many investors are restricted from (or avoid) taking direct leverage, so to take more risk, they need to invest more in higher beta stocks. This causes lower risk, lower beta stocks to be undervalued relative to the high beta securities. The argument for why this anomaly is sustainable comes from a real-world limit to arbitrage.[11] If the market identified high beta stocks to be overvalued, the theoretical arbitrage that follows would be to short the overvalued stocks. In reality, most investors are also restricted from (or avoid) shorting, due to regulations, costs, or self-imposed constraints. Hence, high beta stocks remain overvalued with respect to low beta stocks, thus sustaining the anomaly.

Low volatility indices are similar to value indices in that they are strategies that can achieve lower costs and lower turnover when implemented compared to, for example, momentum indices.

Quality

The quality strategy targets stocks based on a perceived higher quality or profitability measure. It is based on the belief that higher-quality stocks will outperform lower-quality stocks over the long run. This is a well-established investment concept,

[7] Herding bias (i.e., "herd mentality") refers to when investors follow and copy what others are doing in the market, rather than conducting and following their own analysis. Confirmation bias refers to when investors seek out or only pay attention to information that supports their belief while disregarding information that contradicts it. Under-reaction bias refers to when investors fail to react (or do not react enough) to new information.

[8] Source: Tobias J. Moskowitz, Yaho Hua Ooi, and Lasse Heje Pedersen, 2012; "Time series momentum," Journal of Financial Economics: 104 (2012), pp. 228-250.

[9] Low volatility strategies target stocks with historically stable price movements, while minimum volatility strategies prioritize portfolios with the lowest expected volatility. For purposes of this paper, they are effectively the same.

[10] Source: Roger Clark, Harindra de Silva, and Steven Thorley, 2010; "Minimum Variance Portfolio Composition," Journal of Portfolio Management, Vol. 37, No. 2, pp. 31-45.

[11] Arbitrage is the practice of simultaneously buying an asset in one market and selling it in another in an effort to profit from the difference in price.

though there is no universal agreement on how to define it, thus making quality perhaps the most controversial of the four alternative beta strategies discussed here. Some investors define quality through quantitative profitability metrics such as ROE or ROIC, while others may define it by growth and stability of earnings or using leverage measures such as levels of debt in the balance sheet. Still other investors use subjective rather than objective measures for quality, such as market positioning, barriers to entry for the business or industry, or the recurring nature of a company's earnings.

Regardless of the definition used, the quality factor in equities has been an identifiable source of returns. From a fundamental standpoint, quality businesses are expected to be consistent performers in the long run with the ability to protect value better in economic downturns. Additionally, empirical studies have found that a quality factor has explained variability in the returns of equities not previously explained by other factors like value or momentum.[12]

[12] Source: Clifford Asness, Andrea Frazzini, and Lasse Heje Pedersen, 2014; "Quality Minus Junk,"

Comparison of alternative beta strategies

A comparison of the four primary US alternative beta strategies shows that since 1990, the momentum and quality strategies generated annualized returns above the broad US equity market (see figure 1). On the other hand, the min volatility strategy produced a notably lower standard deviation compared to the market and the three other strategies. Moreover, three of the four strategies produced superior risk-adjusted returns than the market, as characterized by their higher Sharpe ratio.

	Type	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
MSCI USA	Market Cap Weighted	10.7%	14.9%	0.52
MSCI USA Min Volatility	Low Volatility Index	10.1%	11.8%	0.60
MSCI USA Momentum	Momentum Index	13.2%	16.1%	0.63
MSCI USA Quality	Quality Index	12.2%	14.6%	0.63
MSCI USA Value Weighted	Value Index	10.4%	15.4%	0.49

FIGURE 1
Key Historical Metrics of US Alternative Beta Strategies

Source: InvestmentMetrics, as of December 31, 2024. For the period 1/1/1990 to 12/31/2024.

Note: Sharpe Ratio calculated by subtracting the monthly risk-free rate from the monthly return, then taking the annualized risk-free rate adjusted return for the entire period and dividing it by the annualized standard deviation for the same period.

Alternative beta strategies are not exclusive to the US, as they can be found globally. The four primary global ex US alternative beta strategies tell a very similar story to that of the US strategies (see figure 2). Since 2002, all four have outperformed the non-US equity market. Min volatility, again, had a notably lower standard deviation, and all four strategies had a superior Sharpe ratio.

	Type	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
MSCI ACWI ex USA	Market Cap Weighted	6.0%	16.8%	0.26
MSCI ACWI ex USA Min Volatility	Low Volatility Index	8.4%	11.6%	0.57
MSCI ACWI ex USA Momentum	Momentum Index	8.5%	16.3%	0.42
MSCI ACWI ex USA Quality	Quality Index	8.2%	16.1%	0.40
MSCI ACWI ex USA Value Weighted	Value Index	6.5%	18.0%	0.27

It is common for financial markets to move in cycles. This includes cyclicality in equity factors. For example, value and growth stocks have a century-long history of moving in cycles of relative outperformance. However, the length and depth of such cycles are impossible to accurately predict. Rotations in leadership can last for very long periods. One asset class or style can be the best performer for an extended period, such as a decade or longer, but it can also be the worst performer for an equally long period. This is evident in figures 3 and 4 below, which show how the different premia have followed different cycles of out- and under-performance relative to the traditional market.
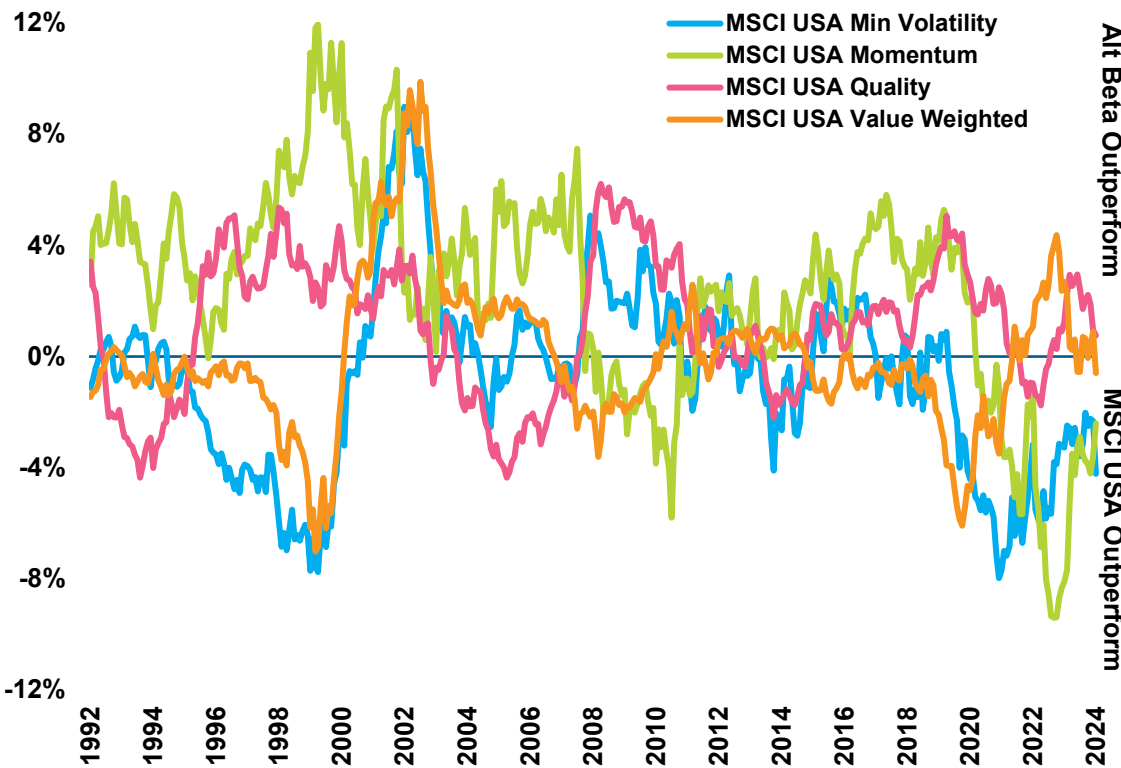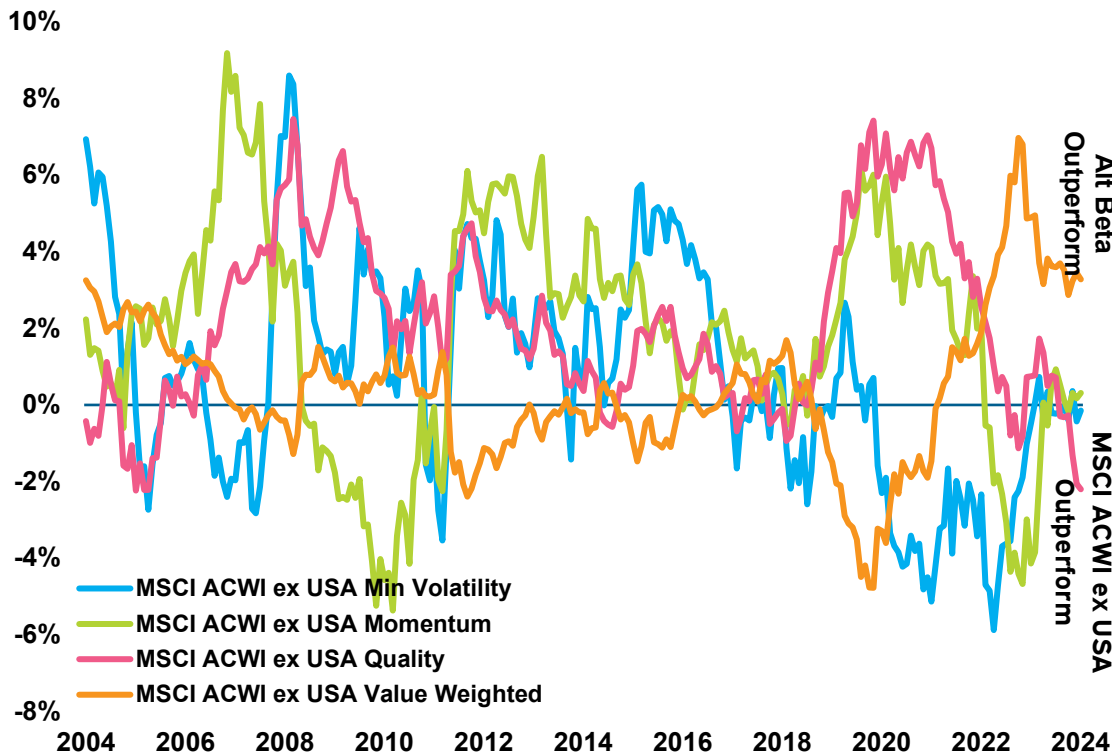
Historical volatility

When looking more closely at the volatility of the four alternative betas, we find that, unsurprisingly, the min volatility strategy has had the lowest annualized volatility for both the US and global ex US strategies. In terms of the highest volatility among US strategies, momentum was first followed by value weighted. This was similar for global ex US strategies where value weighted exhibited the highest volatility followed by momentum.

The volatility of the momentum index is perhaps unsurprising, as market inflection points can cause dramatic portfolio turnover and readjustments within momentum portfolios. More puzzling is the high volatility of the value index, which should presumably be composed of less levered, slower growing businesses than "growthier" equity portfolios. However, the value factor is generally regarded as being episodic, with compressed periods of very strong performance following market corrections accounting for much of the factor's outperformance over time.

	Annualized Standard Deviation		Annualized Standard Deviation
MSCI USA	14.9%	MSCI ACWI ex USA	16.8%
MSCI USA Min Volatility	11.8%	MSCI ACWI ex USA Min Volatility	11.6%
MSCI USA Quality	14.6%	MSCI ACWI ex USA Quality	16.1%
MSCI USA Value Weighted	15.4%	MSCI ACWI ex USA Momentum	16.3%
MSCI USA Momentum	16.1%	MSCI ACWI ex USA Value Weighted	18.0%

Historical drawdowns

The charts below (see figures 6 and 8) show the historical drawdowns of the alternative beta premia that were greater than -10%. To better visualize the drawdown differences, figures 7 and 9 display the drawdown for alt betas in excess of their respective market (e.g., MSCI USA Quality's drawdown return in excess of MSCI USA).[13]

Generally, both the US and global ex US alternative beta strategies followed similar trends during drawdowns. Min volatility was consistently the most protective strategy, though it was not always the highest returning. In other words, min volatility was not necessarily the best performer in every drawdown but was consistently one of the top performers during all types of drawdowns. Quality and value weighted have both been fairly protective during drawdowns, though value weighted has been less so in the global ex US market. Finally, momentum has not been consistent during drawdowns, underperforming the market during the 2008 GFC and recent rate hikes period in 2023 while outperforming in 2020.

[13] Note that because these are excess returns, a positive figure does not mean that the strategy generated a positive return. Instead, it simply means that the strategy performed better (or less bad) than the relative benchmark during that period.
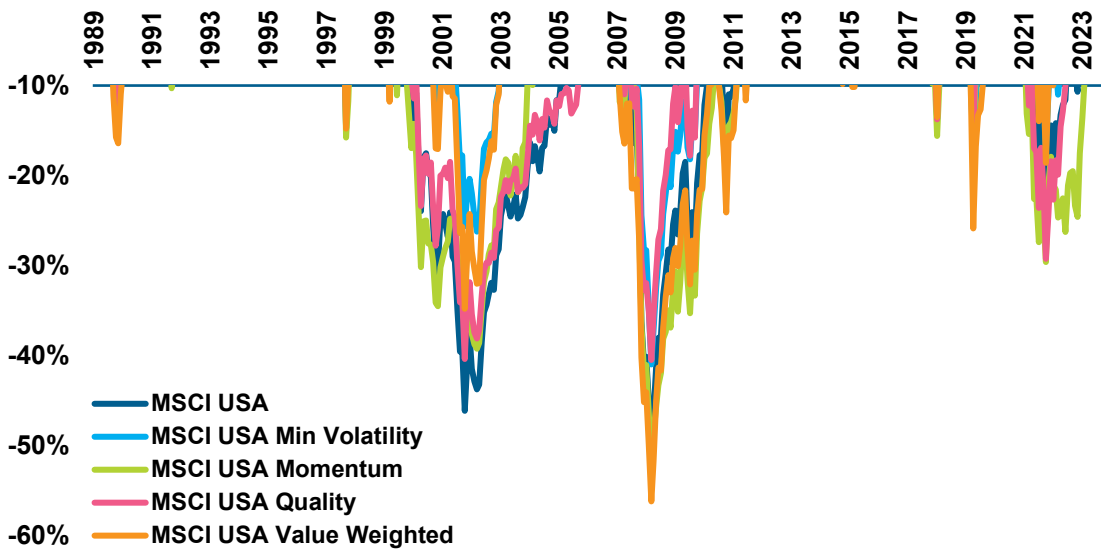

FIGURE 6
Drawdowns of US Alternative Beta More than -10%

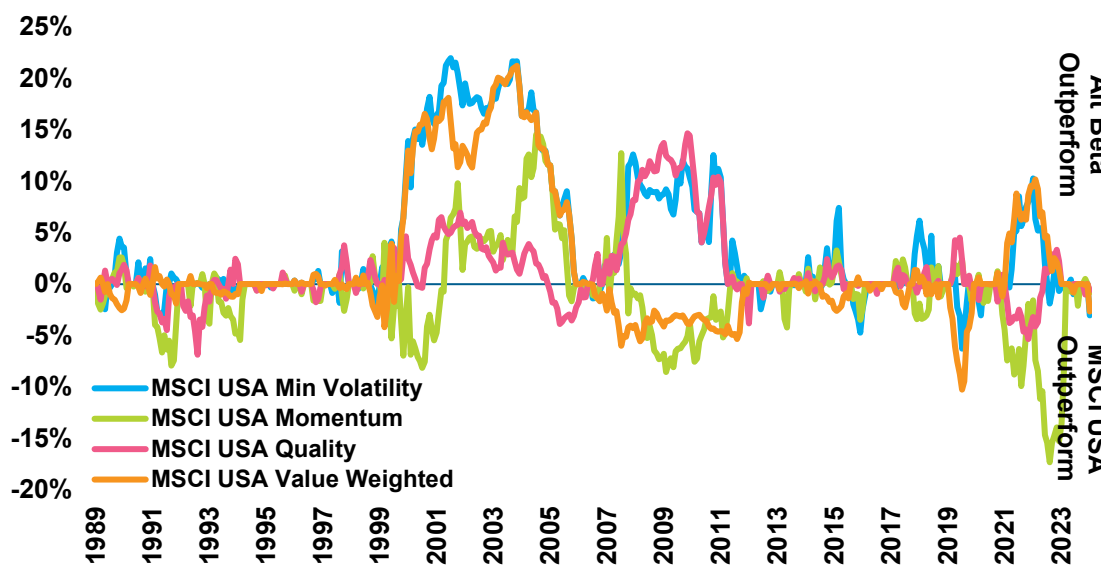Source: InvestmentMetrics, as of December 31, 2024.

FIGURE 7
Excess **Drawdown Returns of US Alternative Beta Relative to MSCI USA**
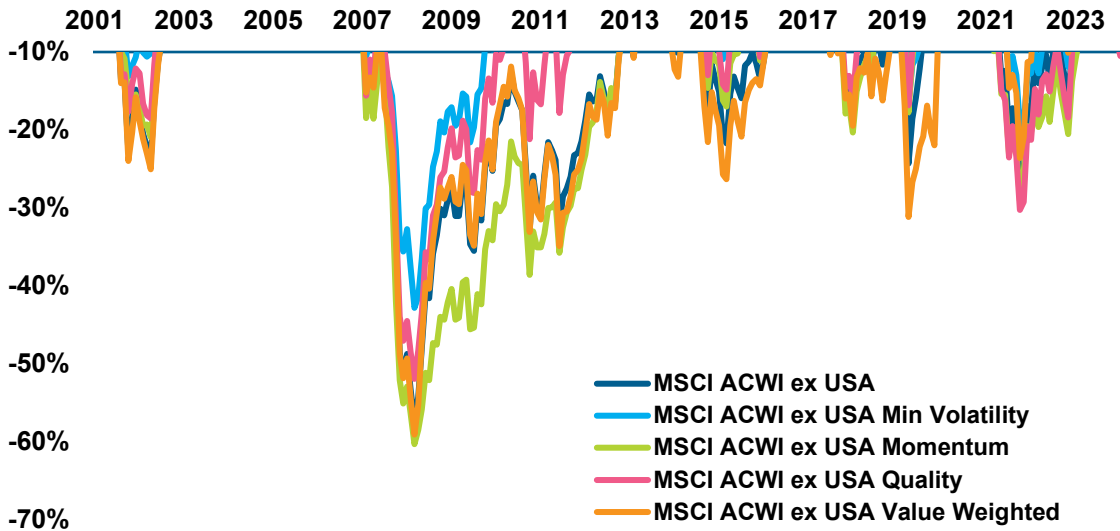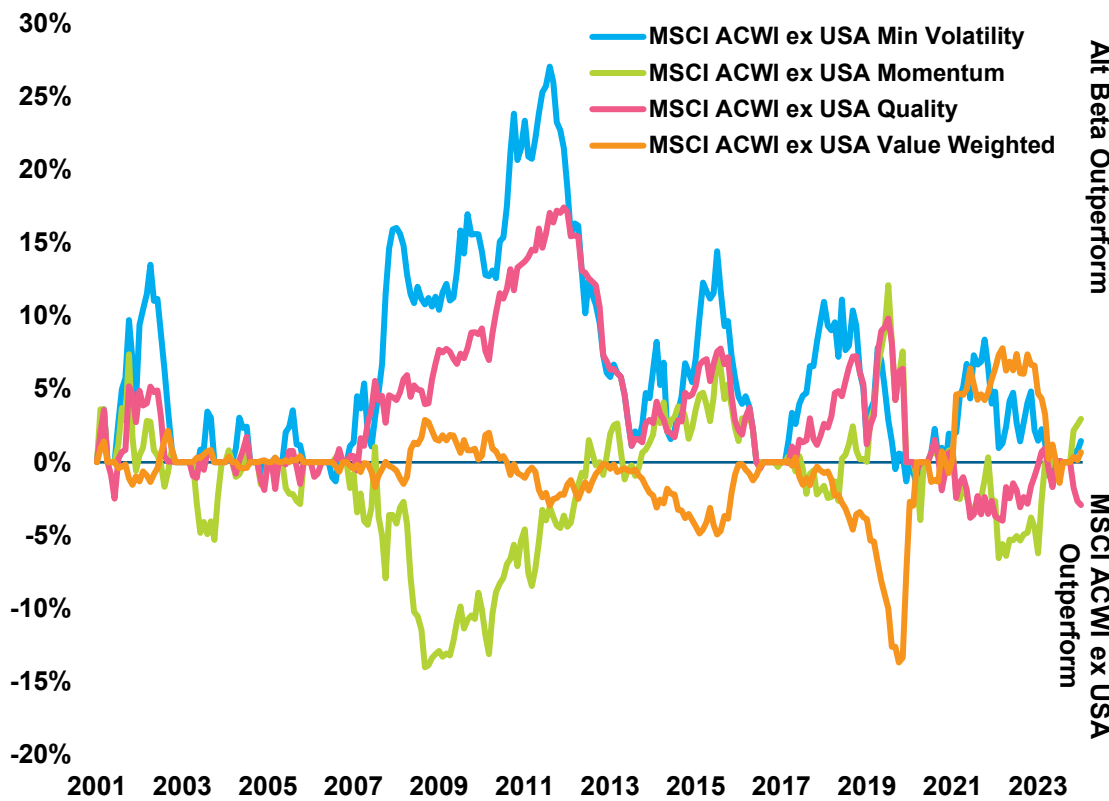
Source: InvestmentMetrics, as of December 31, 2024.

MSCI ACWI ex USA
MSCI ACWI ex USA Min Volatility
MSCI ACWI ex USA Momentum
MSCI ACWI ex USA Quality
MSCI ACWI ex USA Value Weighted

MSCI ACWI ex USA Min Volatility
MSCI ACWI ex USA Momentum
MSCI ACWI ex USA Quality
MSCI ACWI ex USA Value Weighted

Alt Beta Outperform

MSCI ACWI ex USA Outperform

Historical correlation

The four primary alternative beta strategies have all exhibited high correlations to each other as well as to the broad equity market. This pattern has held true for both the US and global ex US alternative beta strategies. Despite the indices having varying return patterns, there is a limit to how uncorrelated all equity, long-only, relatively diversified portfolios can be with each other. The four strategies, despite targeting different premia, will likely provide only modest diversification benefits relative to each other or the broad equity market.

	MSCI USA	MSCI USA Min Volatility	MSCI USA Momentum	MSCI USA Quality	MSCI USA Value Weighted
MSCI USA	1.00				
MSCI USA Min Volatility	0.92	1.00			
MSCI USA Momentum	0.89	0.83	1.00		
MSCI USA Quality	0.96	0.89	0.87	1.00	
MSCI USA Value Weighted	0.96	0.91	0.80	0.89	1.00

	MSCI ACWI ex USA	MSCI ACWI ex USA Min Volatility	MSCI ACWI ex USA Momentum	MSCI ACWI ex USA Quality	MSCI ACWI ex USA Value Weighted
MSCI ACWI ex USA	1.00				
MSCI ACWI ex USA Min Volatility	0.93	1.00			
MSCI ACWI ex USA Momentum	0.92	0.89	1.00		
MSCI ACWI ex USA Quality	0.96	0.92	0.93	1.00	
MSCI ACWI ex USA Value Weighted	0.99	0.90	0.87	0.92	1.00

Implementation

Weighting schemes

Providers of alternative beta indices and strategies can implement different weighting schemes when constructing their portfolios. These strategies tend to be rules-based so that they can be easily implemented and replicated.

Investor risk, return, and governance requirements dictate the choice of weighting scheme. From a risk and return standpoint, most weighting schemes can be altered to help either maximize Sharpe or Information ratios of the resulting portfolios (i.e., prioritize return versus either absolute or benchmark-relative risk). Often the latter are implemented via portfolio constraints such as limiting relative weights of sectors or securities versus a benchmark, while the former typically use absolute volatility constraints. The choice of scheme can also be impacted by transparency or operational requirements, with simpler weighting methods often preferred relative to more complicated ones.

The main types of weighting schemes used are:

Market cap with factor tilt: This weighting scheme is closest to pure market cap. It enhances market cap weighting by either multiplying the weights by a ranking or factor score methodology based on a given factor signal or utilizing a market cap weight but for only a subset of the universe (based on a screening methodology). As the neutral weights in this case are the market cap weights, they tend to be more stable and easier to replicate, requiring less rebalancing and transaction costs, but at the expense of having lower exposure to the intended factors than other weighting schemes, as well as potential for higher unintended exposure to other factors.

Optimization based: This weighting scheme is based on the result of running a mean-variance optimization on the stock universe. This process enables the user to incorporate constraints that limit portfolio turnover or sector exposure but requires estimations of expected returns and covariance for the entire universe.

This weighting scheme can result in the most efficient factor exposure with controlled turnover; however, it is the most computationally expensive process, because it needs to control for the stability of inputs to achieve robust results. This approach is also dependent on the stability and accuracy of its assumptions. For example, if correlations differ substantially from what the model assumes, the weighting scheme could result in unexpected exposures.

Equal: This weighting scheme takes a subset of stocks (i.e., those meeting the beta criteria) and assigns them all equal weights. Typically, a ranking or scoring criteria is used for the desired factor exposure, and then a selection method (e.g., selecting the top-half of ranked stocks, accepting normalized factors scores over a certain threshold, etc.) winnows down the overall grouping to attain the desired exposure.

Rebalancing considerations

One of the main differences between the alternative beta indices and the market cap weighted index is that the former need to rebalance their weights periodically in order to maintain exposure to the desired factors. This contrasts with the market cap index, which is consistent with a buy and hold strategy and seldom needs to be rebalanced.

Rebalancing within alternative beta strategies may be a source of better risk-adjusted returns, particularly in mean reverting markets. This is because the strategies are effectively selling high and buying low, as opposed to a buy-and-hold strategy that would continue to hold the market weight in a security no matter its price or performance.

When implementing any of these strategies, rebalancing is not free.[14] It comes with the tradeoff of transaction costs, which (if left uncontrolled) can quickly erode any profitability that was obtained from targeting alternative sources of returns. Therefore, alternative beta indices must establish rebalancing strategies that aim to minimize transaction costs. They can do this by looking at factors such as rebalancing frequency (e.g., lower frequency can lead to lower costs), as well as the size and liquidity of the

[14] Tax considerations are crucial for taxable accounts, as frequent rebalancing can lead to significant capital gains taxes, particularly affecting high-net-worth individuals and taxable investment accounts.

investable universe (e.g., the larger and more liquid the securities, the cheaper it is to trade). This can help them reap the benefits of rebalancing while lowering the drag caused by transaction costs.

The tables below (see figures 12 and 13) show the impact of turnover and transaction costs on the performance of alternative beta indices. As expected, for both US and global ex US strategies, momentum incurs the highest levels of turnover and thus faces the largest performance drags at 259.9 and 225.2 basis points (respectively) annually, assuming transaction costs of 50 basis points. On the other extreme, a passive market cap weighted index such as the MSCI USA incurs the lowest level of turnover with a performance drag of 7.4 basis points. As expected, min volatility, quality, and value weighted fall somewhere in between, closer to the passive market cap weighted index than to momentum.

Index	MSCI USA	MSCI USA Min Volatility	MSCI USA Momentum	MSCI USA Quality	MSCI USA Value Weighted
Annual performance drag (at 25 bp)	3.7	22.2	129.9	28.1	17.2
Annual performance drag (at 50 bp)	7.4	44.5	259.9	56.3	34.4
Annual performance drag (at 75 bp)	11.0	66.7	389.8	84.4	51.6

FIGURE 12

Performance Drag due to Turnover on US Alt Beta Strategies

Source: MSCI, Average Annual Turnover from 2018-2024, as of December 9, 2024. Annual performance drag (at 25 bp) = one way drag, performance drag (at 50 bp) = one way drag * 2, performance drag (at 75 bp) = one way drag * 3.

Index	MSCI ACWI ex USA	MSCI ACWI ex USA Min Volatility	MSCI ACWI ex USA Momentum	MSCI ACWI ex USA Quality	MSCI ACWI ex USA Value Weighted
Annual performance drag (at 25 bp)	5.2	22.5	112.6	27.9	17.6
Annual performance drag (at 50 bp)	10.4	44.9	225.2	55.8	35.2
Annual performance drag (at 75 bp)	15.6	67.4	337.8	83.7	52.8

FIGURE 13

Performance Drag due to Turnover on Global ex US Alt Beta Strategies

Source: MSCI, Average Annual Turnover from 2018-2024, as of December 9, 2024. Annual performance drag (at 25 bp) = one way drag, performance drag (at 50 bp) = one way drag * 2, performance drag (at 75 bp) = one way drag * 3.

The "performance drag" figures in the above tables represent an estimated range based on the realized turnover of the alternative beta indices. Funds that track the performance of these indices may be able to achieve lower turnover ratios or lower transaction costs, both of which can reduce performance drag during implementation. Nevertheless, these figures represent a starting point to understand that indices that rebalance regularly will face higher turnover and thus higher performance drag than market cap weighted indices. The table below shows how the performance drag generated by turnover can affect alternative beta indices' returns, relative to the market cap weighted benchmark.

	Type	20 Year Annualized Return	Net Return Transaction Costs at:		
			25bps	50bps	75bps
Market Equity Indices					
MSCI USA	Market Cap Weighted	10.4%	10.4%	10.3%	10.3%
MSCI ACWI ex USA	Market Cap Weighted	5.0%	4.9%	4.9%	4.8%
US Alt Beta Indices					
MSCI USA Min Volatility	Low Volatility Index	9.7%	9.4%	9.2%	9.0%
MSCI USA Momentum	Momentum Index	11.3%	10.0%	8.7%	7.4%
MSCI USA Quality	Quality Index	12.0%	11.7%	11.4%	11.2%
MSCI USA Value Weighted	Value Index	9.5%	9.3%	9.1%	9.0%
Global ex US Alt Beta Indices					
MSCI ACWI ex USA Min Volatility	Low Volatility Index	6.5%	6.3%	6.0%	5.8%
MSCI ACWI ex USA Momentum	Momentum Index	7.4%	6.3%	5.2%	4.0%
MSCI ACWI ex USA Quality	Quality Index	7.4%	7.1%	6.9%	6.6%
MSCI ACWI ex USA Value Weighted	Value Index	5.1%	4.9%	4.8%	4.6%

FIGURE 14
Impact of Transaction Costs

Sources: 20-year annualized return data from InvestmentMetrics, for the period 1/1/2005 to 12/31/2024. Transaction cost data from MSCI, annual turnover is for the period 2018 through 2024.

Note: Net Return = Annualized Return – Annual performance drag at given trading cost assumption for each type of alternative beta index.

Management costs

One of the main benefits of passive market cap weighted index funds is that they are relatively inexpensive to implement for most institutional investors. Alternative beta indices can be implemented at fees that are higher than index funds but lower than most actively managed strategies. It is worth noting that differences in alternative beta strategies such as weighting schemes, rebalancing policies, and investable universe may cause dispersion among prices.

Management strategies (active vs passive)

Although this paper has discussed alternative beta strategies as if they are a homogenous group, these systematic approaches to portfolio construction can be used with a variety of different portfolio management styles.

Passive: As implied by the name, the most typical management style for alternative beta portfolios is passive implementation. Investors select an investment, often with index data sourced from third-party providers and manage to the provided index. Although the investor is arguably making a strategic "active" decision on which alternative betas to invest in and in what amount, the day-to-day management is similar to that of market capitalization weighted indices.

Active: Even "systematic" approaches can take on an active character depending on the degree of control exercised over the portfolio by its manager or how varied

the portfolio's exposures are over time. Active management may use a variety of methods to seek to generate excess return: using multiple, proprietary factor definitions, varying the weighting or application factor definitions, and rotating between different factor exposures are common ways to actively manage a collection of "passive" exposures. Additionally, traditional passive exposures can be augmented with "alpha overlays" that seek to tilt toward idiosyncratic stock exposures or exploit company-level divergences from an expected "intrinsic value".

Semi-active: Semi-active approaches, understandably, blend the features of active and passive approaches. The distinctions between semi-active and active strategies are often differences of degree or magnitude.

Conclusion

Alternative beta strategies, also known as "smart betas," offer a systematic approach to capturing alternative sources of equity returns beyond traditional market-cap weighted indices. These strategies, including value, momentum, low volatility, and quality, have shown varying degrees of success in providing superior risk-adjusted returns and lower volatility compared to the broad equity market. The historical performance of these strategies highlights their potential to enhance portfolio diversification and achieve specific investment objectives. However, it is essential to recognize that these strategies are not without their limitations, including the potential for cyclical performance patterns and tracking error versus broad equity benchmarks, necessitating careful consideration and periodic rebalancing to maintain their effectiveness.

Furthermore, the choice of weighting schemes and the implementation of portfolio constraints play a crucial role in optimizing the risk-return profile of alternative beta strategies. Investors must carefully evaluate their risk tolerance, return expectations, and governance requirements when selecting and implementing these strategies. While alternative beta strategies can provide valuable diversification benefits and potentially enhance long-term returns, they should be viewed as complementary to traditional investment approaches rather than standalone solutions. By understanding the nuances and historical performance of these strategies, investors can make informed decisions to achieve their investment goals and navigate the complexities of the equity markets.

Appendix

Value	Momentum	Low/Min Volatility	Quality
→ Value is one of the most widely recognized risk premia. → Value investing relates to contrarian investing, targeting stocks with depressed multiples (e.g., low P/E, P/B) with the belief that mean reversion in the markets will deliver higher performance in the future (i.e., buying low and selling high).	→ Momentum involves buying prior winners and, if permitted, selling prior losers, based on the assumption that the winners will continue to do well and the losers will continue to do poorly. → Momentum strategies can achieve high performance in trending markets, but their main source of risk and underperformance occurs when trends break or mean reversion occurs.	→ Low volatility is not based on an equity risk factor but is rather defined as an anomaly that has been found empirically.* → The anomaly shows that over long enough periods of time, low volatility or low beta portfolios have outperformed high volatility or high beta portfolios (i.e. lower risk achieves higher returns, contradicting CAPM and the basis of finance theory).	→ Quality is perhaps the most controversial because there is no universal agreement on how to define it. → Some investors define it with profitability measures such as gross profitability, ROE, or ROIC; others by stability of earnings or leverage measures. → Regardless, higher-quality stocks have been found to outperform lower-quality stocks over the long run.

FIGURE 15
Alternative Beta Strategies Summary

Source: Meketa Investment Group, 2024.

* Roger Clark, Harindra de Silva, and Steven Thorley, 2010; "Minimum Variance Portfolio Composition", Journal of Portfolio Management, Vol. 37, No. 2, pp. 31-45.

Historical performance

When we dive more deeply into historical returns, we find that over the long-term, the momentum and quality indices tended to perform better than the other alternative beta strategies as well as the traditional equity market indices in both the US and global ex US universes. For both US and foreign alternative beta strategies, min volatility and value tended to perform the worst. However, it is important to note that these return figures may be impacted by endpoint bias.[15] Because alt beta strategies are highly cyclical, it is quite likely that one or more will be out of favor at any point in time. This is why they are often combined together, since rarely are they all in- or out-of-favor simultaneously.

[15] Statistically, endpoint bias refers to the inclusion or exclusion of data that significantly influences results. Practically speaking, endpoint bias refers to investors' tendency to place undue significance on results for measurement periods ending in the present. If the recent past witnessed unusually high or low returns, then long term results can change considerably.
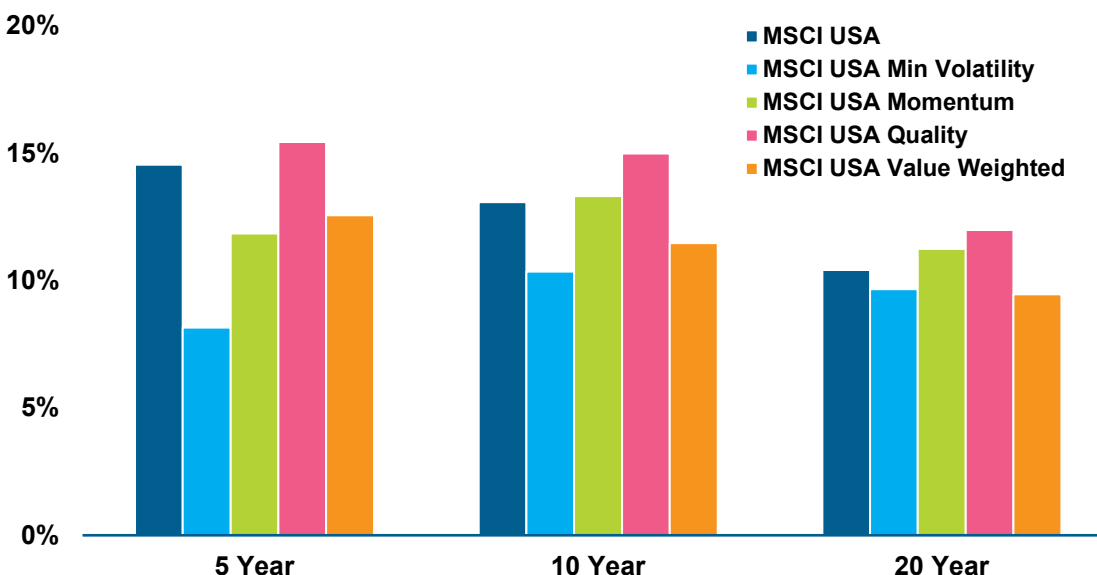

FIGURE 16
Annualized Returns of US Alternative Beta

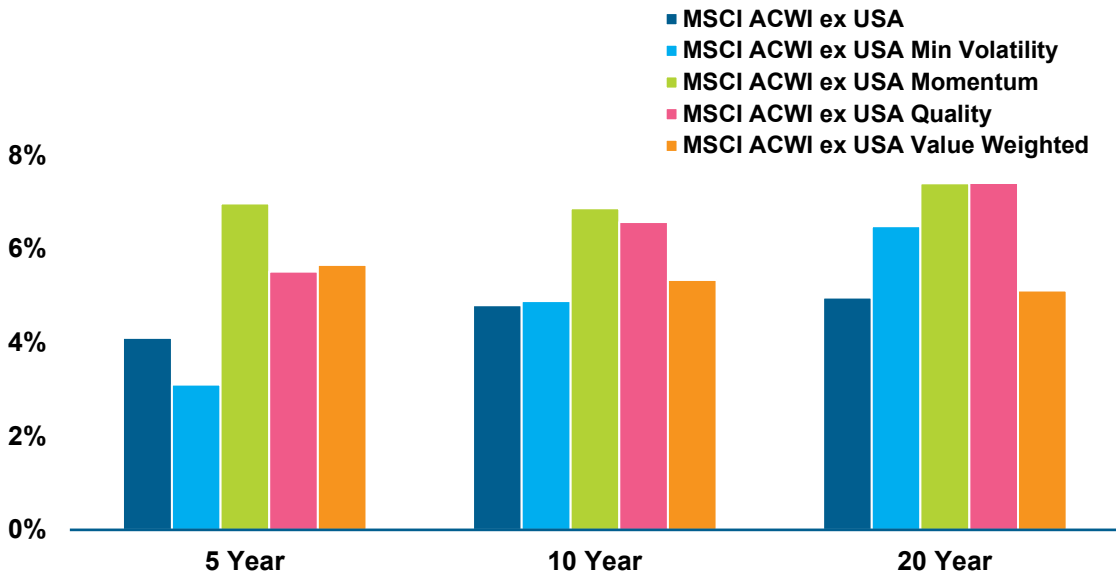Source: InvestmentMetrics, as of December 31, 2024.

Legend:
- MSCI USA
- MSCI USA Min Volatility
- MSCI USA Momentum
- MSCI USA Quality
- MSCI USA Value Weighted

(Bar chart with categories: 5 Year, 10 Year, 20 Year; y-axis 0% to 20%)

FIGURE 17

Annualized Returns of Global ex US Alternative Beta

Source: InvestmentMetrics, as of December 31, 2024.

FIGURE 18

Annual Returns of US Alternative Beta

Source: InvestmentMetrics, as of December 31, 2024.

FIGURE 19

Annual Returns of Global ex US Alternative Beta

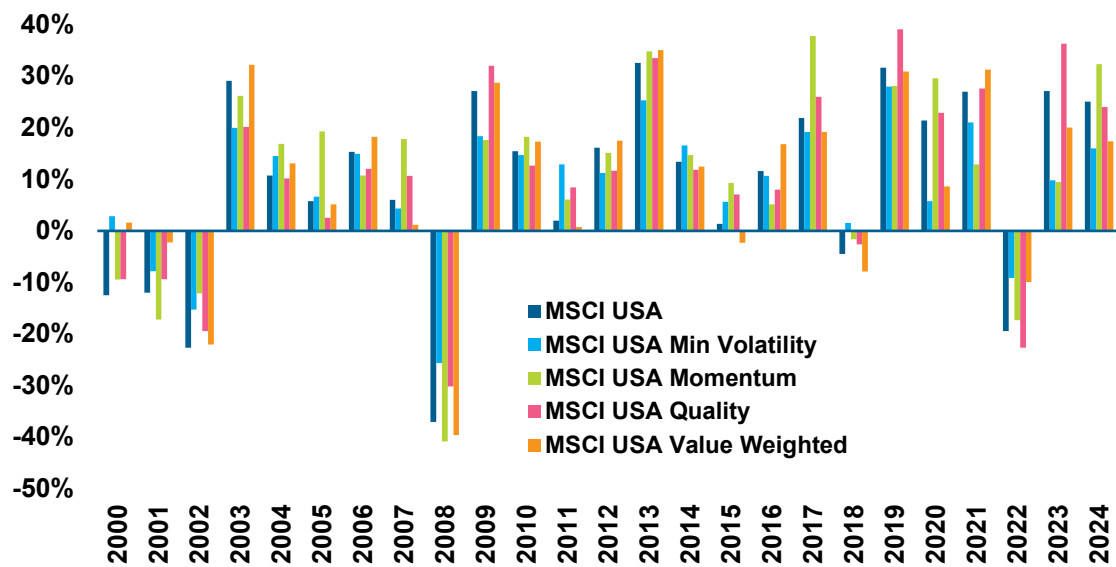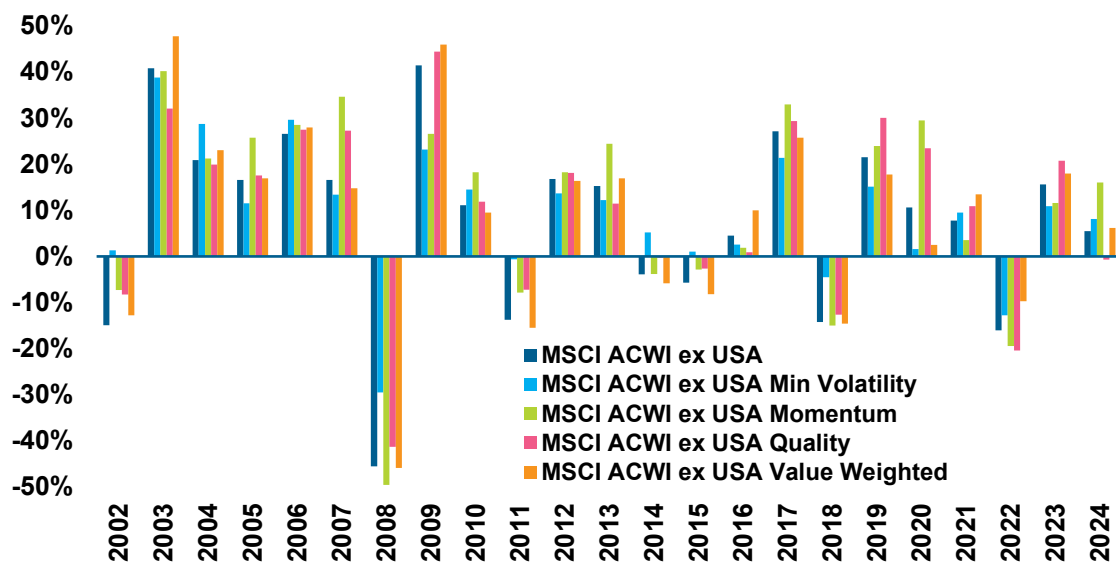Source: InvestmentMetrics, as of December 31, 2024.

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