Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

FEBRUARY 2025

Active Management Environment

Table of Contents

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The active management environment

Our work on active management addresses some shortfalls of the traditional analysis, which uses the median product to describe the active management universe as a whole.

These improvements and insights have allowed us to better understand product behavior and may allow for more informed selection in the future. For first-time readers, an introduction to our active-management research and methodological details can be accessed by visiting https://www.verusinvestments.com/active-management-environment-supporting-material-2/ . For those familiar with the new approach, please read on.

- Even without skilled selection, there are many cases in which active management may help investors achieve better portfolio outcomes in risk and return terms.
- Those better portfolio outcomes may come from additional return or lower risk. Not all investors have the same definition of better outcomes, and the risk/return trade-offs vary by universe.
- Adding skilled selection to the process may create additional value in portfolio construction.
- Fees remain an important part of the active management conversation. Fees and survivorship bias should be taken into account when analyzing active universes.

Using median product (median manager) performance to decide whether active management is beneficial can be misleading. This new tool can help investors make better-informed decisions.

What changed for 2025?

- The past year presented an environment of strong economic growth and fairly resilient conditions in terms of the labor market and consumer spending. As inflation continued to move lower, investors began to expect an aggressive rate cutting path. Then, stronger economic data and stickier inflation towards the end of 2024, along with the re-election of President Donald Trump, contributed to expectations for strong economic growth, elevated inflation, and higher interest rate levels in the future.

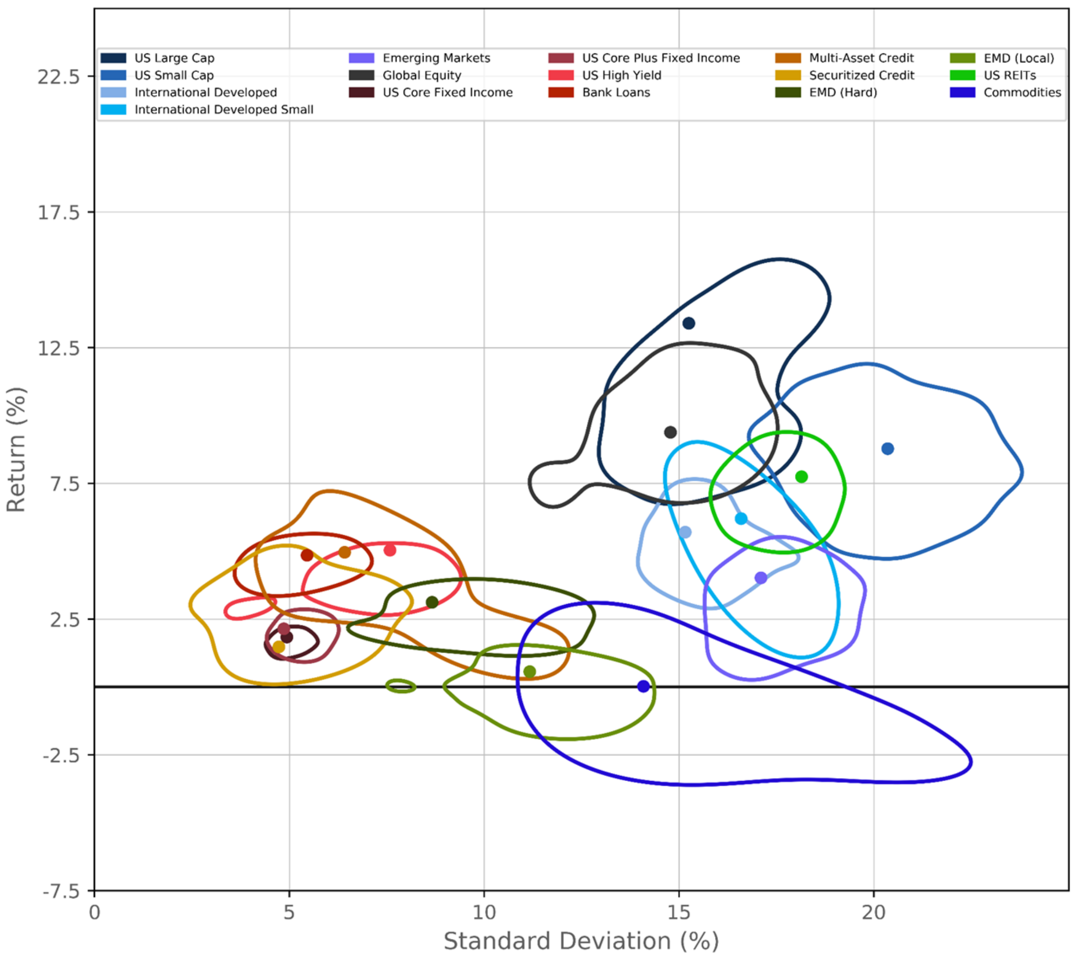
- All major asset classes outside of long treasuries and local currency emerging market debt finished the 2024 calendar year with positive returns, in continuation of the prior year's trend of positive performance. While 2024 was a strong year, readers of this document will notice the losses of 2022 having an outsized impact on 3-year returns for equities. Returns were broadly higher among most major asset classes for the 5-, 7-, and 10-year time horizons. Fixed income saw substantial improvements in 3-year returns.

- Lower volatility over the past year has contributed to less manager dispersion, with tighter "ovoids" observed over a three-year lookback period. It has been a very difficult run for active management in U.S. equities. Rising market concentration in the U.S. market has created an environment where outperformance was best achieved by overweighting "magnificent seven" companies, though this is a less common practice for active strategies in an already concentrated market.

- In many active universes, we once again observed a trend that many strategies are outperforming by reducing risk rather than taking additional risk. This effect has been especially true in international equity and fixed income markets. In other asset classes such as U.S. large cap, it has been very difficult for active managers to outperform the benchmark without taking on additional risk.

The true investment opportunity set

RISK-RETURN REGIONS ACROSS ASSET CLASSES: 10-YEAR RESULTS



Investors often think of the investment opportunity set as a risk-return chart, in the form of single-point (dot) benchmark risk and return, and possibly single-point median product to represent active management.

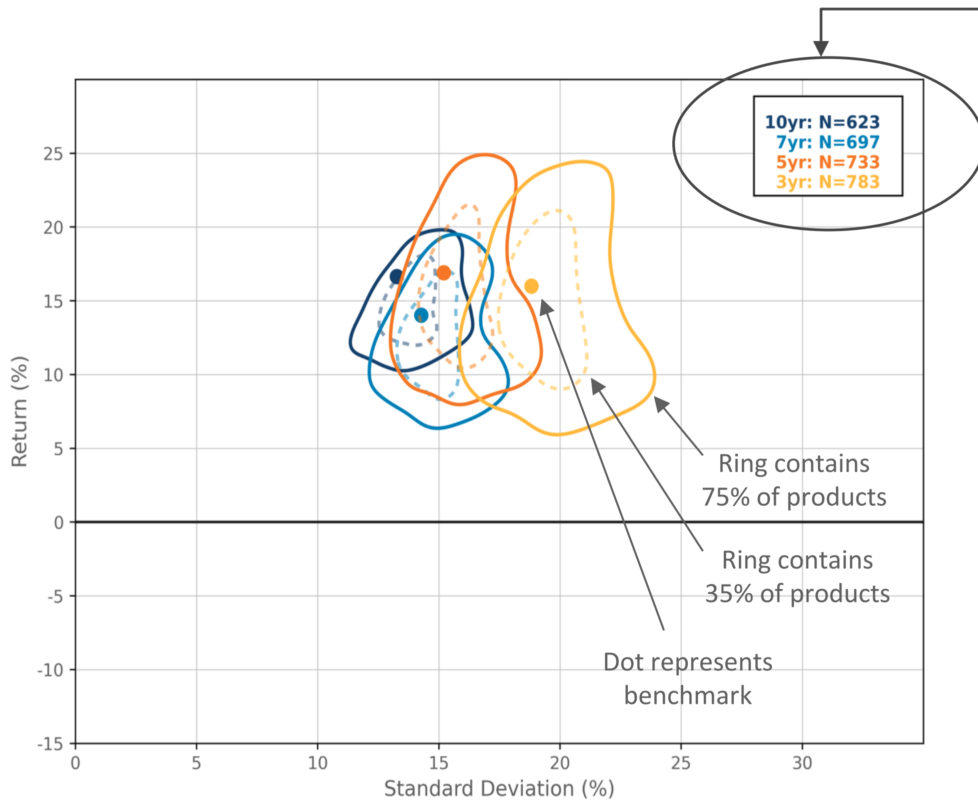
However, active management universes in each asset class often have wide distributions and this traditional analysis misses the true universe characteristics. Much of the risk-return surface between -4% and 16% return and between 3% and 24% volatility is covered by various asset class options, and many parts of this space are covered by multiple active management universes.

This year, readers may notice a wider universe dispersion amongst the longer-dated lookback periods. A volatile macroeconomic environment has led to a wider spectrum of manager returns relative to past publications.

This represents 10-year product performance data and 75% contour areas.
Source: eVestment, Verus, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias.

How to read a universe chart

The movement of the universe, the change in shape, and the change of size, all provide information about product behavior.



The number of products included in the analysis provides insight into the robustness of the analysis.

The position of the benchmark relative to the universe may also change through time, representing dynamic structure changes.

Throughout this report, each asset class universe chart is placed at the same position on the page, at the same size, and with the scales of the axes identical. This allows for easy comparison between universes. **In this 2025 edition, we provide an additional slide with a full-sized universe chart for each asset class, to allow a more detailed look at active management performance characteristics**.

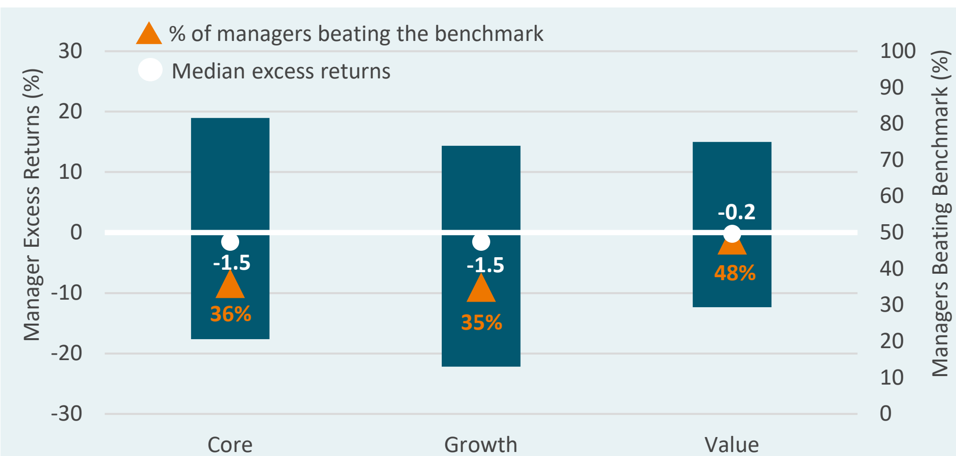
Asset class environments

Note: *Universes are defined at the broadest level. Products vary in terms of style and/or treatment of currency exposure. Equity universes include both value and growth styles. International universes may include both products that hedge currency exposure and products that do not hedge currency exposure.*

Equities – U.S. large cap

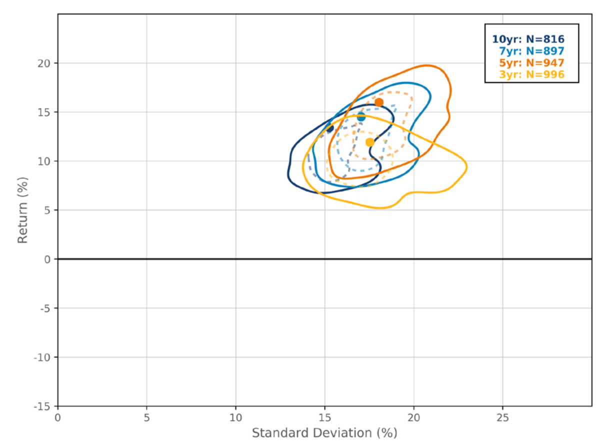
- Recent data suggest that the U.S. large cap equity market continues to demonstrate characteristics of a highly efficient asset class. Over the past decade, persistently low interest rates appear to have played a role in reducing earnings volatility, which likely created a more difficult landscape for active management. However, performance over the trailing three years reveals a more favorable environment, with active managers showing improved results.
- Active management data indicate that certain managers have achieved higher risk-adjusted returns, especially over shorter timeframes. Nonetheless, the majority seem to have taken on increased risk in pursuit of outperforming the benchmark. However, examining the trailing 7- and 10-year periods reveals a limited relationship between heightened volatility and benchmark outperformance.
- The environment was very challenging for most large cap managers on a year-to-date basis through September 30, 2024. Median excess returns for core and growth managers was -1.5% for each, gross-of-fees, with approximately 65% of managers in each segment failing to generate positive excess return. Relative to their core and growth peers, value managers performed slightly better, posting a median excess return of -0.2%, with 48% of the cohort outperforming the benchmark.

U.S. LARGE CAP UNIVERSE – EXCESS RETURNS (YEAR-TO-DATE)



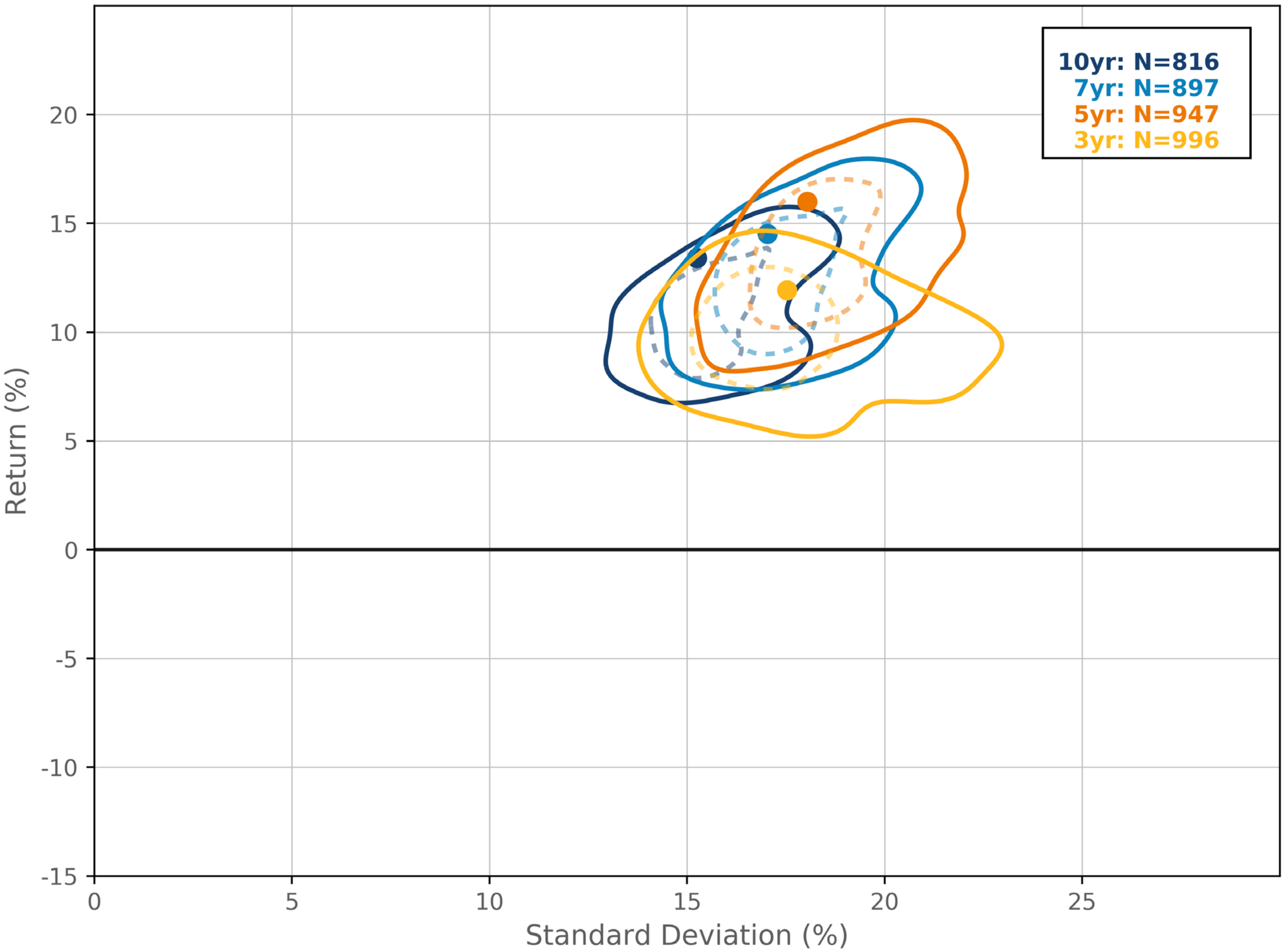
Source: eVestment, as of 9/30/24, gross of fees

U.S. LARGE CAP



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the S&P 500 Index

Equities – U.S. large cap



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the S&P 500 Index

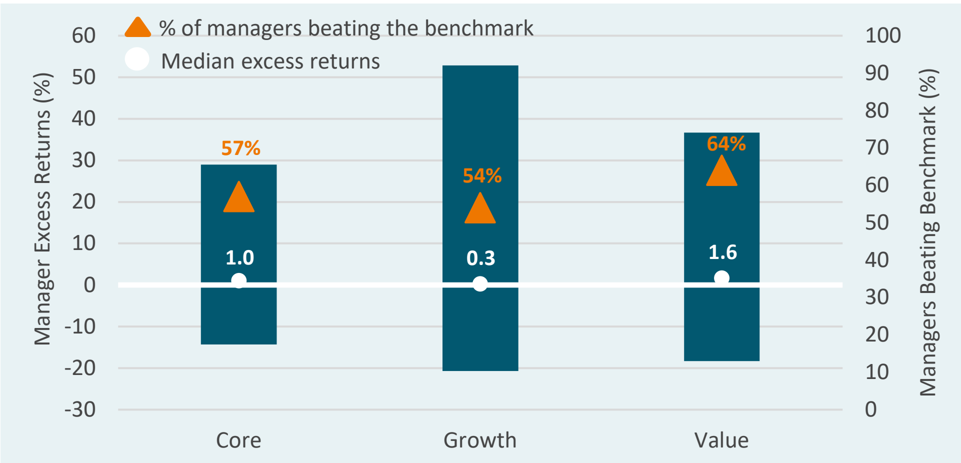
Equities – U.S. small cap

— Compared to their large cap counterparts, U.S. small cap managers have generally exhibited a stronger ability to deliver positive excess returns relative to the benchmark across most time periods. Furthermore, their performance on a risk-adjusted basis suggests they have achieved this with greater efficiency than large cap managers. Overall, active management has tended to be more effective within the small cap segment than in the large cap universe.

— As with the broad large cap universe, data indicate that recent trailing periods, such as the 3- and 5-year horizons, have been more conducive to active small cap managers achieving outperformance.

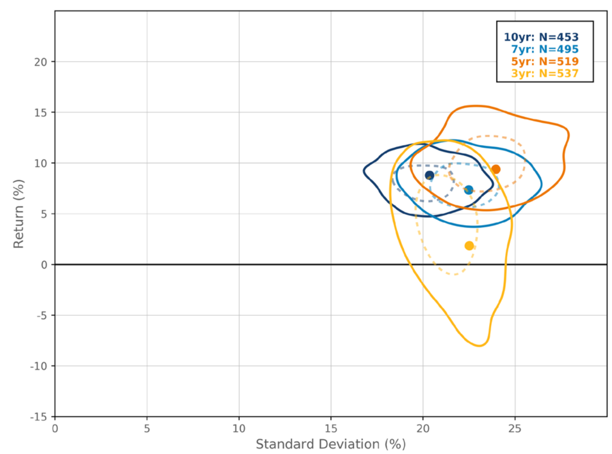
— Year-to-date through September 30, 2024, the active management environment has been more attractive for small cap managers relative to large cap, with the median core, growth, and value managers outperforming their respective preferred benchmarks on a gross-of-fee basis. Value managers had the most success beating their benchmark, with 64% of the cohort generating positive excess return, although this was down from 86% in last year's report.

U.S. SMALL CAP UNIVERSE – EXCESS RETURNS (YEAR-TO-DATE)



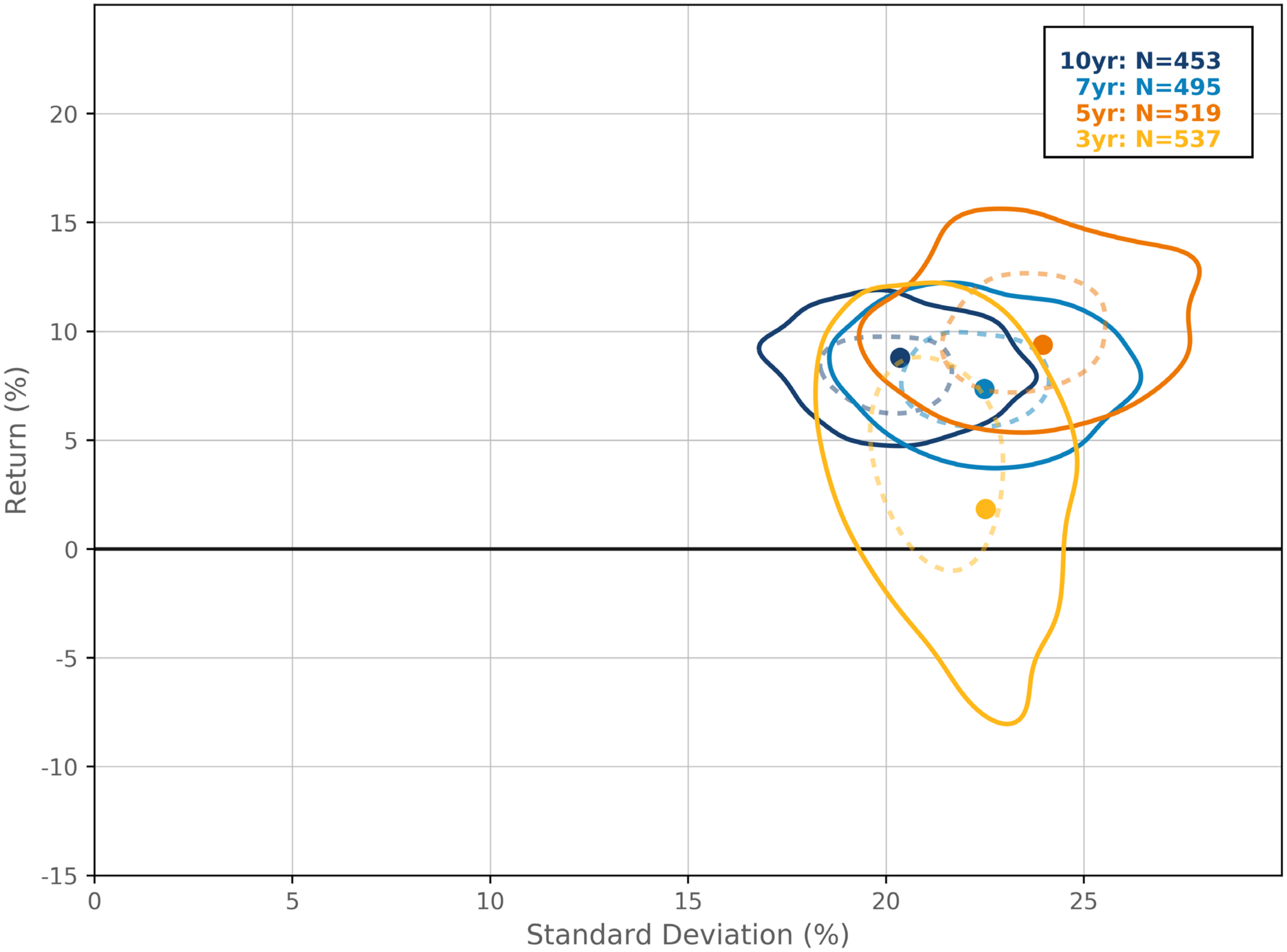
Source: eVestment, as of 9/30/24, gross of fees

U.S. SMALL CAP



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Russell 2000 Index

Equities – U.S. small cap



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Russell 2000 Index

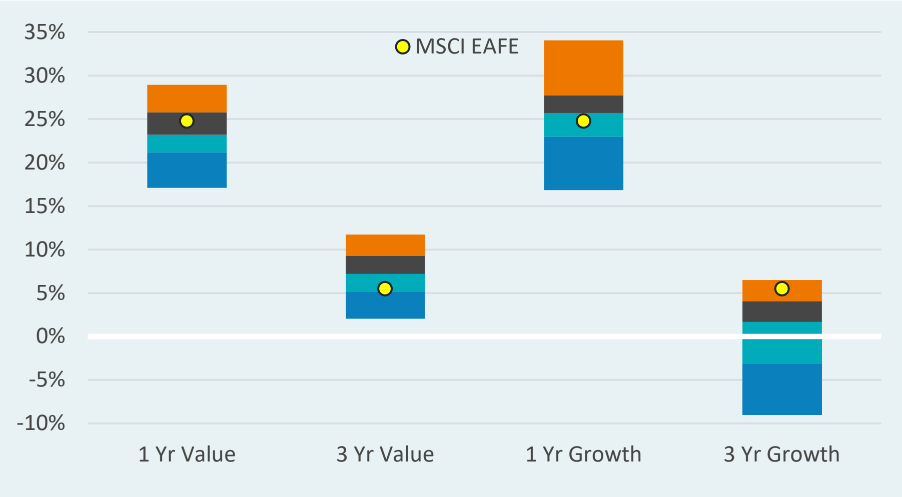
Equities – International developed

— The data reflect a changing relationship between risk and return in the international developed equity space. During the longest periods (7-year and 10-year), a greater proportion of managers took significantly more risk than the benchmark. During shorter periods (3-year and 5-year), the distribution was closer to even, with roughly equal proportions taking more risk or less risk relative to the benchmark. Looking through the lens of return, all periods showed that the proportion of managers beating the benchmark was about the same as those falling short.

— The relationship between risk and return shows a dramatic change in the latest three years. There was a negligible relationship between absolute risk and return during 5-year, 7-year and 10-year lookback periods. However, during the latest three years, a greater proportion of managers taking less risk than the benchmark were rewarded with higher returns than those taking more risk. We believe this relationship reflects changing market conditions during the period and may not necessarily be permanent.

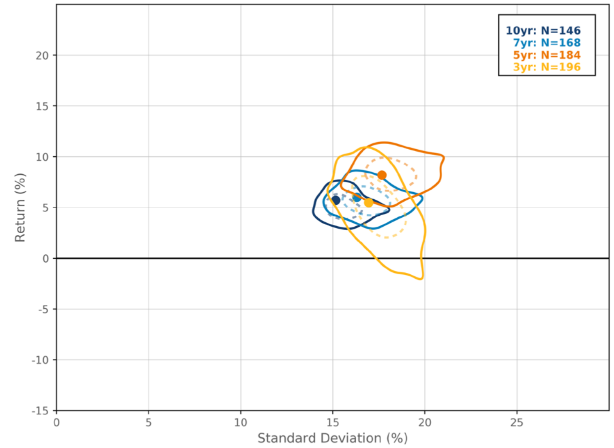
— The lefthand chart illustrates performance differences between international developed large cap value and growth universes. The latest three years have been particularly challenging for active growth managers, with the benchmark ranking just below the top decile. Growth managers as a group underperformed the overall MSCI EAFE Index during 2022 and 2023, a period characterized by rising interest rates. In the latest 1-year period, return distributions indicate the headwind has diminished somewhat.

MSCI EAFE LARGE CAP VALUE & GROWTH



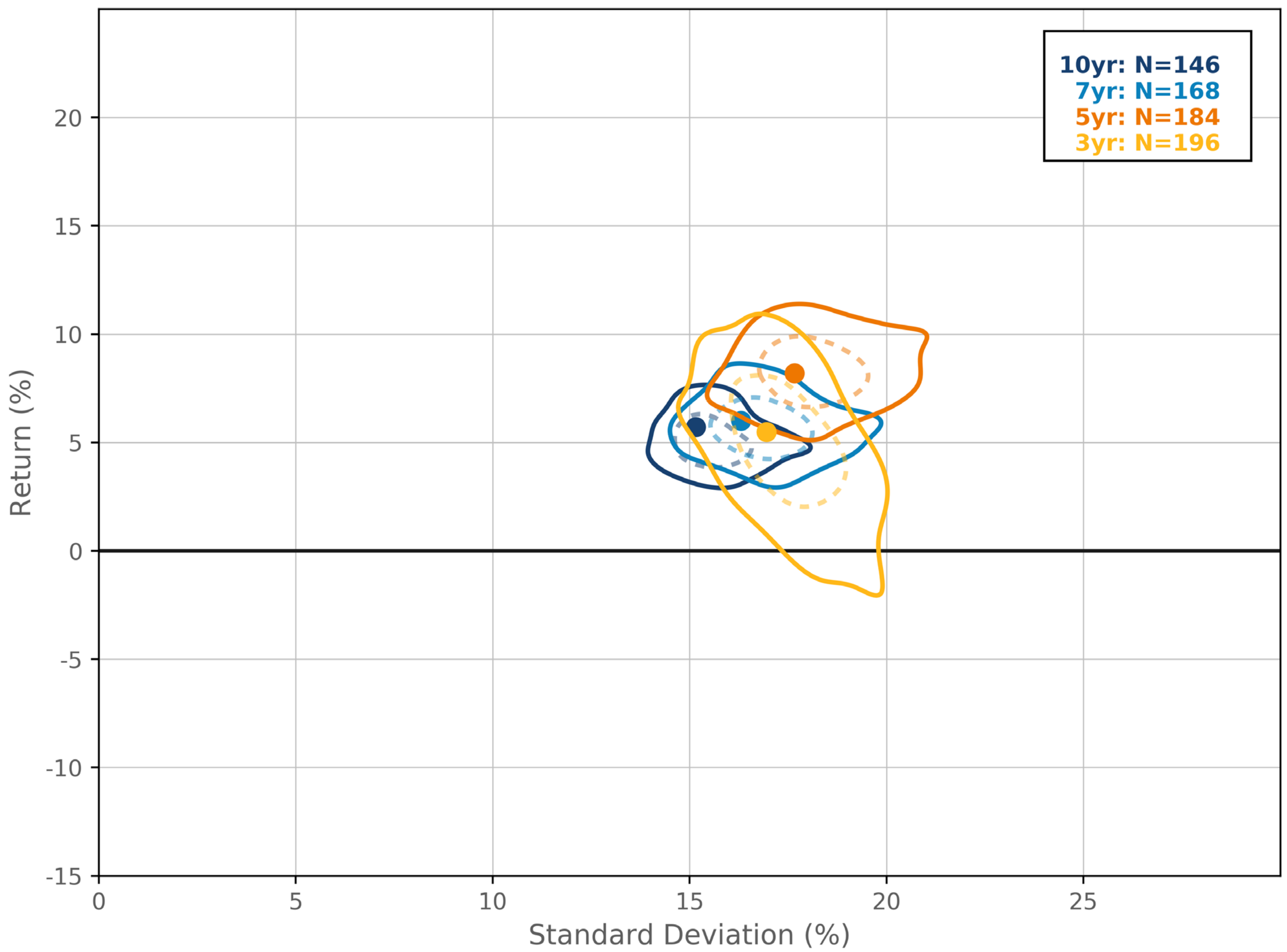
Source: eVestment, as of 9/30/24, gross of fees

INTERNATIONAL DEVELOPED



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI EAFE Index

Equities – International developed



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI EAFE Index

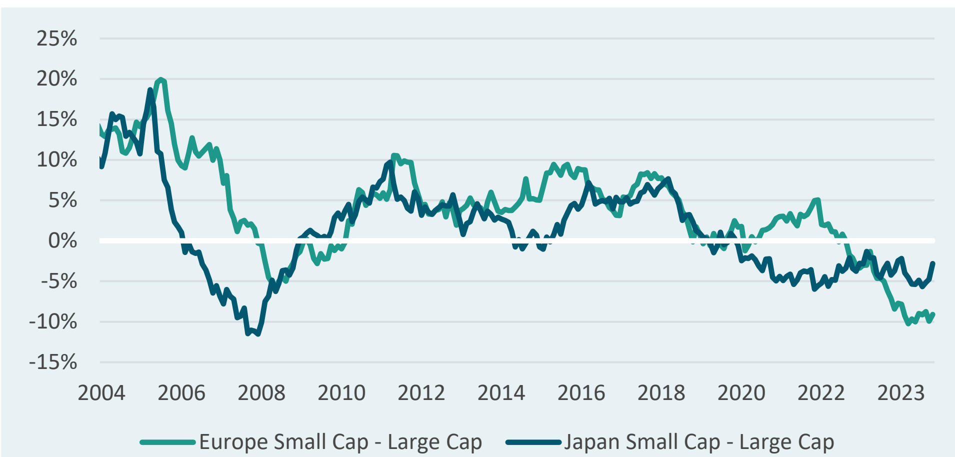
Equities – International developed small cap

— The bottom right chart highlights the negative relationship between international developed small cap equity manager returns and the risk that those strategies took, as all universe shapes exhibited a downward sloping shape (higher risk managers delivering, on average, less total return). This negative relationship was the most severe among all active equity manager universes and has further steepened since last year's document.

— Relative active manager performance improved in recent years. The median manager has delivered net-of-fee outperformance over 5-years and while outperformance was less significant over 3-years, the dispersion between manager performance highlights the possible upside for allocators if able to access skilled active management.

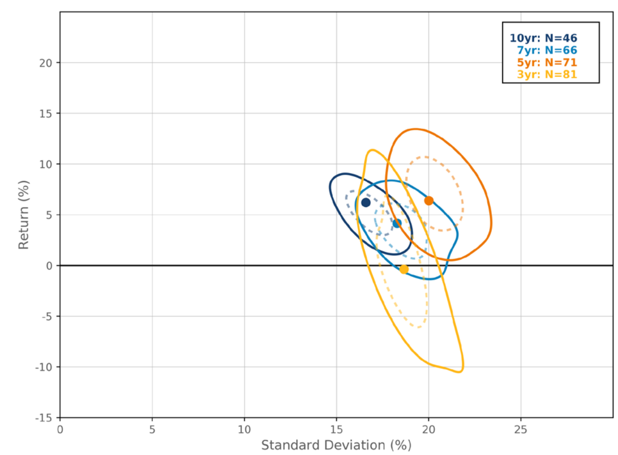
— Developed small cap companies across Europe and Japan have underperformed large cap peers in recent years, as shown in the chart on the bottom left. Ongoing conflict in Ukraine, a cost-of-living crisis, and general political instability exacerbated this dynamic across Europe since the start of 2022. Small cap companies tend to be more cyclical and domestically oriented, less able to weather localized turbulence. This has likely contributed to a compression of valuations of developed small cap securities. The MSCI EAFE Small Cap Index trades at more than a 10% discount to the MSCI EAFE Index based on price-to-earnings and price-to-book ratios. Lower absolute returns from the asset class have likely contributed to the relative success of active managers.

ROLLING 3-YEAR EXCESS RETURN OF SMALL CAP V. LARGE CAP BY REGION



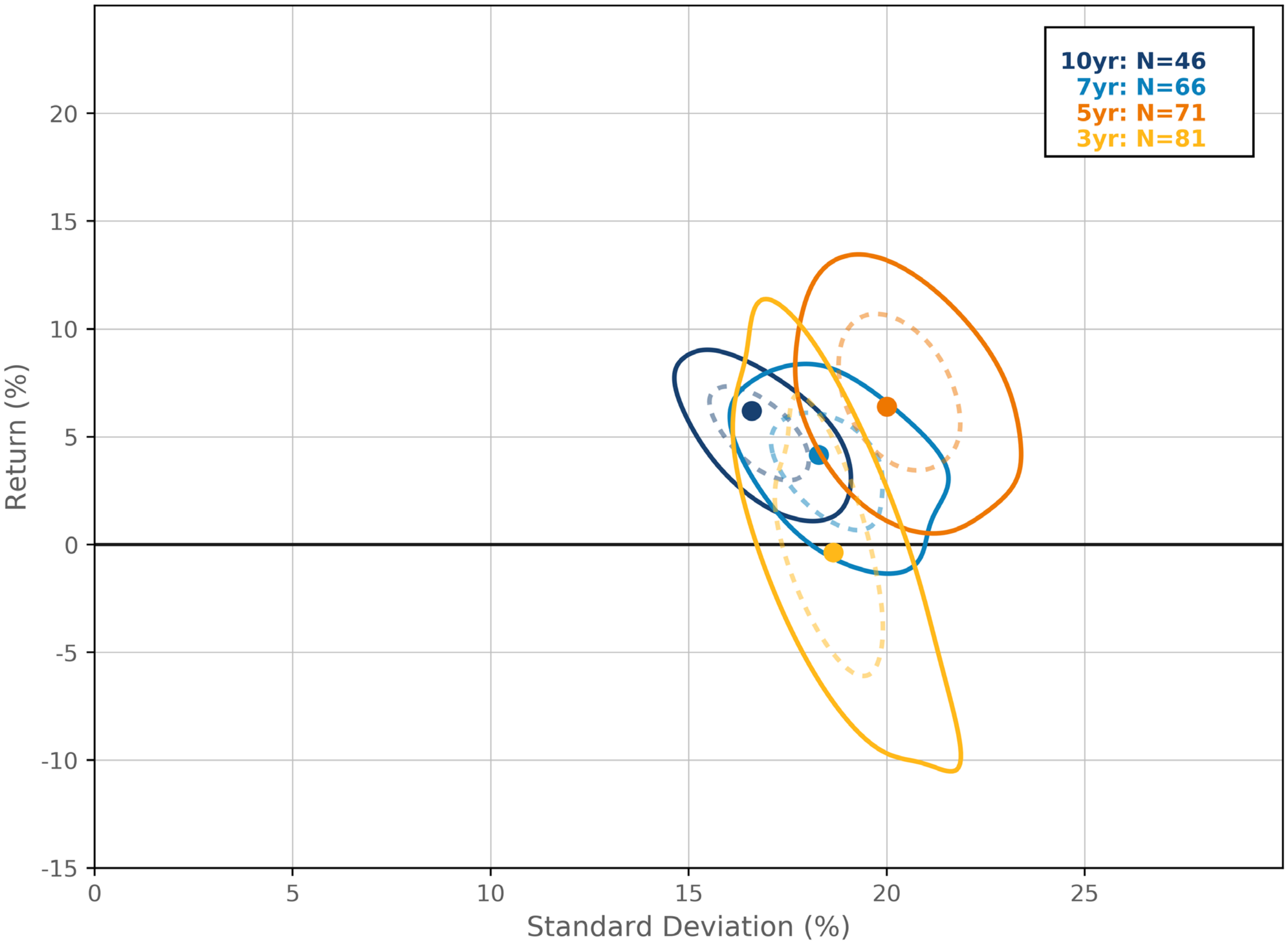
Source: eVestment as of 09/30/24, Europe Small – Large = MSCI Europe Small Cap index minus MSCI Europe Large Cap; Japan Small – Large = MSCI Japan Small Cap index minus MSCI Japan Large Cap

INTERNATIONAL SMALL CAP



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI EAFE Small Cap Index

Equities – International developed small cap



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI EAFE Small Cap Index

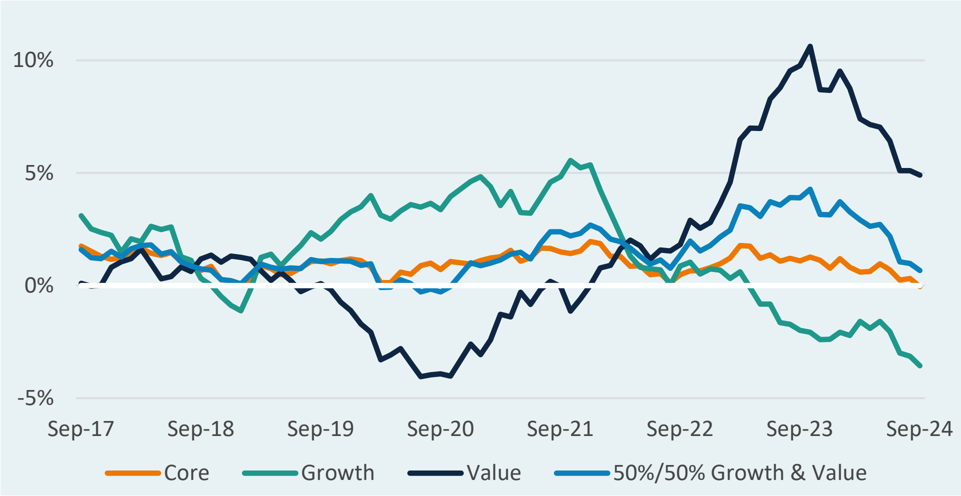
Equities – Emerging markets

— Over the medium term, the emerging markets peer group appears to have evolved to be more agnostic to risk. This can be observed in the relatively flat ovoid shape of the trailing 5- and 7-year periods. These periods may have been influenced by the most recent 3-year observation, where the risk and return relationship turned negative. Managers that took less risk than the benchmark were more likely to deliver outperformance.

— The 10-year trailing period reflects a challenged one for active investment managers in this asset class. After adjusting for fees and estimated survivorship bias, the median emerging markets manager has underperformed the benchmark. A decade of developed market dominance, as well as rising benchmark concentration and U.S. dollar strength have likely contributed to this dynamic.

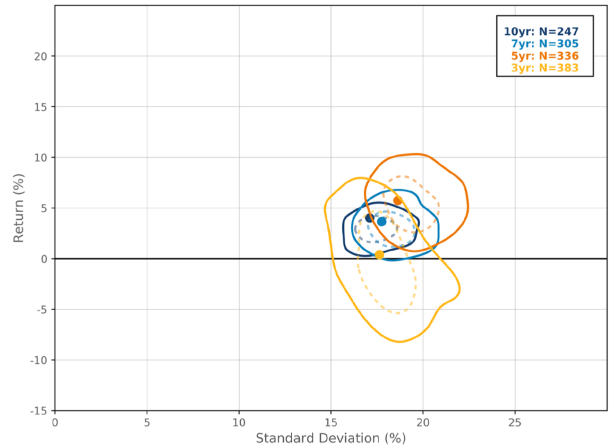
— Extreme performance disparity between investment styles has contributed to significant active manager return dispersion over the recent 3- and 5-years. As seen in the bottom left chart, value oriented emerging markets managers outpaced the broad market index since 2022, and when paired with a growth complement have generally delivered a stronger relative rolling 3-year excess return than the median standalone core manager.

MEDIAN MANAGER 3-YEAR ROLLING EXCESS RETURN BY STYLE EMPHASIS



Source: eVestment, as of 9/30/24 - excess returns to the MSCI EM-ND index

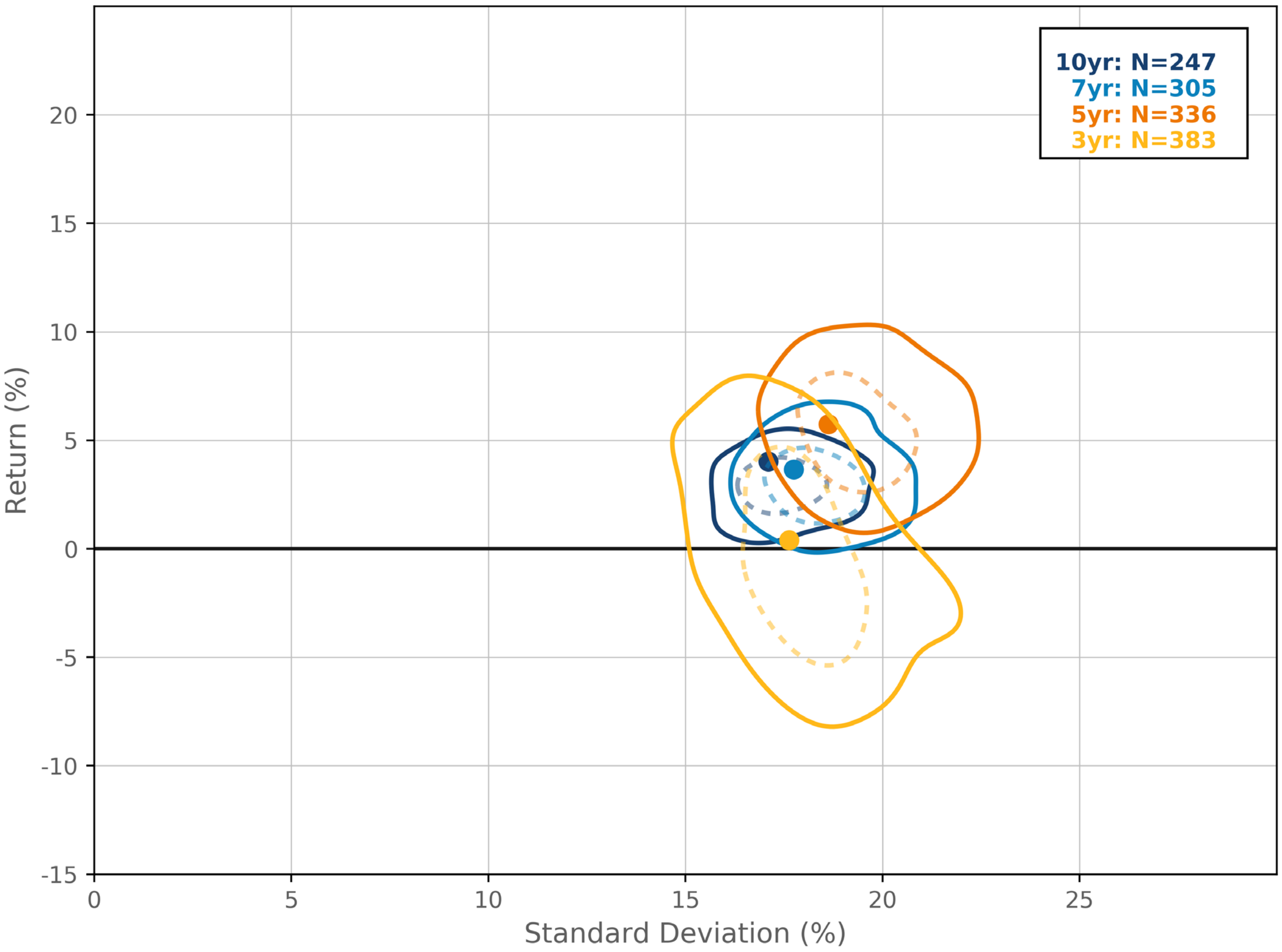
EMERGING MARKETS



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias.

Benchmark displayed is the MSCI Emerging Markets Index

Equities – Emerging markets



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI Emerging Markets Index

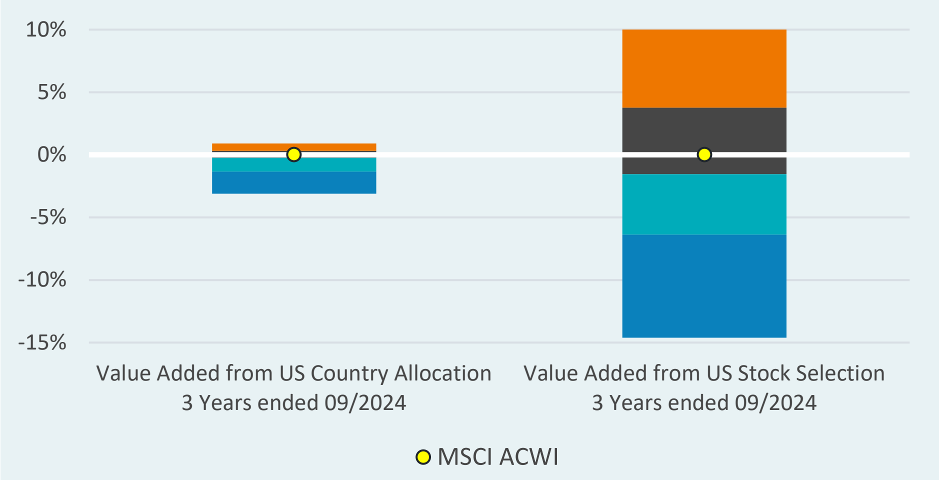
Equities – Global

— During all time periods, the global equity manager universe was approximately evenly split between those outperforming or underperforming the benchmark. Global equity is the broadest equity universe, making it less sensitive to individual factors that may drive country or regional portfolios during short time periods; periods of 3 or more years may reflect some smoothing of returns.

— The relationship between risk and return has changed over time as evidenced by the shape of the 3-year “ovoid”. The universe characteristics for longer time periods (5-year, 7-year, 10-year) reflect a risk-return relationship in which taking more risk was associated with modestly higher return. That relationship is not as clear for the 3-year period. A small portion of the universe comprises low volatility strategies that were characterized by low risk rather than high return; these strategies account for the protrusion on the left side of the chart.

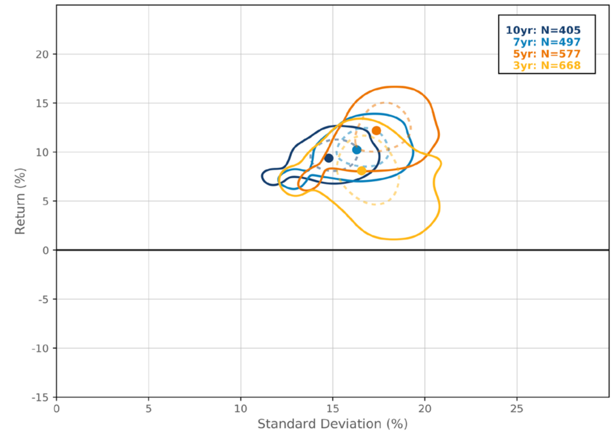
— The chart on the bottom left focuses on U.S. equity allocation and stock selection of global equity managers. The skill a manager demonstrates within the U.S. is typically a differentiator in the decision to implement a global equity allocation instead of active non-U.S. equity + passive U.S. equity. For the 3 years ending September, the range of value added from decisions to underweight or overweight the U.S. was narrow. During the same period, the range of value added due to U.S. stock selection was quite wide, and managers with skill in U.S. stock selection were rewarded.

GLOBAL EQUITY ATTRIBUTION (U.S. ALLOCATION & SELECTION)



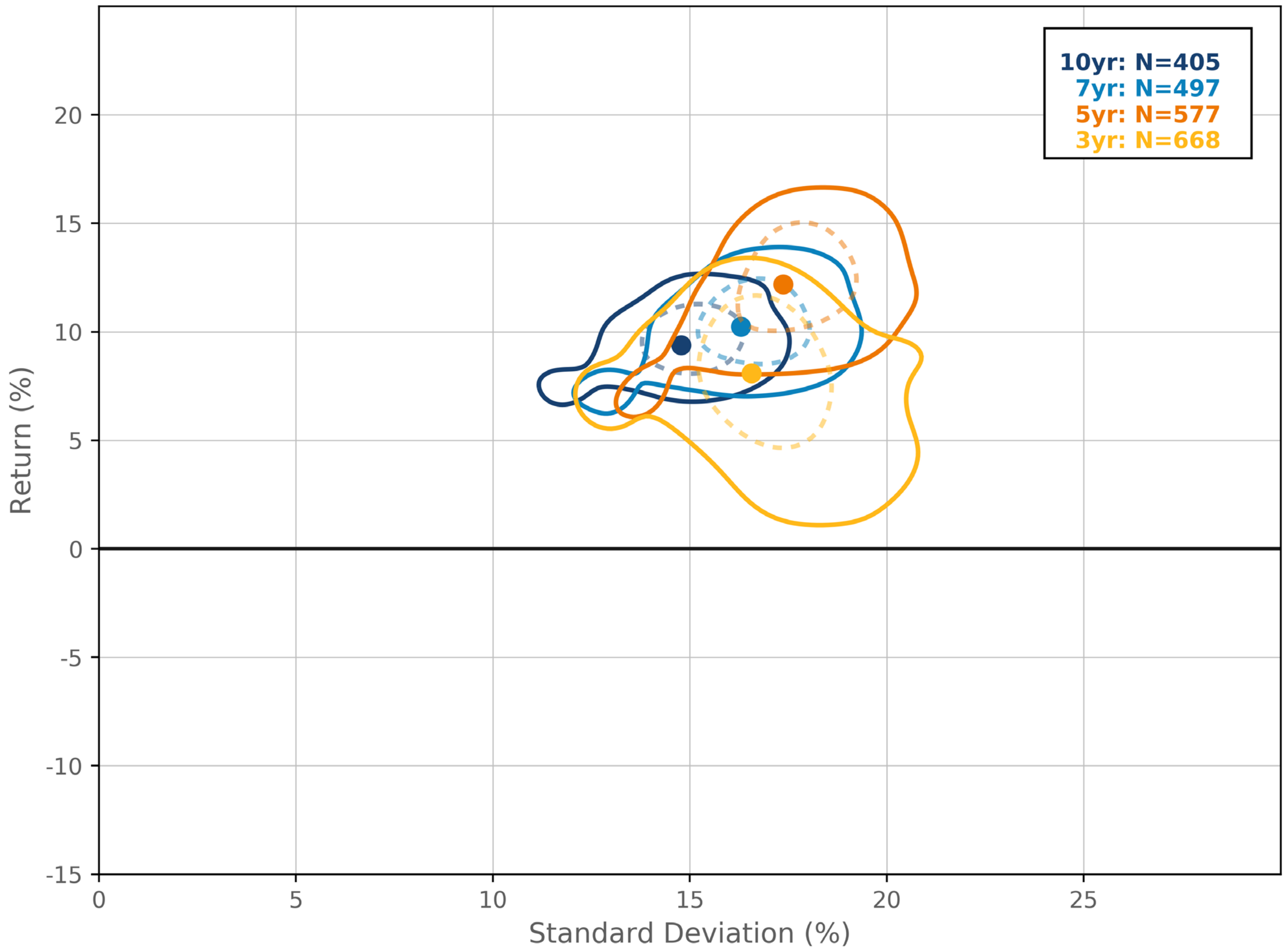
Source: eVestment as of 9/30/24, gross of fees

GLOBAL EQUITY



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI ACWI Index

Equities – Global



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the MSCI ACWI Index

Fixed income – U.S. core

— The U.S. core universe has historically exhibited very low dispersion among active managers, with minimal differentiation from the benchmark regarding both risk and return. The return distribution over longer periods remained normal, as demonstrated by minimal spacing in the bottom-right chart relative to other asset classes. Over longer trailing periods, the core universe showed minimal compensation for taking additional risk. Over a three-year trailing period, the universe displayed a slightly downward sloping shape, resulting primarily from managers that held more duration risk being penalized due to movements in the yield curve.

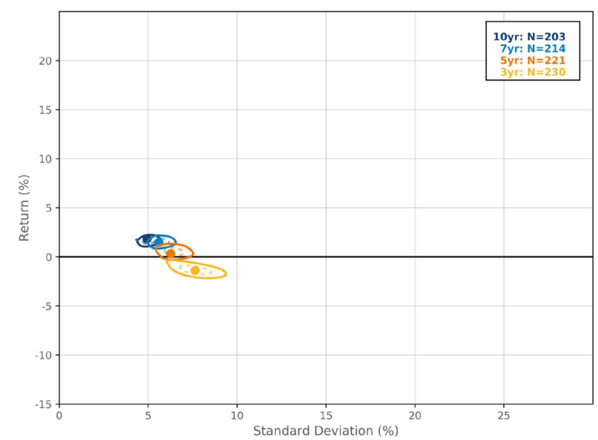
— In 2024, opportunities for core managers appeared limited, as rate cuts by the U.S. Federal Reserve were fewer than the market expected, negating downward movements in the long end of the yield curve. However, continued dislocations in the agency mortgage market caused many active core managers to overweight securitized assets. Due to investment-grade corporate spreads remaining near historical tights, opportunities for outperformance over the index remained dependent on top-down factors such as active duration positioning.

— Despite limited product dispersion, we believe that certain active U.S. core strategies are well-equipped to effectively manage risk and liquidity during market drawdowns.

U.S. AGGREGATE BOND INDEX SECTOR YIELD/OAS RANGES SINCE 2000

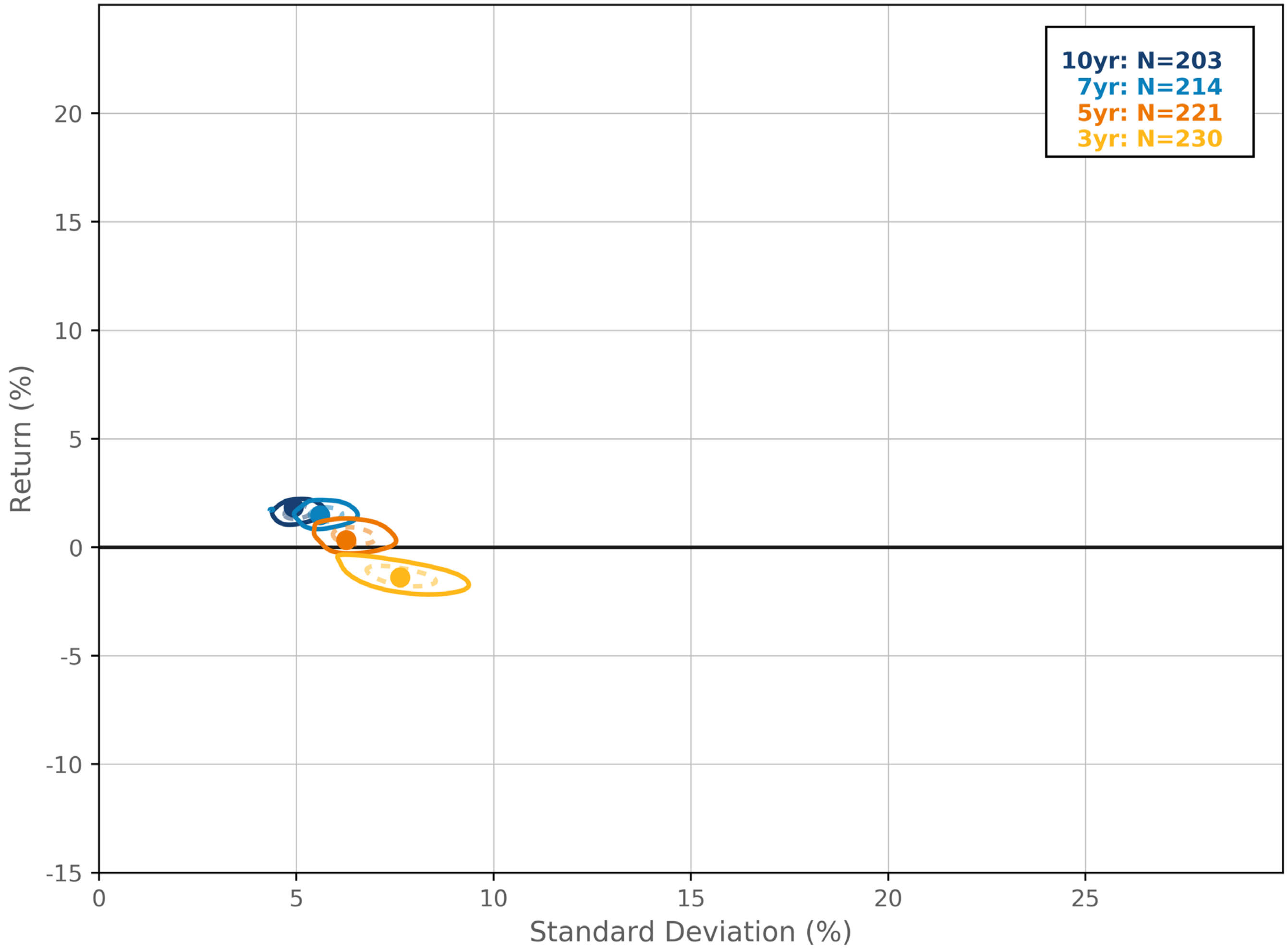
Source: Barclays Live as of 12/20/24

U.S. CORE



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Aggregate Index

Fixed income – U.S. core



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Aggregate Index

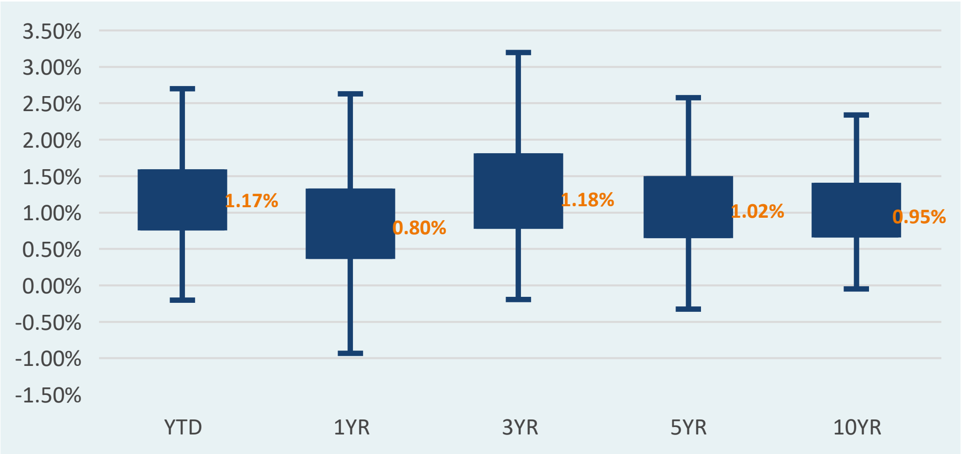
Fixed income – U.S. core plus

— Over shorter periods, most U.S. core plus assets displayed negative absolute returns, largely due to the large losses of 2022. However, core plus managers achieved positive returns over longer periods, benefiting from a wider range of higher-yielding sectors. Despite investment grade and high yield corporate credit spreads near historical averages at the beginning of 2024, multiple factors such as continued strength in the U.S. consumer and corporate balance sheets contributed to spreads tightening further. This led core plus managers that had overweighted credit risk to broadly outperform peers that had overweighted treasuries.

— Duration positioning also played a role due to uncertainty around U.S. interest rate cuts, given significant yield curve fluctuations throughout 2024. At end of year, Federal Reserve policy indicated a slower pace of rate cuts, which has minimized any downward movement of the yield curve.

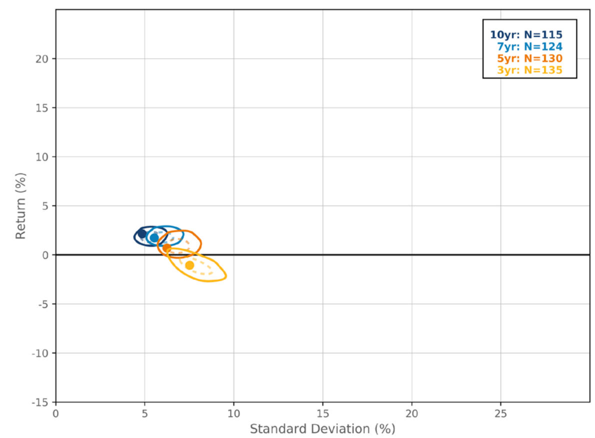
— While dispersion among U.S. core plus strategies remains somewhat narrow, continued uncertainty in the current market environment has strengthened our belief that quality active core plus strategies may be well-equipped to effectively manage liquidity and avoid idiosyncratic risks. This is typically achieved through diligent security selection and sector rotation, as different market environments can reward different components of the universe.

CORE PLUS ACTIVE MANAGER UNIVERSE EXCESS RETURNS



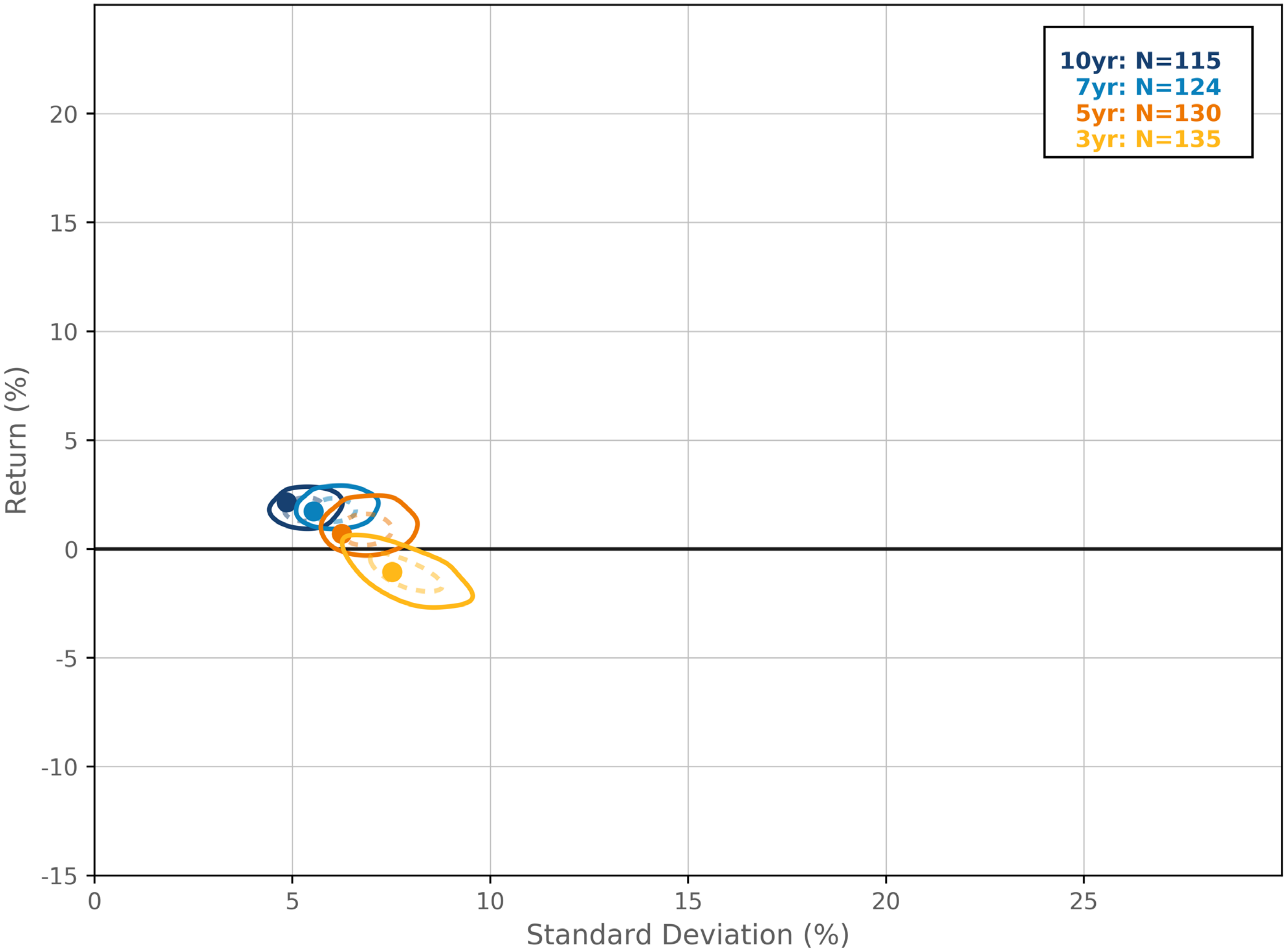
Source: eVestment, as of 9/30/24, Benchmark: Bloomberg US Universal, gross of fees.

CORE PLUS



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Universal Index

Fixed income – U.S. core plus



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Universal Index

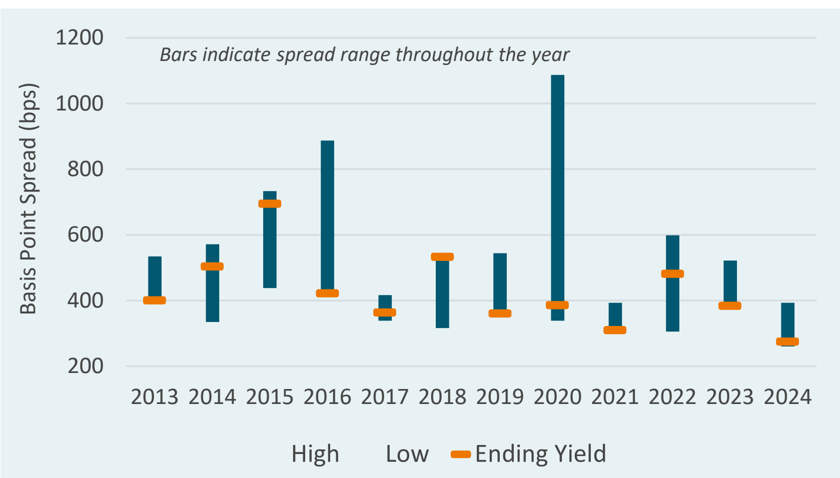
Fixed income – U.S. high yield

— Historically, actively managed high yield strategies have demonstrated greater dispersion around the benchmark compared to primarily interest rate-sensitive core and core plus products. In 2023 and 2024, corporate credit spreads consistently tightened, ending both years at the lower end of historical ranges. Strategies positioned with less duration were more likely to produce higher returns with lower risk, as reflected by the upper left tail in the 3-year trailing period. Over longer 7- and 10-year periods, the benchmark appeared at the top of the universe with few strategies able to outperform. This trend changed in recent periods, indicating less efficiency in the high yield market.

— Over the 3-year period, the universe chart was downward sloping, indicating managers that took more risk than the benchmark underperformed. Over longer-term 7- and 10-year periods, the universe chart remained flat with no discernible relationship between additional risk and return.

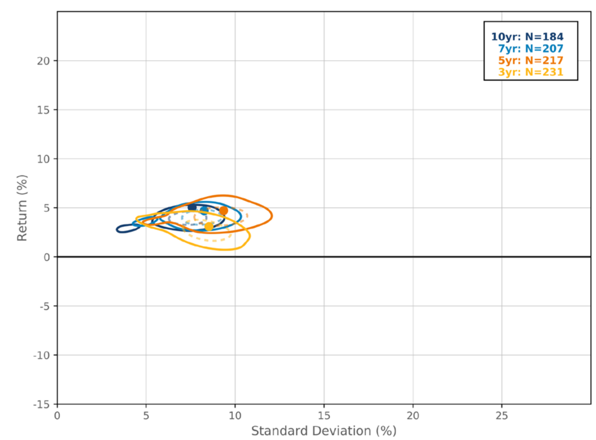
— Active managers have shown an ability to increase diversification and also add returns to traditional core fixed income portfolios. Many skilled managers are able to identify bonds with attractive valuations and positive fundamentals, while avoiding deteriorating credits.

HIGH YIELD OPTION ADJUSTED SPREAD RANGES



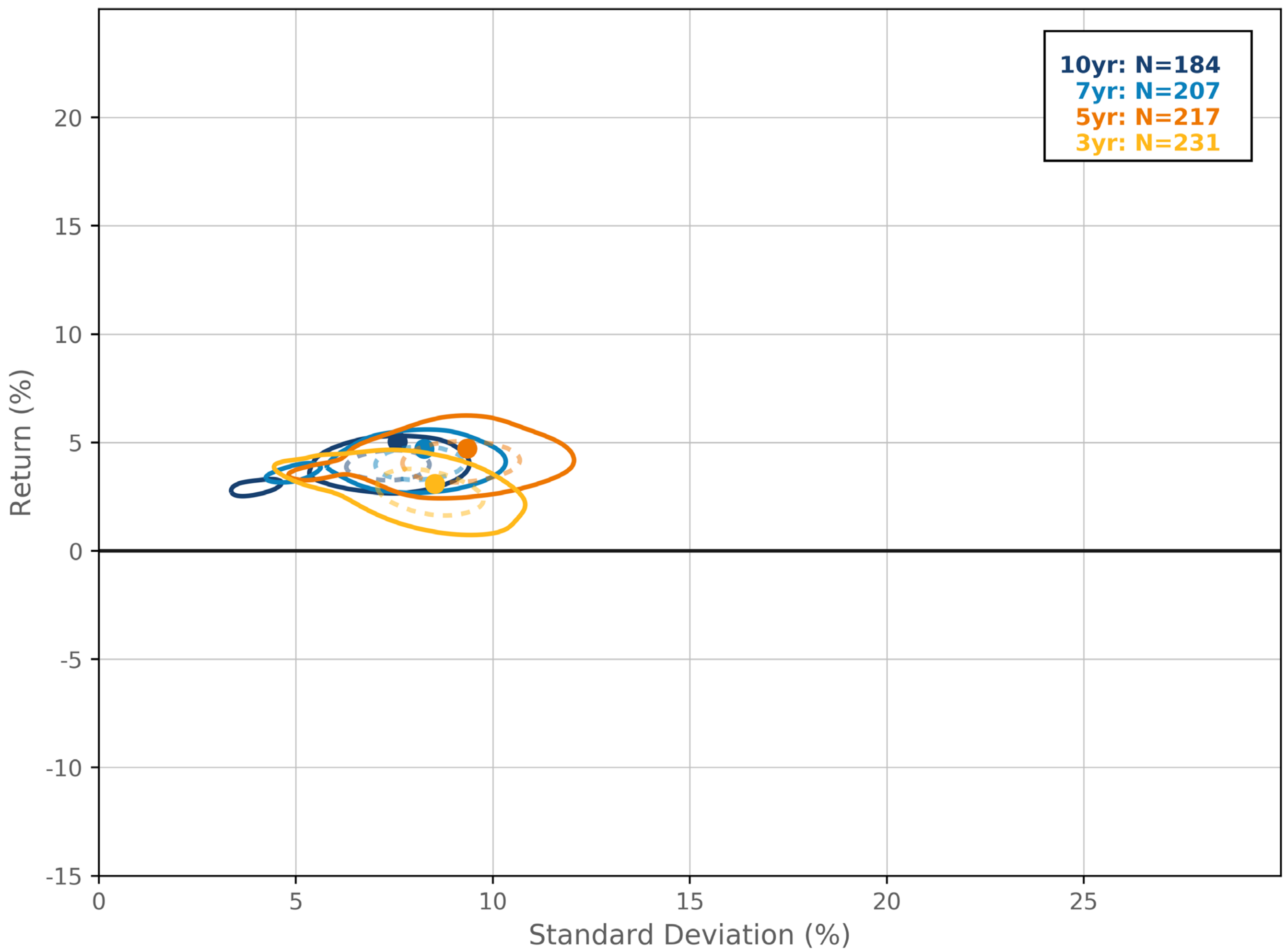
Source: FRED, as of 12/15/24

U.S. HIGH YIELD



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Corporate High Yield Index

Fixed income – U.S. high yield



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Corporate High Yield Index

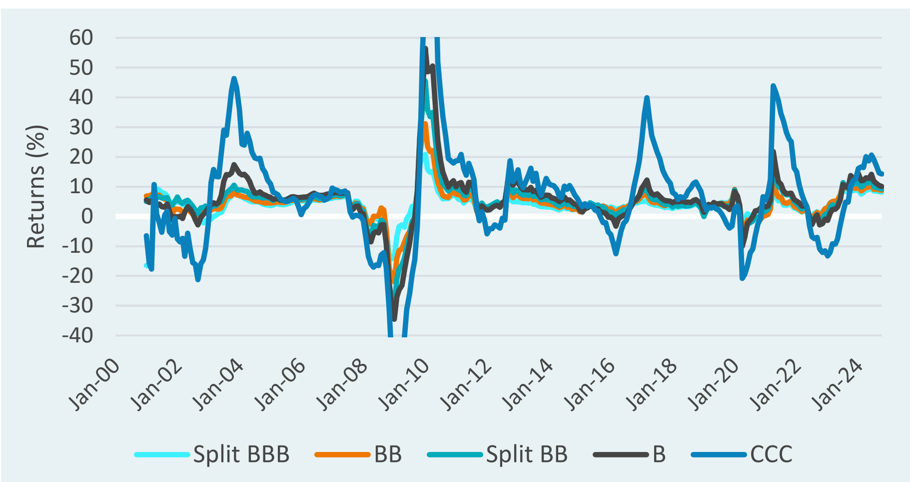
Fixed income – Bank loans

— The bank loan universe has displayed minimal dispersion among active managers across the 5-, 7-, and 10-year periods This asset class typically displays a high level of efficiency, with the benchmark outperforming a majority of active mandates. While active managers struggled to outperform the index over the past three years, the same period also saw higher absolute returns with lower volatility. Differentiation was minimal as active strategies performed fairly similarly.

— Due to their floating rate structure, bank loans have benefited from the higher-for-longer base rates implemented in 2022 and 2023, and this continued in 2024 as the Federal Reserve has been slow to cut rates. As a result, this asset class saw increased market appetite and a broader opportunity set compared to the low-rate environment that followed the 2008-2009 Great Financial Crisis.

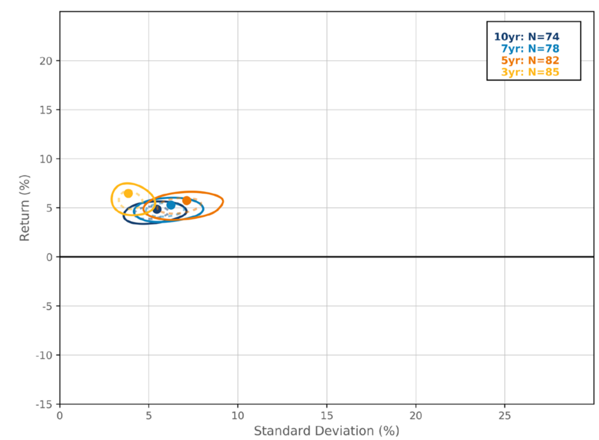
— We believe dedicated exposure to bank loans has the potential to provide diversification for credit portfolios, as well as downside protection in rising rate environments. Because of active managers' ability to tactically rotate into higher beta loan tranches, we believe skilled active managers can outperform traditional core and other credit indices across a full market cycle.

ROLLING 36 MONTH RETURN BY TRANCHE OF CSLLI BENCHMARK



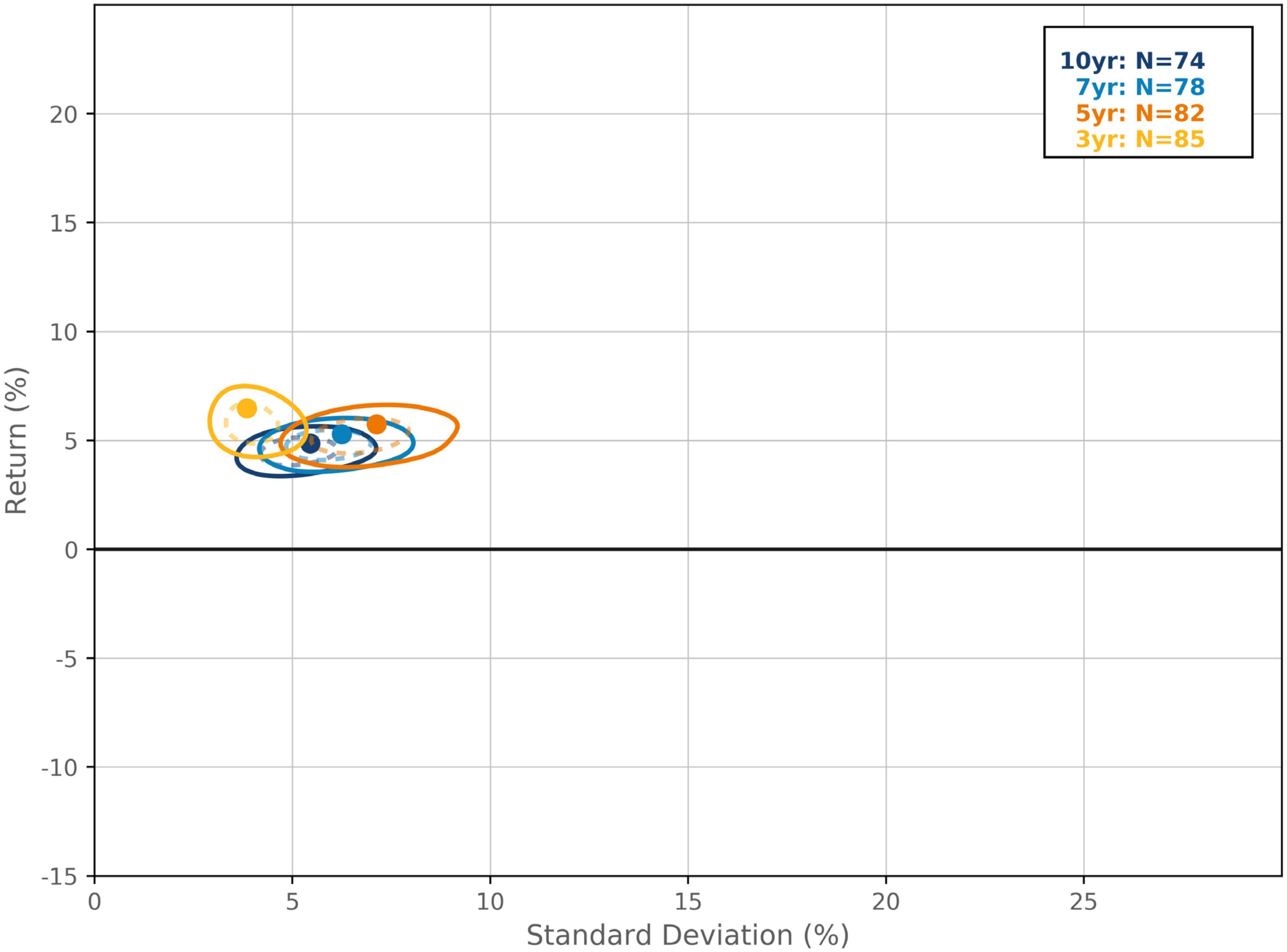
Source: Credit Suisse, Aristotle as of 9/30/24

BANK LOANS



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Morningstar LSTA U.S. Leveraged Loan Index

Fixed income – Bank loans



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Morningstar LSTA U.S. Leveraged Loan Index

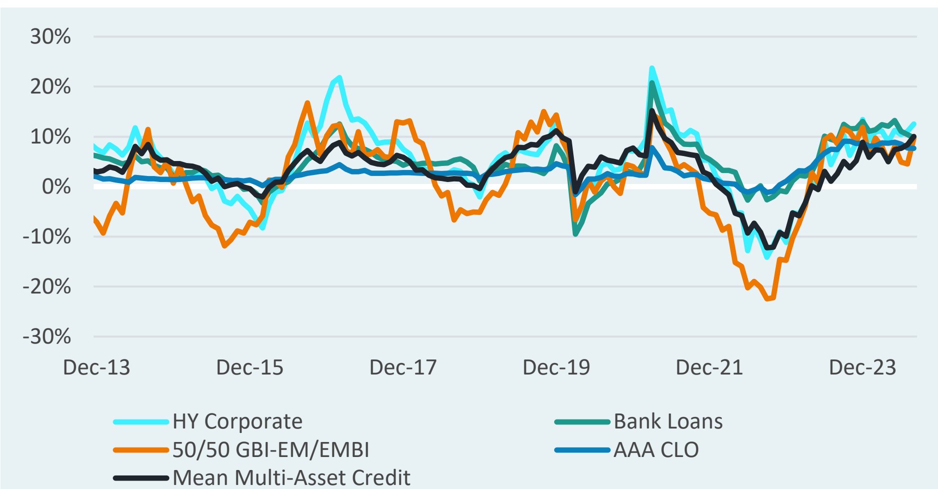
Fixed income – Multi-asset credit

— Multi-asset credit, composed primarily of U.S. bank loans, corporate credit, and structured credit such as CLOs, has shown a wide dispersion of returns over long and short historical periods. These returns have remained positive on an absolute basis, though an equally weighted benchmark of bank loans and high yield has historically returned near the higher end of universe returns. Universe returns have sloped downward in recent periods, indicating that higher risk managers underperformed more risk-averse managers.

— Historically, there has been performance dispersion among the various sleeves of credit due to many factors. Examples include: interest rate movements, idiosyncratic risk from corporate names, and currency risk from non-U.S. domiciled assets. Active multi-asset credit portfolios that allocate to more than one of these sectors can produce a 'smoothing' effect on returns, with skilled managers generating consistently positive returns across most market environments.

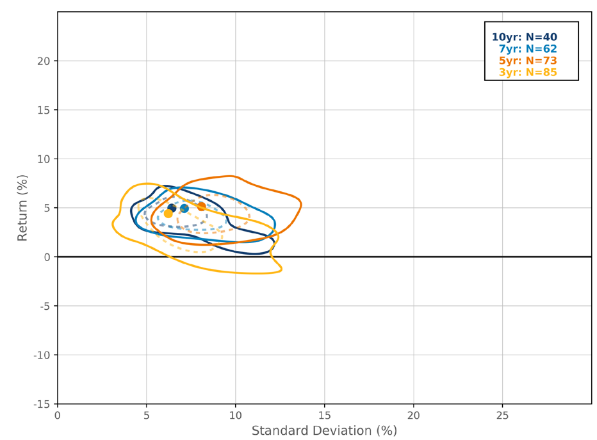
— Due to the broad opportunity set afforded to multi-asset credit managers, we believe that active managers focused on generating alpha from sector rotation can potentially provide a portfolio with diversification from traditional, government-focused, core fixed income. We believe this to be particularly true for smaller portfolios without the scale to allocate to separate sleeves of bank loans and corporate high yield.

12 MONTH ROLLING PERFORMANCE VS CONSTITUENT SECTORS



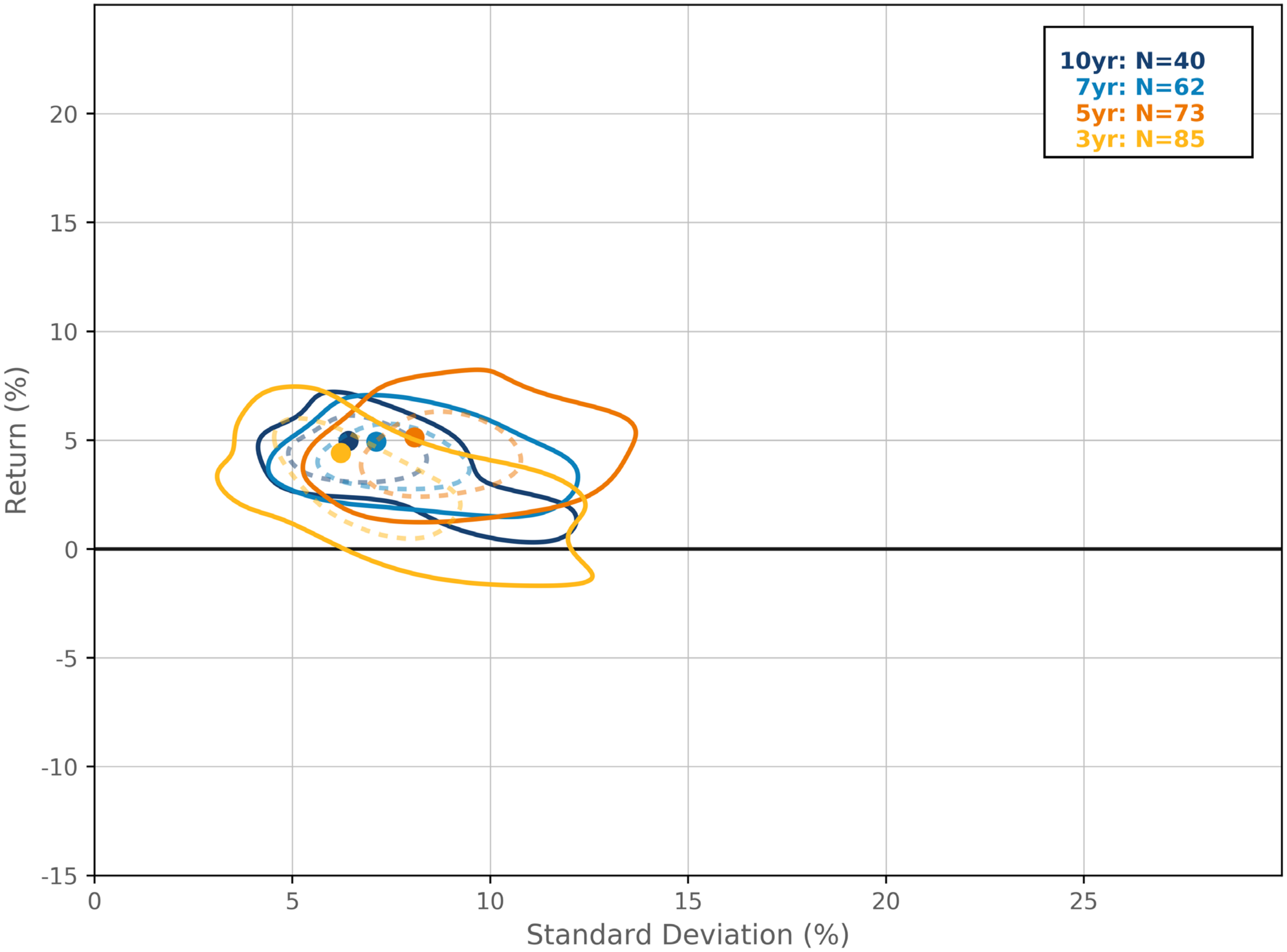
Source: Barclays, as of 9/30/24

MULTI-ASSET CREDIT



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is a 50/50 blend of the Bloomberg U.S. Corporate High Yield Index and Morningstar LSTA U.S. Leveraged Loan indices

Fixed income – Multi-asset credit



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is a 50/50 blend of the Bloomberg U.S. Corporate High Yield Index and Morningstar LSTA U.S. Leveraged Loan indices

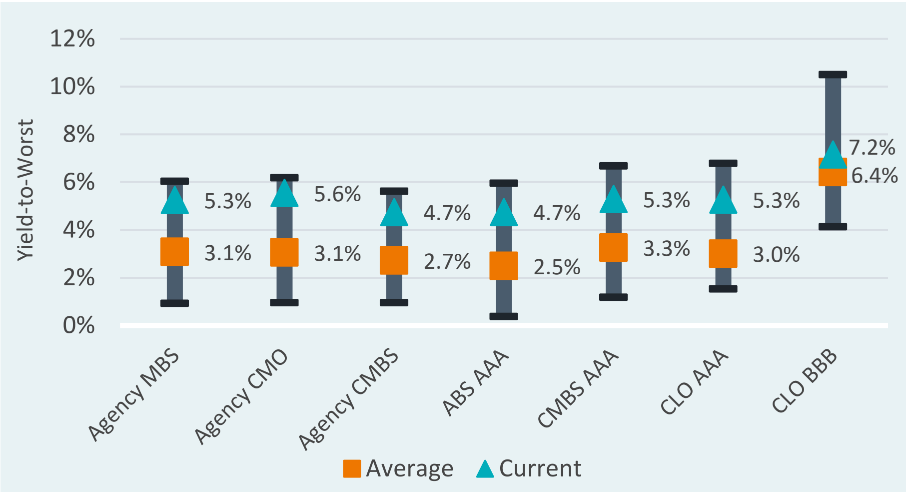
Fixed income – Securitized credit

— Active managers in securitized credit universe have historically demonstrated value over longer trailing periods relative to other asset classes, as demonstrated by a majority of managers outperforming of the index. This tends to result from a combination of manager skill and the conservative nature of the index, which is largely comprised of agency mortgage-backed securities (MBS). As a result, active managers have tended to underweight agency mortgages and overweight higher yielding sectors such as non-agency mortgages, commercial real estate, and structured credit such as asset-backed securities.

— During the recent 3-year trailing period, uncharacteristically higher yields from agency MBS allowed managers to be compensated for reducing risk. This is shown by a negative relationship between risk and return as well as a widened distribution of risk across the period. The result reflects managers taking advantage of the dislocation in agency MBS, an area that typically displays too low of yields to justify meaningful allocations.

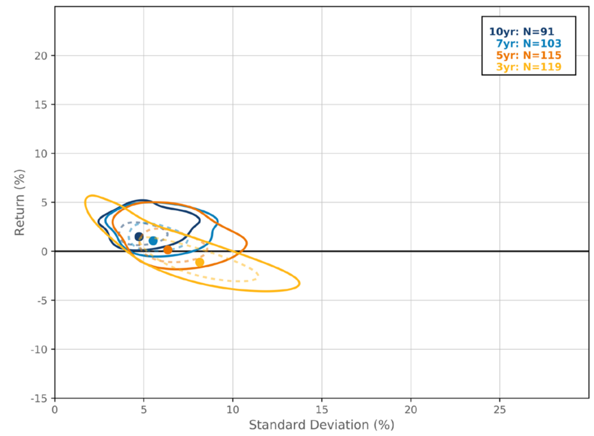
— We believe securitized credit can provide diversification to investors through the portfolio's convexity profile and bond duration, resulting in a lower correlation to equity relative to corporate bonds. Therefore, a dedicated active exposure to securitized can make sense in portfolios that are structurally underweight to securitized credit. This is often the case in portfolios that use core plus strategies but are benchmarked to a diverse index such as the Bloomberg U.S. Aggregate.

HISTORICAL SECURITIZED SECTOR YIELDS



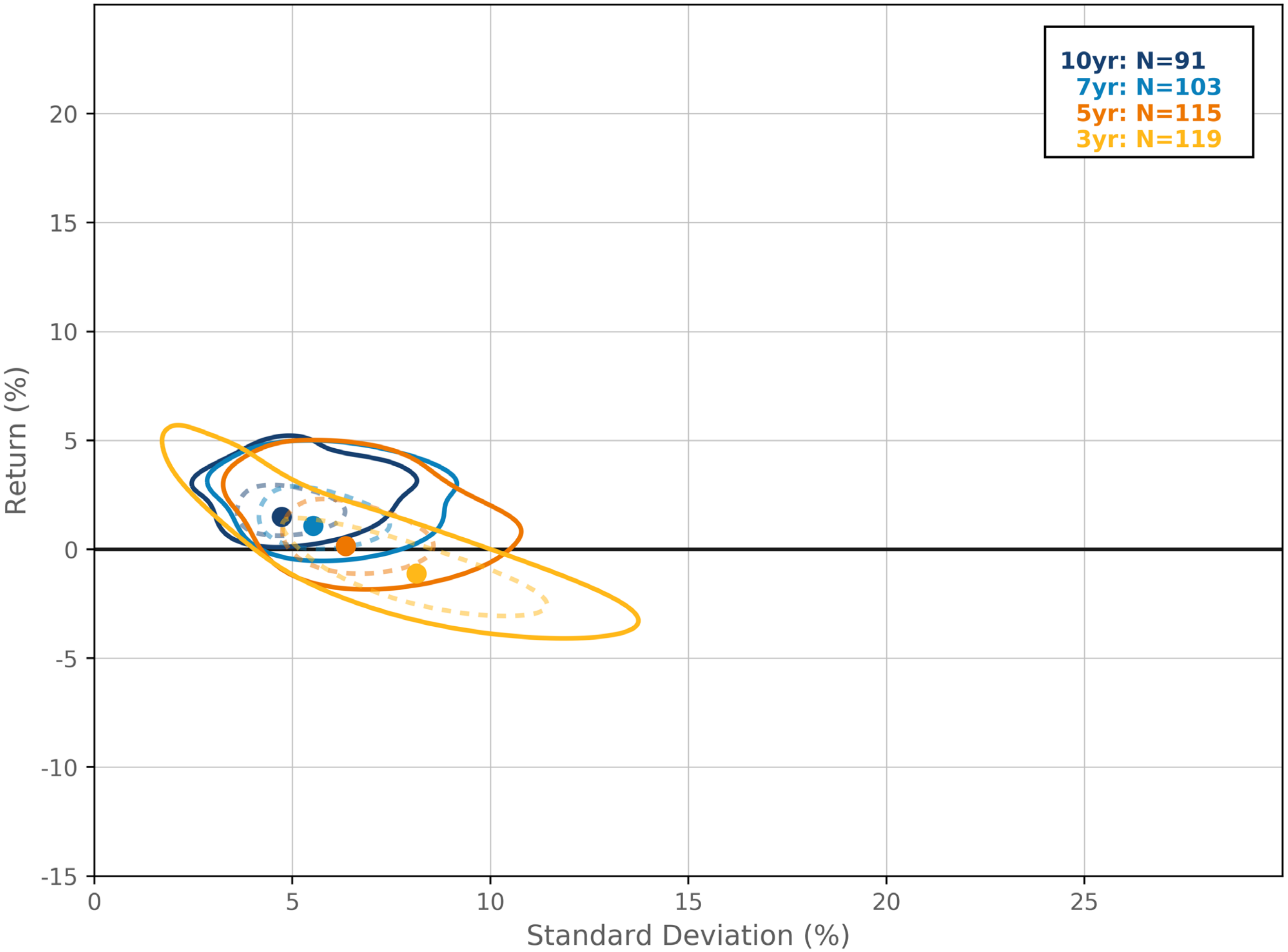
Source: DoubleLine, as of 12/30/24

SECURITIZED CREDIT



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Securitized Index

Fixed income – Securitized credit



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. Securitized Index

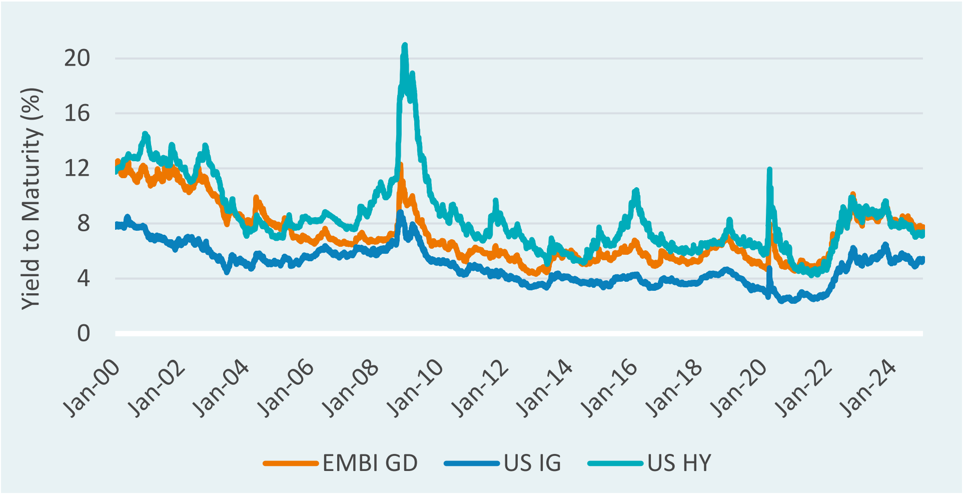
Fixed income – Emerging market debt (hard currency)

— Over 3-, 5-, and 7-year periods, hard currency emerging market debt active managers exhibited a relatively flat universe shape, indicating less relationship between total risk and total return among strategies. Over the 3-year period, the benchmark outperformed most managers on a return basis, as indicated by its positioning near the top of the universe. However, over medium lookback periods, a larger number of managers outperformed the benchmark, indicating less efficiency in the emerging market universe over a full market cycle.

— Relative to longer time horizons, the recent spread levels of emerging market debt have begun to rhyme with U.S. corporate high yield spreads. This is being driven by a tightening of U.S. credit spreads while investor appetite for emerging market debt continues to be scarce. While this may present an opportunity for active managers in 2025 and beyond, geopolitical uncertainty in the U.S. and abroad arguably overshadows the attractiveness of higher emerging market debt absolute yields.

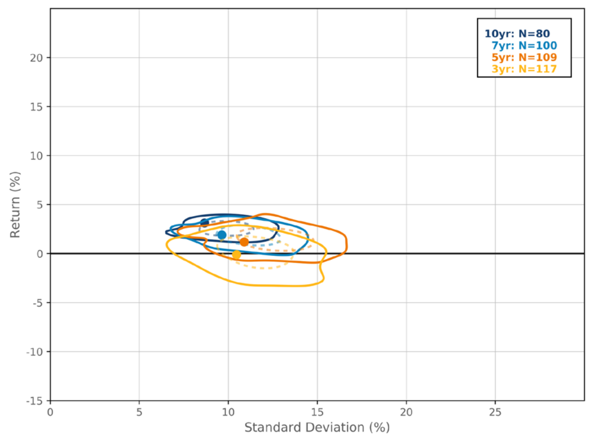
— While idiosyncratic country risk remains high, we believe competent active managers can selectively exclude higher risk exposures from the portfolio. Additionally, we believe the combination of incremental spread and potential diversification from U.S. credit makes the asset class a compelling choice for investors seeking higher returns.

EMD HARD CURRENCY SPREADS VERSUS US CREDIT



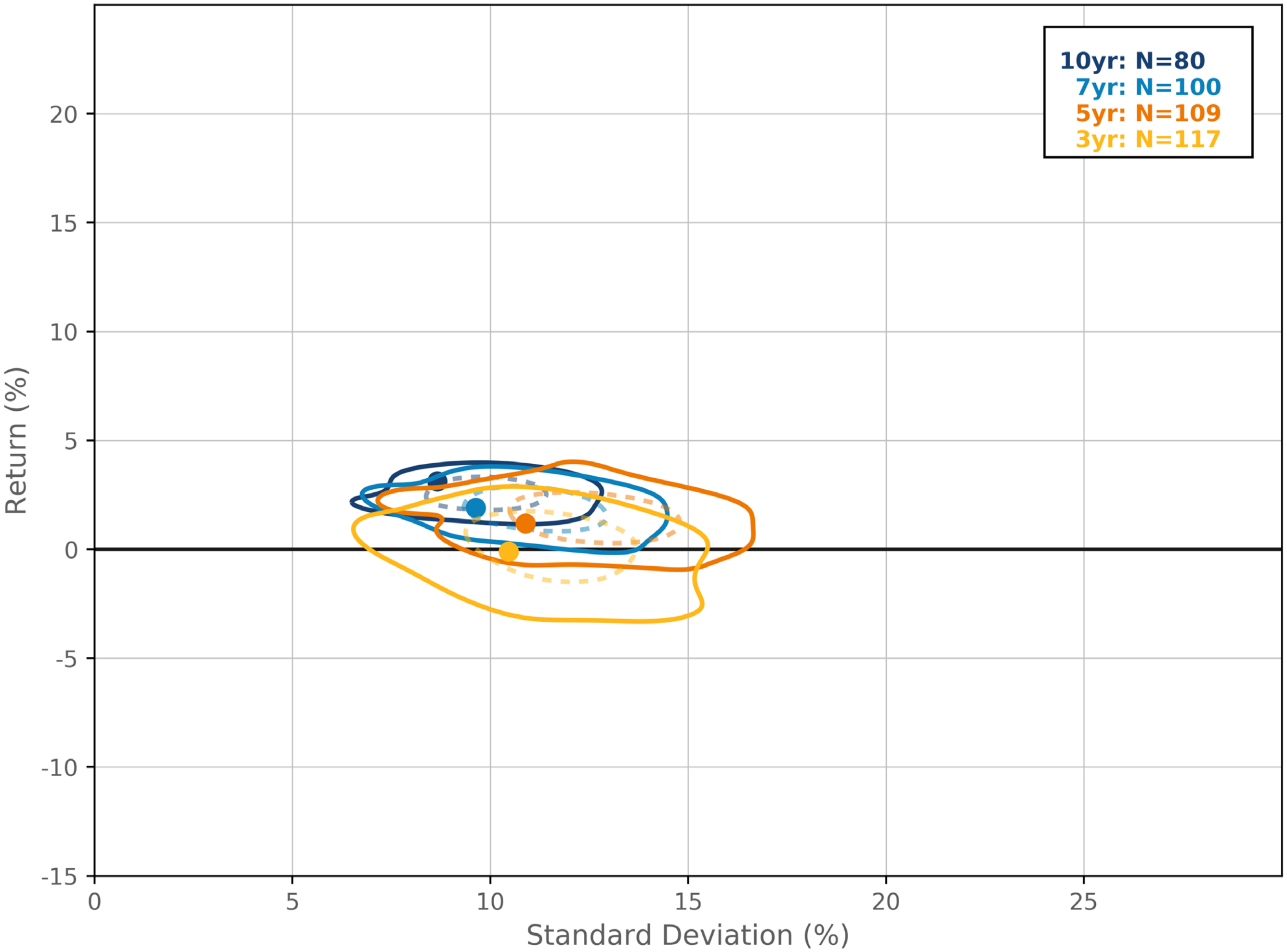
Source: Bloomberg, TCW as of 12/20/24

EMERGING MARKET DEBT (HARD)



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the J.P. Morgan EMBI Global Diversified Index

Fixed income – Emerging market debt (hard currency)



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the J.P. Morgan EMBI Global Diversified Index

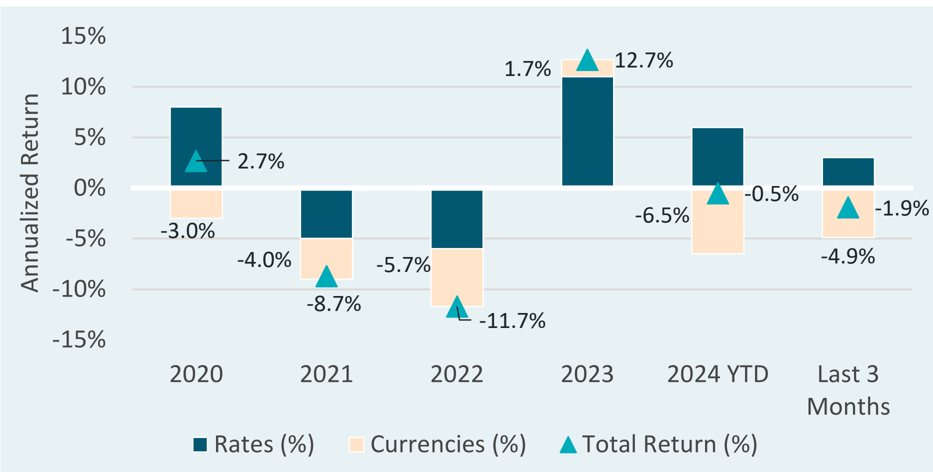
Fixed income – Emerging market debt (local currency)

— Over each trailing period, local currency displayed a neutral relationship between risk and return. The benchmark index produced similar levels of absolute returns across all lookback periods. Over longer timeframes, the benchmark ranged near the upper middle of active strategy returns, indicating that many active managers had difficulty adding value on a risk-adjusted basis. However, during the trailing 3-year period, local currency emerging market debt strategies saw an uptick in returns relative to the index. A majority of managers outperformed the index during this time, perhaps indicating a higher level of market inefficiency that active managers were able to take advantage of.

— Perhaps due to continued strength of the U.S. dollar and ongoing geopolitical risk, many strategies in local currency emerging market debt have seen significant outflows over the last three years. Following the global supply chain disruption in 2020 due to the COVID-19 pandemic, local currency has produced negative returns relative to the U.S. dollar in every year except 2023. However, many skilled managers have demonstrated an ability to actively rotate between countries to avoid outsized risks of foreign currency movements while capturing the upside of elevated real yields in emerging markets.

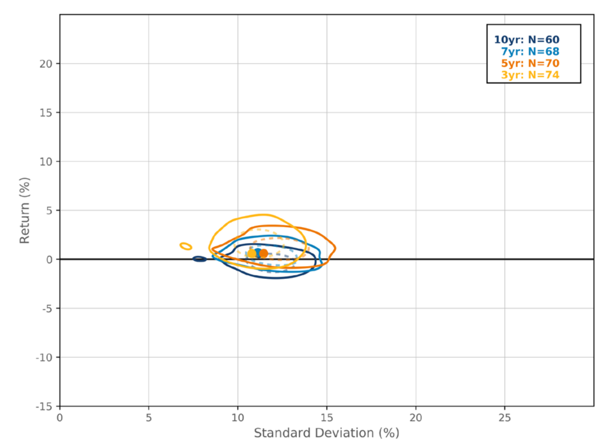
— While local currency-denominated emerging market debt is often influenced by idiosyncratic currency risks, we believe allocations to active managers can provide a degree of diversification to multi-asset portfolios.

ANNUAL CURRENCY IMPACT ON INDEX RETURNS



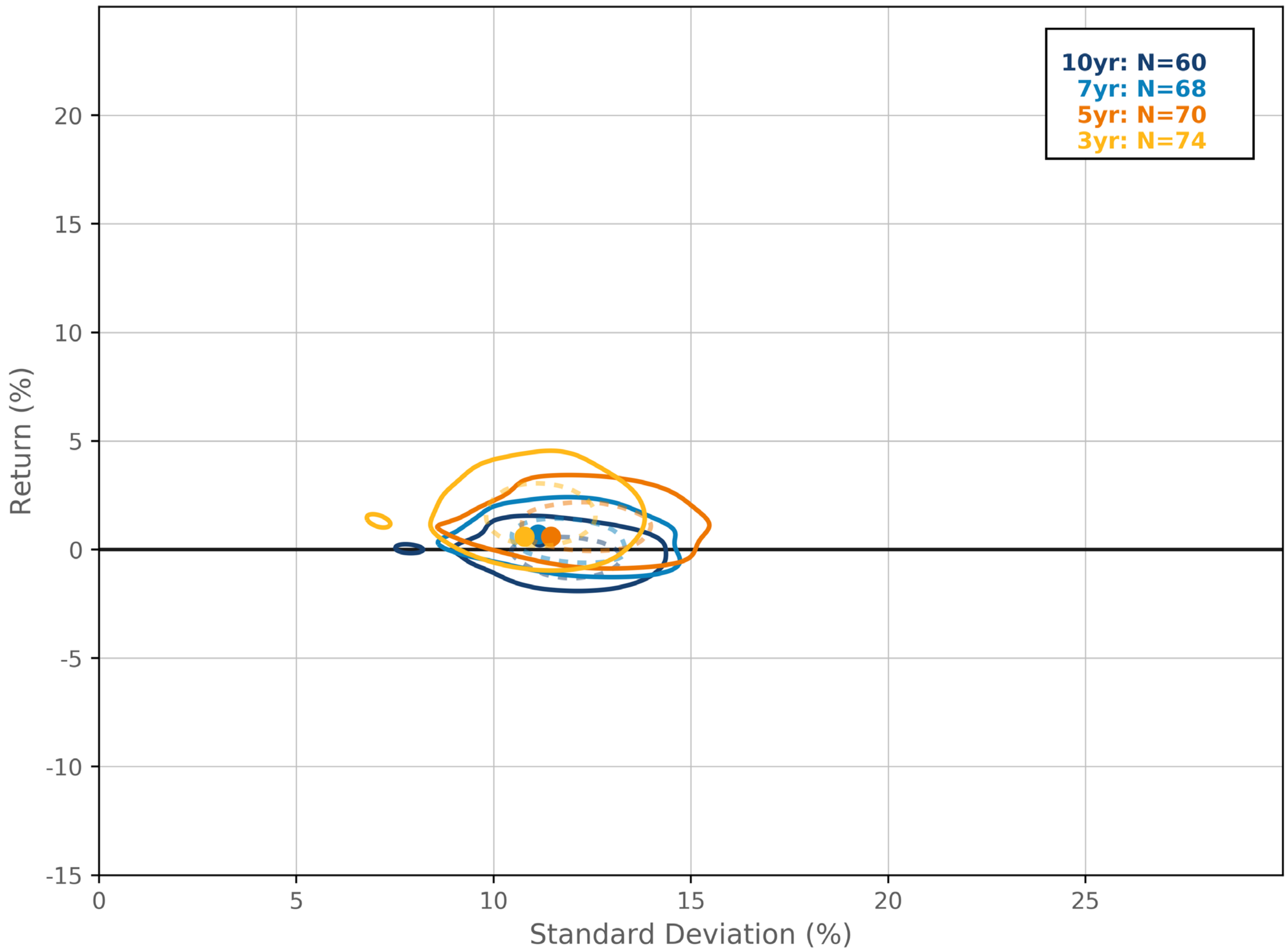
Source: JP Morgan, as of 12/29/24

EMERGING MARKET DEBT (LOCAL)



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the J.P. Morgan GBI-EM Global Diversified Index

Fixed income – Emerging market debt (local currency)



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the J.P. Morgan GBI-EM Global Diversified Index

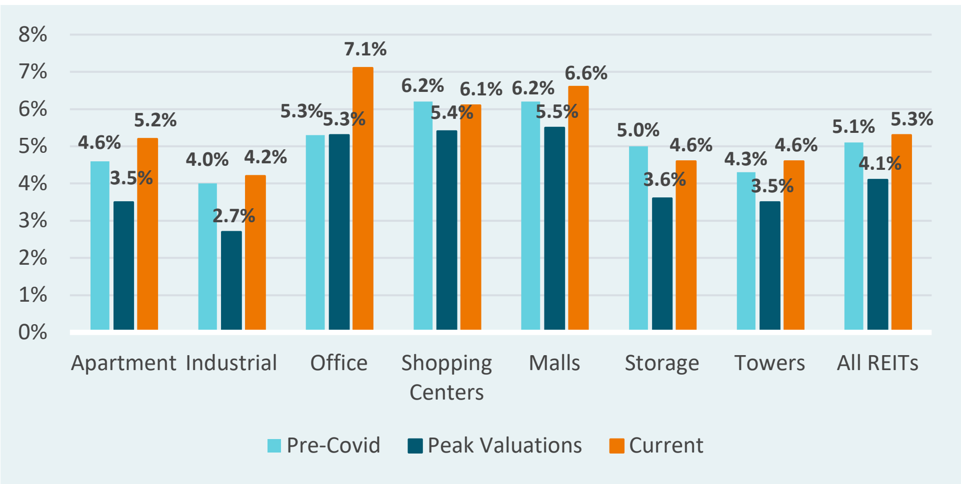
U.S. REITs

— Over most time periods, active REIT management has broadly provided the benefit of volatility reduction rather than the generation of large excess returns. This is likely due to the higher volatility of the benchmark, an ability to avoid or underweight out-of-favor sectors, and rebalancing effects.

— REITs continued to underperform broad equities in 2024 for the third consecutive year. Price performance was positive during the year but lagged the S&P 500 by more than -15% (Wilshire REIT Index +9.1% vs S&P 500 Index +25.0%).

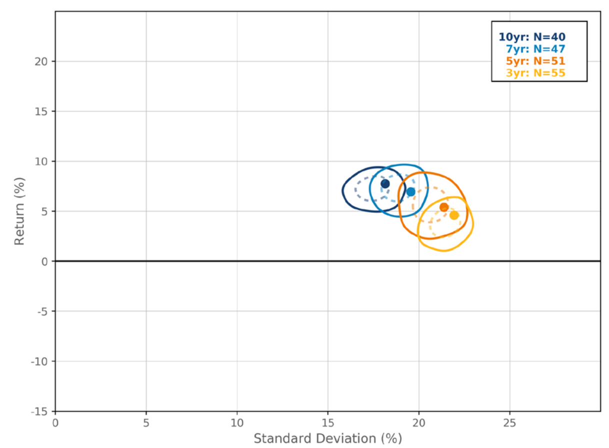
— While sector dispersion remained high, REIT implied cap rates have generally risen after the peak valuations of Q4 2021, when cap rates were low. The average implied cap rates for all REITs expanded to 5.3% (through Q3 2024), a rise of +1.2% from peak pricing and now are higher than the pre-Covid levels of 2019 (5.1%). While implied cap rates have expanded across most sectors, some are being valued today at lower rates than pre-Covid levels (shopping centers, storage, towers, data centers). Fundamental challenges remain in certain sectors (office and malls) and a higher interest rate environment has continued to pressure valuations relative to other public equity sectors.

IMPLIED CAP RATES – REIT SECTORS



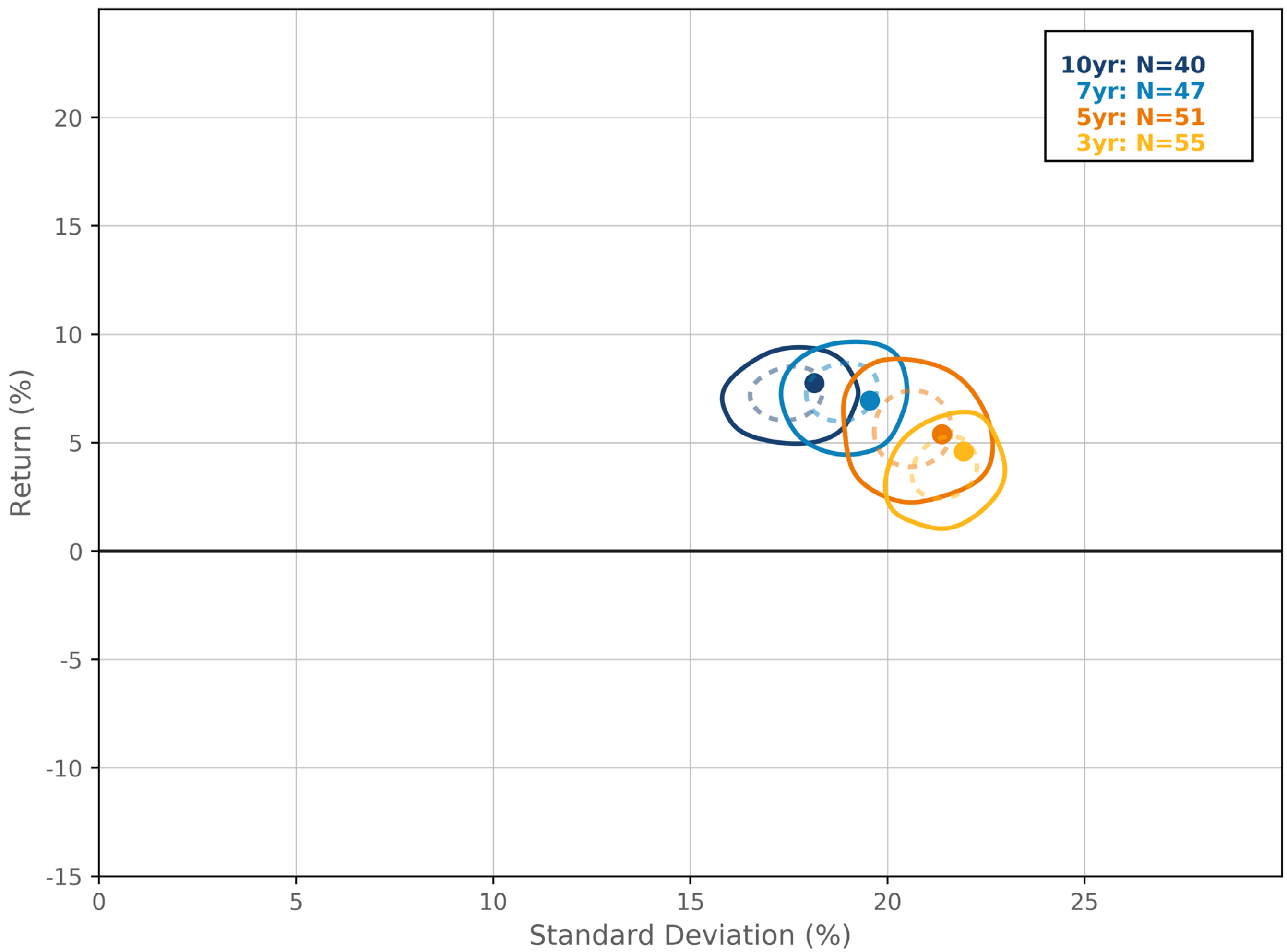
Source: CenterSquare (Pre-Covid: 12/31/19, Peak: 12/31/21, Current: 9/30/24

U.S. REITS



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Wilshire REIT Index

U.S. REITs



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Wilshire REIT Index

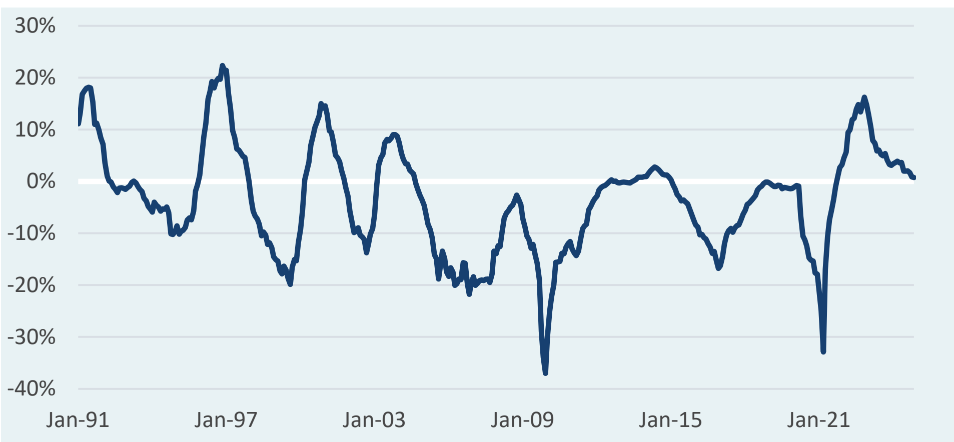
Commodities

— Active management in the commodity space tends to exhibit wide variation regarding the risk characteristics of strategies. This may be partly a reflection of the variety of manager styles. Strategies which look to mitigate negative roll yield and contango through term structure management have continued to add value over standard indexes, on average.

— Over the longest time period shown, data continues to suggest a negative relationship between risk and return as strategies with higher volatility levels have tended to underperform. That trend reversed over the most recent three-year and five-year periods, however, as a more traditional profile is represented (higher risk levels have led to higher returns). Dispersion has been very elevated due to volatility within the various commodity sectors.

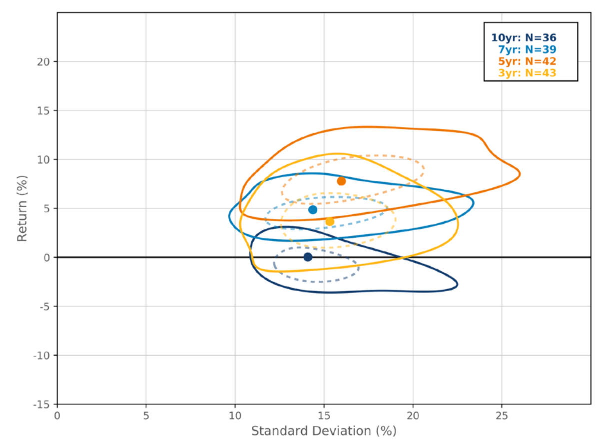
— The roll yield component has historically provided a headwind during a majority of time periods. This factor has been positive over the last three years, a likely reason for the higher percentage of outperformance during that period for active management. Roll yield performance has moderated towards a neutral level during the most recent month.

12-MONTH ROLL YIELD (S&P GSCI INDEX)



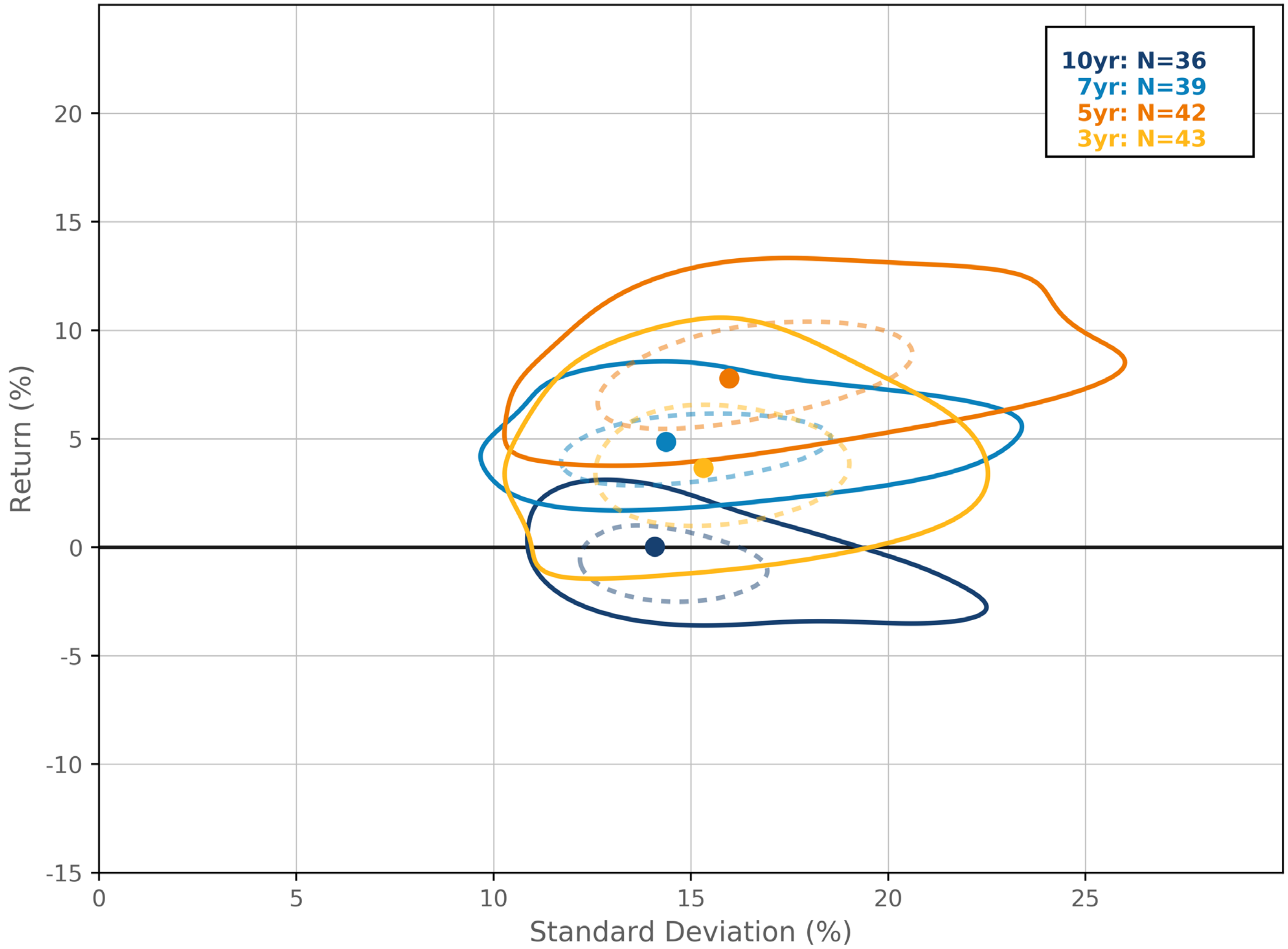
Source: Standard & Poor's, as of 11/30/24

COMMODITIES



Source: eVestment, as of 9/30/24. Universe returns adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg Commodity Index

Commodities



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg Commodity Index

Appendix

Supplementary universe charts: a different view

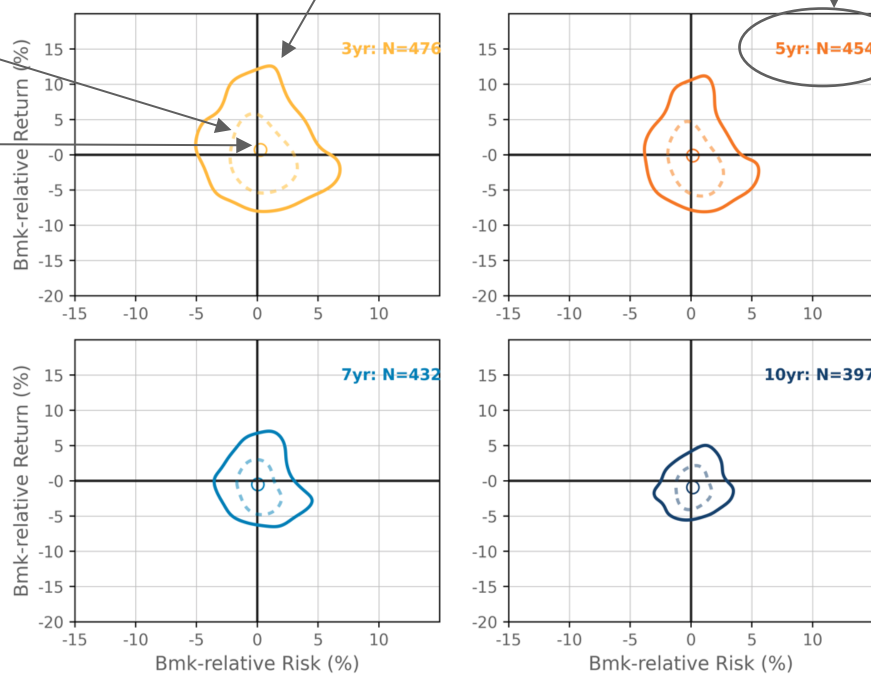
How to read a risk/return universe chart

Ring contains
75% of products

Ring contains
35% of products

Center circle
indicates median
manager

The center axis (0,0)
indicates the
benchmark return

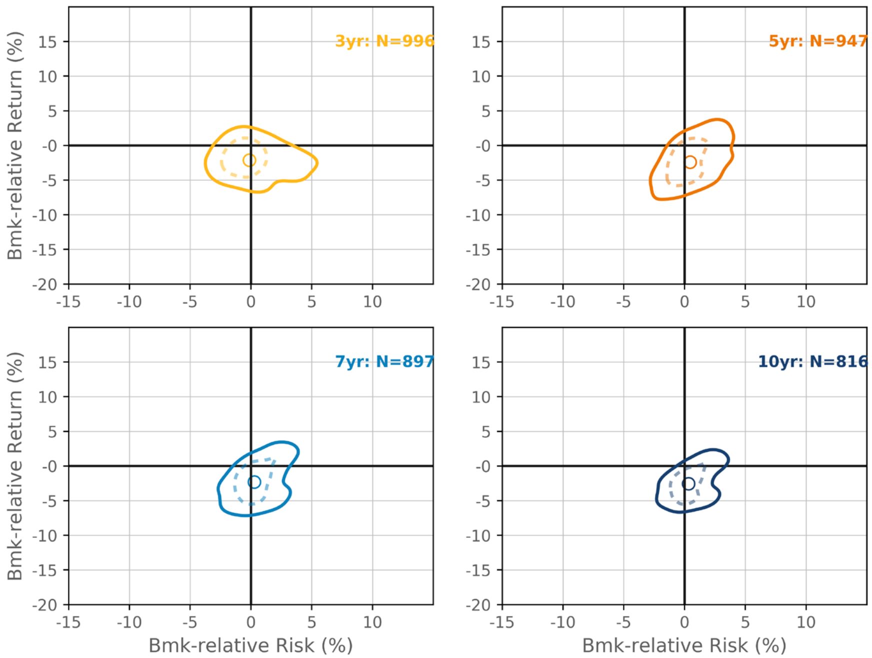


The number of products included in the analysis provides insight into the robustness of the analysis.

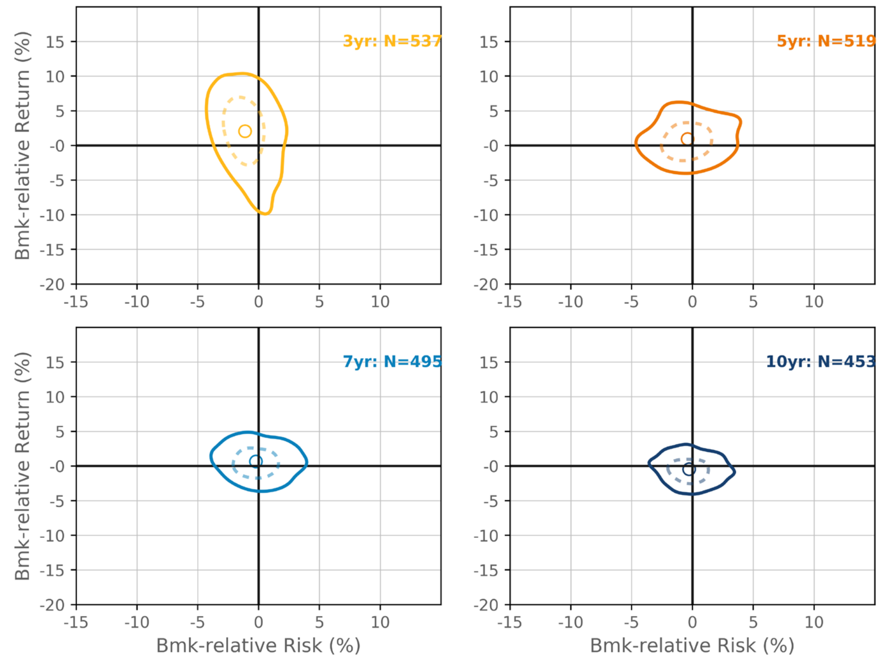
The changing shape within the charts is impacted by the market environment and the time period examined

U.S. equity

U.S. LARGE CAP



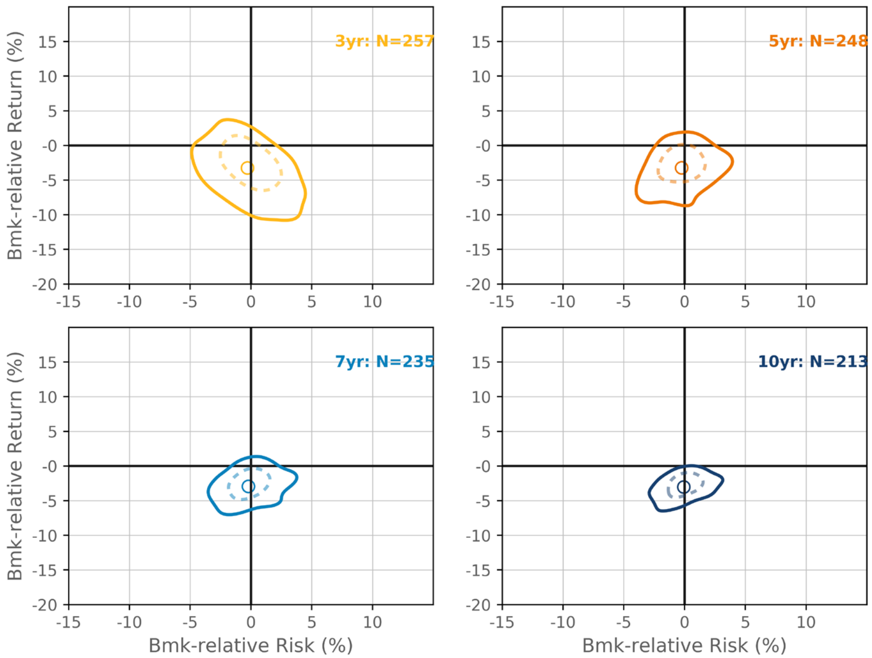
U.S. SMALL CAP



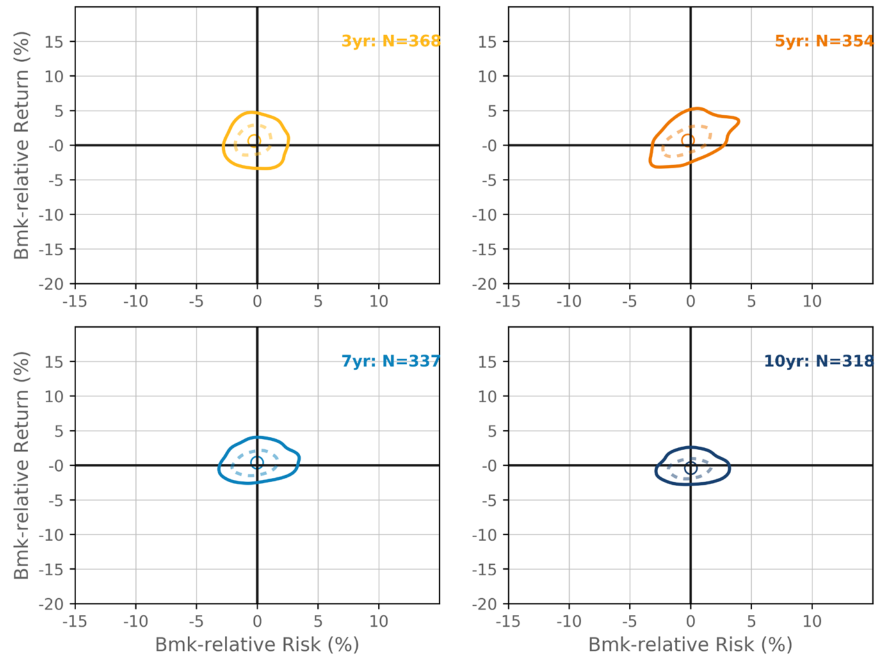
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

U.S. equity

U.S. LARGE CAP GROWTH



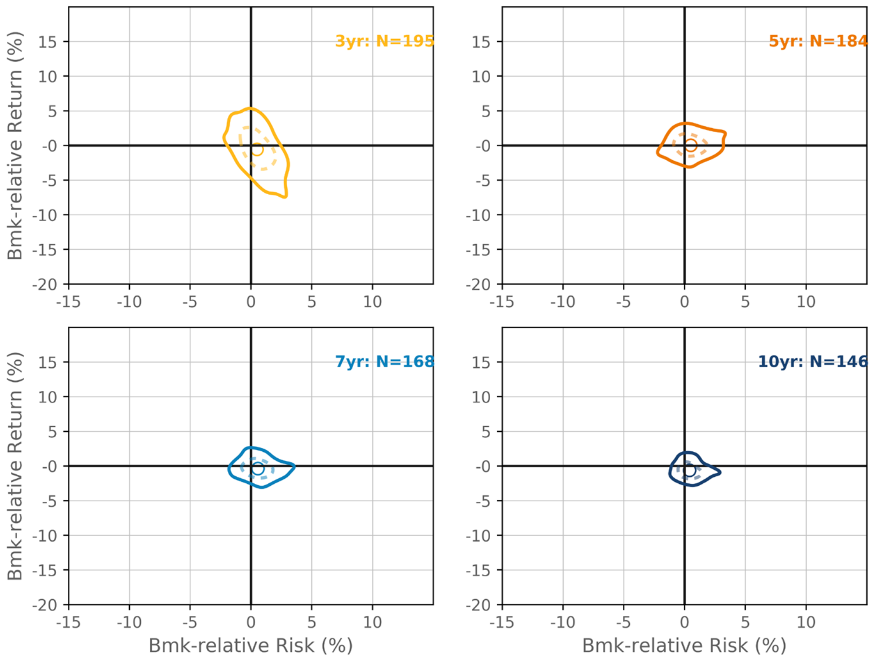
U.S. LARGE CAP VALUE



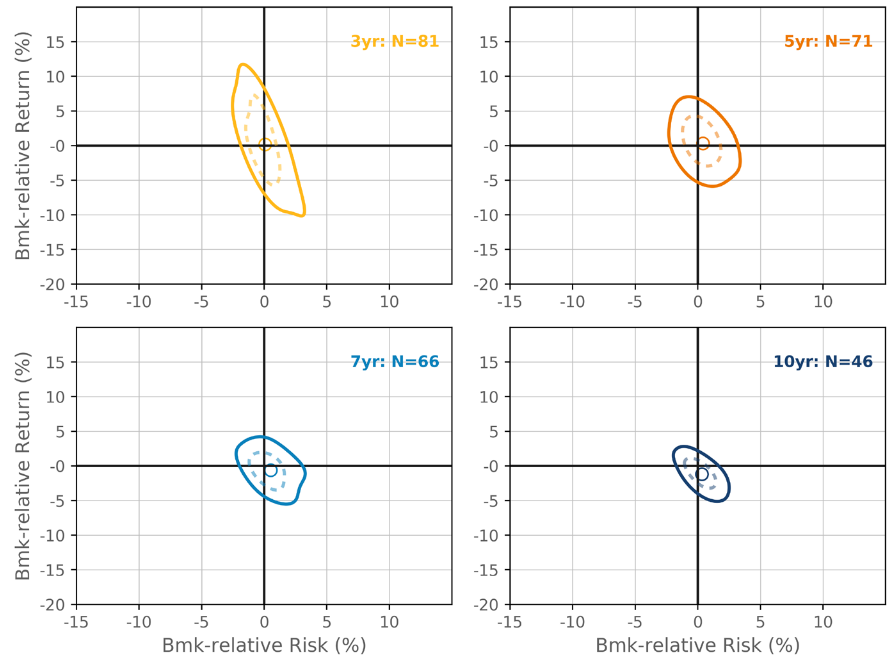
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

International equity

INTERNATIONAL DEVELOPED



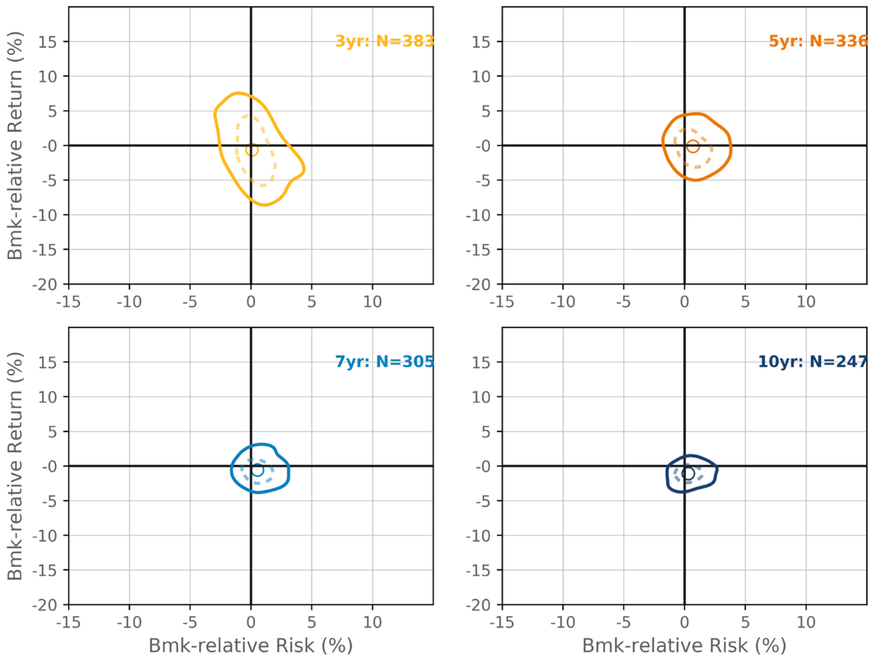
INTERNATIONAL DEVELOPED SMALL



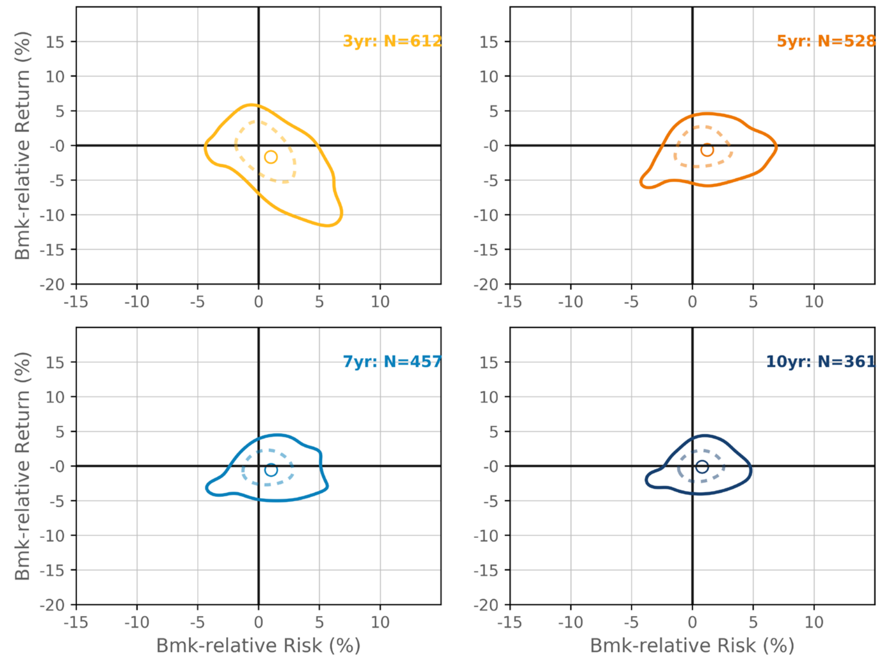
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

Emerging market & global equity

EMERGING MARKETS



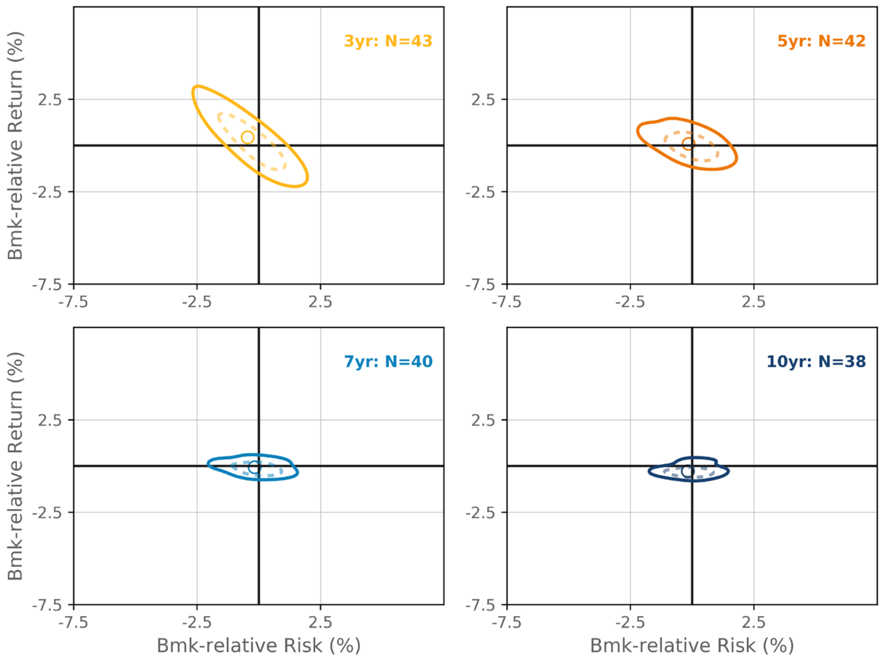
GLOBAL



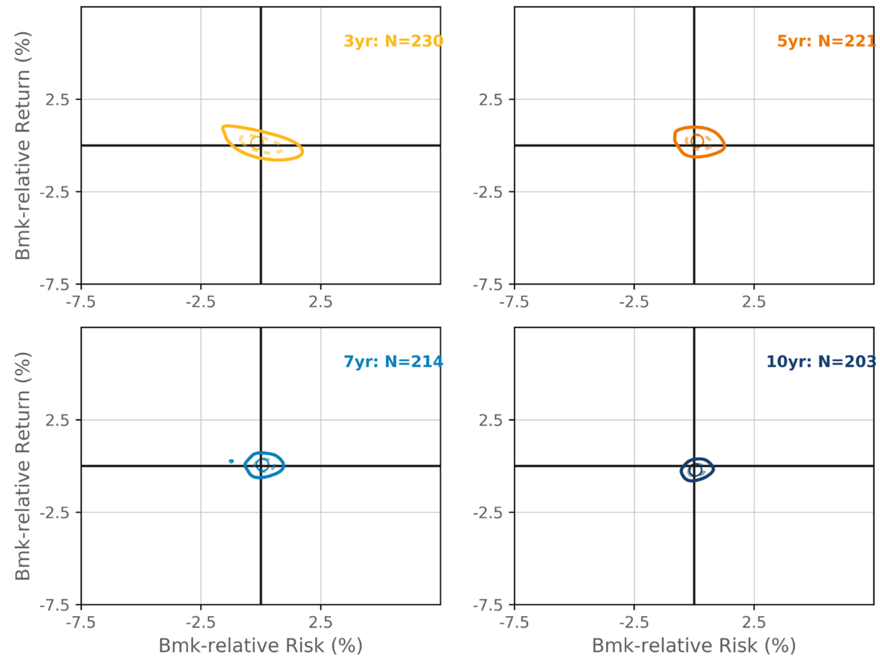
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

U.S. fixed income

U.S. TIPS



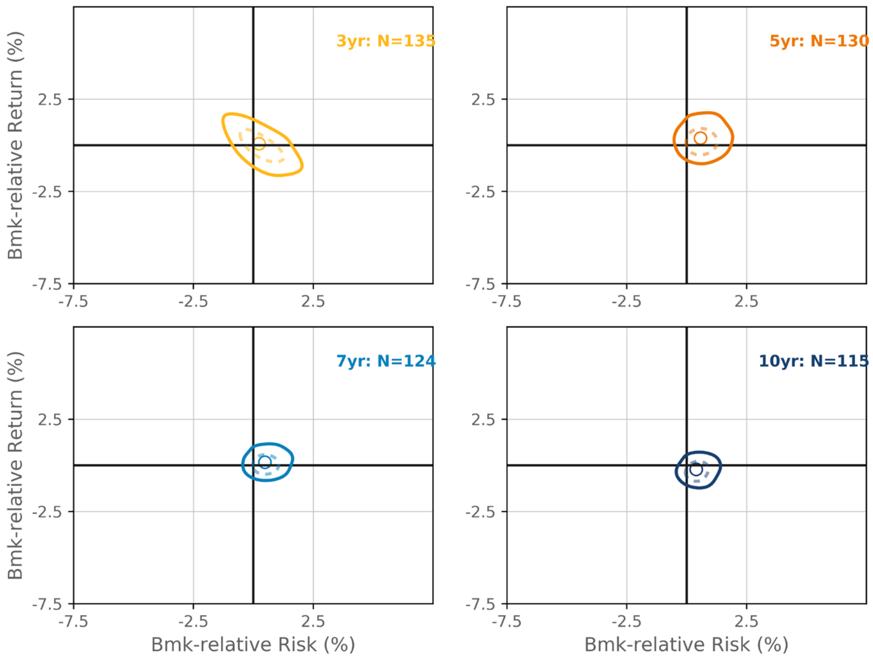
U.S. CORE



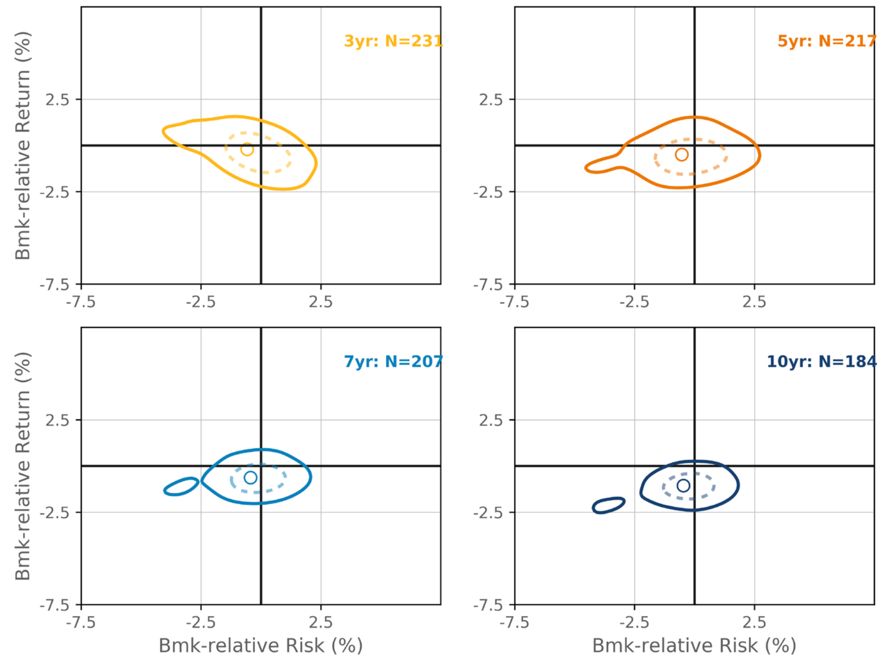
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

U.S. credit

U.S. CORE PLUS



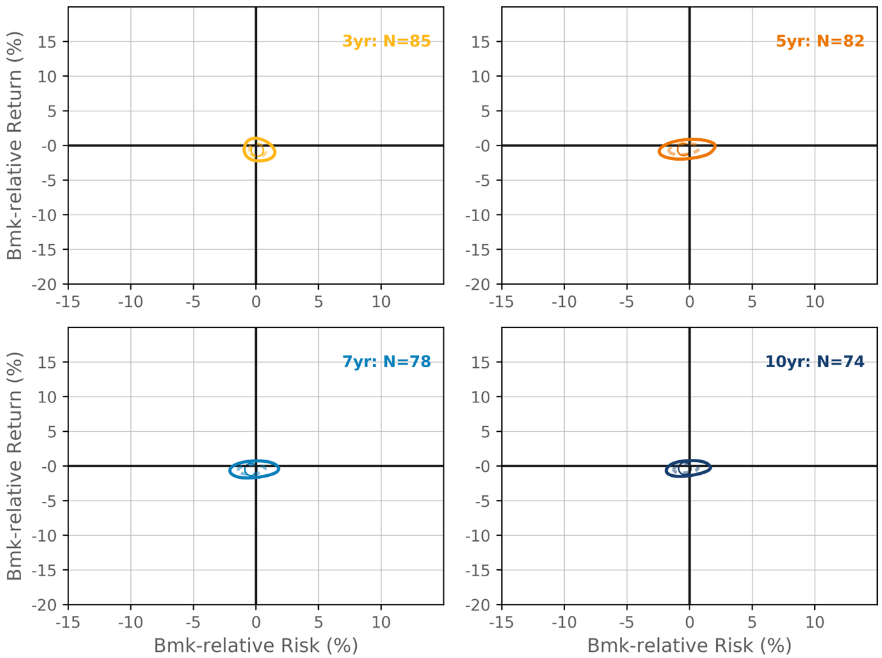
U.S. HIGH YIELD



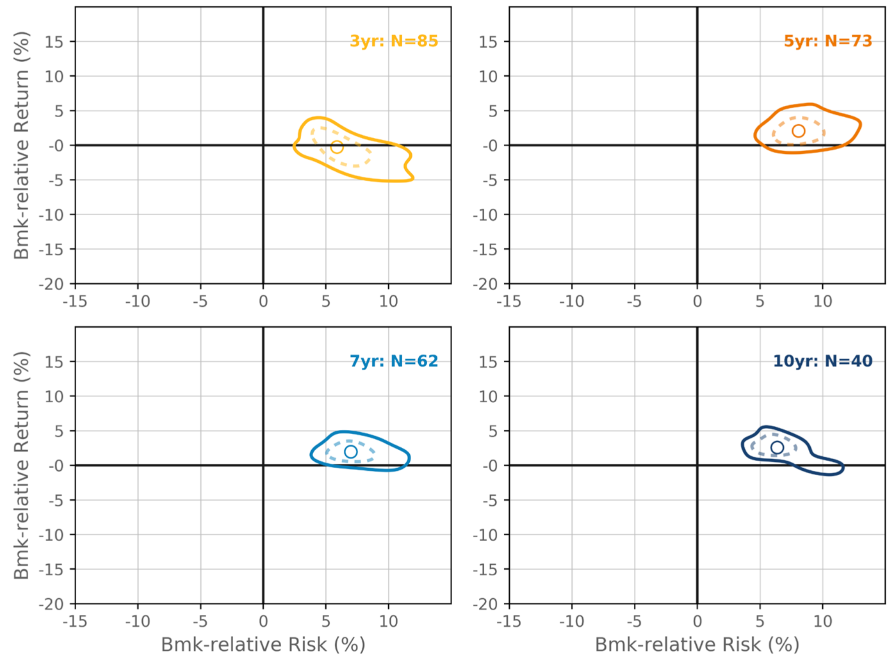
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

U.S. credit

BANK LOANS



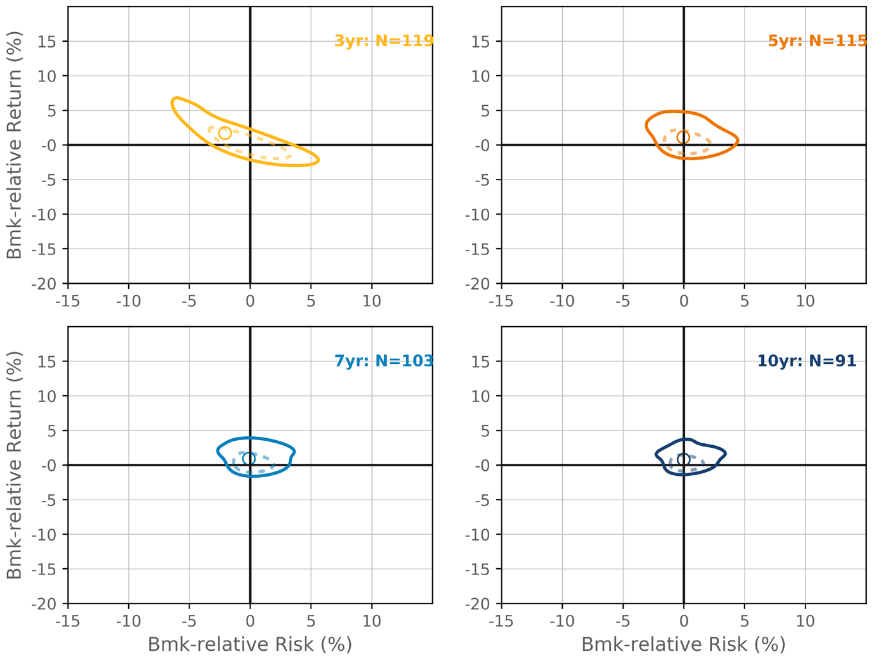
MULTI-ASSET CREDIT



Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

U.S. credit

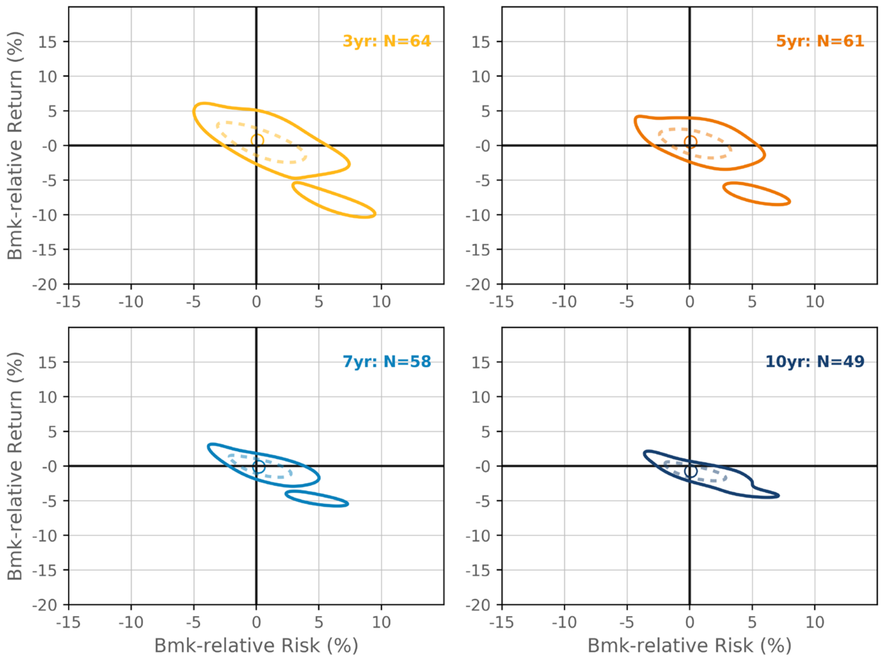
SECURITIZED CREDIT



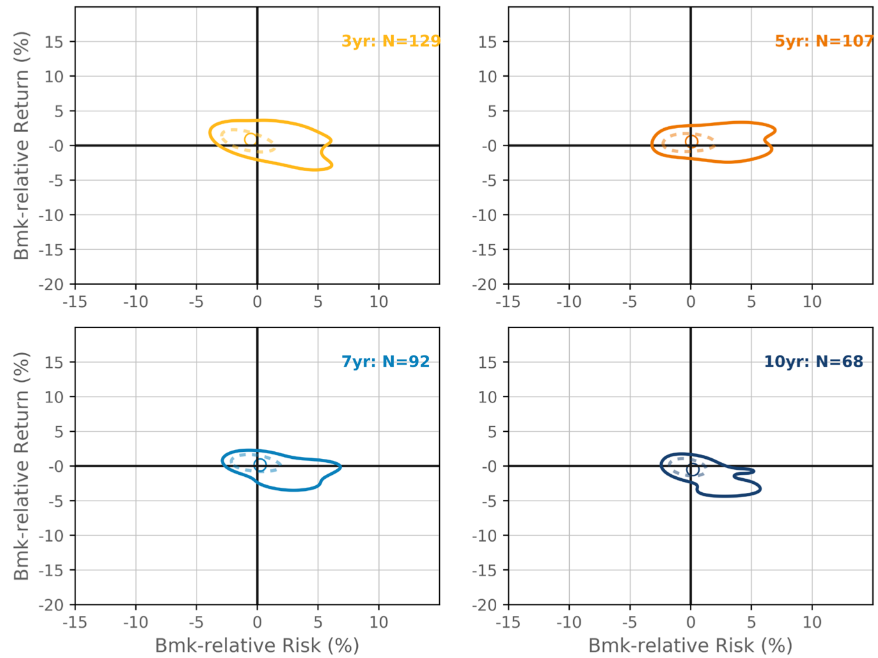
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

Global fixed income

GLOBAL SOVEREIGN



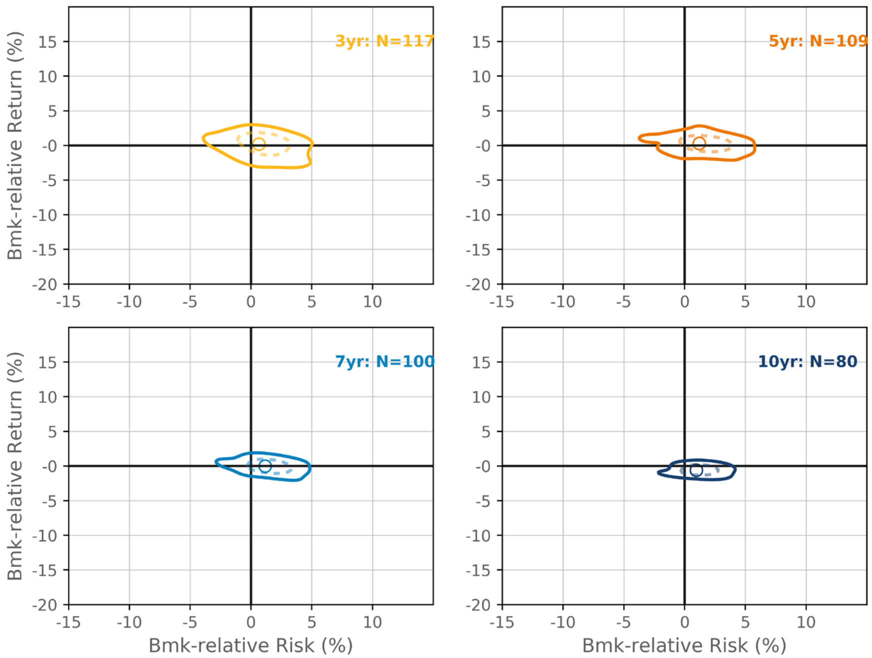
GLOBAL CREDIT



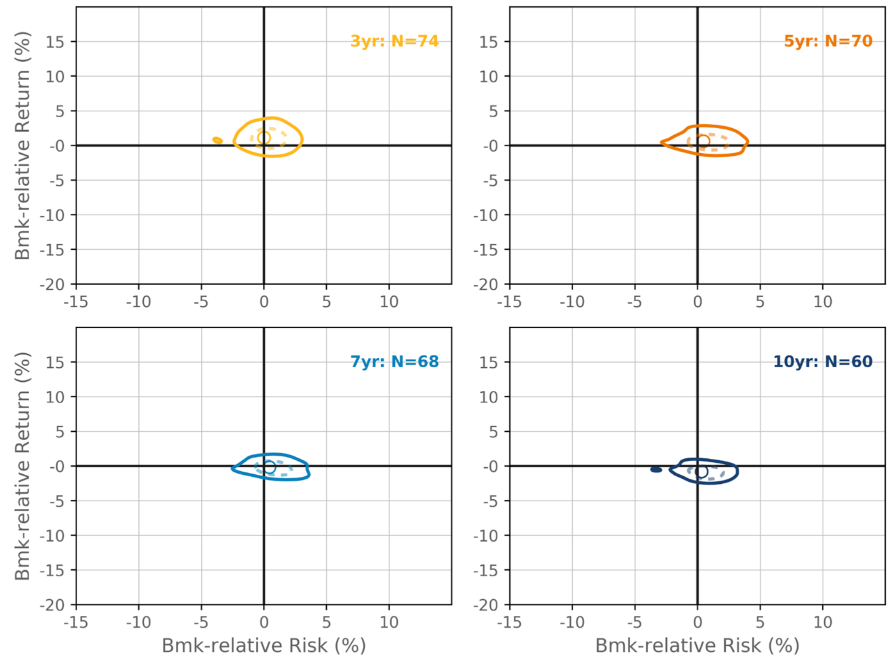
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

Emerging market debt

EMERGING MARKET DEBT (HARD)



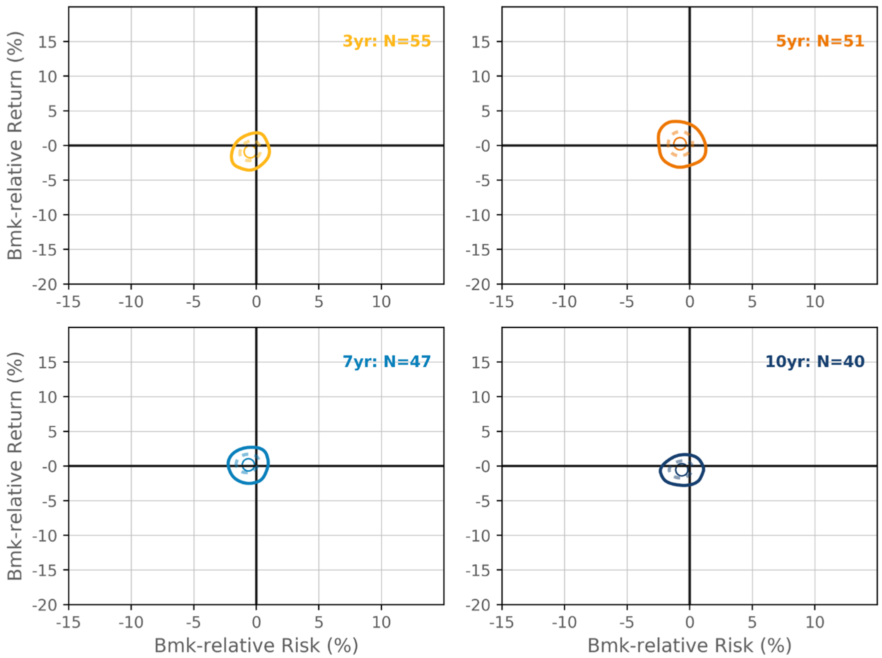
EMERGING MARKET DEBT (LOCAL)



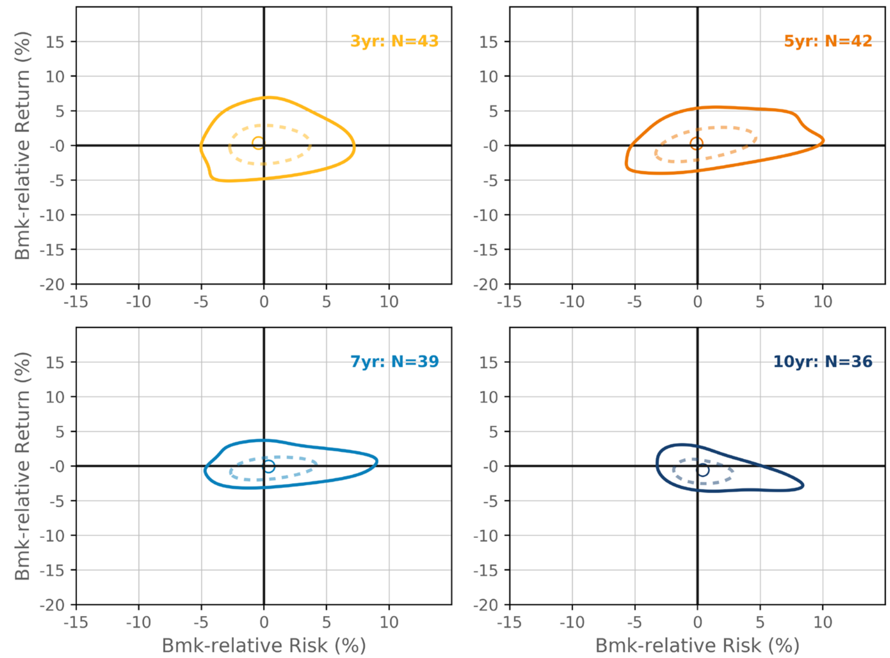
Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

Other

U.S. REITS



COMMODITIES

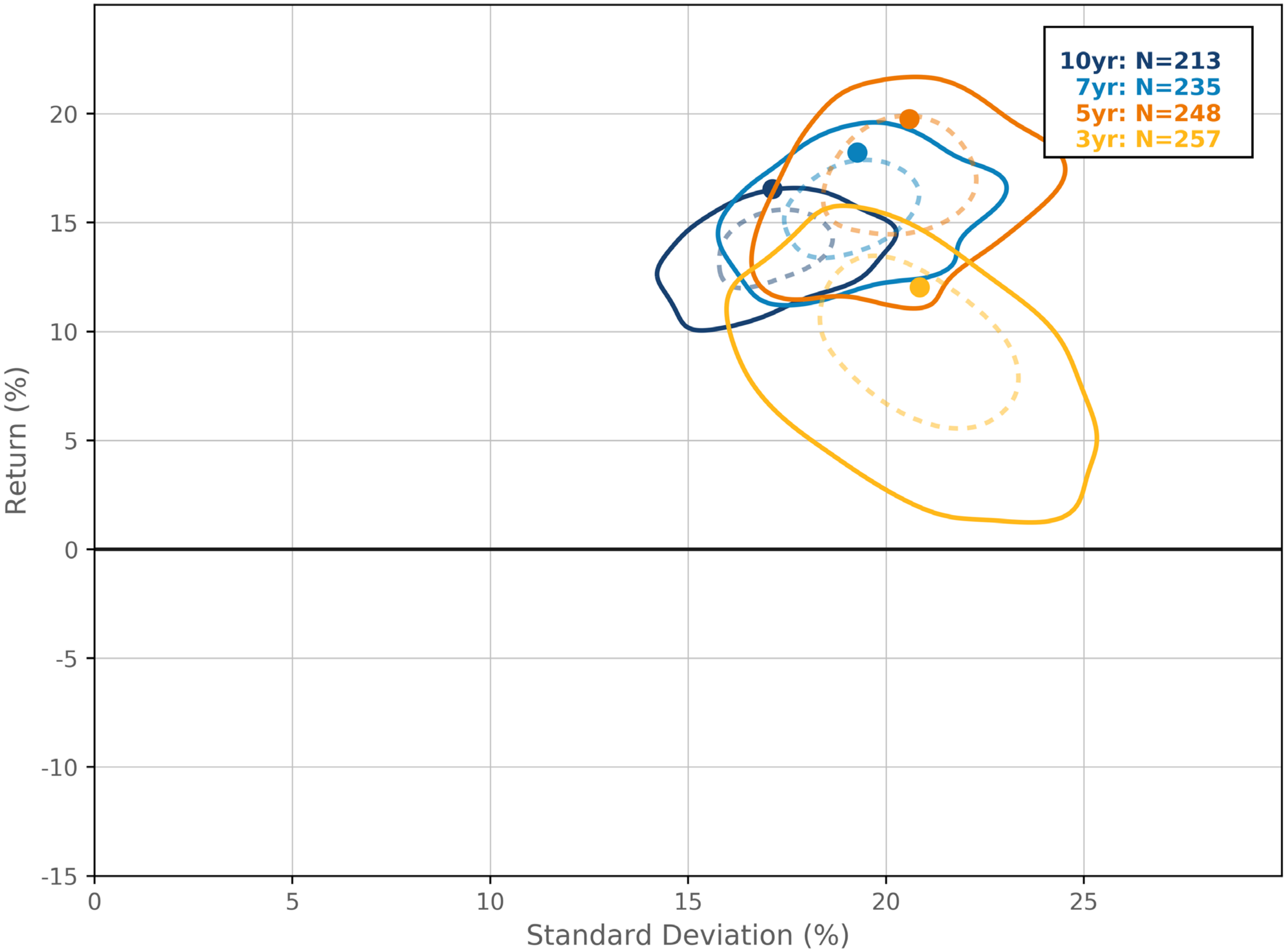


Source: eVestment, Verus, as of 9/30/24, center circle indicates median manager

Appendix

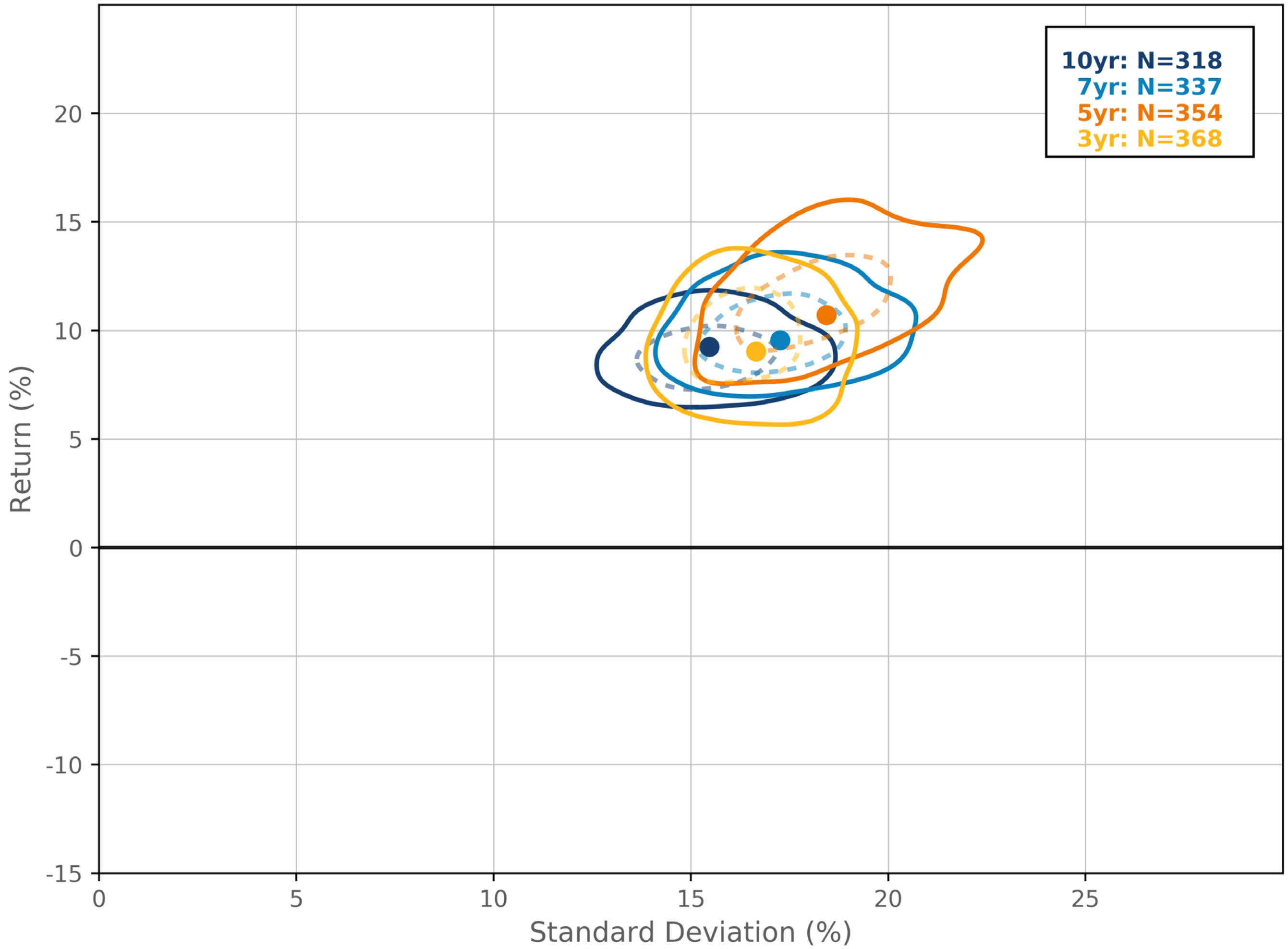
Supplementary full-page universe charts

Equities – U.S. large cap growth



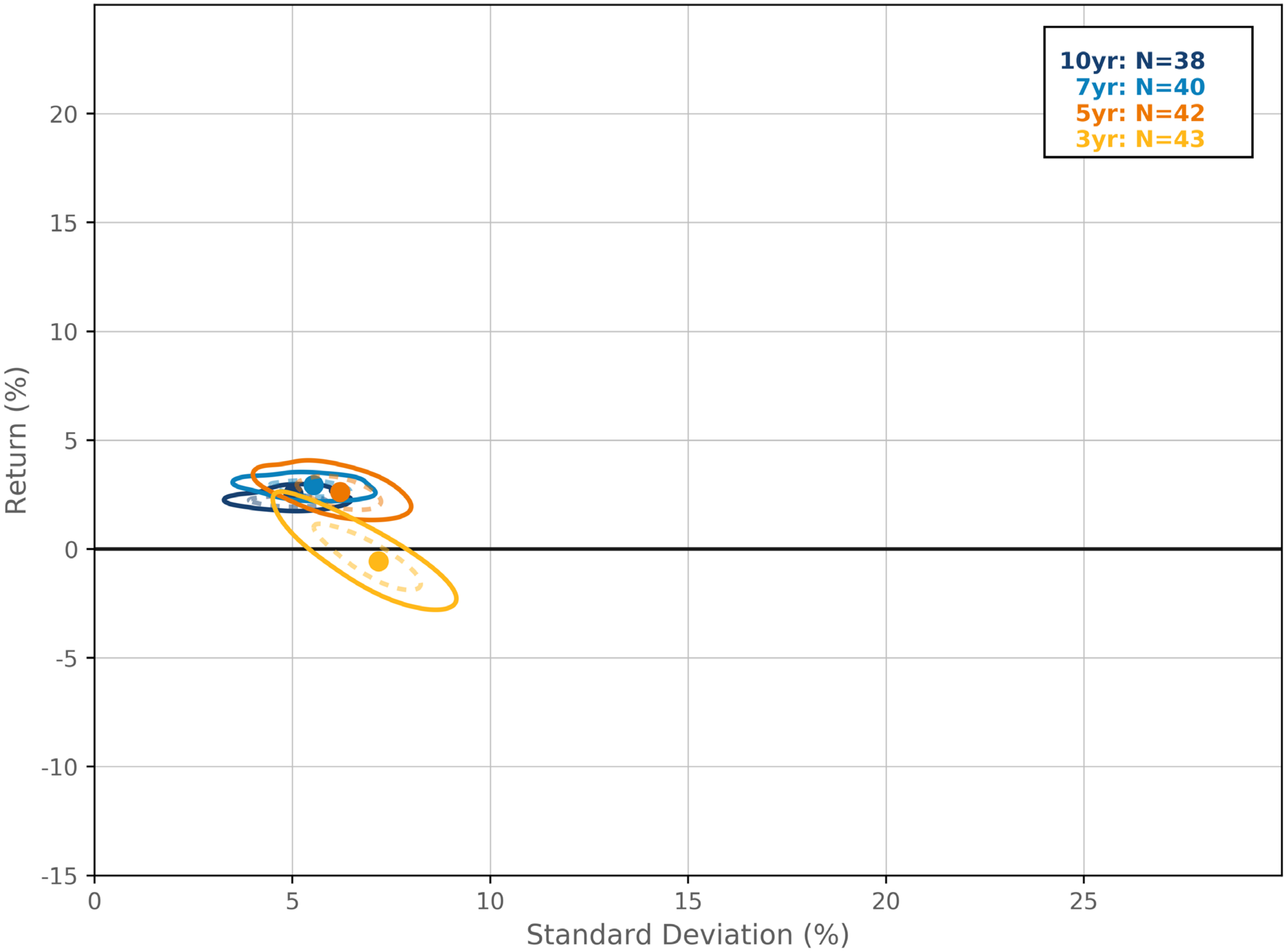
Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Russell 1000 Growth Index

Equities – U.S. large cap value



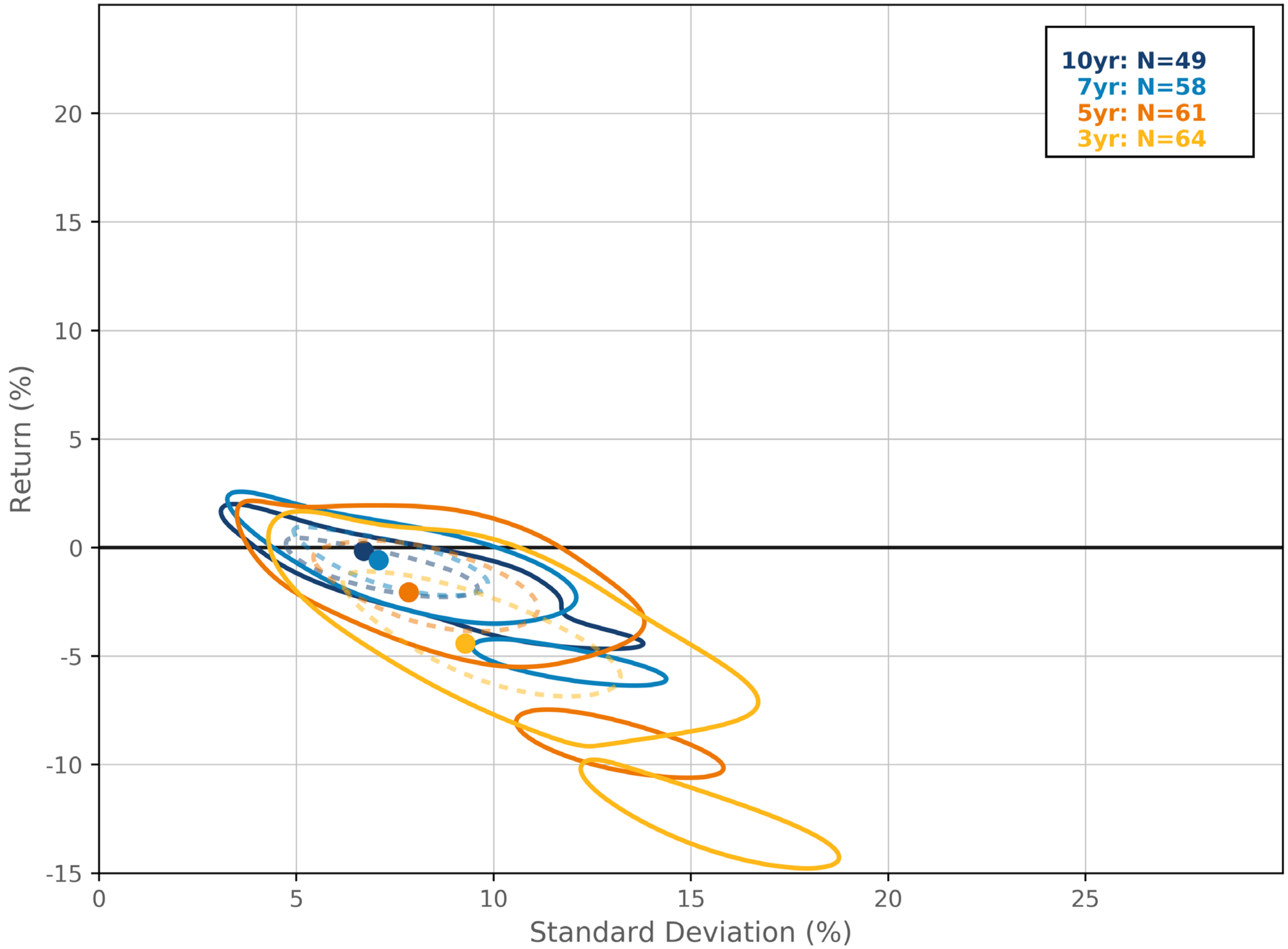
Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Russell 1000 Value Index

Fixed income – U.S. TIPS



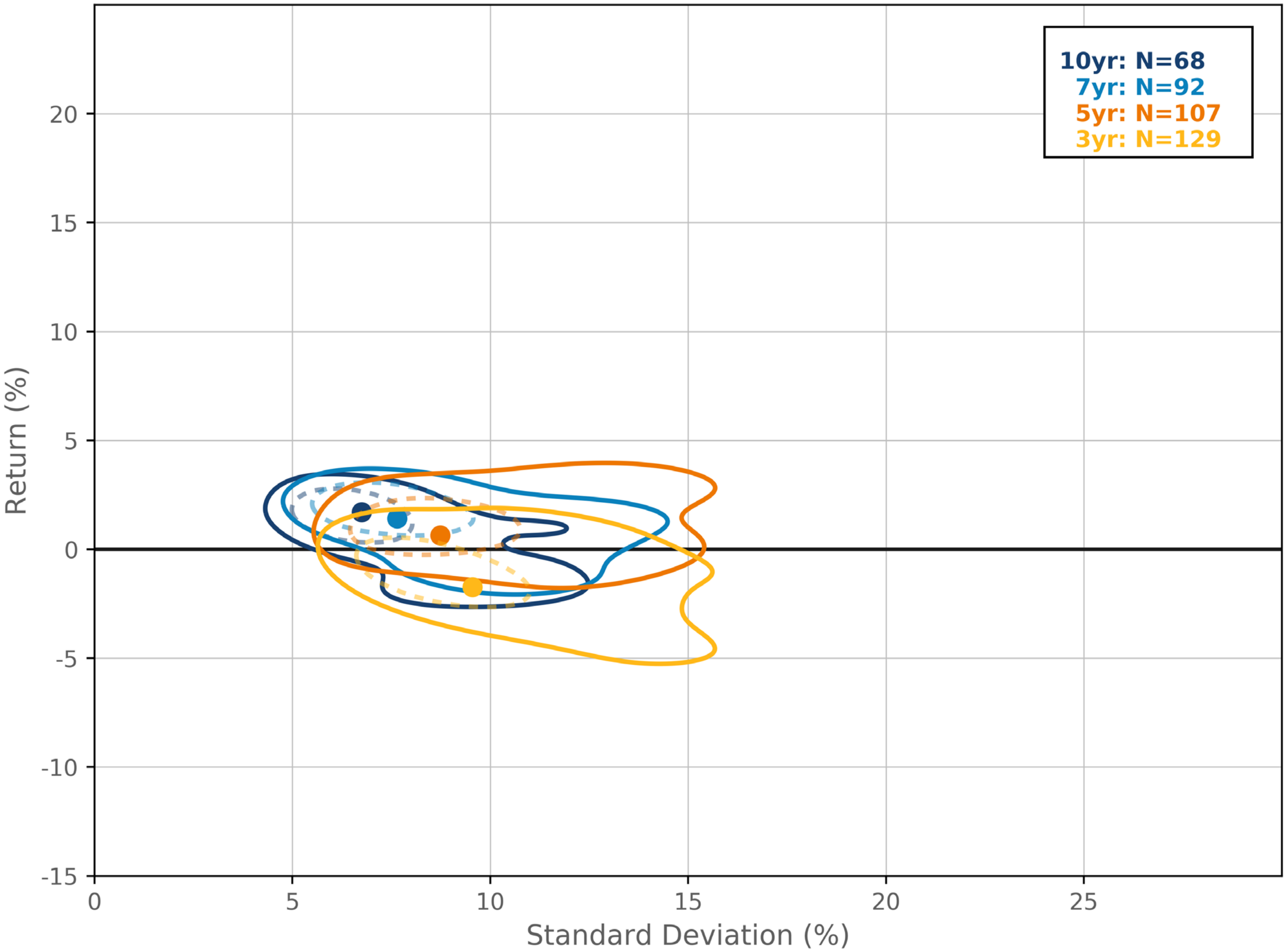
Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg U.S. TIPS Index

Fixed income – Global sovereign



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the FTSE WGBI

Fixed income – Global credit



Source: eVestment, as of 9/30/24. Universe returns have been adjusted for fees and estimated survivorship bias. Benchmark displayed is the Bloomberg Global Aggregate - Credit

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