White Paper
Active Quantitative Equity (AQE)

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The Case for Active Investing in Equities

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Introduction

With interest rates elevated from QE-driven lows, investors now have less of a hankering to step down in quality in search of higher yields — a familiar playbook after the Global Financial Crisis that was further encouraged by low equity market volatility. Now, investors are required to be more aware of volatility, more discerning of company fundamentals, and more conscious of attractive opportunities outside of equities. As a result, we think it could be time for the pendulum to swing towards active equity management and the thoughtful process of stock selection.

In this piece, we provide further insight to this view by outlining the environments that have been most and least fruitful historically for systematic and fundamental active equity strategies.

Summary of Research Implications

Our analysis shows that systematic and fundamental active equity funds have both historically outperformed index funds, on average, in many different market environments. This excess performance is not always enough to generate positive absolute performance. However, there were consistent patterns across developed market (DM) and emerging market (EM) indices.

The various tables in this piece illustrate that the performance of different active management styles (specifically systematic active versus fundamental active) has varied historically when the global economy founders. The investment implications are that when structuring an equity portfolio, it may be wise to allocate to both fundamental and systematic active funds, rather than to rely on one type of investment philosophy.

In addition, in our view, active management has gone out of fashion right when it can bring the most to the table. The rapid rise in inflation during the pandemic era and the accompanying aggressive tightening of monetary policy will eventually have the impact of benefiting firms that have been disciplined and have kept financial engineering to a minimum. This should now also tilt the balance toward active managers who can once again rise to the occasion and start to participate in the price discovery process without fear of being overrun by large index fund flows.

What Could Drive an Active Management Resurgence

The investor base, which was once dominated by active investors, has evolved into a new mix. As of the end of 2023, US passive fund assets (bond and equity) have outpaced those of active funds, per Morningstar. The 40-year bond bull market is partly to blame, and especially the post-Global Financial Crisis quantitative easing period, when rates collapsed to near zero and then stayed there for over a decade. Facing this, institutional investors, as well as individual retirees, took increasingly aggressive positions in risk assets, including equities. These hardly seemed risky, as the mechanics of this relentless buying had the effect of reducing volatility. Index investors — lured by these large returns and an apparent lack of risk — increased their equity allocations, further suppressing volatility and driving up the indexing share of the pie.

In 2022, this trend reversed, as central banks reduced money supply and enacted aggressive monetary tightening to combat inflation. Volatility was unleashed among those high-growth companies that had the most uncertain cash flows, as well as those with a high beta.[1] Active management also suddenly and severely dropped further out of favor. Especially hurt were active managers with higher expense ratios that were not justified by their performance.

For markets to function, they need active members who participate in the price discovery process. When index investors far outnumber active investors, price discovery can become impaired. Rather than being driven by investors who are studying fundamentals and assessing risk, prices in an index-dominated market can largely be driven by flows. It is worth considering what it would mean for investors if this dynamic changes and if active management indeed comes back to the fore.

Defining the Field: Characteristics of Various Equity Strategies

When classifying equity investment styles, it is important to go beyond the dichotomies of "active vs. passive" and "fundamental vs. systematic active" and recognize that there is a wide array of approaches from pure passive indexing all the way to highly concentrated fundamental active, with a continuum of points in between.

Indeed, in its broadest sense, active investment management stretches far beyond the domain of stock picking to encompass active asset allocation, sector rotation, overlay management, and much more.

As shown in Figure 1, many of these approaches share common features, but there are trade-offs between costs (both explicit, in terms of fees, and less easily quantified, in terms of governance costs) and expected excess returns at each stage.

At an index strategy's most basic level, index investment managers seek to create portfolios to track benchmark indices, but there can still be some quasi-discretionary decisions in the hands of the portfolio manager. For example, when exactly to rebalance, and how to deal with primary issues are often under index managers' purview. However, at its heart, an indexed approach assumes some form of market efficiency.

As we move along the spectrum, we look to exploit market inefficiencies. For example, enhanced indexing uses similar technology to that of smart beta, or factor investing to identify and harvest factor premia that have proven economic intuition, have shown durability empirically, and can be practically implemented to improve the information ratio of the portfolio. Systematic active approaches tend to target higher tracking error than enhanced indexing, and both differ from smart beta in terms of the breadth and complexity of factors used (smart beta tends to focus on "standard," well-understood, and generally transparent factors and their implementations).

Finally, active fundamental approaches aim to exploit security-level mispricing through primarily qualitative assessments of security value, but many active fundamental managers use quantitative inputs and view their portfolios through the lens of factors, just as many systematic active managers have a keen understanding of the fundamental drivers of their portfolio stocks' value.

Once again, none of these approaches is exclusive of any other, either from the point of view of the investment manager or the end investor.

Figure 1 **Systematic Investing: Much More than Just Active or Passive**

Strategy	Purpose	Approach	Pros	Cons
Index	Replicate benchmark returns	Own a benchmark replicating portfolio	• Low cost • Transparent • Maximally scalable	• Guaranteed to underperform after costs • Can be susceptible to "gaming"
Enhanced	Outperform index with low tracking error	Tilt away from the benchmark using active stock selection	• Low cost • Close to benchmark-neutral • Non-cyclical excess return	• Reliant on manager skill • Alpha might not be enough to "move the needle" • Not fully transparent
Smart Beta	Systematically capture factor premia	Invest in portfolio with above benchmark exposure to selected factors	• Backed up by academic research + economic institution • Meaningful outperformance over a market cycle • Diversified multifactor approach can smooth cyclicality	• Single factors can endure long periods of relative underperformance • More advanced approaches can be less transparent • Susceptible to factor crowding
Systematic Active	Systematically capture a wide variety of factor premia and anomalies	Invest in portfolio with above benchmark exposure to selected factors and focus on implementation	• Use full breadth of market and maximize transfer coefficient • Able to capture uncorrelated premia and anomalies • Ability to protect downside	• Reliant on manager skill • High degree of model risk • Susceptible to factor crowding
Active Fundamental	Exploit security-level mispricing	Use qualitative assessments based on fundamental company and industry analysis, company visits and "mosaic theory"	• Can provide alpha uncorrelated to traditional factors • Can be entered into and exited opportunistically	• Can rely too much on individual skill ("key person risk") • Not highly scalable
Alternatives	Capture factor premia through market anomalies	Systematically exploit empirically observed anomalies	• Capture premia uncorrelated to traditional factors • Can be entered into and exited opportunistically	• Return distribution can have large negative skewness • Can be hard to understand and explain • Not highly scalable

Which Environments Are More Favorable for Active Strategies?

Which economic environments are conducive to systematic active versus active fundamental equity strategies? To answer this, we begin by looking at how active strategies weather market storms, specifically US-only recessions, heightened volatility, and our proprietary market regimes. Next, we look at how active strategies perform during periods of differing dispersion within markets.

Recessionary Periods

A starting point is to look at fund performance during official periods of recession. Focusing on funds benchmarked against the MSCI World Index (DM or EM) would require looking at global recessions; however, these are hard to identify and date. In this paper we've taken the approach of using US recessions as defined by the National Bureau of Economic Research, noting that while not every US recession has necessarily coincided with a global recession, every global recession has coincided with a US recession since the 1950s.[2]

Notably, we analyze performance of the active funds using both beta-adjusted (EBA) and beta-unadjusted results. For equity beta adjustment, we used one value of equity beta calculated over the entire data range. We adjusted the equity betas for the individual fund returns and then averaged their excess returns across all funds tracking a particular index.

Figure 2 **Index Performance During US Recessionary Periods**

Period	Global Recession	MSCI World Index Benchmark	SEA		AF		MSCI Emerging Markets Index Benchmark	SEA		AF	
			ExRet	ExRet EBA	ExRet	ExRet EBA		ExRet	ExRet EBA	ExRet	ExRet EBA
Jan 1970 to Nov 1970		-6.05	—	—	—	—	—	—	—	—	—
Dec 1973 to Mar 1975	Yes	-1.89	—	—	—	—	—	—	—	—	—
Feb 1980 to Jul 1980		20.48	—	—	6.30	14.18	—	—	—	—	—
Aug 1981 to Nov 1982	Yes	5.22	—	—	13.43	14.47	—	—	—	—	—
Aug 1990 to Mar 1991	Yes	-0.01	1.62	1.62	-1.07	-1.07	-2.06	—	—	-14.63	-14.77
Apr 2001 to Nov 2001		-5.81	4.78	4.50	5.84	5.45	-3.04	1.25	1.20	4.59	4.46
Jan 2008 to Jun 2009	Yes	-23.07	1.45	-0.21	4.01	3.37	-19.16	1.74	1.52	1.88	1.03
Mar 2020 to Apr 2020	Yes	-12.37	-2.83	-3.39	1.82	1.31	-31.47	-1.50	-3.54	-7.12	-8.02
Average		-5.12	1.98	1.05	6.22	7.00	-12.92	1.36	1.06	-1.95	-2.48
Average Across Recessions Since the 1990s		-14.04									

Sources: eVestment, FactSet, NBER, World Bank, State Street Global Advisors calculations. All returns are gross.
The row labelled "Average" gives the annualized average of monthly returns over all recessions.
SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM.
AF: Active fundamental.
ExRet EBA: Equity beta-adjusted excess returns = Fund return — beta * benchmark return.
ExRet: Unadjusted excess returns = Fund return — benchmark return.
For the time frame over which eVestment has fund performance data and FactSet has index performance data:

- There have been only four US recessions for DM systematic active funds.
- DM active fundamental funds have a longer history, so there are six recessions.
- For EM systematic active funds there are only three recessions.
- EM fundamental funds have experienced four recessions.

For funds with the same benchmark, we examined the annualized return of a simple average of monthly gross excess returns.[3] For comparison purposes, we also show the annualized return of the average monthly gross returns of the respective benchmarks during periods of recession.

With the caveat of a very small sample size with respect to the number of official recessions, the results in Figure 2 show:

- **Recessions do not always cause underperformance of actively managed funds ...**
  - — When looking at the individual recessions, neither US-only recessions nor global recessions have always coincided with underperformance for DM and EM systematic active and fundamental active funds. However, the most recent recession did see underperformance of all fund types except DM active fundamental funds. This is perhaps a nod to the unprecedented nature of the global pandemic.

- **… But benchmark returns are more consistently negative during recessionary periods.**
  - Benchmark returns are negative during most of the recessionary periods (all for EM), and on average the MSCI Emerging Markets Index fared worse at a roughly -13% return vs. the MSCI World Index returning roughly -5%.
  - However, if we consider only the recessions from 1990 and later — i.e., over the same timeframe as we have data for the MSCI Emerging Markets Index — then the average annualized return for the MSCI World Index falls to about -14%, slightly worse than the MSCI Emerging Markets Index.
- **Active funds outperformed the benchmark across the board during US-only recessions.**
  - We emphasize there is only one US-only recession for which we have data on all four fund types. During this one period, all four active fund types outperformed, and fundamental funds' outperformance exceeded systematic funds' outperformance.
- **Equity beta is less than one for both systematic active and fundamental active funds.**
  - The underperformance is more severe for equity beta-adjusted excess returns (ExRet EBA) than for unadjusted excess returns (ExRet) when the index sells off. By contrast, when the index rallies, the outperformance is greater for ExRet EBA. This suggests that equity beta is less than one for all four fund types, meaning that the active funds will usually have less volatility than the market.

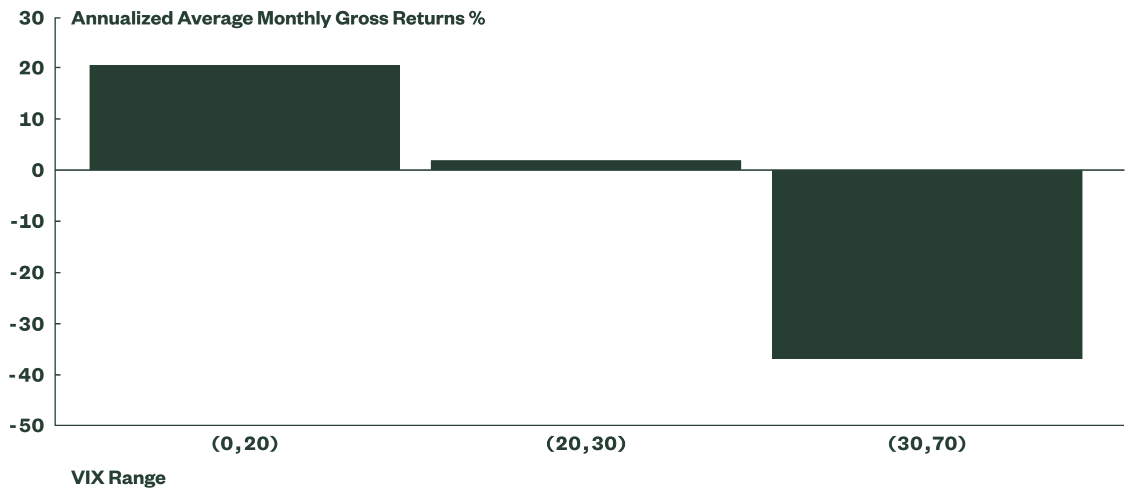
Notes on the Current Environment

We expect 2024 to be a time of "positioning the pieces," as we weigh multiple factors within the macroeconomic environment to assess how they converge in order to refine our outlook and portfolio views. We see fixed income as a bright spot for investors in 2024 given current yield levels, slowing growth, and continued disinflation. Amid heightened volatility and global fragility, we remain cautious on risk assets and favor high quality stocks in equity markets. For more, please see our 2024 Global Market Outlook.

Heightened Volatility Periods

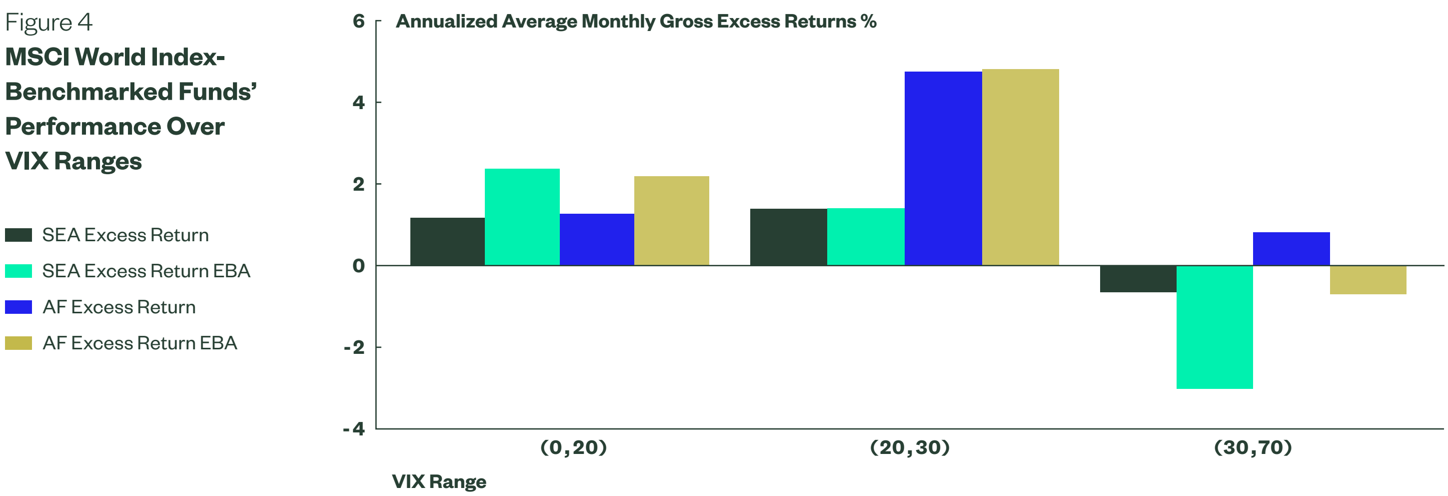
Next, we investigate the effect of the implied volatility of stock markets alone on the performance of active funds. We use the Volatility Index (VIX) as a proxy for volatility. Results are shown in Figures 3 through 6.

Figure 3
MSCI World Index Performance Over VIX Ranges



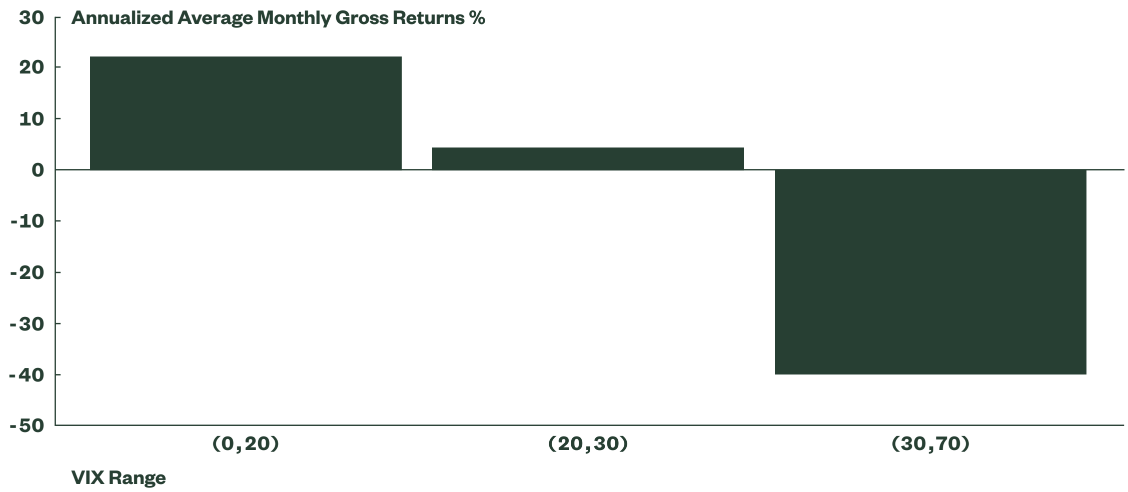
Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from January 1990 for MSCI World Index (due to the VIX data availability) and January 1994 for MSCI Emerging Markets Index to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 4
MSCI World Index-Benchmarked Funds' Performance Over VIX Ranges



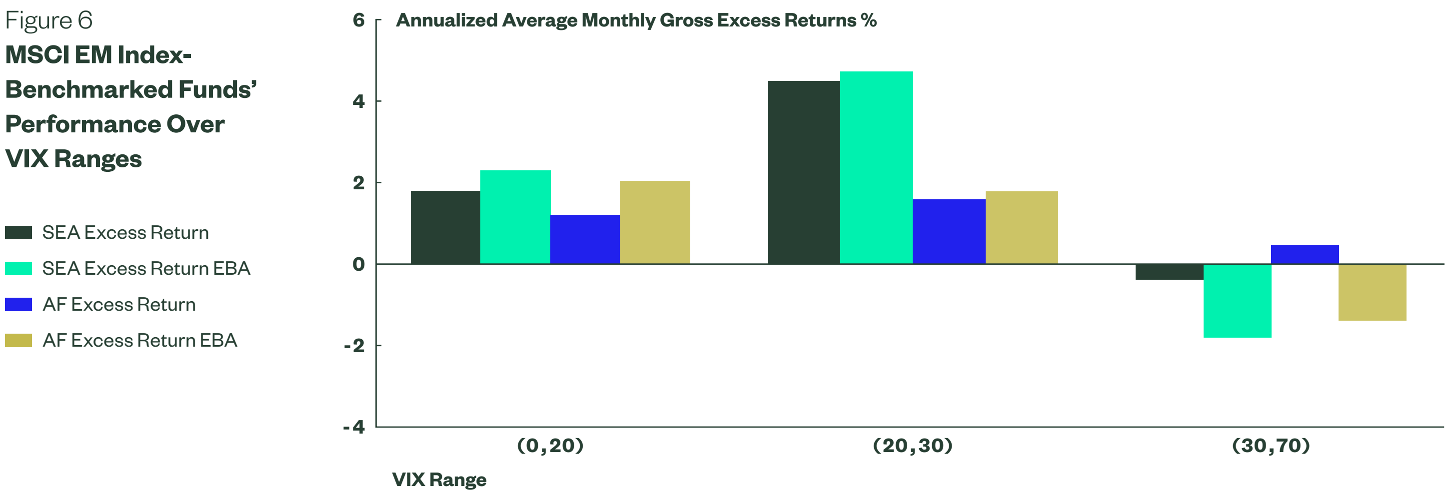
Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from January 1990 for MSCI World Index (due to the VIX data availability) and January 1994 for MSCI Emerging Markets Index to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 5
MSCI EM Index Performance Over VIX Ranges



Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from January 1990 for MSCI World Index (due to the VIX data availability) and January 1994 for MSCI Emerging Markets Index to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 6
MSCI EM Index-Benchmarked Funds' Performance Over VIX Ranges



Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from January 1990 for MSCI World Index (due to the VIX data availability) and January 1994 for MSCI Emerging Markets Index to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

The results show:

- **In terms of excess returns, the 20–30 VIX range is the sweet spot for DM active fundamental and EM systematic active funds.**
  For DM active fundamental funds and EM systematic active funds, performance is significantly better in the 20–30 VIX range for both measures of excess return.

- **For EM active fundamental and DM systematic active, results vary modestly based on equity beta adjustment.**
  In both EM active fundamental and DM systematic active, the best performance is in the 20–30 VIX range; however, this changes to the 0–20 VIX range on a beta-adjusted basis.

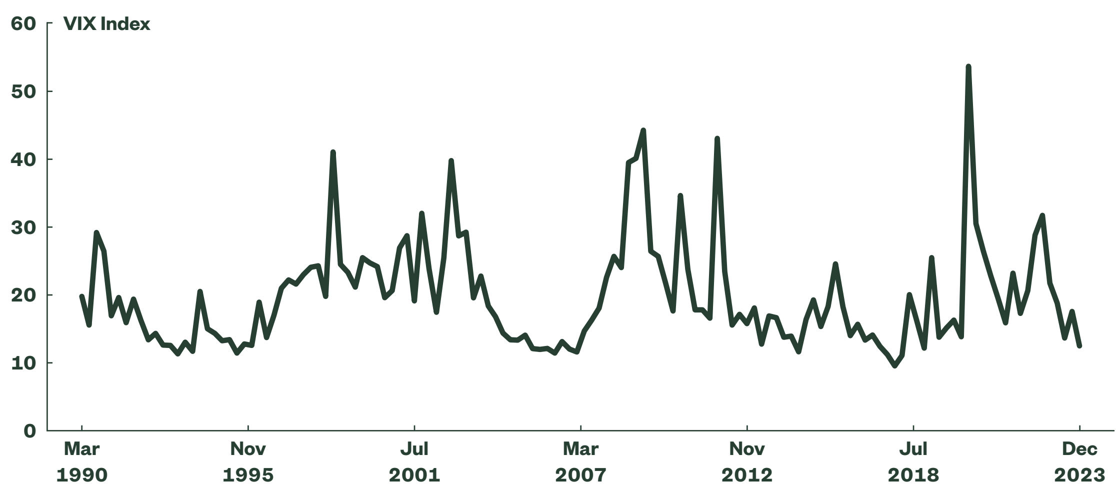
- **DM fundamental funds seem to outperform DM systematic active funds on an absolute excess return basis in all VIX ranges.**
  However, on an equity beta-adjusted basis, systematic active outperformed fundamental active world funds in the 0–20 VIX bucket.

- **A VIX range greater than 30 is particularly bad for investors.**
  Across both benchmark indices (Figures 3 and 5), there is a trend of falling returns over higher VIX ranges. Historical data shows negative returns on the index as well as underperformance by systematic active fund managers in the +30 VIX range. Fundamental managers have, on average, delivered positive excess performance in this bucket; however, on a total return basis, that outperformance is overshadowed by the fact that returns are negative for the indices and funds across the board.

Notes on the Current Environment

The VIX remains low historically. Given the plethora of geopolitical risks that exist in 2024, from the potential for territorial conflict to geopolitically sensitive elections, we do not see the VIX remaining at these subdued levels (Figure 7).

Figure 7
The VIX Remains Near Historical Lows

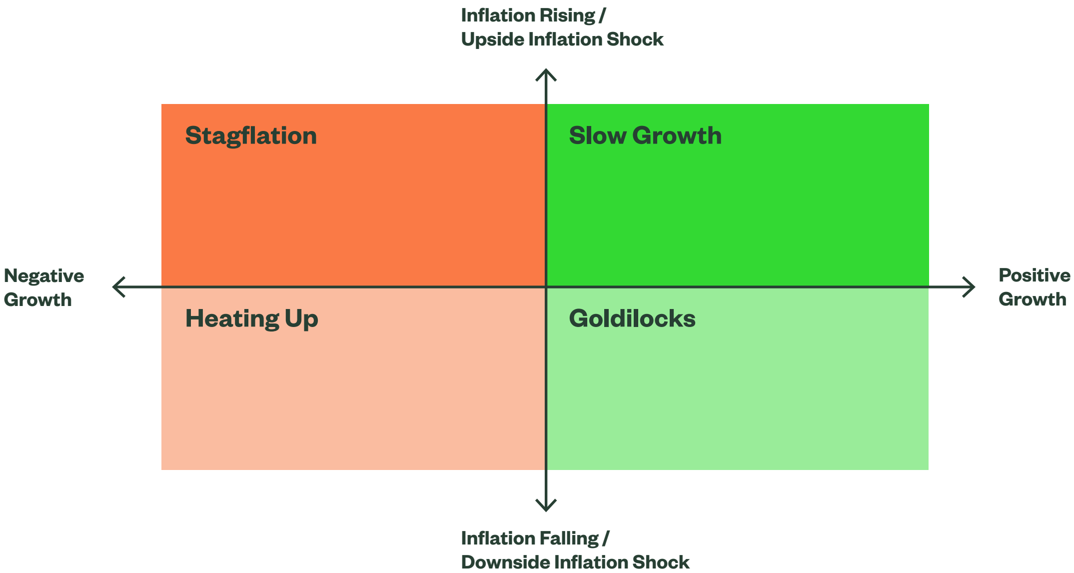


Source: Bloomberg, as of December 31, 2023.

Beyond Traditional Economic Cycles

Given that there are few official periods of recession, we also consider an alternative approach to economic regimes. To do that, we partition the economic climate into four regimes, based on the rates of change in both growth and inflation (Figure 8). For more details on the construction of these regimes, see Zooming Out: A Comprehensive Approach to Defining Economic Cycles.

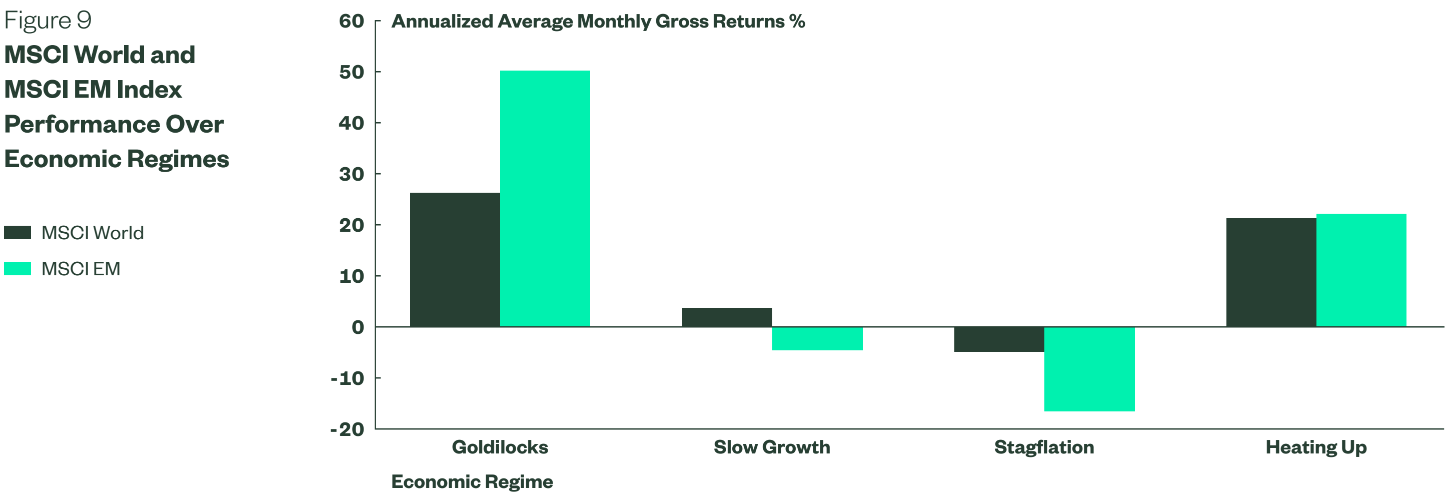
Figure 8
Four Quadrants Define Alternative Economic Regimes



Source: State Street Global Advisors, as of February 20, 2024.

Figure 9 shows the performance of the MSCI World Index and MSCI Emerging Markets Index during each of the four regimes shown in Figure 8.

Figure 9
MSCI World and MSCI EM Index Performance Over Economic Regimes

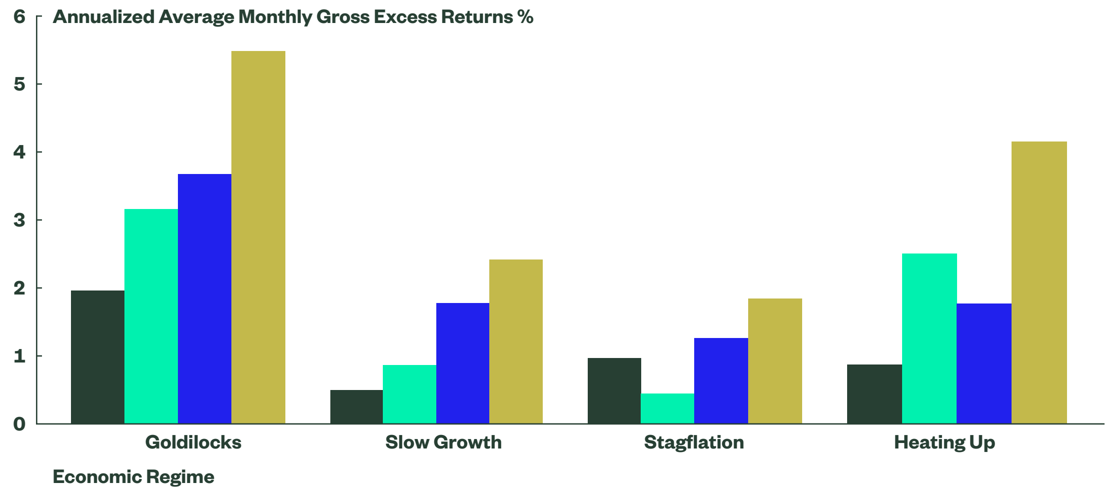


Sources: FactSet, Bloomberg, State Street Global Advisors calculations. MSCI World Index data starts with the monthly return over January 1970, MSCI Emerging Markets Index January 1988. End date for all data series April 2023. All USD unhedged returns.

We also calculated excess returns for active funds for each period in Figure 8. Similar to our analysis of recessionary periods and high-volatility periods, we have calculated returns for active funds both with and without equity beta adjustment (Figures 10 and 11).

Figure 10
MSCI World Index-Benchmarked Funds' Performance Over Economic Regimes

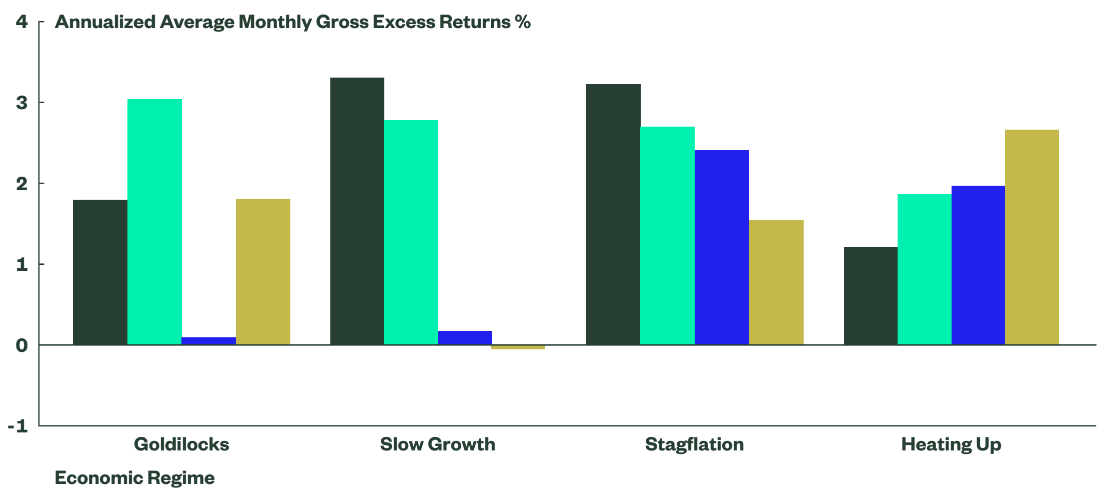
SEA Excess Return
SEA Excess Return EBA
AF Excess Return
AF Excess Return EBA



Sources: eVestment, FactSet, Bloomberg, State Street Global Advisors calculations. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental. MSCI World Index data starts with the monthly return over January 1970, MSCI Emerging Markets Index January 1988. End date for all data series April 2023.

Figure 11
MSCI EM Index-Benchmarked Funds' Performance Over Economic Regimes

SEA Excess Return
SEA Excess Return EBA
AF Excess Return
AF Excess Return EBA



Sources: eVestment, FactSet, Bloomberg, State Street Global Advisors calculations. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental. MSCI World Index data starts with the monthly return over January 1970, MSCI Emerging Markets Index January 1988. End date for all data series April 2023.

The results show:

- **Both types of DM active funds have positive excess return in all regimes, with the best performance in the Goldilocks environment.**
  Once we adjust for equity beta, funds outperform on average in both the Goldilocks and Heating Up regimes (i.e., the accelerating growth regimes).

- **Similarly, all EM active funds have positive excess returns across the board except in one instance.**
  The only negative excess return is on a beta-adjusted basis for active fundamental funds.

- **In DM, active fundamental funds outperformed systematic active across all four economic regimes; this is generally reversed for MSCI Emerging Markets Index-benchmarked funds.**
  In EM, only in the Heating Up regime do active fundamental EM funds outperform systematic active funds. On a beta-adjusted basis, the EM systematic active fund excess returns do not vary as much across regimes as those of the other three fund types.

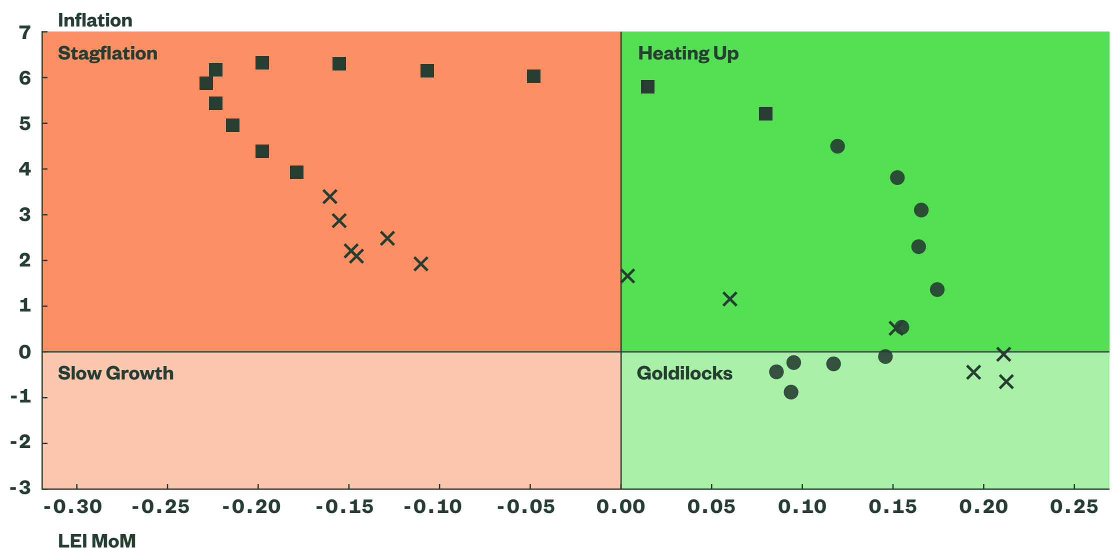
- **Stagflation is particularly concerning for DM fund investors, while Slow Growth may raise alarm bells for EM investors.**
  This is because investors tend to care about absolute returns. Even though active funds outperform during these periods, the excess returns on average do not make up for the negative moves in the benchmark indices.

Notes on the Current Environment

Our data shows a recent shift from Stagflation to Heating Up (moving from falling growth to rising) to Goldilocks (Figure 12). In our view, we are now seeing the start of a move to Slow Growth territory, should growth decelerate and disinflation continue as we expect (see "Zooming Out: A Comprehensive Approach to Defining Economic Cycles").

Figure 12
Trend Inflation and LEI

● 2023
■ 2022
✕ 2021



LEI MoM: Leading Economic Index,[4] month-over-month change. Based on the OECD's G20 Composite Leading Indicator.
Inflation Calculation: CPI year-over-year three-month average minus year-over-year 36-month average.
Source: FactSet, Bloomberg, State Street Global Advisors calculations.

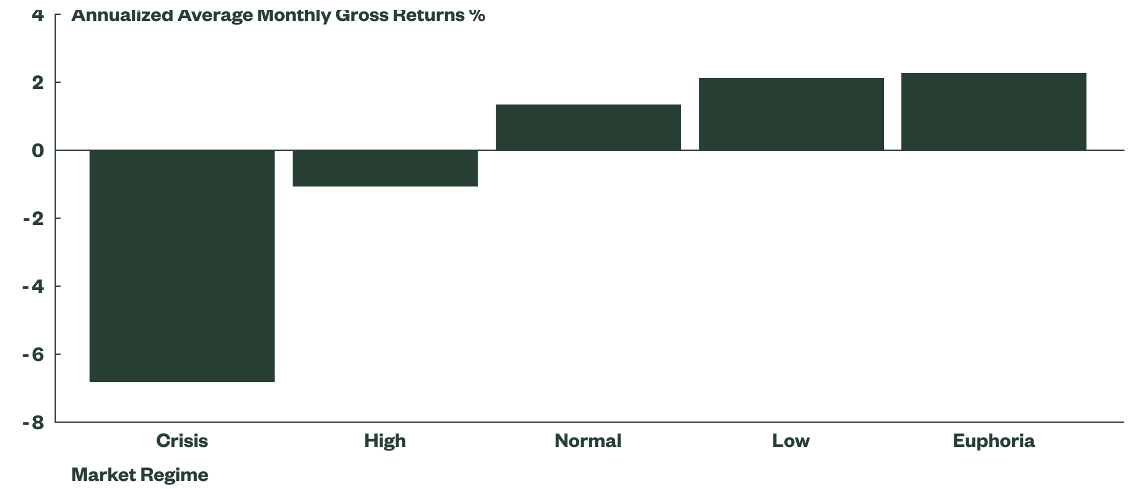
Another View of the Economic Backdrop: The State Street Global Advisors' Proprietary Market Regime Indicator

Another way to look at the investment environment is to make use of financial market data to segregate environments with different levels of risk aversion. We use our proprietary Market Regime Indicator (MRI), which identifies five different market regimes:[5]

Crisis Extreme risk aversion associated with fear and panic in the markets
High Risk Aversion Aversion toward risky assets
Normal Characterized by neutral market sentiment
Low Risk Aversion Appetite for risky assets
Euphoria Extreme risk appetite associated with greed or complacency in the markets

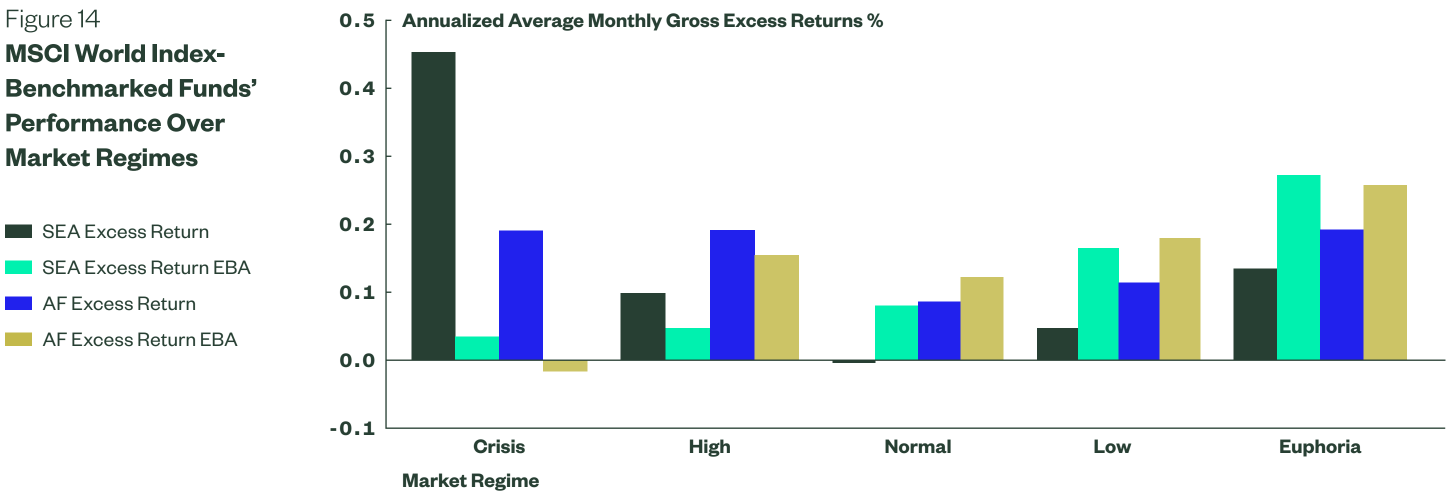
The performance of the benchmarks and active funds by regime are shown in Figures 13 through 16.[6]

Figure 13
MSCI World Index Performance Over Market Regimes



Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from to January 2001 to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 14
MSCI World Index-Benchmarked Funds' Performance Over Market Regimes

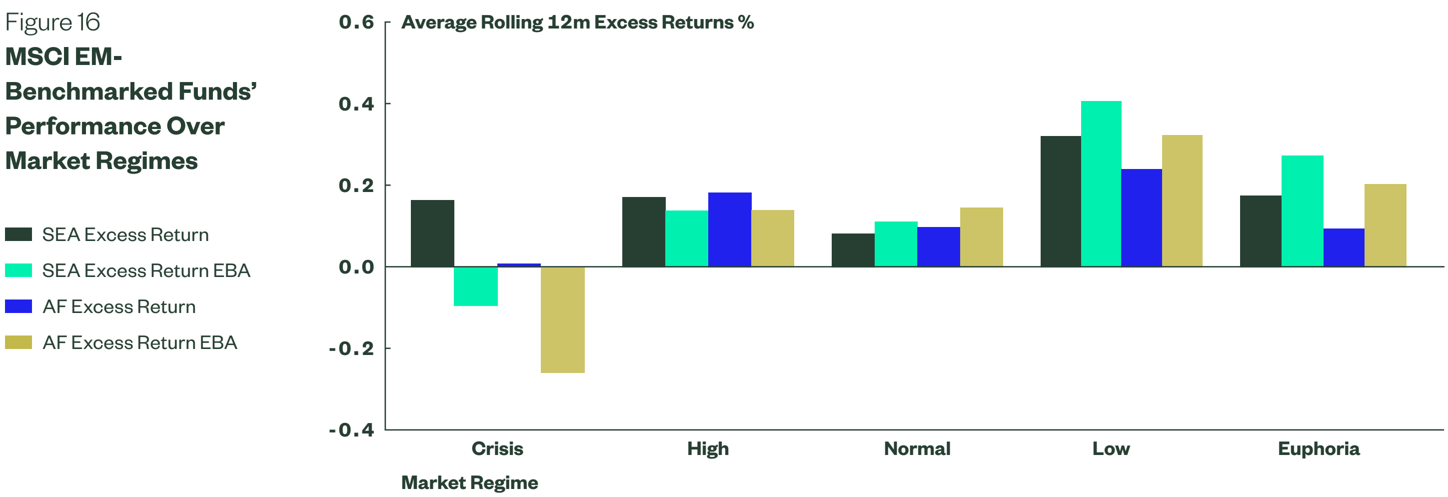


Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from to January 2001 to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 15
MSCI EM Index Performance Over Market Regimes

Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from to January 2001 to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 16
MSCI EM-Benchmarked Funds' Performance Over Market Regimes



Sources: State Street Global Advisors, FactSet, eVestment. The period of the analysis is from to January 2001 to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

The results show:

- **High Risk Aversion and Crisis are market regimes in which both the DM and EM benchmark indices sell off.**
  As we move from Normal risk aversion to Low to Euphoria, benchmark returns are positive and rising.

- **For DM funds, both systematic active and fundamental active funds have positive excess returns across the board.**
  For DM fundamental funds, on an absolute return basis, excess returns form a U shape, with lower outperformance in Normal regimes and highest outperformance in Euphoria. However, on a beta-adjusted basis, Crisis turns to underperformance, breaking the left tail of the U shape.

- **In Crisis mode, among active funds, absolute excess returns are highest for systematic active funds for DM. However, on an equity beta-adjusted basis, those returns are significantly reduced.**
  This is consistent with having an equity beta on average of less than one, as the EBA return corrects for the fact that the fund has less long exposure than the market on average, so a fairer comparison would be to compare the funds' return to a less negative drawdown. On a beta-adjusted basis, Euphoria is the sweet spot for systematic active in DM, with the highest outperformance.

- **On the EM side, both systematic and fundamental active funds tracking the MSCI Emerging Markets Index have exhibited positive excess returns across all market regimes on an unadjusted basis.**
  However, once adjusted for equity beta, the positive absolute excess returns in Crisis become negative.

- **The sweet spot for EM appears to be Low Risk Aversion, in which excess returns are at their highest both on an unadjusted and equity beta-adjusted basis for both fundamental and systematic active funds.**

Notes on the Current Environment

During the fourth quarter of 2023, markets were a tale of two halves, with the driving forces once again being inflation and central bank policy. October saw an escalation of the themes of the third quarter with a significant shift in bond yields amid worries that interest rates may stay higher for longer. The MRI moved higher from Low Risk regime into Normal regime for the first time since March (amid the regional banking crisis). However, the narrative turned from November onwards, with more promising inflation data and a shift in tone from several central banks. The MRI moved back into Low Risk regime early in November, and continued lower into Euphoria regime to close that month. The signal flipped between Low Risk and Euphoria regimes during December, signaling the positive market sentiment as the year came to a close.

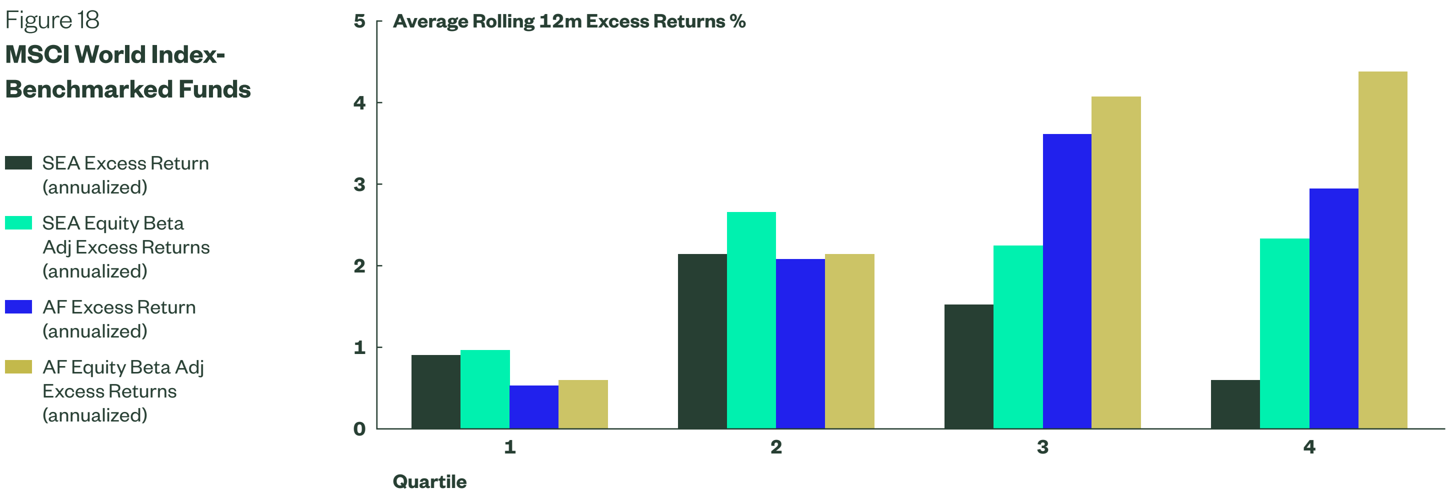
Dispersion

Finally, we evaluated the way performance varies based on the dispersion of returns in a particular market. To do so, we looked at the cross-sectional volatility of the underlying stocks within indices. In Figures 17 and 19, we have ranked each index by quartile, with 1 being least dispersion and 4 being most dispersion.

Figure 17
MSCI World Index

Sources: State Street Global Advisors, FactSet, eVestment. The analysis uses annualized returns on a monthly frequency from March 1988 for MSCI World Index-benchmarked funds and December 1994 for MSCI Emerging Markets Index-benchmarked funds to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 18
MSCI World Index-Benchmarked Funds

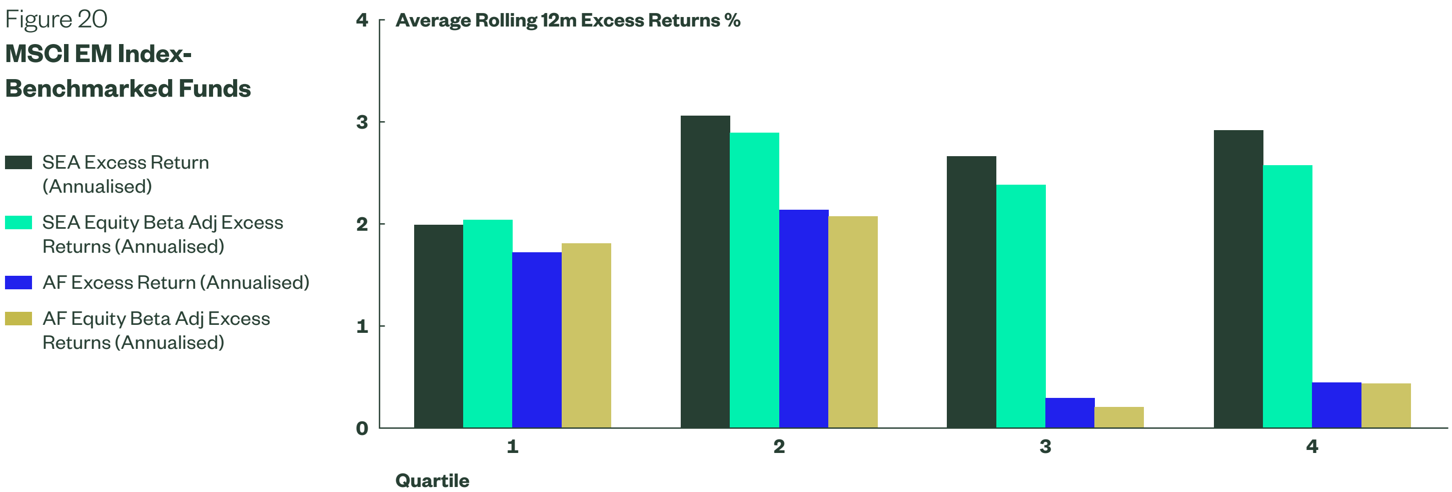


Sources: State Street Global Advisors, FactSet, eVestment. The analysis uses annualized returns on a monthly frequency from March 1988 for MSCI World Index-benchmarked funds and December 1994 for MSCI Emerging Markets Index-benchmarked funds to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 19
MSCI EM Index

Sources: State Street Global Advisors, FactSet, eVestment. The analysis uses annualized returns on a monthly frequency from March 1988 for MSCI World Index-benchmarked funds and December 1994 for MSCI Emerging Markets Index-benchmarked funds to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

Figure 20
MSCI EM Index-Benchmarked Funds



Sources: State Street Global Advisors, FactSet, eVestment. The analysis uses annualized returns on a monthly frequency from March 1988 for MSCI World Index-benchmarked funds and December 1994 for MSCI Emerging Markets Index-benchmarked funds to May 2023. SEA: Systematic equity — active. This includes systematic funds in eVestment with gross returns and benchmarks MSCI World and MSCI EM. AF: Active fundamental.

The results show:

- **We see a pattern of higher benchmark returns when there are periods of higher dispersion.** Both benchmark indices see negative 12-month rolling returns for the lowest-dispersion quartile. This is intuitive, as generally when equity markets sell off sharply, they do so in a highly correlated (or less dispersed) fashion.

- **For both systematic and fundamental active funds, data shows positive excess returns at all levels of dispersion.**

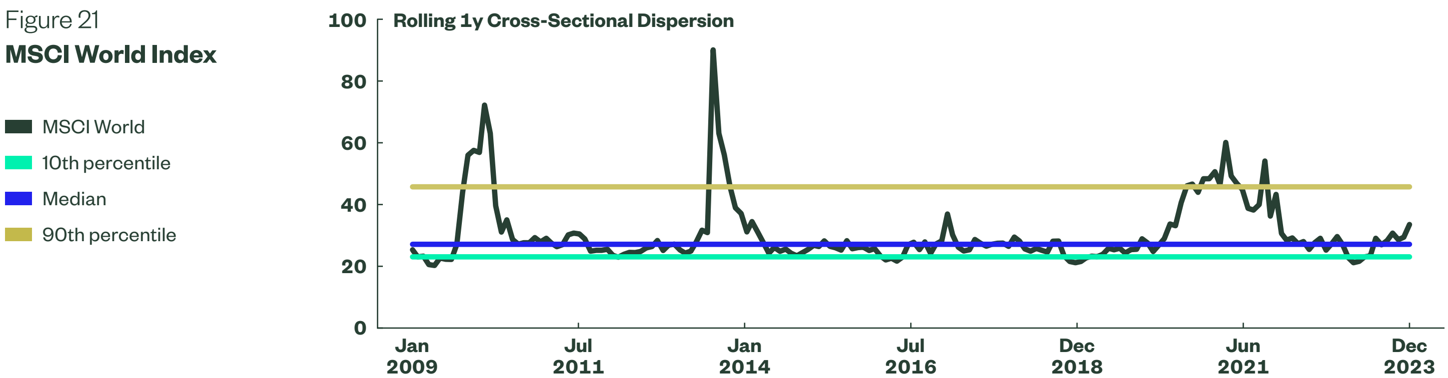
- **Per the DM data, systematic active equity funds outperform fundamental funds in the lower quartiles but underperform in the higher quartiles.**
This result may strike one as surprising, as one may posit that higher dispersion means greater opportunities for active managers and hence higher outperformance. One hypothesis for explaining this counterintuitive result could be that systematic funds rely on the existence of backward-looking data, and the greatest dispersion happens at the beginning of a new trend, before data or data metrics are available to capture a new trend. A takeaway here is that fundamental equity portfolios may be better positioned for new trends in the developed world.

- **For EM funds, systematic active equity outperforms fundamental across all dispersion quartiles.**
EM systematic active equity funds' outperformance always exceeds fundamental funds', whether absolute or beta-adjusted. For fundamental EM funds, the higher-dispersion quartiles (3 and 4) see lower outperformance against the benchmark, similar to systematic active in DM. Furthermore, it would appear that EM fundamental managers have not been able to capture as much of the upside available relative to DM managers, on average.

Notes on the Current Environment

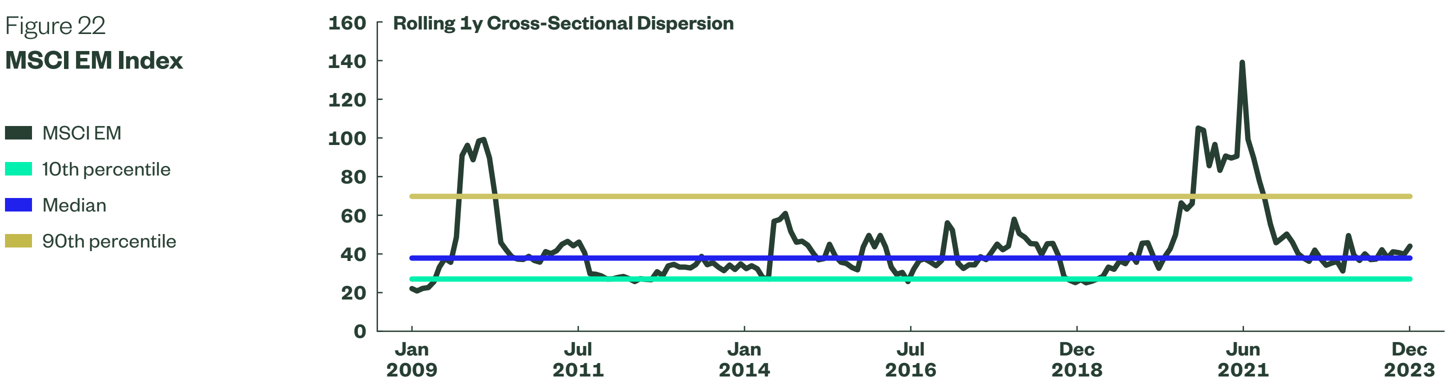
In Figures 21 and 22, we plot the cross-sectional dispersion of the benchmark indices. Per data as of end October 2023, we recently moved into the second quartile for both indices — a quartile in which active managers' outperformance coincides with positive benchmark performance. In times of low dispersion, historically, systematic active equity funds have outperformed fundamental funds, on average.

Figure 21
MSCI World Index



Source: FactSet. Median, 10th percentile, and 90th percentile calculated over the range of January 2009 to December 2023.

Figure 22
MSCI EM Index



Source: FactSet. Median, 10th percentile, and 90th percentile calculated over the range of January 2009 to December 2023.

The Bottom Line

In this piece, we take into account that there are various ways to determine whether a particular market environment is strong or weak, and as a result, we consider how active management performs in market downturns based on a wide range of measures. In general, active management's excess returns are better in times of lower volatility and low risk aversion, but active funds have positive excess returns in many cases that the market backdrop is deemed poor or volatile. However, there is variance in the outperformance of fundamental active relative to systematic active during these periods, Therefore, we see value in allocating to both types of active strategies.

Beyond this, we do believe that passive investing has its place in a multi asset portfolio, as environments favorable for active versus passive can come and go (see Market Concentration, Dispersion and the Active/Passive Debate).

In Figures 23, we summarize the returns (positive or negative) for different investment styles across the various regimes.

Figure 23
Summary of Return Performance (Gain or Loss)

Environment	Classification		Absolute Excess Return: Systematic Active	Absolute Excess Return: Active Fundamental	Equity-Beta Adjusted Excess Return: Systematic Active	Equity-Beta Adjusted Excess Return: Active Fundamental
MSCI World Index						
Economic	**Recessions**		+	+	+	+
	Economic Regime	Goldilocks	+	+	+	+
		Slow Growth	+	+	+	+
		Stagflation	+	+	+	+
		Heating Up	+	+	+	+
Investment	**Market Regime Indicator**	Crisis	+	+	+	+
		High RA	+	+	+	–
		Normal	–	+	+	+
		Low RA	+	+	+	+
		Euphoria	+	+	+	+
	VIX	0–20	+	+	+	+
		20–30	+	+	+	+
		30+	–	+	–	–
	Dispersion in the Benchmark	1st quartile	+	+	+	+
		2nd quartile	+	+	+	+
		3rd quartile	+	+	+	+
		4th quartile	+	+	+	+
MSCI EM Index						
Economic	**Recessions**		+	–	+	–
	Economic Regime	Goldilocks	+	+	+	+
		Slow Growth	+	+	+	–
		Stagflation	+	+	+	+
		Heating Up	+	+	+	+
Investment	**Market Regime Indicator**	Crisis	+	+	–	–
		High RA	+	+	+	+
		Normal	–	+	+	+
		Low RA	+	+	+	+
		Euphoria	+	+	+	+
	VIX	0–20	+	+	+	+
		20–30	+	+	+	+
		30+	–	+	–	–
	Dispersion in the Benchmark	1st quartile	+	+	+	+
		2nd quartile	+	+	+	+
		3rd quartile	+	+	+	+
		4th quartile	+	+	+	+

Sources: State Street Global Advisors, FactSet, eVestment, NBER, World Bank.
The + sign is “Positive Return” and the – sign is “Negative Return.”

References

1 Kishore L. Karunakaran, "The Hard Truth About Market Volatility," 2023.

2 NBER and World Bank Policy Research Working Paper 9172, Global Recessions; another useful reference is IMF, World Economic Outlook, Crisis and Recovery, April 2009.

3 The authors did look into creating a series weighted by assets under management (AUM); however, the incompleteness of AUM data meant many assumptions would be required that would affect the returns of a weighted average. Hence, for simplicity, the authors decided on a simple average.

4 MSCI Research Insight, Index Performance in Changing Economic Environments, April 2014.

5 More on the Market Regime Indicator can be found here.

6 Note: Due to the availability of the MRI data, the period under study is shortened to begin from January 2001 but still runs to May 2023.

Appendix

Fund Level Data

Benchmark index	Active Style	Number of Funds	Earliest Return Date
MSCI World Index	Systematic active	100	April 1987
	Active fundamental	290	January 1979
MSCI Emerging Markets Index	Systematic active	57	January 1994
	Active fundamental	205	September 1989

Historical Probabilities of the Four Economic Regimes

Economic Regime	Probability (to two decimal places)
Goldilocks	0.33
Slow Growth	0.32
Stagflation	0.21
Heating Up	0.14

Please note there is an inherent data lag; that is, at a given point in time, one will only know the regime two months ago. In light of this, we calculate the historical probabilities moving between the four economic regimes below:

Regime	Regime Two Months Prior			
	Goldilocks	Slow Growth	Stagflation	Heating Up
Goldilocks	0.78	0.19	0.01	0.09
Slow Growth	0.17	0.75	0.10	0.02
Stagflation	0.02	0.05	0.80	0.12
Heating Up	0.04	0.01	0.10	0.77

The greatest probability is: staying in the current regime.

Market Regime	Occurrence (%)
Crisis	7
High	19
Normal	31
Low	32
Euphoria	10

Period covers December 1973 to April 2023.

Regime	Regime 1 Month Prior				
	Crisis	**High**	**Normal**	**Low**	**Euphoria**
Crisis	0.35	0.19	0.04	0.00	0.00
High	0.40	0.42	0.18	0.08	0.00
Normal	0.25	0.35	0.49	0.23	0.00
Low	0.00	0.04	0.27	0.53	0.58
Euphoria	0.00	0.00	0.02	0.15	0.42

We calculate the historical probabilities of moving between the market regimes below:
Period covers January 2001 to May 2023.

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* Pensions & Investments Research Center, as of December 31, 2022.
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