



Equity Market Neutral

Alternative Investments | Group 10

Executive Summary

An Equity Market Neutral strategy provides you:

- 1 Objective:** Deliver absolute returns with a low correlation to market movements.
- 2 Benefits:** Consistent returns, that have low volatility, and high Sharpe ratio.
- 3 Market Opportunity:** Significant market dispersion & volatility present ideal conditions for EMN strategies to capture alpha
- 4 Risks:** Multiple risks including beta mismatch, model decay & uncertain shorting costs.
- 5 Proven Resilience in Major Market Crashes**

Key Characteristics and Description

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Market Neutrality

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- **Zero Beta Exposure** – Eliminates systematic market risk by maintaining a net beta of approximately zero.
- **Alpha-Driven Returns** – Ensures that returns are derived from proper stock selection, sector tilting, and geographic exposure.
- **Long/Short Portfolio Construction** – Balances long and short positions in the portfolio to hedge market exposure.
- **Reducing Correlation with Traditional Asset Classes** – Enhances portfolio diversification benefits for investors and ensures predictable performance.
- **High Sharpe Ratio** – Achieves low volatility and stable risk-adjusted returns, making it attractive for institutional investors.
- **Consistent Performance Across Market Cycles** – Performs effectively in both rising and declining markets.

Key Characteristics and Description

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2

Strategies used to form EMN

- **Discretionary** - Relies on human judgment and fundamental research to select long and short positions. Decisions based on company fundamentals, macroeconomic conditions, and qualitative insights.
[Fundamental Arbitrage, Event-Driven Arbitrage, Thematic Long/Short]
- **Systematic** - Uses quantitative models, machine learning, and algorithmic trading to identify and execute long/short positions. Decisions are driven by historical data, statistical models, and predictive analytics.
[Statistical Arbitrage, Pairs Trading, Factor-Based Arbitrage]

3

Sector/Factor Exposure

Depending on the investor's preferences, the EMN strategy can provide a variety of neutrality options. Funds can elect to **be neutral to sectors/factors** in addition to the market as a whole. Some investors may be willing to **be exposed to sectors/factors** which have attractive investment opportunities.

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Performance Metrics

Return Metrics of EMN

Metric	Value
Annualised Return	4.90%
2024 Return	8.42%
2023 Return	4.64%
Last 3 Months	2.45%
Positive Months	77.33%
Worst Monthly Return	-3.46%
Since Inception	230.62%

Risk/Return Metrics of EMN

Metric	Value
Annualised Volatility	2.43%
Sharpe Ratio	1.19
Sortino Ratio	2.04
Treynor Ratio	0.3014
Downside Deviation	1.42%
Max Drawdown	-5.59%
Skewness	-0.2866
Kurtosis	5.7681

Capacity Constraints

Increasing AUM limits trade efficiency and reduces alpha generation.

- **Short-side** challenges include higher borrowing costs, liquidity constraints, and regulatory restrictions.
- **Long-side** issues stem from market impact and slippage in small/mid-cap stocks.

Using indices on the short side can increase scalability but significantly reduces the alpha generation capability of the fund.

The average annual return for the EMN strategy is 4.90%, while it experienced the worst monthly return equaling to negative 3.46%.



Source: EurekaHedge / Dec 1999 to Dec 2024

Performance Metrics

Risk Metrics Comparison of Hedge Fund Strategies

Strategy	Sharpe Ratio	Sortino Ratio	Annualised Volatility	Downside deviation	Maximum Drawdown
Equity Strategies					
Equity Market Neutral	1.19	2.04	2.43%	1.42%	-5.59%
Equity long-short	0.84	1.33	7.57%	4.76%	-22.36%
Equity long bias	0.57	0.83	11.06%	7.55%	-39.61%
Other Strategies					
Multi Strategy	1.29	2.48	5.26%	2.74%	-12.06%
Fixed Income	1.26	1.82	3.90%	2.71%	-11.90%
Event Driven	0.97	1.46	6.81%	4.53%	-22.49%
Distressed Debt	1.20	1.82	6.64%	4.38%	-28.45%
Managed Futures	1.02	2.10	6.09%	2.93%	-6.28%
Global Macro	1.40	3.09	4.02%	1.81%	-4.22%

- The EMN strategy stands out for its compelling risk-adjusted return profile, highlighted by its **Sharpe ratio (1.19)** and **Sortino ratio (2.04)**.
- A key **differentiator** is its notably **low volatility (2.43%)** and **downside deviation (1.42%)** compared to other equity strategies.
- While its **maximum drawdown of -5.59%** is significantly smaller than most alternatives, this defensive characteristic does not come at the expense of performance efficiency.

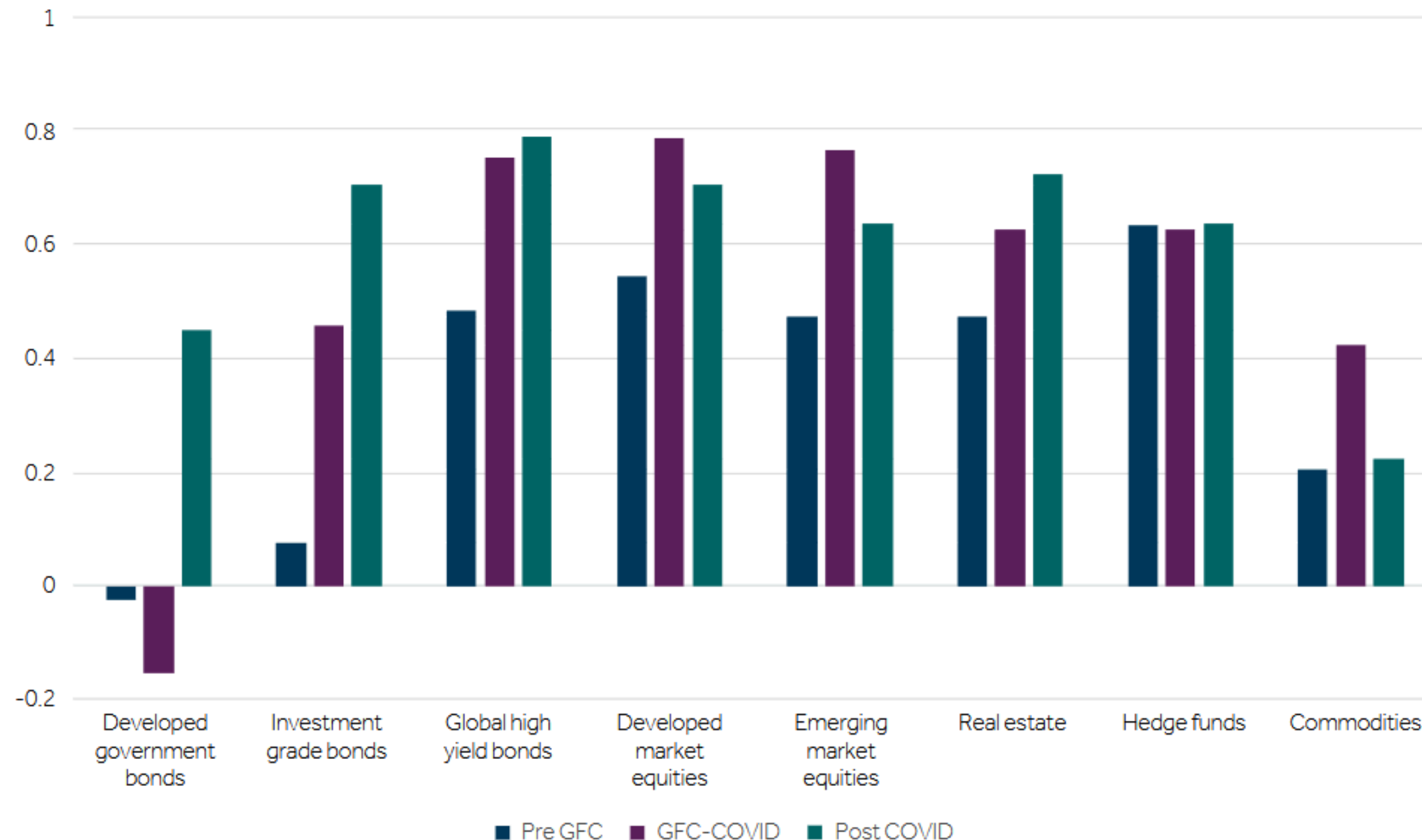


Source: EurekaHedge / 1999-2024

Benefits of an EMN Strategy

DIVERSIFICATION HAS BECOME MORE CHALLENGING

Median correlations of returns for each asset class in excess of cash to all other considered asset classes from January 2000 to December 2007 (Pre GFC), January 2008 to December 2019 (GFC - COVID) and January 2020 to October 2024 (Post COVID)



Diversification

→ Rising Correlations

Traditional asset classes have become increasingly correlated—especially after shocks like the Global Financial Crisis and COVID-19. Higher correlations can lead to sharper drawdowns and increased volatility in classic 60/40 or long-only portfolios.

EMN strategies deliver returns largely independent of market swings by maintaining a low beta, which minimizes exposure to broad market volatility. These strategies enhance diversification, mitigate risk, and promote more consistent, stable returns even in turbulent markets.



Source: Bloomberg and Barclays Private Bank

Benefits of an EMN Strategy

Low Volatility

Minimal portfolio volatility, cushioning the impact of economic uncertainty and market shocks.

On a risk-adjusted basis, EMN consistently outperforms equity strategies, and most other hedge fund strategies, as evidenced by its **higher Sharpe and Sortino ratios**.

Market Correlation and Tail Dependence

Crego and Gálvez (2022), EMN hedge funds display dynamic correlations with the S&P 500 - typically negative during bear markets and positive during bull markets.

Tail dependence occurs only during **bull markets**. Thus, returns are less tied to market trends, and so it is possible to generate positive alpha even in the times of distress.

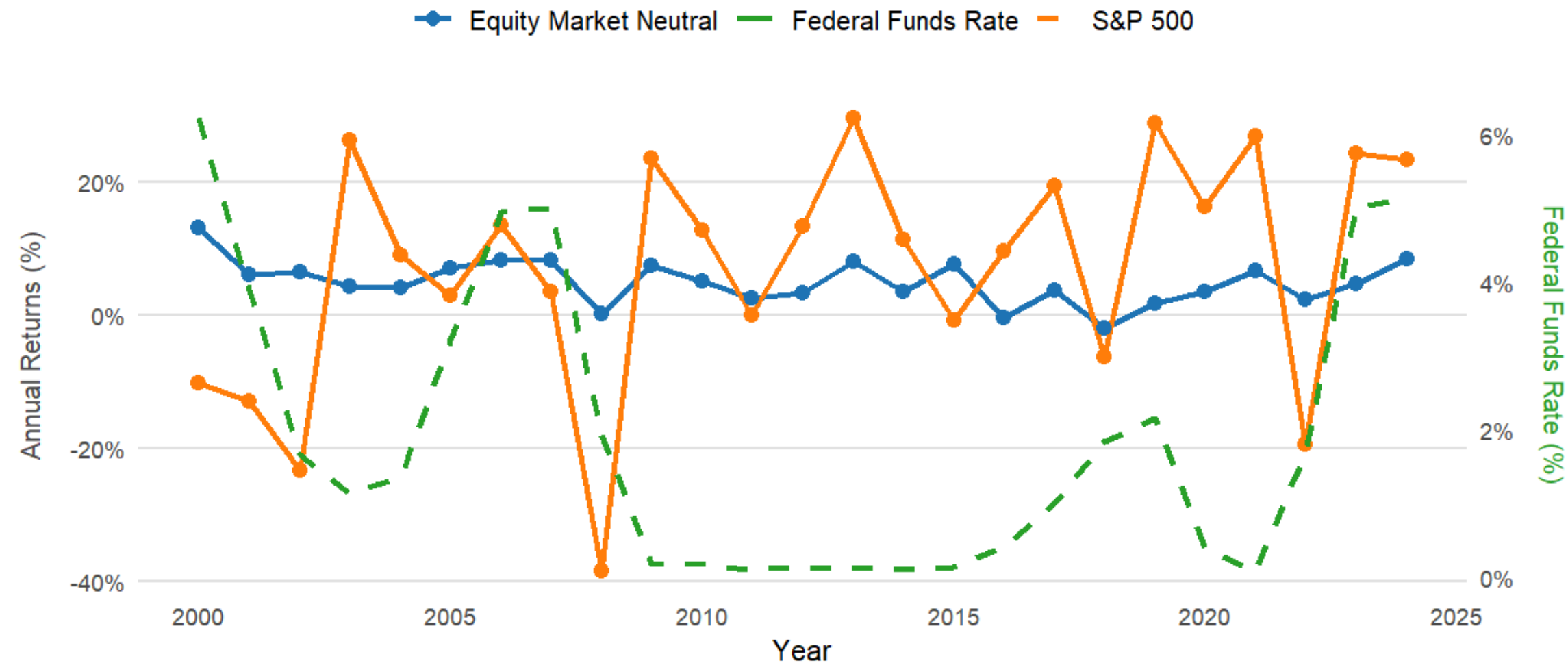
Capitalizing on Rising Equity Dispersion

EMN captures alpha from dispersion in equity returns - useful during current macroeconomic and geopolitical uncertainty.

With market **volatility** likely to **continue**, EMN offers a compelling way to **enhance** overall portfolio **performance**.

Consistent Returns of EMN Strategy

Equity Market Neutral vs S&P 500 Returns in Changing Rate Environments



- Throughout major market downturns, even when S&P returns sometimes plunged as low as -40%, the EMN strategy consistently delivered steady returns within a 0-10% range.
- The strategy's performance remains remarkably resilient regardless of whether rates are rising or falling.

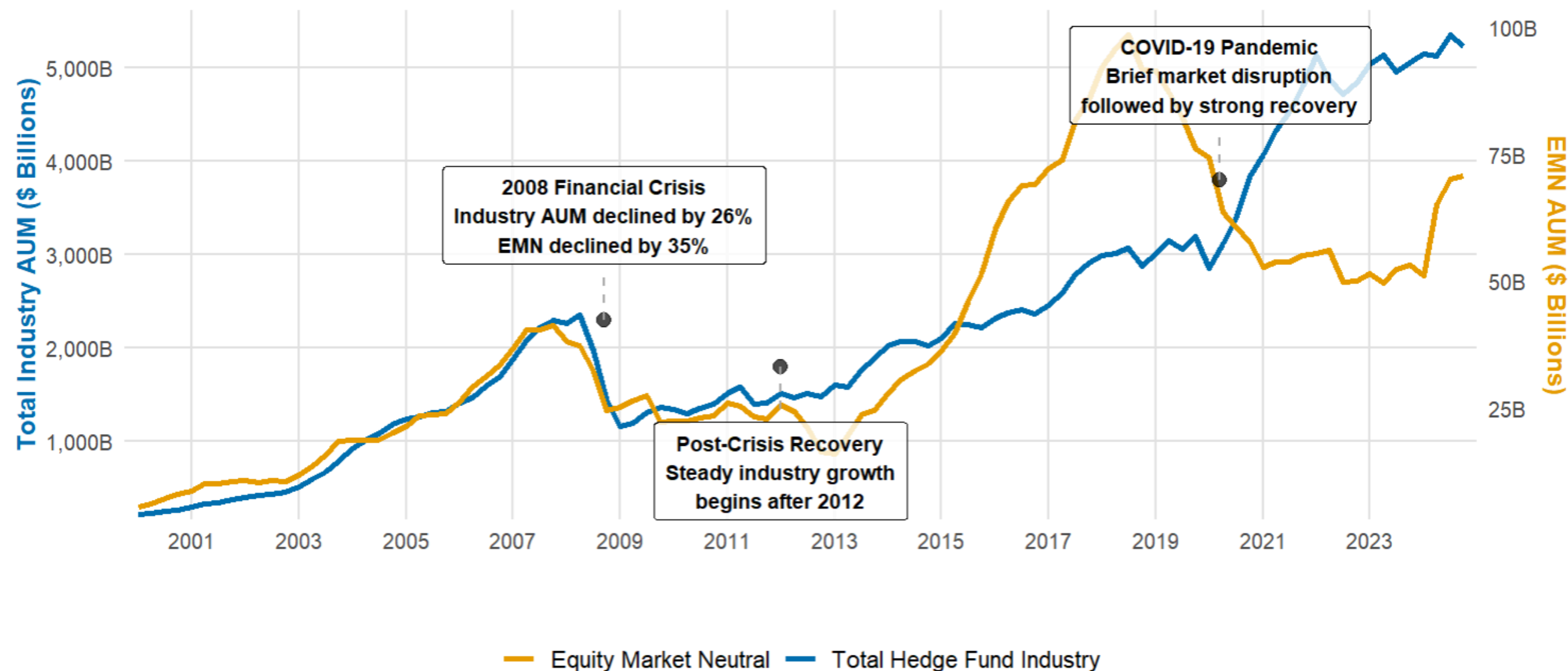


Source: FRED, CRSP and Eurekahedge

Trends and Developments

Hedge Fund Industry vs Equity Market Neutral AUM Trends

Quarterly data from 2000 Q1 to 2024 Q4



Q4 23-24 saw a 33.1% increase in AUM vs a 3.4% increase for the hedge fund industry as a whole.

- This rise in inflows could be due to **difficulty of diversification** in a post **COVID** world where bonds have become more **correlated** to the market.
- An additional reason, is that investors are seeking **diversification** because of the uncertainty in the markets surrounding **trade tariffs**, and **the calming of inflation**.



Source: BarclayHedge

Trends and Developments

- During the Financial Crisis, EMN funds ran similar factor models leading to poor performance for the industry and leading to significant withdrawals.
- After the GFC, funds have independent models and use their own proprietary data to base trades off of.

- Recently, we have begun seeing an increase in funds using systematic optimisation techniques for leverage instead of discretionary.
- Systematic Funds will use both factor model strategies and statistical arbitrage to seek alpha.



- Some funds have begun employing AI, in particular Large Language Models, to quickly decipher information to trade on factors. For example, quickly analysing managements earnings calls to find the sentiment of the managers.



Risks of the EMN Strategy

Category	Risk	Mitigation Measures
Model And Regulatory risks	Model decay Regulatory constraints	Constant model improvements & patents Geographic diversification & derivatives
Crowding and Behavioral Risks	Short Squeeze Crowded trends	Using put options Diversify into niche sectors
Counterparty and Liquidity Risks	Prime broker failures Liquidity crunch	Diversification across brokers Liquidity stress tests

Risks of the EMN Strategy

Category	Risk	Mitigation Measures
Structural Mismatches	Beta mismatch Factor mismatch	Beta monitoring & beta adjusted position sizing Factor Neutralizing tools eg Axioma & Stress testing
Leverage & Volatility	Excessive leverage Volatility regime switching	Cap leverage & Dynamic volatility targeting Using volatility clustering models eg GARCH
Execution and Funding Risks	Short selling costs Low interest rates	Negotiating rebate rates, focus on liquidity stocks Implementing AI hiring trends or supply chain analytics

Market Outlook

Predicted Scenario



- Most major analysts and banks expect continued gains for U.S. stocks over the next 6–12 months (S&P 500 at 6,500 by end-2025).
- Key economic drivers are favorable. Inflation is expected to ease, allowing for potential Fed interest rate cuts.
- Markets hopeful for business-friendly policies – notably tax cuts, deregulation, and infrastructure spending.
- 10-year Treasury yield is expected to stay in a moderate 4.0–4.5% range.
- Strong returns predicted for cyclical sectors, technology stocks will keep growing while healthcare expected to bounce back.

Worst Case Scenario



- Tariffs can raise input costs, spur inflation, and hurt overseas revenues for U.S. multinationals.
- If inflation rebounds, the Fed might delay rate cuts or even hike again leading to upswing in bond yields.
- Stocks could face increased pressure once the 10-year rate rises above 5%. BofA's worst-case scenario is 7%.
- US foreign sales can take on a 3% to 4% hit as the rest of the world establishes its own retaliatory tariffs.
- Full implementation of proposed tariffs could cut S&P 500 earnings by ~10% due to lost foreign sales.



Weather the Storm: Why Now Is the Ideal Time for an EMN Strategy

- ◆ Unpredictable policy moves expected to keep market volatility and stock dispersion high. Over the past month, the S&P 500, Nasdaq, and Dow have seen declines of approximately 8%, 11%, and 6.5%, respectively.
- ◆ Global spillovers are also expected – stock markets from Tokyo to London recently slumped on a major U.S. tariff announcement
- ◆ Corrections can happen quickly : one day's headline (a tax cut or tariff) might send indexes up or down several percent. In such a volatile environment, remaining market neutral can be advantageous.
- ◆ Historically, high volatility and dispersion have been favorable for market neutral funds
- ◆ Greater differences between stock winners and losers – can boost market neutral returns.



Top Current EMN Hedge Funds

BlackRock



Vanguard



**BlackRock Global
Equity Market Neutral**

**Systematic
\$2,881MM AUM**

**AQR Equity Market Neutral
Fund**

**Systematic
\$1,202MM AUM**

**Vanguard Market Neutral
Fund**

**Systematic
\$431MM AUM**

**Marshall Wace TOPS (Market
Neutral) Fund**

**Systematic
\$2,008MM AUM**

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5. Lecture Slides



Thank You!

Q & A