Insights
Global Equity Beta Solutions

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Managed Volatility Equity Strategies — A COVID-19 Case Study

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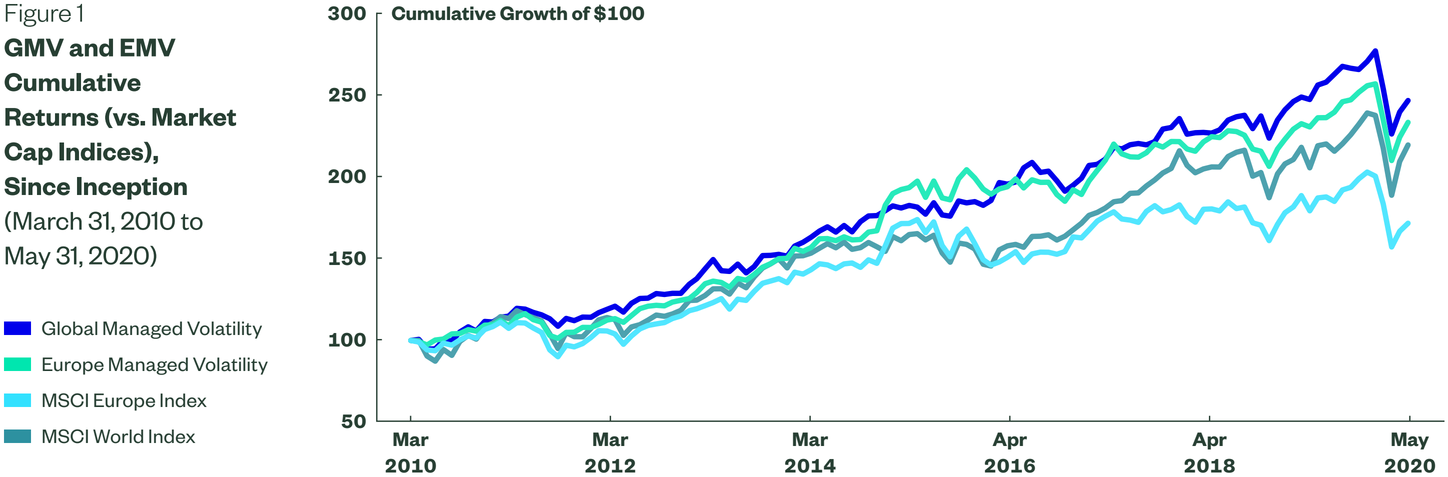
- During the COVID-19 market drawdown, State Street's Managed Volatility strategies meaningfully outperformed their benchmark indices and provided downside protection.
- Due to their low volatility, low beta, and defensive nature, Managed Volatility approaches are a natural complement to traditional market capitalization exposures.

Managed Volatility (MV) investment strategies are predicated on the belief that a well constructed portfolio targeting lower volatility stocks, as well as stocks that have low correlations with each other, can offer better risk-adjusted returns than the cap-weighted index. In this piece, we'll take a close look at two of State Street Global Advisors' optimized volatility approaches — our Global Managed Volatility (GMV) and European Managed Volatility (EMV) strategies — to see how they fared during the COVID-19 market drawdown and rebound.[1]

Performance Expectations Through Market Cycles

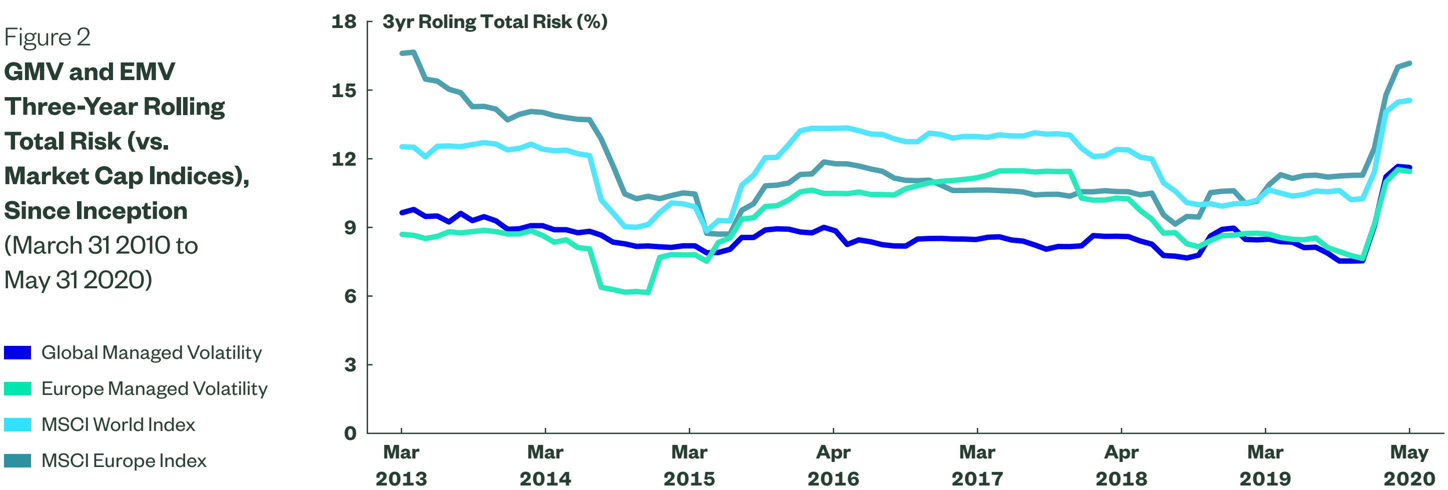
Due to defensive properties such as sector positioning[2] and low betas, State Street's Managed Volatility strategies[3] are expected to outperform during market volatility and drawdown periods, and are also expected to offer substantial risk-reduction during these events as well. Conversely, during short, sharp rebounds, MV strategies are expected to lag the market capitalization index. For long-term investors, however, the drawdown mitigation, combined with the benefits of compounding returns, can provide superior risk-adjusted returns over the long term. See Figures 1 and 2.

Figure 1
GMV and EMV Cumulative Returns (vs. Market Cap Indices), Since Inception
(March 31, 2010 to May 31, 2020)



Source: State Street Global Advisors, as of May 31, 2020. The performance shown is of a composite consisting of all discretionary accounts using this investment strategy. The above information is considered supplemental to the GIPS presentation for this Composite, which can be found in the Appendix or was previously presented. A GIPS presentation is also available upon request. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. Returns are expressed gross of management fees. Some members of the composite may accrue administration fees. The performance includes the reinvestment of dividends. Index returns reflect capital gains and losses, income, and the reinvestment of dividends. Returns shown in USD for Global Managed Volatility and EUR for Europe Managed Volatility.

Figure 2
GMV and EMV Three-Year Rolling Total Risk (vs. Market Cap Indices), Since Inception
(March 31 2010 to May 31 2020)



Source: State Street Global Advisors, as of May 31, 2020. Past returns do not guarantee future results.

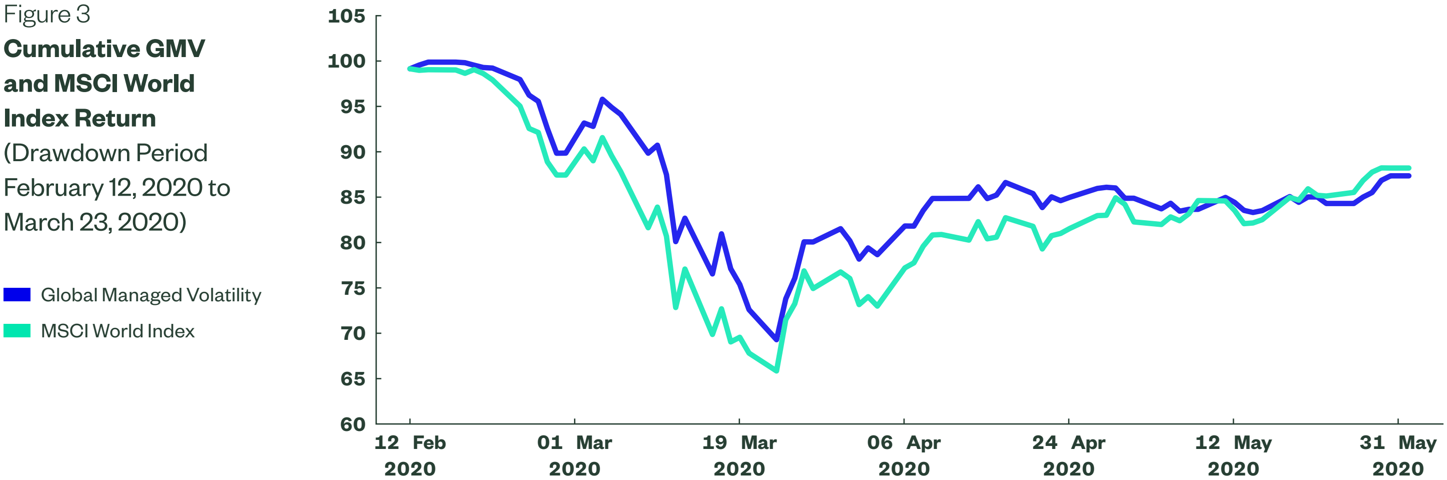
MV Performance: A COVID-19 Case Study

The market volatility and drawdown during the COVID-19 crisis was unprecedented in its speed and breadth. To gauge the speed of the drawdown, it's helpful to compare to previous crises. During the Tech Bubble, the drawdown took 241 days — approximately eight months — to lose 30%. It took more than five months (166 days) for global equity markets (using MSCI World as a proxy) to fall 30% during the Global Financial Crisis. It took just 25 days to reach that point during the COVID-19 crisis.

The COVID-19 market drawdown was also unique because of the breadth of the drawdown, which represented a broad selloff across markets and sectors. The best performing sector in the COVID-19 drawdown outperformed the index by only 12.87%. In prior episodes such as the Global Financial Crisis and the Tech Bubble, the best performing sector outperformed the MSCI World by 20% and by 32%, respectively.

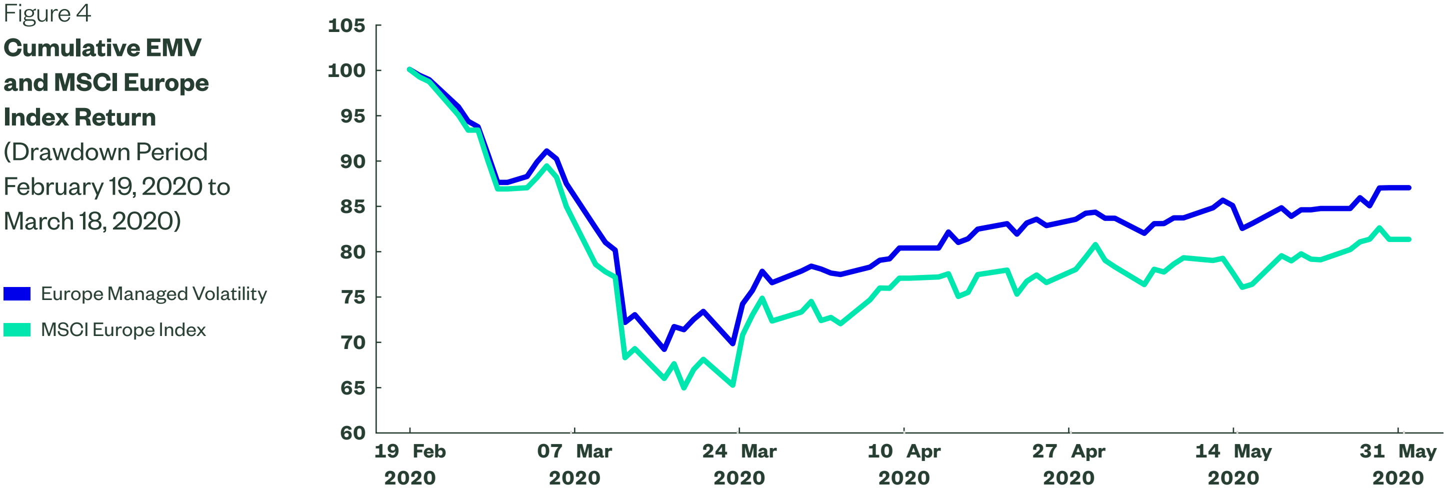
The value of State Street's Managed Volatility strategies as part of a core equity allocation strategy was amply demonstrated during the COVID-19 global equity drawdown period and subsequent recovery. (See Figures 3 and 4.) We define the 2020 COVID-19 drawdown period as February 12 to March 23 (peak to trough) for Global equities, and February 19 to March 18 (peak to trough) for European equities.

Figure 3
Cumulative GMV and MSCI World Index Return
(Drawdown Period February 12, 2020 to March 23, 2020)



Source: State Street Global Advisors, as of May 31, 2020. The performance shown is of a composite consisting of all discretionary accounts using this investment strategy. The above information is considered supplemental to the GIPS presentation for this Composite, which can be found in the Appendix or was previously presented. A GIPS presentation is also available upon request. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. Returns are expressed gross of management fees. Some members of the composite may accrue administration fees. The performance includes the reinvestment of dividends. Index returns reflect capital gains and losses, income, and the reinvestment of dividends. Returns shown in USD.

Figure 4
Cumulative EMV and MSCI Europe Index Return
(Drawdown Period February 19, 2020 to March 18, 2020)



Source: State Street Global Advisors, as of May 31, 2020. The performance shown is of a composite consisting of all discretionary accounts using this investment strategy. The above information is considered supplemental to the GIPS presentation for this Composite, which can be found in the Appendix or was previously presented. A GIPS presentation is also available upon request. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. Returns are expressed gross of management fees. Some members of the composite may accrue administration fees. The performance includes the reinvestment of dividends. Index returns reflect capital gains and losses, income, and the reinvestment of dividends. Returns shown in EUR.

During the drawdown periods, GMV and EMV outperformed the MSCI World Index and MSCI Europe Index by 353 bps and 645 bps, respectively. Defensive positioning (overweight) within Consumer Staples, and underweights to Energy (amid the oil price war) and Industrials (underweight Boeing and Airbus amid COVID-19 travel impacts) all supported the MV strategies' outperformance. The Consumer Staples overweight was particularly beneficial in the EMV strategy, as were overweight positions in Communication Services names Elisa Oyj (Finland) and Swisscom AG (Switzerland). The equity markets overshot in both directions (downside and upside), and we experienced a short, sharp reversion in equity markets from April. During the recovery (through May 31), the GMV and EMV strategies lagged their market cap indices, which is expected. The GMV strategy had a particularly challenging April versus its benchmark, owing to a lower beta (compared with the EMV strategy) as well as regional composition differences.

The global recovery has largely been led by expensive and risky pockets of the market. Information Technology, Health Care, and Financials contributed strongly to the MSCI World Index rebound. The highly cyclical Energy and Materials sectors posted the highest sector returns. And while Consumer Staples successfully protected the GMV strategy on the downside, this sector was the largest detractor from excess returns during the recovery. The Consumer Staples positioning in the EMV strategy was also a detractor during the rebound; however, EMV was propped up by strong stock selection in European Health Care overweights to Orion Oyj (+62.5%), Sartorius Stedim Biotech (+70.9%), and bioMerieux (+57.0%),[4] which all saw rising earnings estimates related to COVID-19 testing and vaccine development.

Rebalancing Amid Extreme Market Volatility

Not only were equity markets in uncharted territory with respect to risk and liquidity, this extremely volatile 35-day period also saw many rules-based strategies and indices undergo regular rebalancing, including Managed Volatility strategies. Some index providers responded by delaying index rebalances, while others went ahead as planned with scheduled rebalancing.

State Street's Managed Volatility strategies follow a disciplined, systematic investment process, and we believe adhering to this discipline — particularly during periods of market stress — is important in achieving long-term objectives. We follow a quarterly rebalancing cycle to ensure MV portfolios are best positioned to achieve their risk-reduction objectives. Given the incredibly volatile nature of equity markets during this period, it was essential to recalibrate portfolio positions in order to ensure that our stock, sector, and factor exposures took advantage of the changing risk and correlation environment in pursuit of the lowest total risk. Indeed, the March 2020 rebalance was one of the largest for GMV and EMV since their inception.

Flexibility in Achieving Targeted Exposures

While the Managed Volatility strategies are model-driven, portfolio managers have an element of discretion in determining how to implement the model trades. Unlike active management, this discretion is not driven by market — or stock-specific views, but rather by an assessment of how to achieve the targeted exposures with the lowest possible trading costs. Unlike traditional market cap or third-party index replication, there is no requirement to minimize tracking error relative to a replication benchmark (which might require trading at market-on-close on the rebalance date, regardless of liquidity conditions).

This discretion allows State Street portfolio managers to spread trades out over longer periods, to rebalance during internal liquidity events, or to act when they believe market conditions are conducive to lower implementation costs. For the March 2020 rebalance, in the context of an unstable risk environment, our portfolio managers monitored the daily proposed rebalance trades over consecutive days, utilizing risk estimates from vendor models such as Qontigo (formerly Axioma). Our goal was to ensure stability in the risk estimates and proposed trades before proceeding with the rebalance.

This thoughtful and flexible approach to smart beta portfolio management is a key differentiator for the Managed Volatility strategies, compared with index replication approaches (e.g., MSCI Minimum Volatility indices). We strongly believe in the importance of opportunistic rebalancing and the utilization of cost-minimization trading strategies. Our significant scale and experience as equity index investors afford us a unique perspective on the trade-offs between portfolio discipline and the associated costs to achieve a desired exposure.

A Strategic Long-Term Allocation

There is no denying that 2020 has seen unique and idiosyncratic drivers of equity market returns. The extreme daily market moves, often concentrated in sectors that include COVID-19-specific business models, have challenged the carefully chosen strategies of many investors. Going forward, as investors look to reposition their portfolios in search of diversification and differentiated returns, defensive strategies such as Managed Volatility can offer protection ahead of expected and ongoing bouts of volatility.

We expect that a core allocation to a Managed Volatility equity strategy would appeal to all major classes of investors. In particular, MV strategies can be appropriate for investors who desire full participation in growth assets but who are also less sensitive to benchmark-relative risk and wish to temper their equity allocations with a more defensive posture. Due to their low volatility, low beta, and defensive nature, MV approaches are a natural complement to traditional market capitalization exposures and an attractive building block in a diversified equity portfolio.

Endnotes

1 Standard performance reports for both strategies can be found in the Appendix.

2 For example, Utilities and Consumer Staples overweights.

3 See Appendix for more on State Street's approach to Managed Volatility.

4 Performance measured from MSCI Europe Index's trough of March 18, 2020 to May 31, 2020.

APPENDIX: Performance of Global Managed Volatility and Europe Managed Volatility Strategies

GMV Annualized Performance (%) in USD as of June 30, 2020
Strategy Inception: March 2010

Period	Composite Return (%)	MSCI World Return (%)	Difference (%)
Since Inception	7.16	7.61	-0.45
Quarter To Date	8.03	19.36	-11.33
3 Months Return	8.03	19.36	-11.33
Year To Date	-9.86	-5.77	-4.09
1 Year Return	-5.07	2.84	-7.91
3 Year Return	3.40	6.70	-3.30
5 Year Return	5.97	6.90	-0.93
7 Year Return	7.35	8.38	-1.03
10 Year Return	9.16	9.95	-0.79

EMV Annualized Performance (%) in EUR as of June 30, 2020
Strategy Inception: March 2010

Period	Composite Return (%)	MSCI Europe Return (%)	Difference (%)
Since Inception	8.08	5.73	2.35
Quarter To Date	11.04	12.60	-1.56
3 Months Return	11.04	12.60	-1.56
Year To Date	-9.03	-12.84	3.80
1 Year Return	-1.93	-5.48	3.55
3 Year Return	2.16	0.51	1.65
5 Year Return	3.88	1.30	2.58
7 Year Return	7.85	5.82	2.04
10 Year Return	8.28	6.57	1.70

Source: State Street Global Advisors, as of June 30, 2020.
Returns greater than one year are annualized. Returns represent past performance and are not a guarantee of future results. Current performance may differ from the performance shown. Returns shown reflect the reinvestment of dividends and other income.
Composite return performance figures are provided net of actual trading, audit, custody, administrative and legal fees and expenses. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. It is not possible to invest directly in an index.

APPENDIX: State Street Global Equity Beta Solutions on Managed Volatility Equity Strategies

Managed Volatility strategies are predicated on the belief that a well constructed portfolio targeting lower volatility stocks, as well as stocks that have low correlations with each other, may offer better risk-adjusted returns than the cap-weighted index. Such approaches inevitably challenge the traditional Capital Asset Pricing Model ("higher risk = higher reward") and notions of mean-variance efficient markets. Nonetheless, behavioral finance and market structure reasons continue to justify this premia and, combined with broad intuitive appeal, spur ongoing demand for these strategies. Managed Volatility strategies serve four objectives in core equity portfolios:

1. Risk reduction
2. Remain fully invested in growth assets, but from a more defensive posture
3. Diversification
4. Improvements in long-term risk-adjusted returns

Some of the more simple, heuristic approaches take a universe of stocks, rank them on their historic volatility, and then either select the lowest-variance stocks (e.g., top 50%) or reweight the universe according to their volatility metric (overweighting stocks with low volatility and underweighting stocks with high volatility). Other more sophisticated approaches, such as State Street's range of Managed Volatility strategies, employ a risk model and optimization engine to build the portfolio. Risk models allow for a volatility assessment at both the individual stock level ("how volatile is this stock relative to other stocks in the universe?") and correlations at the total portfolio level ("how does this combination of stocks co-move together?"). This more holistic assessment of risk may result in stocks with higher volatilities being included in the portfolio if they serve to reduce the overall portfolio volatility through their diversifying properties.

Through the application of a disciplined, systematic investment process that seeks to manage total risk, as opposed to controlling for active or benchmark-relative risk, we believe a Managed Volatility equity strategy that reduces exposure to stocks with high expected volatility may offer investors stronger risk-adjusted returns (through the benefit of compounding) than the respective cap-weighted investable universe, over the long term. A more nuanced approach to portfolio management (compared to low volatility index replication) and increased cost efficiencies (compared to more active quantitative approaches) make these strategies a unique and compelling offering for investors.

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For four decades, State Street Global Advisors has served the world's governments, institutions and financial advisors. With a rigorous, risk-aware approach built on research, analysis and market-tested experience, we build from a breadth of active and index strategies to create cost-effective solutions. As stewards, we help portfolio companies see that what is fair for people and sustainable for the planet can deliver long-term performance. And, as pioneers in index, ETF, and ESG investing, we are always inventing new ways to invest. As a result, we have become the world's third-largest asset manager with US $2.69 trillion* under our care.

* AUM reflects approximately $50.01 billion USD (as of March 31, 2020), with respect to which State Street Global Advisors Funds Distributors, LLC (SSGA FD) serves as marketing agent; SSGA FD and State Street Global Advisors are affiliated.

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