

The MSCI Minimum Volatility Indices

Track Broad Market Returns with Lower Risk

- The MSCI Minimum Volatility Indices are uniquely designed to capture the low volatility effect.
- The MSCI Minimum Volatility Indices are constructed to (1) experience the lowest total risk, (2) avoid unintended bets on countries, sectors and styles, and (3) provide superior risk-adjusted performance while maintaining the investability and replicability features of the parent cap weighted indices.
- Multiple uses of MSCI Minimum Volatility include cost effective replication, benchmarking of low volatility managers, and combinations of MSCI Minimum Volatility with other MSCI Risk Premia Indices.

Why Do Investors Use Minimum Volatility Strategies?

- Reduction of portfolio volatility - on average by 25% to 30% - and lower drawdown compared to the broad market.
- De-risking the portfolio while keeping an exposure to equity markets
- One of few strategies that aims to outperform the broad market in adverse market conditions.

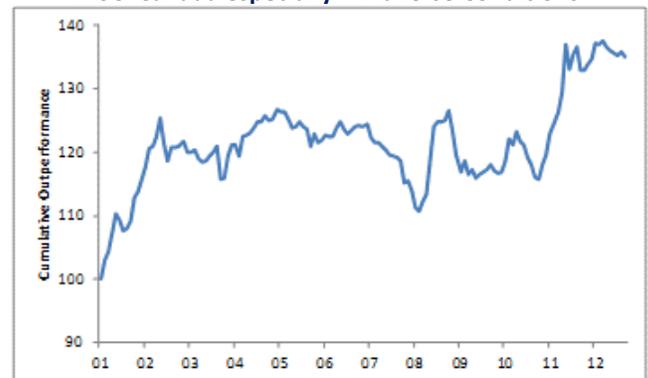
Key Benefits of the MSCI Minimum Volatility Indices

- Accounts for multiple risk sources and has achieved effective risk reduction via high level of diversification.
- Longest industry live history – beginning in April 2008.
- Designed to avoid unintended Country, Sector and Style bets.
- Low annual index turnover at 20% to reduce replication cost.
- High investability and replicability.

Illustrative Use Case

- A G8 national pension fund used MSCI World Minimum Volatility to de-risk its equity portfolio.
- Instead of moving from equity to fixed income, the fund allocated 25% of its developed market equity to MSCI World Minimum Volatility Index.
- Historically, the Minimum Volatility Indices have effectively reduced risk when compared to their parent indices.

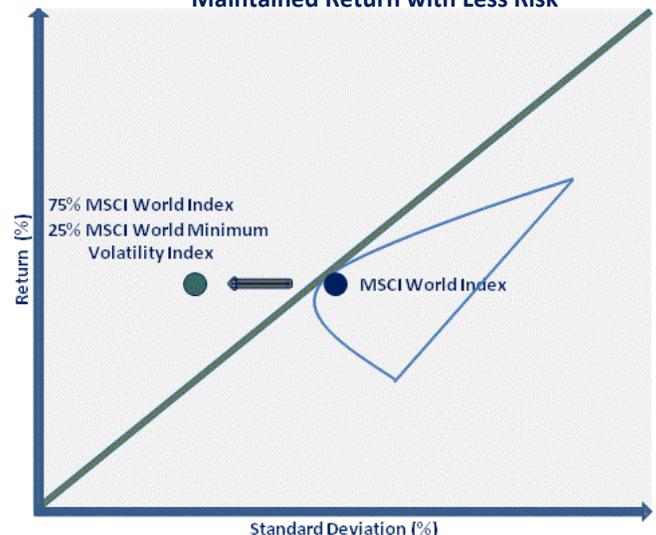
MSCI Canada Minimum Volatility Outperformed MSCI Canada especially in Adverse Conditions



	MSCI Canada	MSCI Canada Minimum Volatility
Total Return (CAD)* (%)	6.0%	8.8%
Total Risk* (%)	14.5%	11.3%
Risk Adjusted Return	0.41	0.78
Active Return*(%)		2.8%
Tracking Error*		5.4%
Information Ratio		0.53

*Annualized from May 2001 to Dec 2012

Adding MSCI Minimum Volatility Indices Has Historically Maintained Return with Less Risk



Methodology Highlights

Parameter	Methodology	Comments
Universe	Parent index constituents	Derived indices benefit from parent index construction rules
Optimization	MSCI's market leading Barra Global Equity Model (GEM2)	Account for Factor volatility and correlation Comprehensive and robust risk measures
Weighting	Minimize index volatility subject to constraints	Ensure high investability and liquidity
Constraints	<ul style="list-style-type: none"> Sectors: +/-5% or 3x relative to the parent index Style: +/- 0.25 relative to Barra factor exposure of the parent index (except for Volatility) Stocks: Lower of 1.5% or 20x the cap-weight, with a minimum of 5bps Turnover: Maximum 10% one-way turnover per rebalance 	Stock weight cap ensures adequate capacity and replicability Style and Sector caps ensure no unintended exposure Turnover limit ensures low cost replication
Number of Constituents	Subset of parent index, number will vary	High level of diversification achieved by a subset of parent index
Rebalance	Semi-annual	Timely data updates, consistent with MSCI rebalancing calendar

Combining MSCI Risk Premia Indices

- MSCI Minimum Volatility, Value Weighted, Quality and other MSCI Risk Premia Indices outperformed their cap-weighted parent indices over long periods.
- However, performance is cyclical: any strategy can underperform for long periods.
- Therefore, a higher level of diversification could be achieved by combining two or more of these MSCI Risk Premia Indices.
- Combinations may also reduce overall cost by exploiting natural internal "cross opportunities" at each rebalancing.

Combining MSCI Minimum Volatility and MSCI Value Weighted Indices



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