Managing Tail Risk with Momentum

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This document includes results of a historical simulation study. Any historical study, while informative, is subject to several limitations. In particular, historical studies are often not a reliable predictor of future events as they may be different from those experienced in the past. In addition, because of modeling limitations, there are significant differences between a simulated strategy and its practical implementation. Among such differences, but in no way fully enumerated, are the fact that in historical simulations there are no inflows or outflows, the prices are closing month-end prices, and dividends are assumed to be re-invested on the ex-dividend day of each underlying ETF, all of which assumptions may not be practical in actual implementation. Furthermore, it is important to realize that higher returns of a historical study may often be associated with risks that have not manifested over the historical period studied. No assurances can be given that implementing a simulated strategy will meet its objectives, or if the objectives are met, the actual implementation will be profitable.

Findings*

An investment of $100,000 in 1971 in MSCI US Equity Index (Large + Mid Cap) has potentially grown to about $7.5MM by the end of 2014, outperforming inflation by a wide margin.

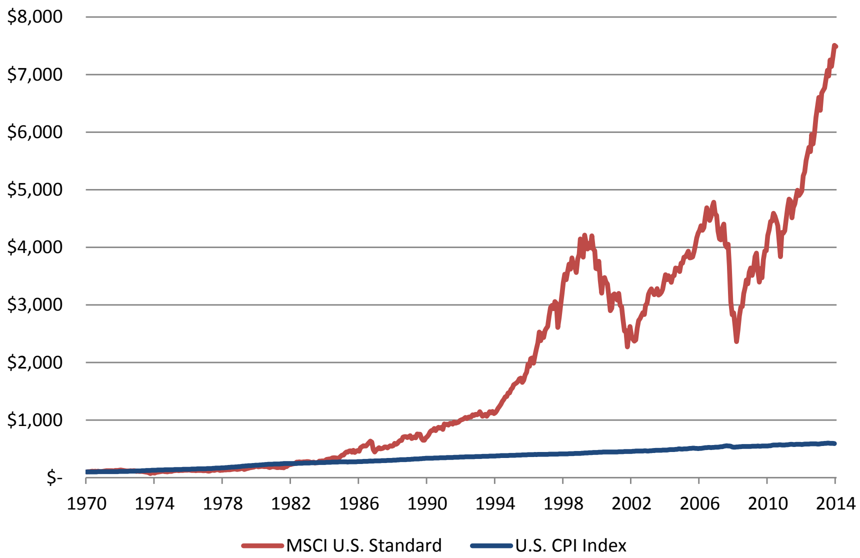
Employing a Momentum following strategy to mitigate the impact of tail events would have potentially increased that final number to about $12.5MM, and with lower volatility and lower draw down.

*Based on historical simulations which have several important limitations. Please see page 2 for details.

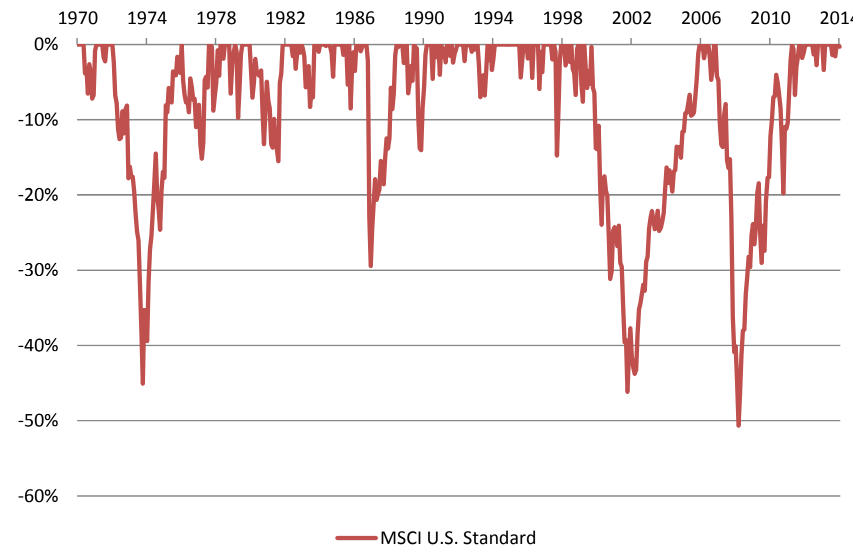
MSCI U.S. Index (Large + Mid Cap)
1971 – 2014

Healthy long-term returns outperforming inflation with a wide margin, but with occasional tail events

Growth of $100



Drawdown From Previous Peak



	MSCI	CPI
Avg Annual Return	10.3%	4.1%
Std Deviation	15.3%	1.3%
Positive Months	61.4%	-
Negative Months	38.6%	-
Avg Return -- Pos Mnths	3.6%	-
Avg Return -- Neg Mnths	-3.3%	-
Max Drawdown	50.6%	-
Max Drawdown (ex 1987)	50.6%	-

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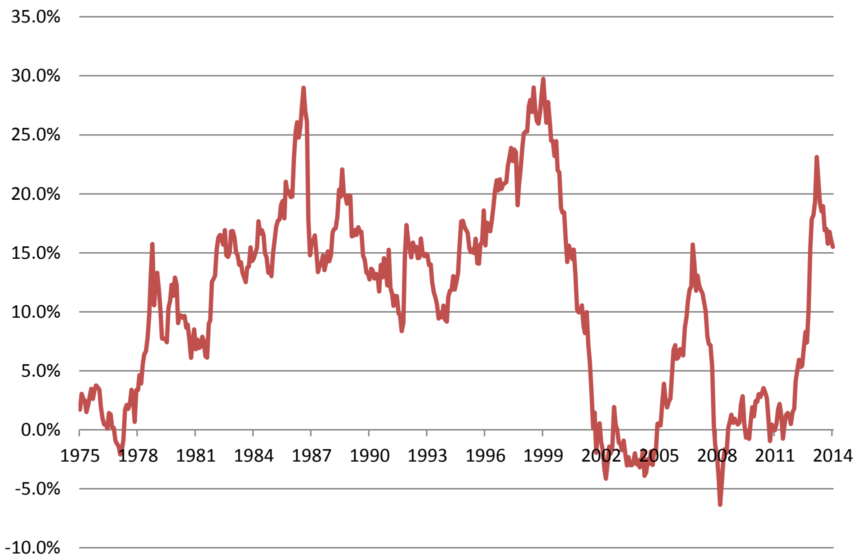
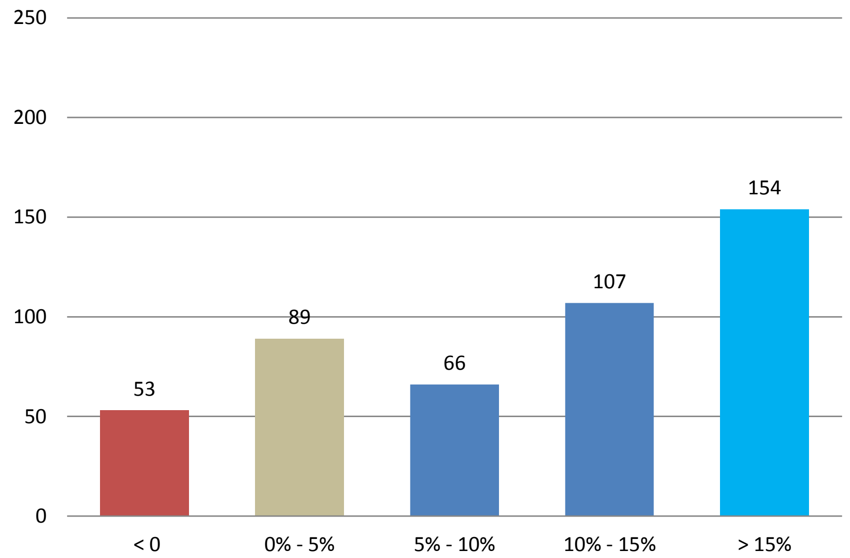
MSCI U.S. Index (Large + Mid Cap)
1971 – 2014

5-Year Average Annual Returns

Rolling Returns



Number of 5-Year Periods



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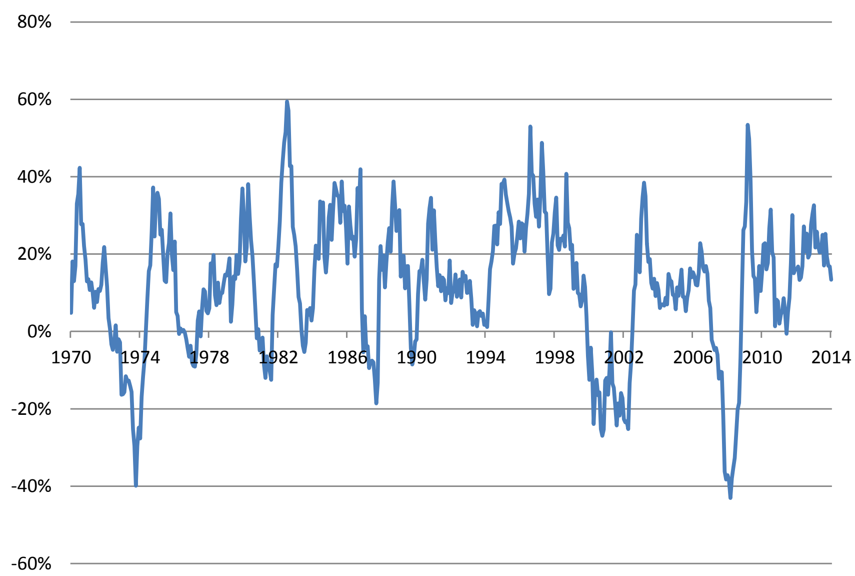
What is Momentum?

- Momentum is a well known pricing anomaly indicating the persistence of market returns. Rising markets tend to continue to rise, while falling markets tend to continue to fall*. This phenomenon appears to be rooted in Behavioral Finance.

- Historical evidence shows that the past 12-month return, which we define as Momentum, is an indicative of future returns.

MSCI U.S. Standard 12-month Look-back Momentum



*In academic papers, this anomaly is often referred to as “Time Series Momentum” or “Absolute Momentum.” It is related to, but different than, cross sectional studies that focus on relative performance -- see references on page 13.

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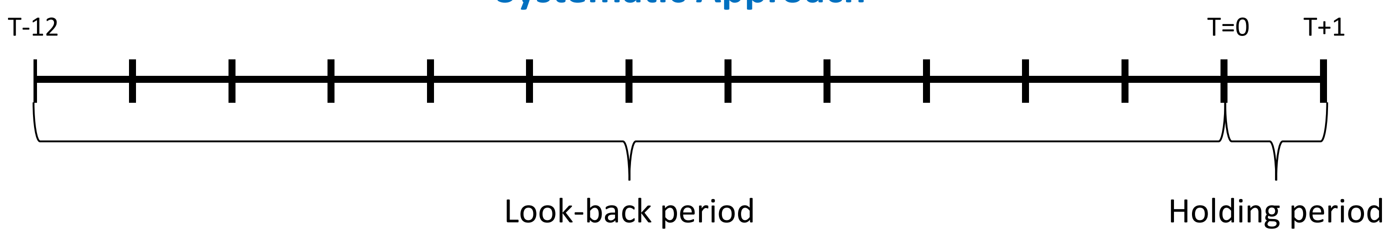
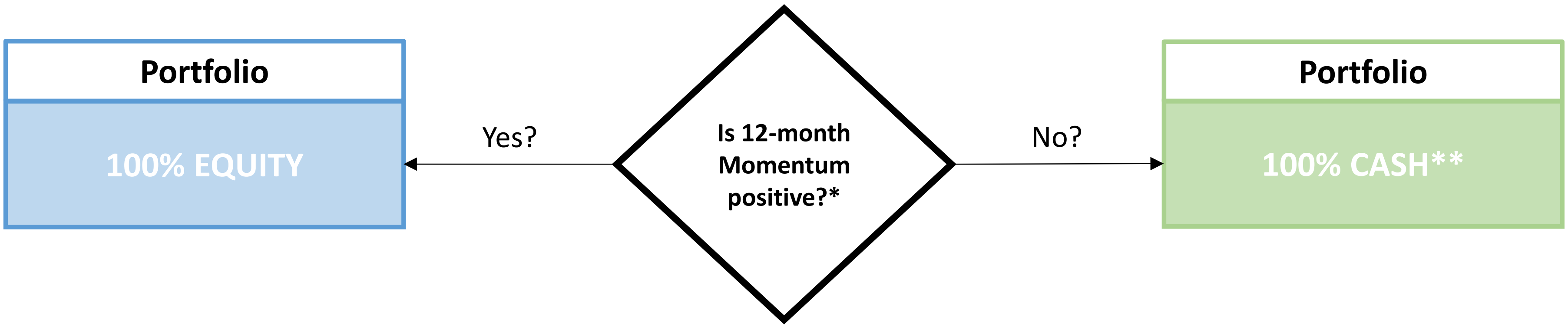
Managing Tail Risk

Follow Momentum

1-Year Look-Back / 1-Month Holding

Systematic Approach



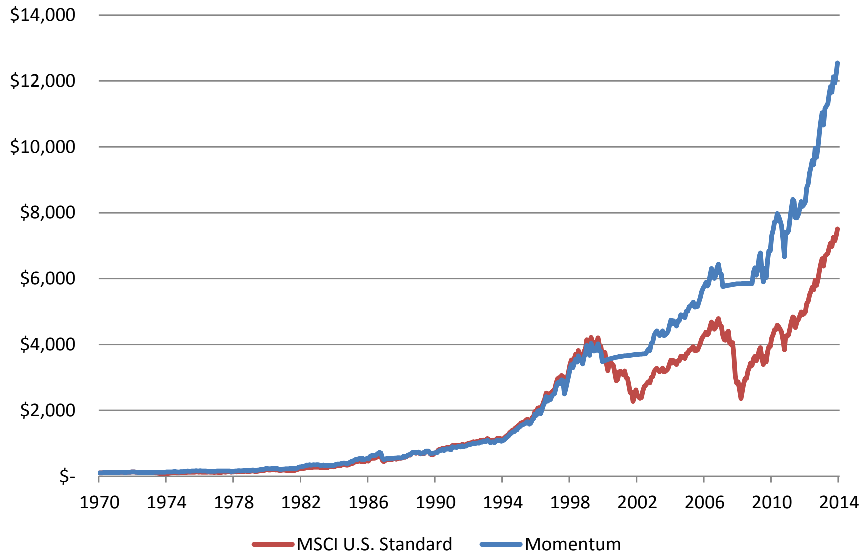


*In historical studies, 1-year look-back period produced higher average return than other look back periods. Shorter look-back periods resulted in significantly higher turnover. For details see Antonicci (2013) and Jegadeesh et al (1993).

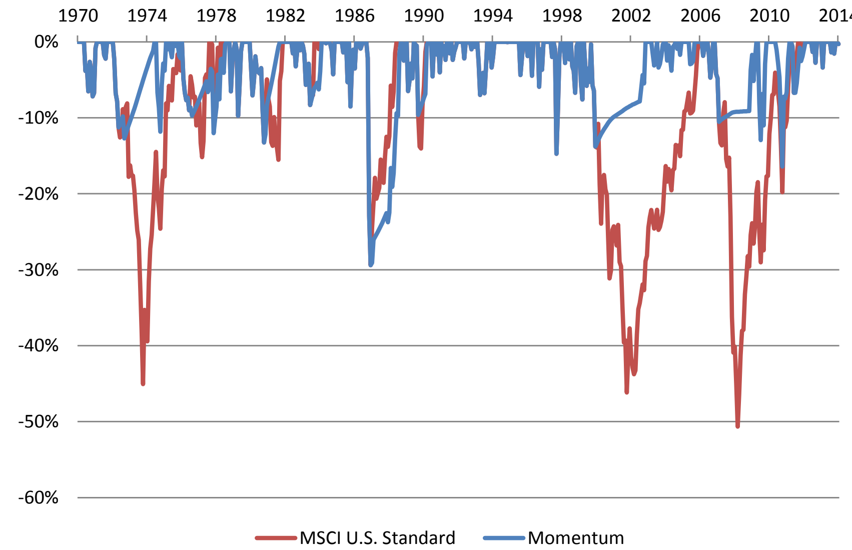
** In our study we have used the return of a hypothetical money market investment in rolling 3-month bill. See Nozari and Epstein (2013).

MSCI U.S. Index (Large + Mid Cap)
1971 – 2014
Managing Tail Risk
Follow Momentum

Growth of $100



Drawdown From Previous Peak



	MSCI	MO
Avg Annual Return	10.3%	11.6%
Std Deviation	15.3%	12.1%
Positive Months	61%	72%
Negative Months	39%	28%
Avg Return -- Pos Mnths	3.6%	2.5%
Avg Return -- Neg Mnths	-3.3%	-2.9%
Max Drawdown	50.6%	29.4%
Max Drawdown (ex 1987)	50.6%	16.4%

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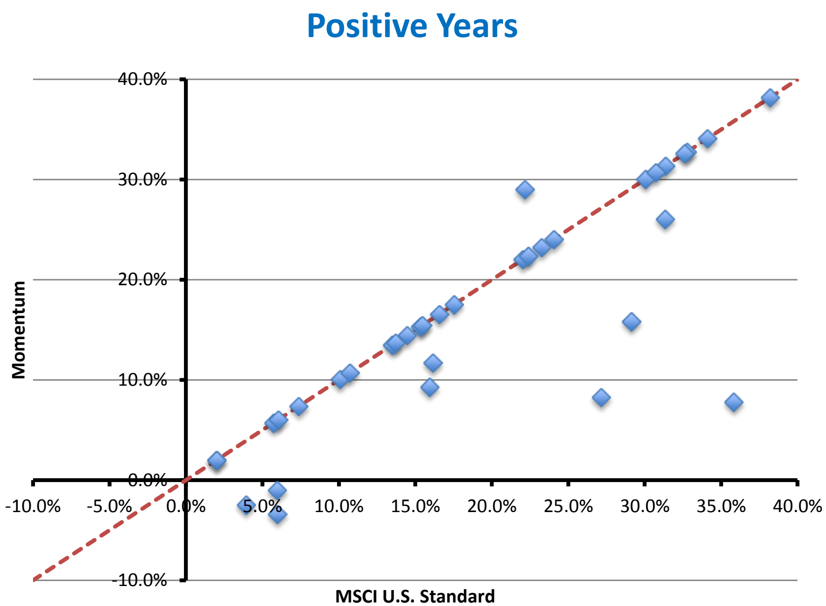
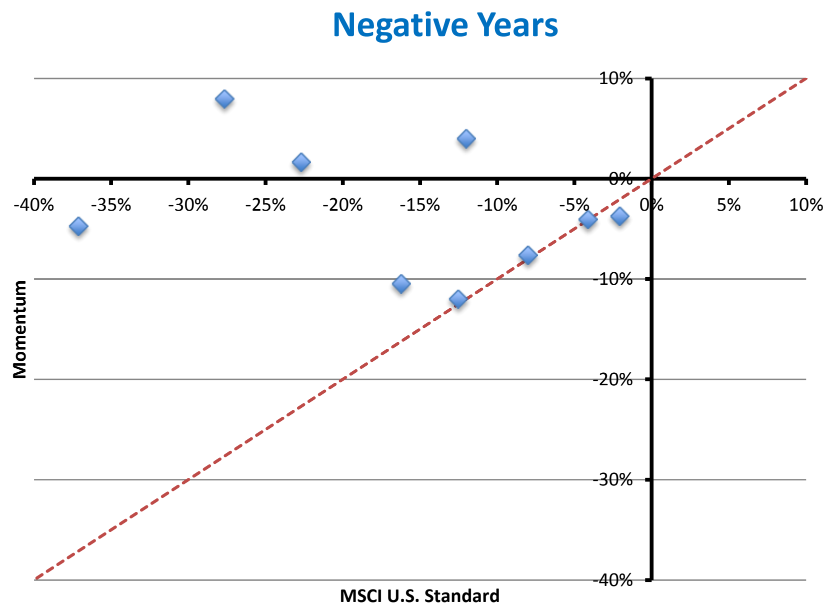
*Historical simulations have several important limitations. Please see page 2 for details.

MSCI U.S. Index (Large + Mid Cap)
1971 – 2014
Managing Tail Risk
Follow Momentum





- In the past 44 years, MSCI had 35 years of positive returns (80%).
- In 8 out of the 9 negative years, Momentum following strategy outperformed the index.
- In the 32 of the 35 positive years, Momentum following strategy had also positive returns.

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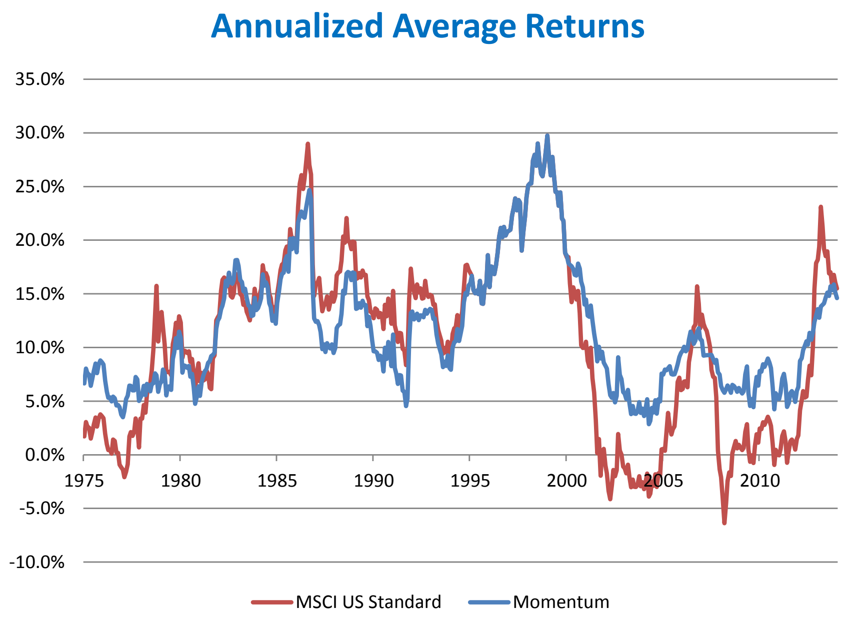
*Historical simulations have several important limitations. Please see page 2 for details.

MSCI U.S. Index (Large + Mid Cap)
1971 – 2014
Managing Tail Risk
Follow Momentum

Momentum strategy has produced positive returns in any 5-year window



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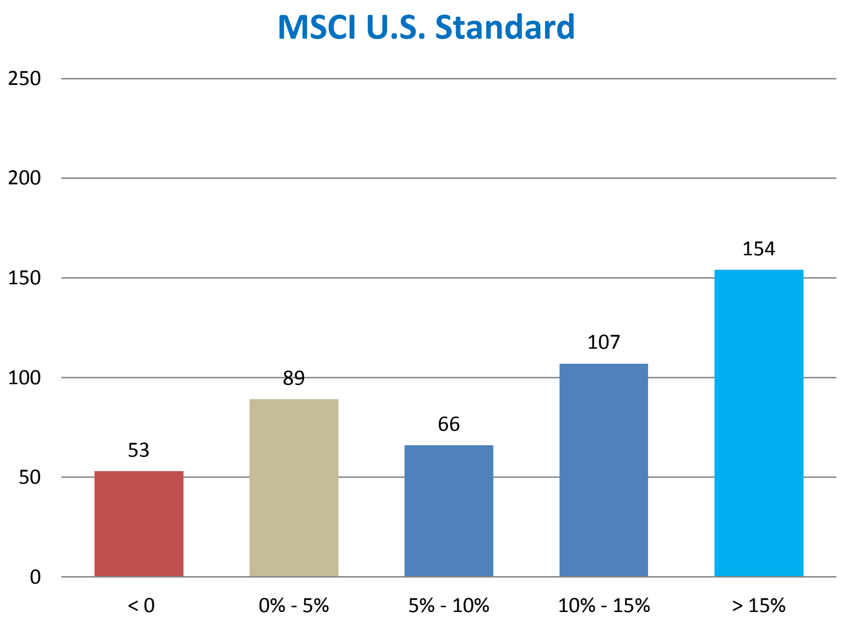
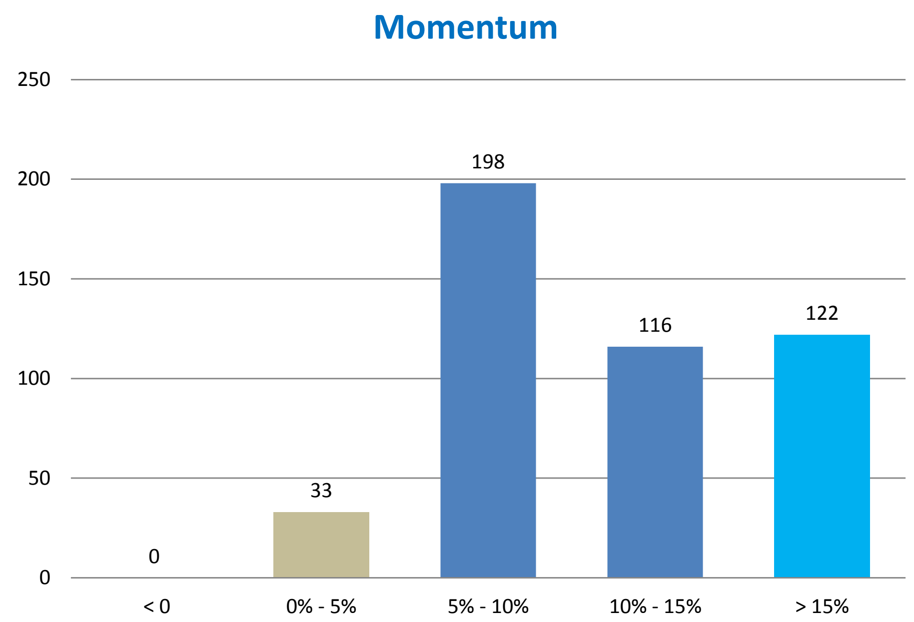
MSCI U.S. Index (Large + Mid Cap)
1971 – 2014
Managing Tail Risk
Follow Momentum

5-Year Average Annual Returns
Number of 5-Year Periods

Momentum strategy produced a tighter distribution of 5-year returns





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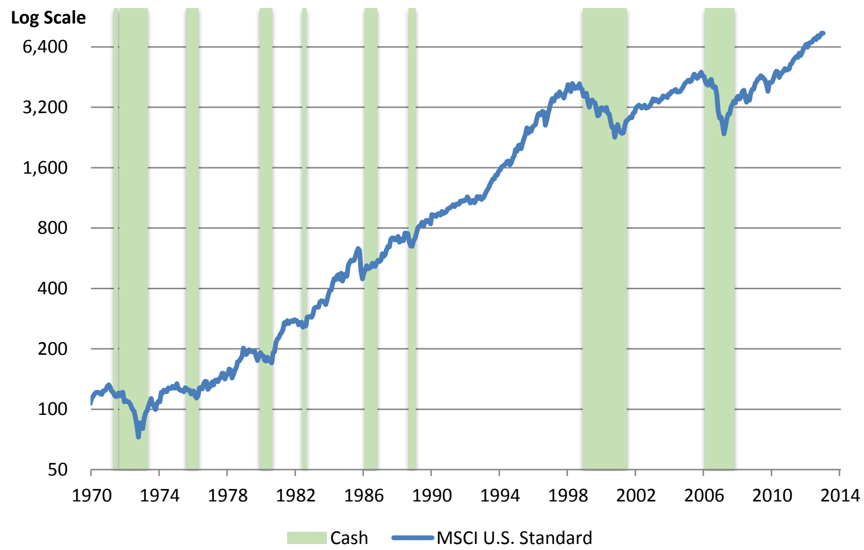
Managing Tail Risk

Following Momentum

1-Year Look-Back / 1-Month Holding

Simulation Results*



Due to graphic limitations, a few brief periods of cash allocations cannot be displayed.

- Practical Implementation:
  - Daily execution while maintaining 1-year look-back / 1-month holding.
  - Gradual transition between Equity and Cash to reduce market impact.
  - Use of Filtered Momentum to reduce noise and detect the “real” signal.

*Historical simulations have several important limitations. Please see page 2 for details.

We welcome questions and comments. Please call.

References

- Antonicci, Gary, 2013, "Absolute Momentum: a Simple Rule-Based Strategy and Universal Trend-Following Overlay", Social Science Research Network
- Ilmanen, Antti, 2011, Expected Returns, John Wiley & Sons
- Jegadeesh, Narasimhan and Sheridan Titman, 1993, "Returns of Buying Winners and Selling Losers: Implications for Stock Market Efficiency", Journal of Finance 48, 65-91
- Moskowitz, Tobias, 2010, Momentum Investing, Investment and Wealth Monitor
- Moskowitz, Tobias J., Yao Hua Ooi, and Lasse Heje Pedersen, 2012, "Time Series Momentum", Journal of Financial Economics 104, 228-250
- Nozari, Ardavan and Nathan Epstein, 2013, "Using Momentum for a Long-Only Strategy in US Market – A Historical Review", www.NozariAdvisors.com

Sources of Data

- MSCI USA Standard (Large and Mid Cap) Index data obtained from: http://www.msci.com/products/indexes/size/standard/performance.html
- Consumer Price Index data obtained from: http://research.stlouisfed.org/fred2/
- 3-month Treasury Bill data obtained from: http://finance.yahoo.com

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