



## The Proliferation of Engineered Investment Solutions- Impacts on the Nonprofit World

FIA Conference for Nonprofit Organizations

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**Moderated by Thomas Kirkenmeier**

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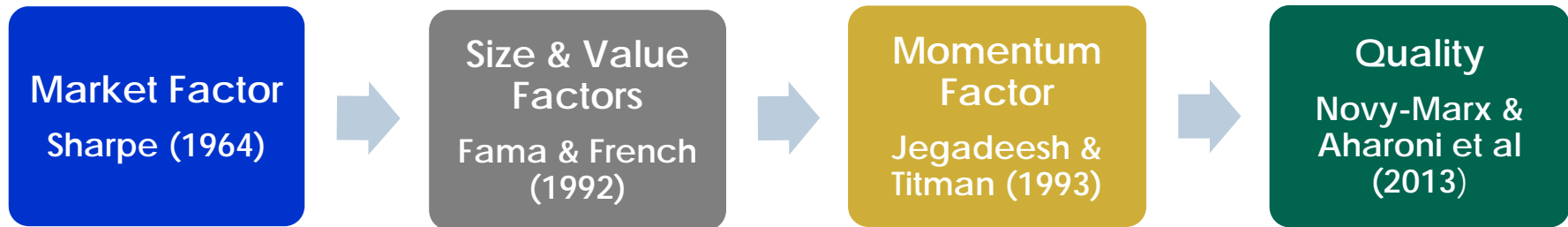
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**Northern Trust**

[northerntrust.com](http://northerntrust.com)

# Equity Risk Premiums – Timeline and Definitions



- Market Factor: the return of equities over the return of the risk free asset (e.g. Treasury bills)
- Size Factor: the return of small stocks over the return of large stocks
- Value Factor: the return of value stocks (low price-to-book ratio) over the return of growth stocks (high price-to-book ratio)
- Momentum Factor: the subsequent return of stocks with high prior 12-month returns over the subsequent return of stocks with low prior 12-month returns
- Quality Factor: the return of high quality stocks over the return of low quality stocks. Quality is defined as high profitability and low investment



# Equity Factors

*Time Period: 1926 – 2014\**

	Market Premium	Size Premium	Value Premium	Momentum Premium	Quality Premium
Compound Premium	6.21%	2.14%	4.11%	6.81%	4.80%
t-statistic	3.81	2.33	3.56	4.57	4.89
Standard Deviation	18.72%	11.18%	12.15%	16.48%	6.33%
Correlation to Equity	1.00	0.25	0.24	-0.35	-0.07

Sources: Ibbotson, Ken French Data Library, Northern Trust

\* Inception for momentum is 1927. Inception for profitability is 1974. Data shown as of May 30, 2014.



# US Factor Premiums – Diversified Sources of Return

## Return Correlations

(since common factor inception)

	Market	Size	Value	Momentum	Quality
Market	1.00	0.26	-0.32	-0.11	-0.49
Size	0.26	1.00	-0.23	0.06	-0.53
Value	-0.32	-0.23	1.00	-0.18	0.42
Momentum	-0.11	0.06	-0.18	1.00	0.17
Quality	-0.49	-0.53	0.42	0.17	1.00

Sources: Ibbotson, Ken French Data Library, Northern Trust

\* Common factor inception is 1974. Data shown as of May 30, 2014.





# Global Market, M1 and M2 with Momentum

## Global Returns

(since common factor inception)

1991-9/2013	Global Market	Global M1	Global M2 w/ Mom.
Factor Exposure (beta)			
Global Market	1.00	1.00	1.00
Global Size		0.14	0.22
Global Value		0.16	0.24
Global Momentum			0.06
Performance			
Compound Return	8.0%	9.0%	10.0%
Risk (Std. Dev.)	15.1%	15.0%	14.8%
Sharpe Ratio	0.59	0.65	0.72

Source: Ken French Data Library.

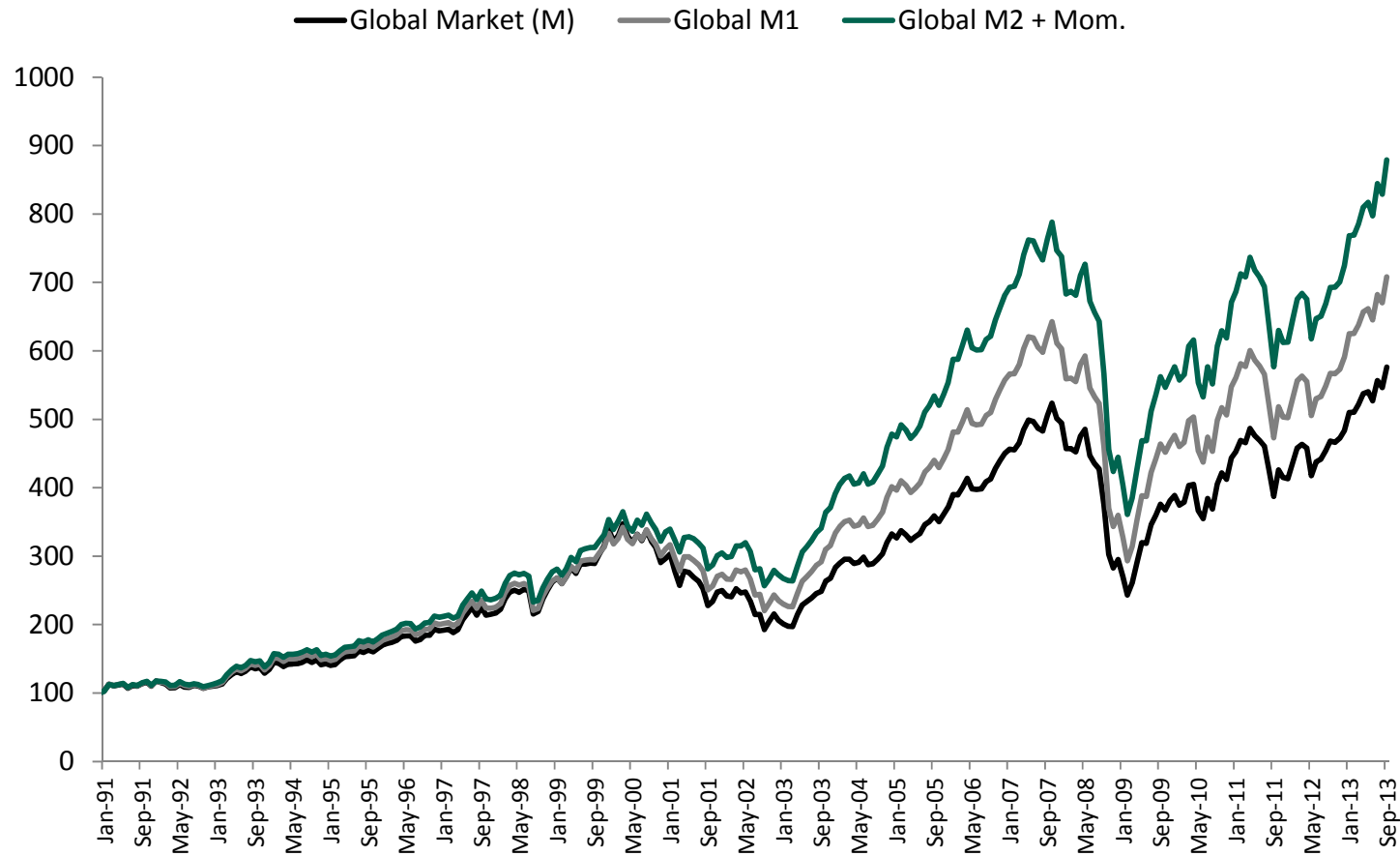
Returns are simulated from historical global data from 1991 to September 2013 and do not include expenses or transaction costs. Sharpe ratio calculated as annualized arithmetic mean return divided by annualized standard deviation.





# Global Market, M1 and M2 with Momentum

## Global Equity Returns (since common factor inception)



Source: Ken French Data Library.

Returns are simulated from historical global data from 1991 to September 2013 and do not include expenses or transaction costs.

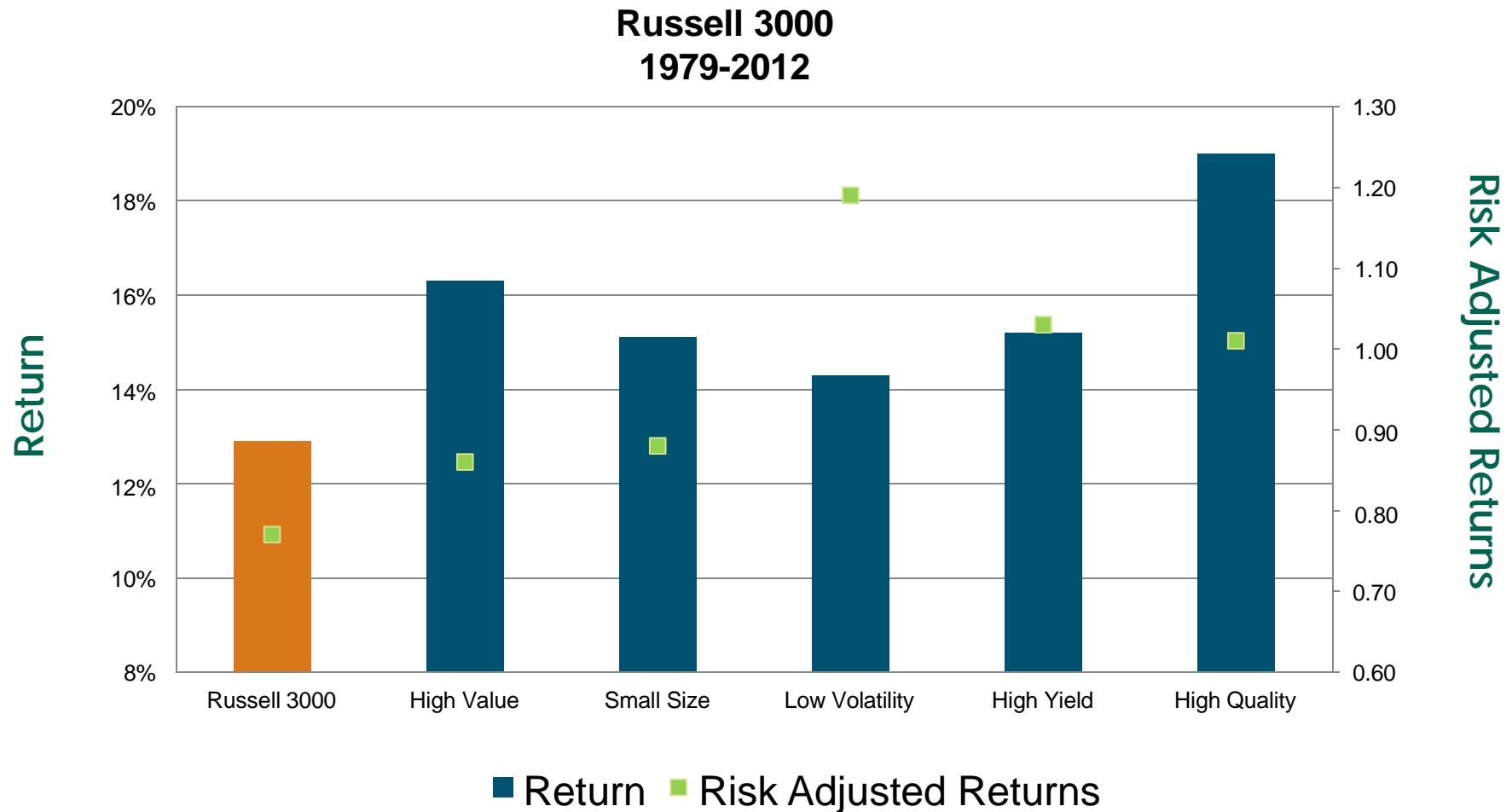
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# Historical Performance of Factor Tilts

Style factors have generated greater absolute and risk-adjusted returns relative to standard indexes over the long-term.

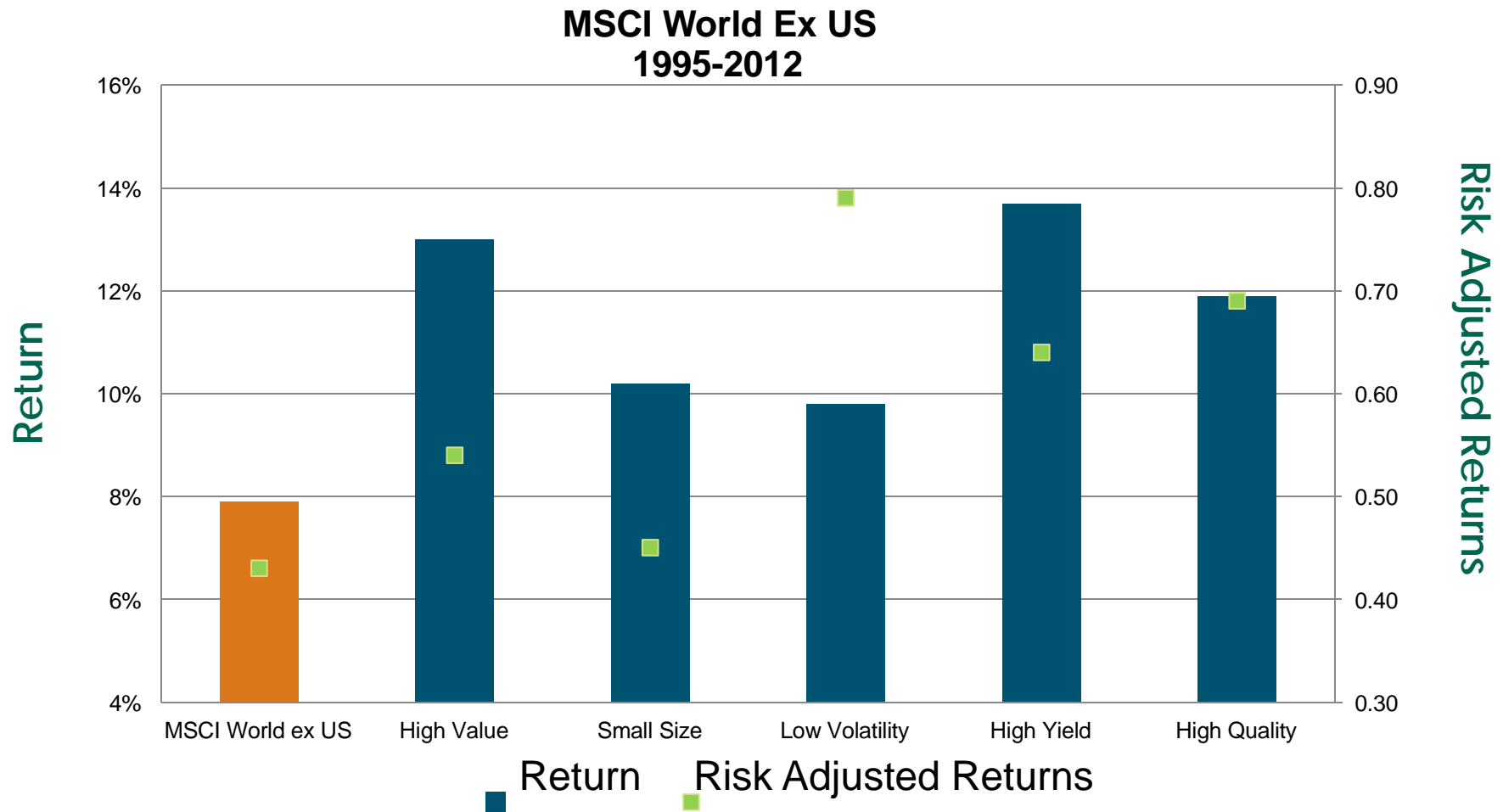


Source: Northern Trust Quantitative Research



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Source: Northern Trust Quantitative Research

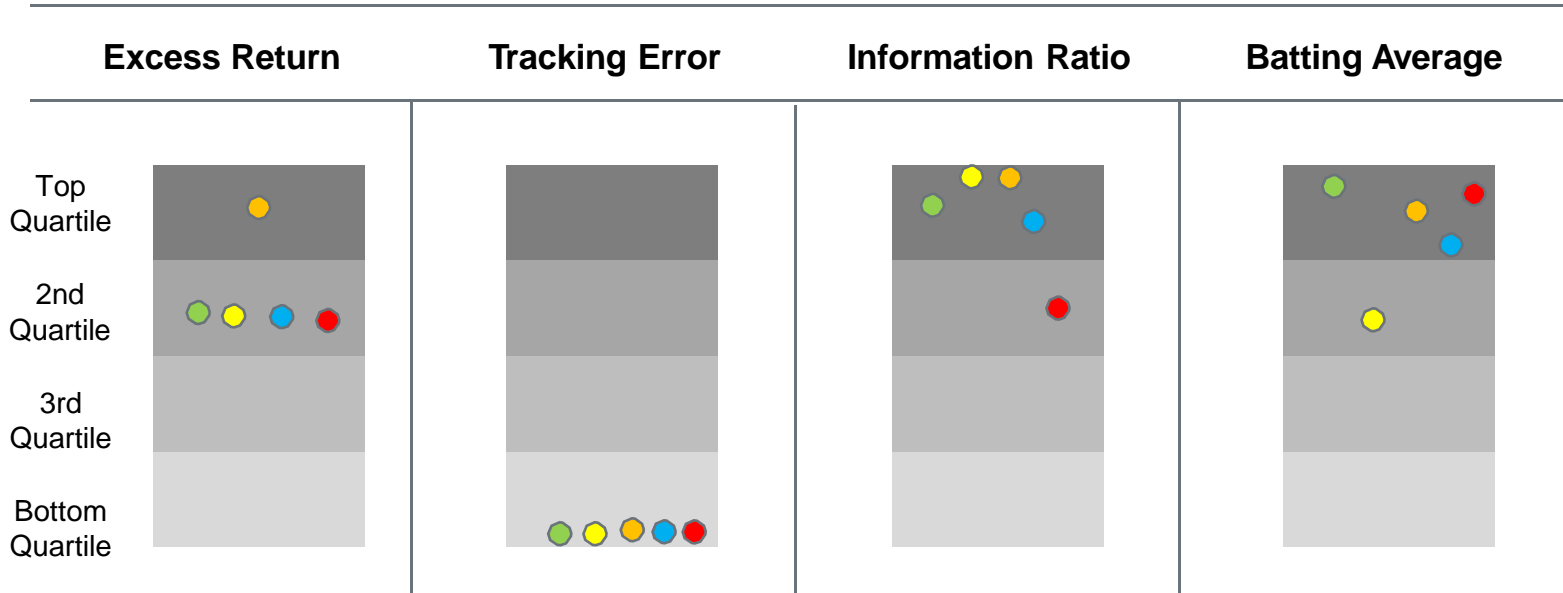




# Performance and Metrics Comparisons

Established Engineered Equity strategies have delivered consistent strong performance.

Time Period: 3/31/2011 to 03/31/2014



Strategy	
Small Cap Value	●
Small Cap Core	●
U.S. Large Cap	●
EAFE	●
Quality Dividend Focus	●

Source: eVestment Analytics

Annualized for periods greater than one year. Performance is gross of fees and does not reflect the deduction of investment advisory fees. Past performance is not indicative of future results. Quality Dividend Focus performance reflects the QDF Russell 3000 Core composite.