

P&I | CONFERENCES

# Active, Alpha & the Next Frontier

Strategies for Generating Alpha Across Asset Classes

BREAKFAST BRIEFING | CHICAGO: MARCH 27 | NEW YORK: MARCH 29

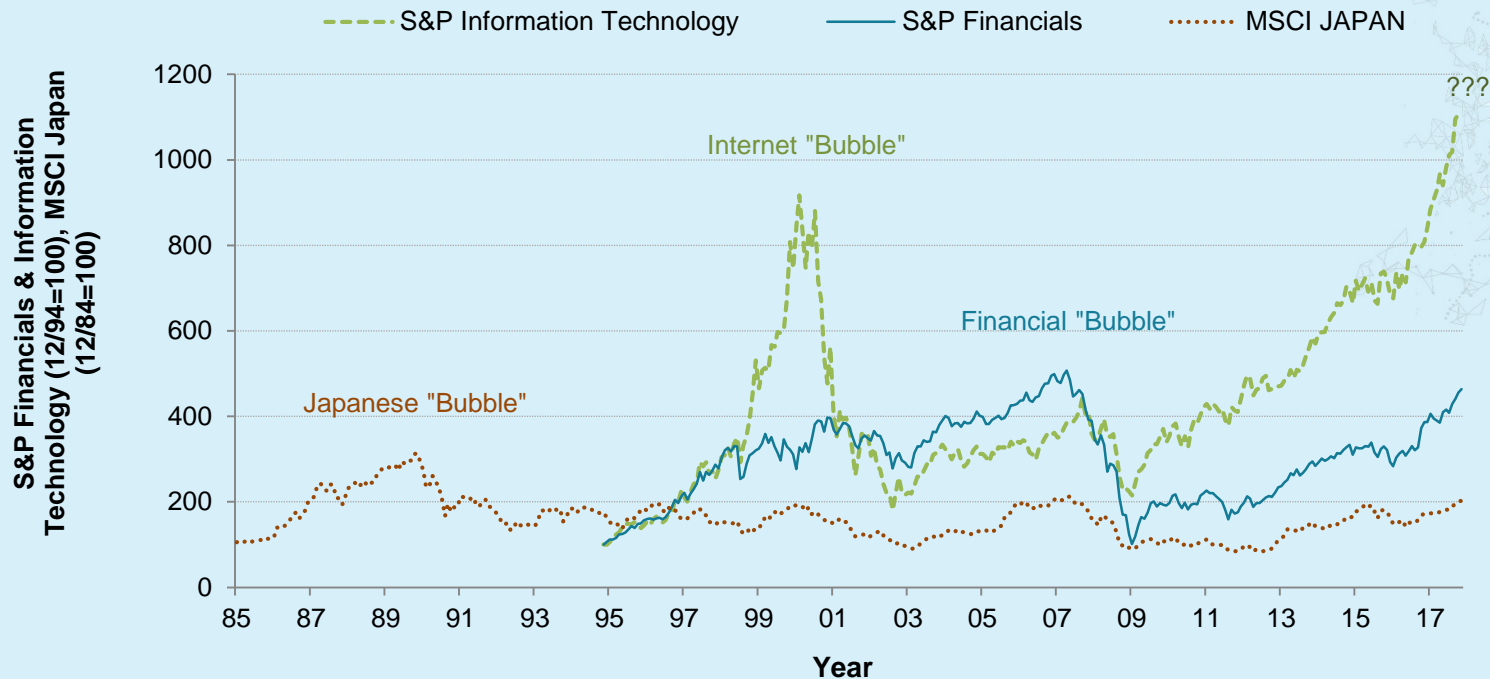
## Quantitative Investing – Integrating the Human Perspective

Speaker:

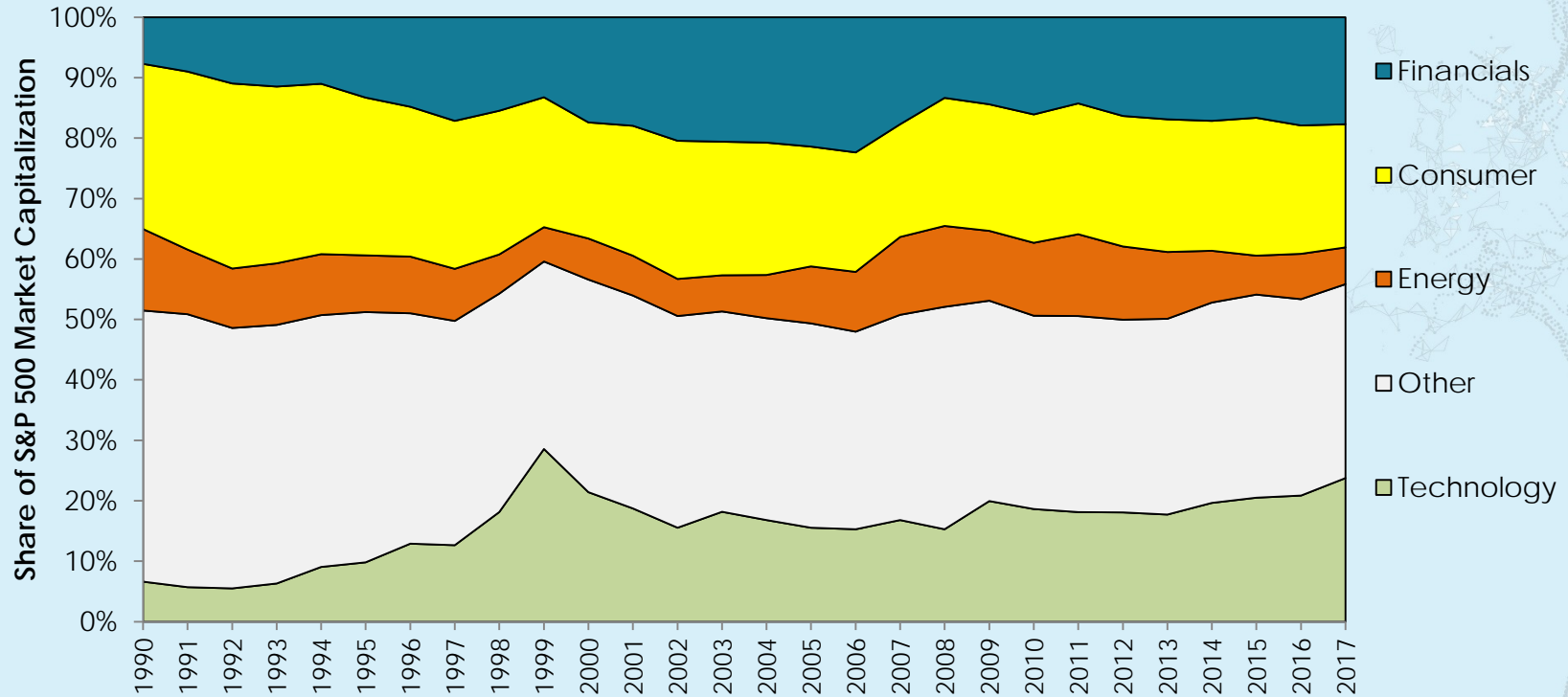
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# Market Indexes can be Subject to “Irrational Exuberance”



# Index Sector Weightings Are Volatile



# Index Funds Favor Stocks with the Largest Market Capitalizations

December 1980		December 1999		December 2006		December 2016	
1. IBM	Technology	1. Microsoft	Technology	1. Exxon Mobil	Energy	1. Apple	Technology
2. AT&T	Communication	2. GE	Capital Goods	2. GE	Capital Goods	2. Microsoft	Technology
3. Exxon	Energy	3. Cisco	Technology	3. Citigroup	Financials	3. Google	Technology
4. Amoco	Energy	4. Wal-Mart	Cons. Cyclical	4. Microsoft	Technology	4. Exxon Mobil	Energy
5. Schlumberger	Energy	5. Intel	Technology	5. B of A	Financials	5. J&J	Health Care
6. Shell Oil	Energy	6. AT&T	Communication	6. P&G	Staples	6. Berkshire H.	Financials
7. Mobil	Energy	7. Lucent	Technology	7. J&J	Health Care	7. JPMorgan	Financials
8. Chevron	Energy	8. IBM	Technology	8. Pfizer	Health Care	8. Amazon	Cons. Disc.
9. ARCO	Energy	9. Exxon Mobil	Energy	9. AIG	Financials	9. GE	Capital Goods
10. GE	Capital Goods	10. AOL	Technology	10. Altria	Staples	10. FB	Technology

Source: FactSet (Based on year end weights)

This represents past performance which is not indicative of future results. Securities mentioned are for informational purposes only and do not represent a recommendation or an offer to buy, hold or sell any securities, or all of the securities held in client portfolios. These specific time frames are used to illustrate discrete periods in time where there has been "irrational market behavior".

# Top Five Companies in the Russell 1000 Growth Index

In December 2017, the five largest companies represented over 23% of Russell 1000 Growth Index. Historically, when the largest companies exceeded 20% weight in the index, they underperformed.

5 Largest Cos. in Russell 1000 Growth Index



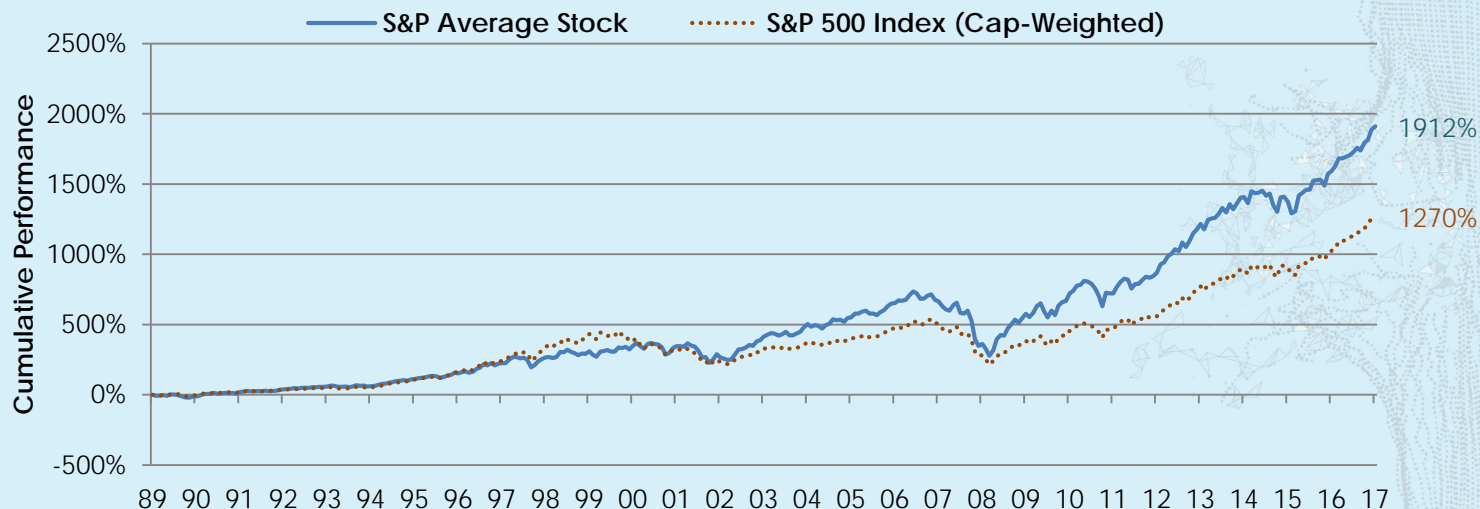
Relative Performance to Russell 1000 Growth Index

Top Five Weight	Post One-Year Return		Post Three-Year Return	
	Average	Negative Frequency	Average	Negative Frequency
>20%	-5.6%	72.9%	-12.8%	78.6%
15% to 20%	2.5%	43.7%	2.3%	52.6%
<15%	2.7%	32.1%	9.1%	15.4%
<b>All Periods</b>	<b>0.4%</b>	<b>48.8%</b>	<b>-0.2%</b>	<b>52.1%</b>

# Average Stock vs. Cap-Weighted Index

**S&P 500 –  
Average Stock  
versus  
Cap-Weighted Index**

**December 31, 1989  
Through  
December 31, 2017**

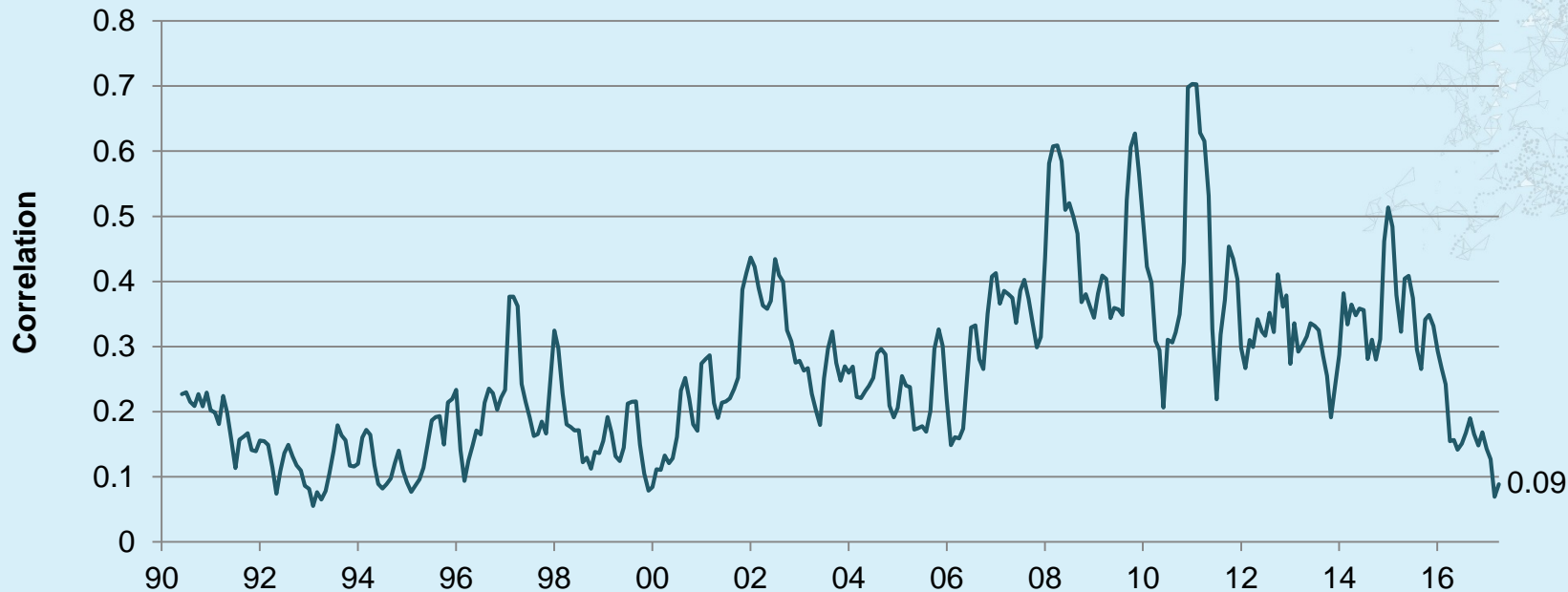


## Historical 12-Month Returns

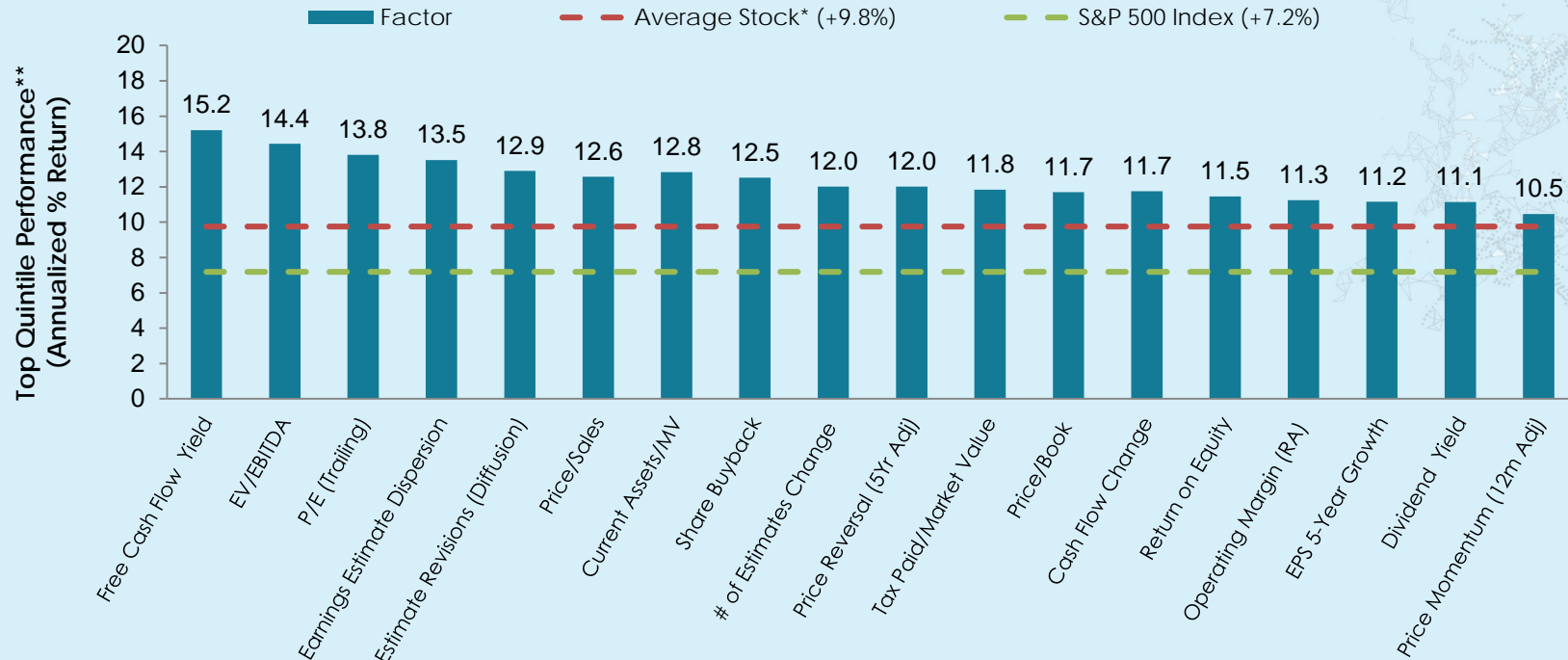
	S&P Average Stock	S&P 500 Index	Spread
Average Annualized Return	11.3%	9.8%	1.5%
Standard Deviation	15.9%	14.2%	1.7%
Avg Return/St Dev	0.71	0.69	0.02
Negative Return Frequency	16.9%	17.2%	-0.3%
Average Negative Return	-13.5%	-16.7%	3.2%
Upside Capture	109.4%	100.0%	9.4%
Downside Capture	103.9%	100.0%	3.9%

# Excessive Indexing Can Lead to Inefficient Stock Prices

S&P 500 - Average Intraday Correlation, Rolling 3-Month Returns (Daily)



# Intuitive, Fundamentally-Based Factors Have Outperformed



Sources: Glenmede Investment Research, MATLAB and FactSet

\*Average Stock and top quintile factor returns based on constituents of Russell 1000 Index, rebalanced monthly

\*\*Top quintile performances for each factor are based on the average return of stocks ranked by Glenmede Investment Management Quantitative team of each sector. This represents past performance which is not indicative of future results.



# Multi-Factor Model Outperforms Average Stock in Most Years

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Highest	Momentum 27.5%	Momentum 67.4%	P/E 25.8%	P/E 30.5%	Multifactor -1.4%	P/E 50.7%	P/E 29.6%	Multifactor 22.5%	P/E 16.2%	EPS Est 24.5%
	Russell 1000 27.0%	EPS Est 46.2%	Multifactor 11.1%	ROE 3.7%	ROE -7.7%	EPS Est 48.5%	Multifactor 24.2%	EPS Est 21.2%	EPS Est 15.7%	Multifactor 15.2%
	Multifactor 20.9%	ROE 23.0%	ROE 9.9%	Avg Stock 0.6%	Momentum -8.9%	Avg Stock 43.9%	ROE 22.6%	Momentum 18.3%	Russell 1000 15.5%	Momentum 14.4%
	ROE 17.7%	Multifactor 21.4%	Avg Stock 1.4%	Multifactor -0.8%	P/E -10.9%	Momentum 40.5%	EPS Est 20.4%	ROE 14.9%	Avg Stock 15.1%	ROE 13.5%
	EPS Est 15.0%	Russell 1000 20.9%	EPS Est -7.0%	Momentum -11.5%	EPS Est -19.3%	Multifactor 39.9%	Avg Stock 18.5%	P/E 14.7%	ROE 14.1%	Russell 1000 5.8%
	Avg Stock 9.4%	Avg Stock 20.1%	Russell 1000 -7.8%	Russell 1000 -12.4%	Avg Stock -20.3%	ROE 36.1%	Momentum 16.2%	Avg Stock 9.8%	Multifactor 12.8%	Avg Stock 2.7%
Lowest	P/E 0.6%	P/E 3.2%	Momentum -13.0%	EPS Est -19.7%	Russell 1000 -21.7%	Russell 1000 29.9%	Russell 1000 11.4%	Russell 1000 6.3%	Momentum 6.7%	P/E -5.0%

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	1998-2017
Highest	Russell 1000 -37.6%	P/E 78.7%	EPS Est 29.3%	Russell 1000 1.5%	P/E 21.5%	P/E 50.6%	Russell 1000 13.2%	Multifactor 2.0%	P/E 20.2%	ROE 25.0%	Multifactor 12.3%
	Avg Stock -41.7%	Avg Stock 55.9%	Momentum 27.6%	ROE -0.1%	Momentum 19.4%	Multifactor 45.0%	ROE 11.5%	Russell 1000 0.9%	Avg Stock 16.1%	Multifactor 24.8%	P/E 12.2%
	ROE -43.9%	ROE 51.1%	Multifactor 26.1%	Multifactor -0.9%	ROE 19.1%	Momentum 43.3%	Multifactor 11.3%	Momentum 0.7%	ROE 12.1%	Russell 1000 21.7%	ROE 12.1%
	EPS Est -45.3%	EPS Est 42.1%	Avg Stock 24.9%	EPS Est -1.2%	EPS Est 18.9%	ROE 40.7%	Avg Stock 11.1%	EPS Est -1.4%	Russell 1000 12.1%	Momentum 21.1%	EPS Est 10.6%
	Multifactor -45.4%	Russell 1000 28.4%	P/E 21.3%	Avg Stock -1.9%	Multifactor 18.9%	EPS Est 38.6%	EPS Est 11.0%	ROE -2.8%	EPS Est 10.0%	EPS Est 20.8%	Momentum 9.9%
	Momentum -45.8%	Multifactor 27.2%	ROE 21.0%	Momentum -3.5%	Avg Stock 18.2%	Avg Stock 36.9%	P/E 10.6%	Avg Stock -3.7%	Multifactor 7.8%	Avg Stock 19.0%	Avg Stock 9.6%
Lowest	P/E -50.8%	Momentum 17.5%	Russell 1000 16.1%	P/E -6.5%	Russell 1000 16.4%	Russell 1000 33.1%	Momentum 6.8%	P/E -6.0%	Momentum 6.2%	P/E 17.1%	Russell 1000 7.4%

Top Quintile returns are based on equally-weighted total returns of most attractively ranked stocks (top 20%) for each factor every year.

# Summary

- Irrational market behavior poses risks for investors
- Active management that combines quantitative discipline with fundamental insights may efficiently improve risk return
- Portfolio manager has the opportunity to prudently construct a portfolio as opposed to holding securities due to their inclusion or weighting in an index