



M.J. Murdock  
Charitable Trust

# Finance and Investment Oversight

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M.J. Murdock Charitable Trust

December, 2015

# Oversight of Finances

- Primary Portion of Fiduciary Responsibility
- Understand Key Drivers of the Finances (Revenue and Expenses)
- Board Level Focused on How Annual Budget Fits with Long-Term Strategic Plan
- Focus on Major Line Items (don't count paper clips)
- Investments included in the Budget
- Budget versus Actual (look at major variances)



# How Boards and Staff Work Together

## Board

- Ensures performance of mission and alignment of interests
- Provides adequate resources
- Exercise financial stewardship

## Staff

- Ensures multi-year planning
- Adapts to changing needs of community
- Executes strategic plan
- Sets budget
- CEO manages up to Board and down to staff





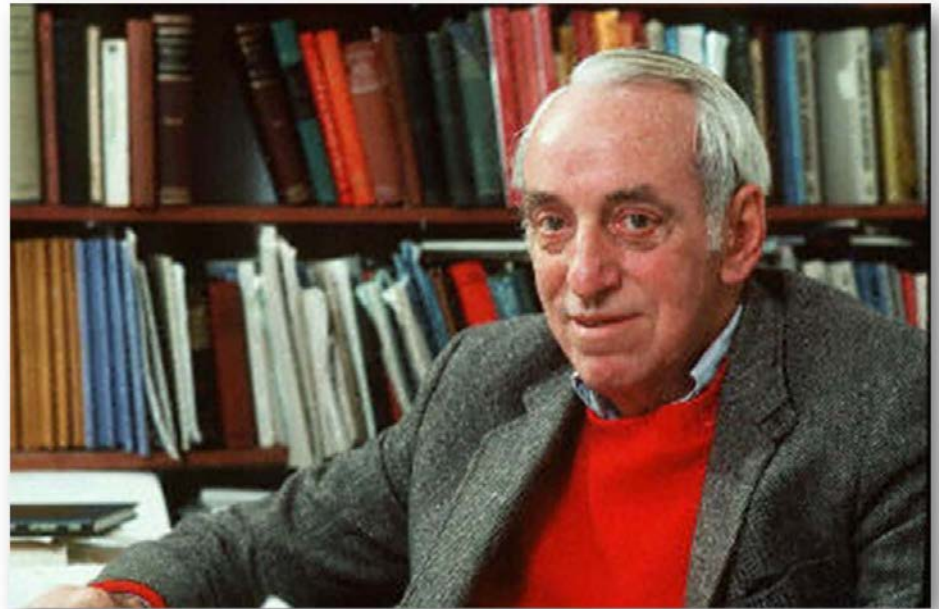
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# Investment Oversight

# Intergenerational Equity

“The trustees of an endowed institution are the guardians of the future against the claims of the present. Their task is to preserve equity among generations.”

James Tobin  
Yale University 1974



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# Informed Decision Making

Policy Drivers | A Framework

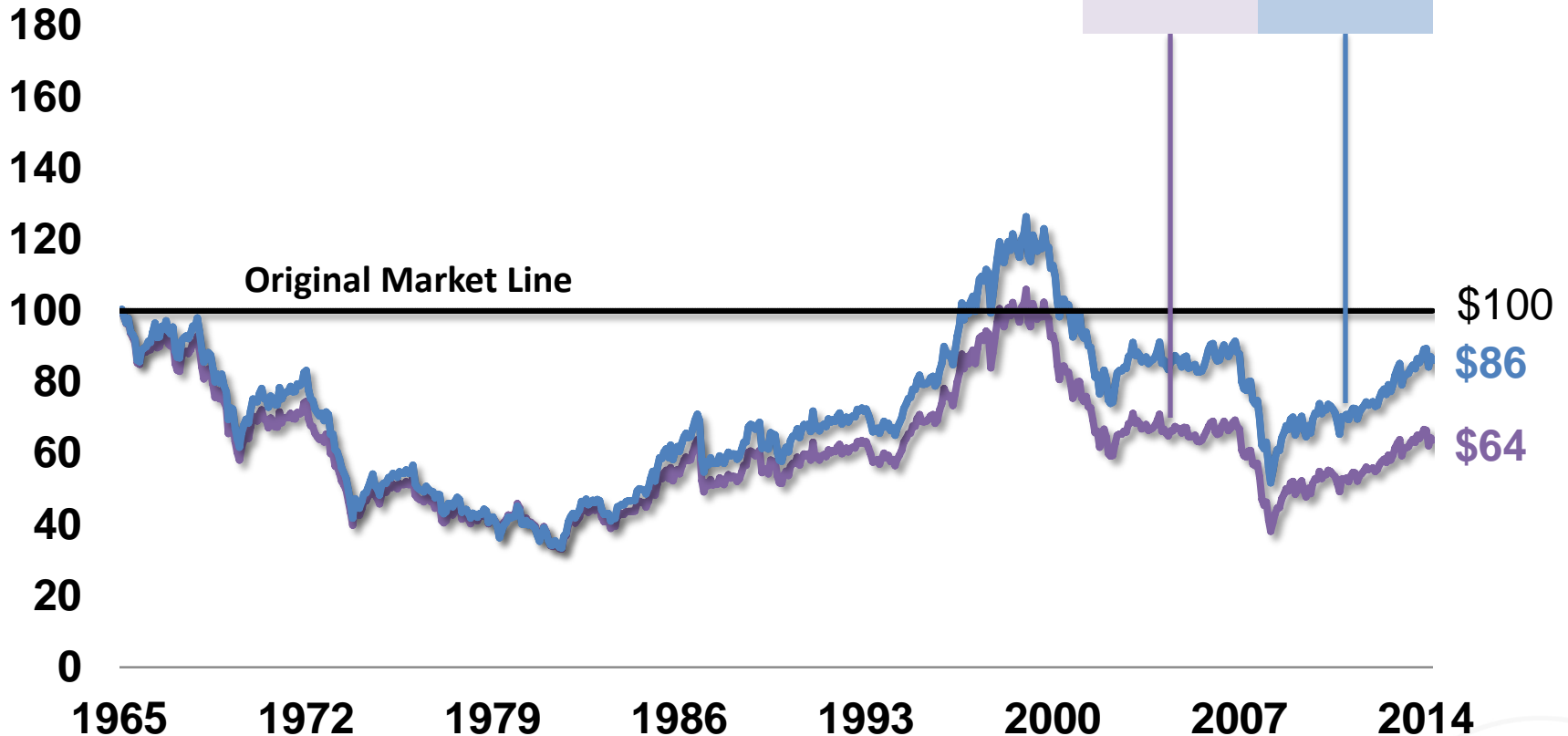
Four Levers ↓	Intergenerational Equity	Median Spend	Volatility of Spending
Asset Allocation	↑	↑	↓
Contributions	↑	↑	↓
Spending Rate	↑	↓	■
Spending Method	■	■	↓



# Only Real Returns Matter

70% S&P 500, 30% Barclays U.S. Aggregate and 5.00% Spend (Hypothetical Portfolio)  
January 1966 – March 2015

Cumulative Value (Real Dollars)



• Cumulative Inflation-Adjusted Performance  
• Source: Ibbotson, Bloomberg, Commonfund Institute  
• The equity portion of the hypothetical portfolio is based on monthly returns of the S&P 500 Index (12/65-current quarter end), and the fixed income portion is based on monthly returns of the Barclays U.S. Aggregate Index (01/73-current quarter end) and the Ibbotson Associates Long Term Corporate Bond Index (12/65-12/72). HEPI data from 07/06 to current quarter end is estimated using the Commonfund Institute method based on regression analysis. Returns for this hypothetical portfolio assume that it is rebalanced to 70/30 annually on 1/1/yy and 5% is distributed annually on 1/1/yy.



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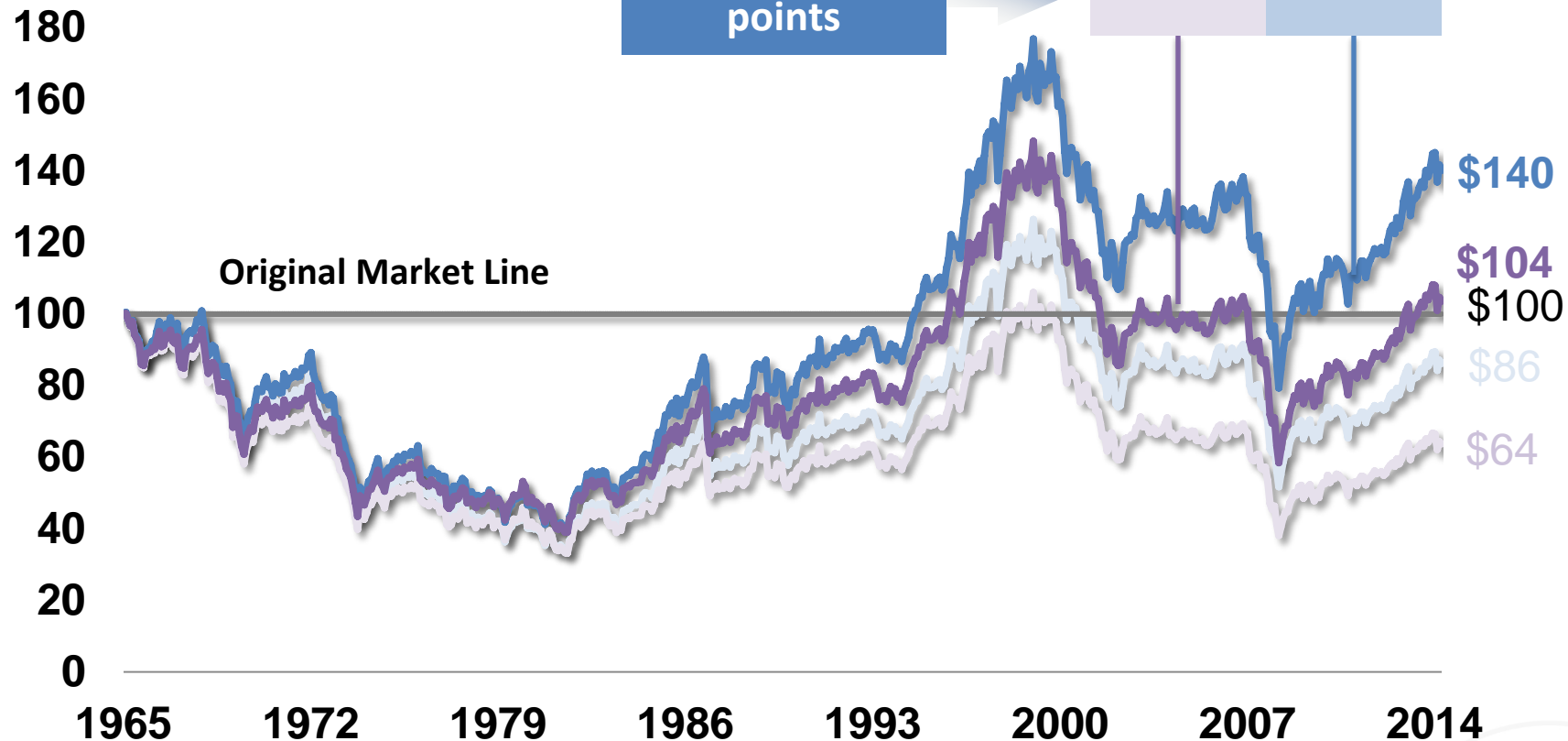
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# Only Real Returns Matter | The Quest for Alpha

70% S&P 500, 30% Barclays U.S. Aggregate and 5.00% Spend (Hypothetical Portfolio)  
January 1966 – March 2015

Cumulative Value (Real Dollars)



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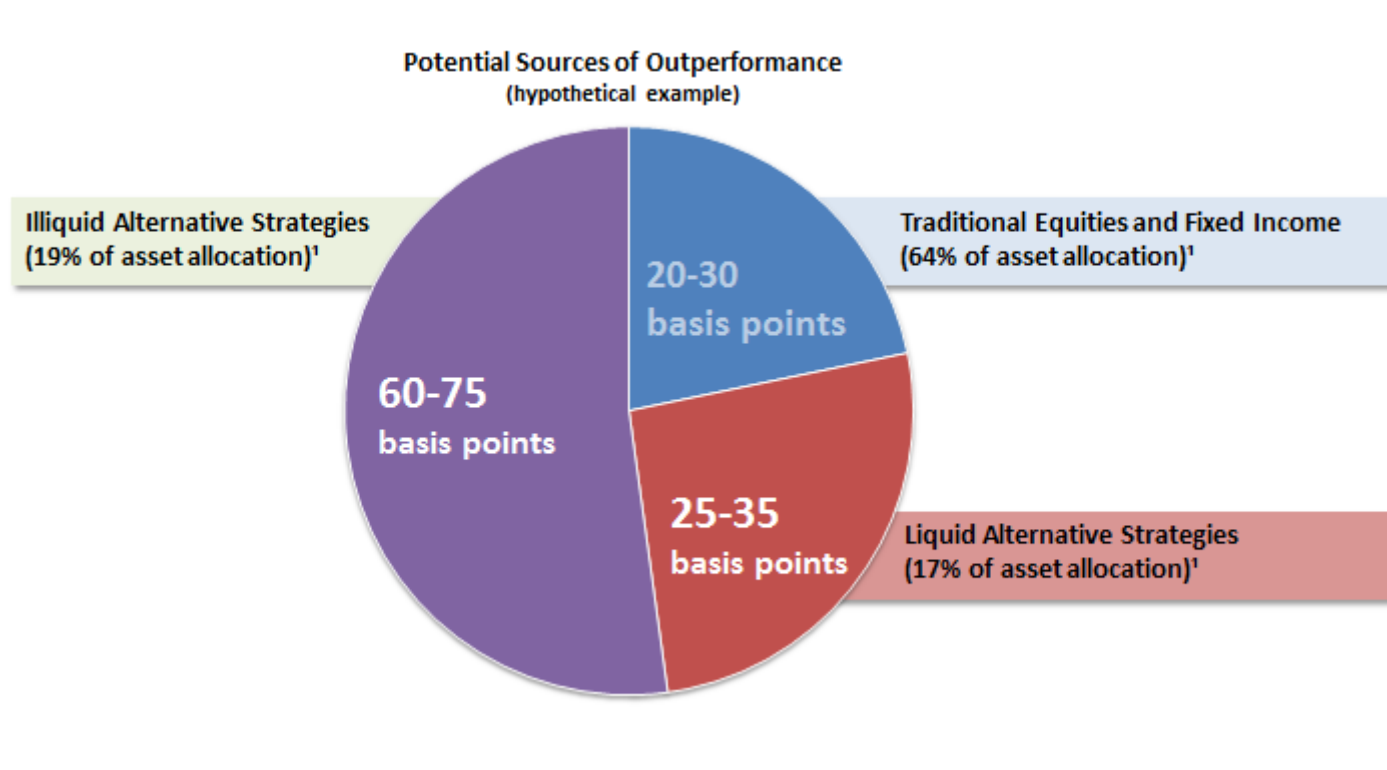
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# Can you achieve 100 Basis Points of Portfolio Outperformance over Traditional Indices?



<sup>1</sup>Asset allocations based on 2012 NACUBO-Commonfund Study of Endowments (\$100-500 million cohort)

# Strategic Issues to Be Addressed

- Return Objective
- Active versus Passive Investment Philosophy
- Level of Risk Tolerance
- How to Define Risk
- Allocation to Illiquids
- Execution Methodology
- Allocation to Alternatives (Hedge Funds)
- Social Investing Policies
- Spending Rate
- Oversight and Accountability
- Spending Method

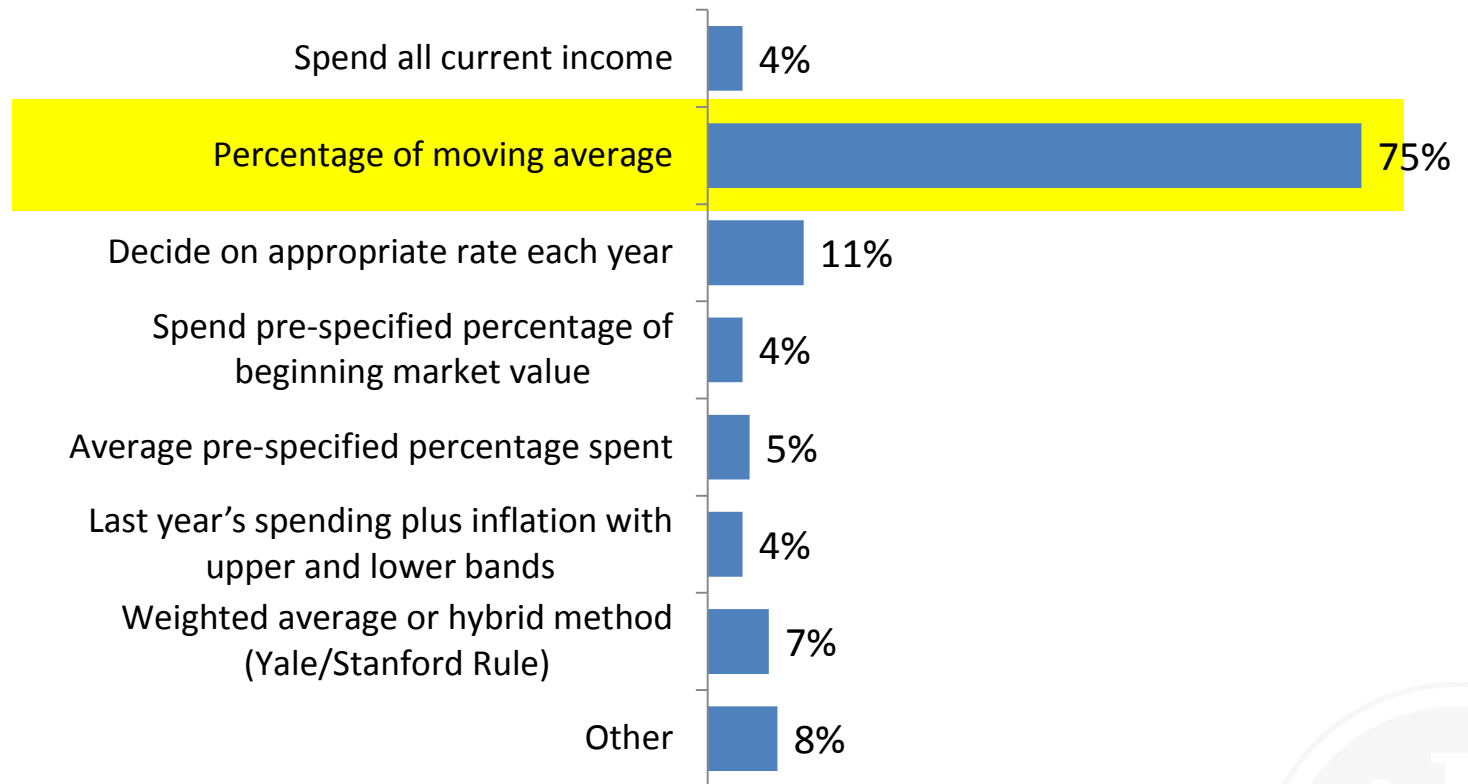


# Spending Methods Used

Fiscal Year Ending June 30, 2012

## Total Institutions

Percent (%)



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- Note: Multiple responses allowed
- Source: NCSE 2012
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# Beware of Agency Risks

- One of the Most Important Jobs of Investment Committee
- Almost all of your agents have different objectives than you Institution
- Beware of these differences they lead to:
  - Narrow Bucket-ism
  - Short term-ism (is running rampant)
  - Indexation
  - Over diversification
  - Too liquid
- Develop Strategy for Value Add and Stick to it  
(This is not easy because you will underperform sometimes)
- Stay away from looking at Short-term returns

# Current View of Social| Framework

- Defining the Elements | Executing the Unique Mission of Each Institution

	<b>Thematic Investments</b>	<b>Program-Related and Impact Investing</b>	<b>Socially Responsible Investing (SRI)</b>	<b>Environmental, Social and Governance (ESG) Integration</b>
<b>Intentions</b>	<ul style="list-style-type: none"> <li>• Focus on themes and sectors targeting specific market opportunities or trends</li> </ul>	<ul style="list-style-type: none"> <li>• Invest in vehicles designed to generate positive social or environmental changes</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid investments in potentially “objectionable” companies and/or industries</li> </ul>	<ul style="list-style-type: none"> <li>• Align portfolio with ESG factors that add value or are consistent with mission</li> </ul>
<b>Actions</b>	<ul style="list-style-type: none"> <li>• Identify and overweight in portfolio</li> <li>• Trading Strategies</li> <li>• Hedging Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Identify private equity and debt vehicles aligned with mission</li> </ul>	<ul style="list-style-type: none"> <li>• Screen and exclude specific public equities and debt</li> </ul>	<ul style="list-style-type: none"> <li>• Score public equities on ESG criteria/factors</li> <li>• Identify managers that can build ESG portfolios</li> </ul>
<b>Investment Examples</b>	<ul style="list-style-type: none"> <li>• U.S. Industrial Renaissance</li> <li>• Nano Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Green Bonds</li> <li>• Direct Lending</li> <li>• Minority Managers</li> <li>• Empowering women</li> </ul>	<ul style="list-style-type: none"> <li>• Tobacco</li> <li>• Firearms</li> <li>• Carbon-free Fund</li> </ul>	<ul style="list-style-type: none"> <li>• Quant funds aligned with various E,S or G factors</li> <li>• Stranded Assets Swap</li> <li>• Clean Tech</li> </ul>



# ESG and Performance: Why Focus On E ?

• TABLE – Based on 1st and 5th quintiles

• Source: Style Research. Past performance does not assure future results.

• Performance of ESG Portfolios | 5 Years to End July 2013

		The “Good”	The “Bad”
U.S.	E	117	93
	S	89	106
	G	94	116
United Kingdom	E	117	111
	S	118	102
	G	103	108
Japan	E	103	98
	S	102	91
	G	95	109
Eurozone	E	107	93
	S	99	105
	G	110	105

		The “Good”	The “Bad”
World	E	110	96
	S	96	104
	G	98	109
World Developed	E	111	96
	S	95	103
	G	99	111
Emerging Markets	E	103	95
	S	96	112
	G	95	104
Asia Pacific ex-Japan	E	99	96
	S	92	106
	G	94	101



# Commonfund Survey of College and Universities Responsible Investing

## ADOPTERS

## NON- ADOPTERS

Numbers in Percent	Total Institutions	Total	Private	Public	Total	Private	Public
Responding Institutions	191	52	41	11	139	77	62
Socially Responsible SRI	21	77	85	45	0	0	0
ESG	8	31	29	36	0	0	0
Impact Investing	3	10	7	18	0	0	0
Divestment of Fossil Fuels	2	6	5	9	0	0	0
None of the Above	69	2	0	9	94	92	97
Don't Know	3	0	0	0	4	5	3

Source: Commonfund Study of Responsible Investing ---April 2015

# Thoughts on Socially Responsible Investing

- Portfolio Theory States there has to be a risk/return give to a restricted universe
- Fiduciary Challenges
  - **Previous and current Donors**
  - **Additional Cost of Administration**
  - **Very difficult to achieve**
- Seldom Satisfies Constituent Base
- ESG is new SRI Pro Fiduciary
- Limited Divestment (Coal, Oil Sands)
- Alternative Donor Fund







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# ACTIVE VS. PASSIVE

# Statement of problem

## Solutions to Problems

- Don't forget your advantages
- Target macro inefficiency
- Avoid index inefficiencies
- Exploit passive investor biases
- Pursue truly, not seemingly, active investment



# Indexes are not Consistently Attractive

S&P 500 Performance Comparison to Institutional U.S. Large Cap Equity Funds  
Fiscal Year Ending June | Numbers in Percent (%)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Upper Quartile	9.29	24.6	6.1	34.3	17.0	-20.6	-6.5	22.9	12.1	11.8	23.3	3.5	-8.8	6.4	12.7	23.9
Median	7.93	21.8	3.9	31.4	14.1	-25.2	-10.5	20.9	10.0	8.9	20.3	0.8	-14.2	-6.3	8.7	20.9
Lower Quartile	6.03	19.8	0.6	28.9	11.7	-27.9	-13.7	18.5	8.4	6.5	18.2	-0.9	-17.4	-12.1	0.9	15.9
S&P 500 Index	8.34	20.6	5.4	30.7	14.4	-26.2	-13.1	20.6	8.6	6.3	19.1	0.3	-18.0	-14.8	7.2	22.8
Percentile Rank*	<b>44</b>	<b>67</b>	<b>34</b>	<b>57</b>	<b>47</b>	<b>60</b>	<b>70</b>	<b>57</b>	<b>71</b>	<b>76</b>	<b>66</b>	<b>57</b>	<b>78</b>	<b>90</b>	<b>56</b>	<b>39</b>



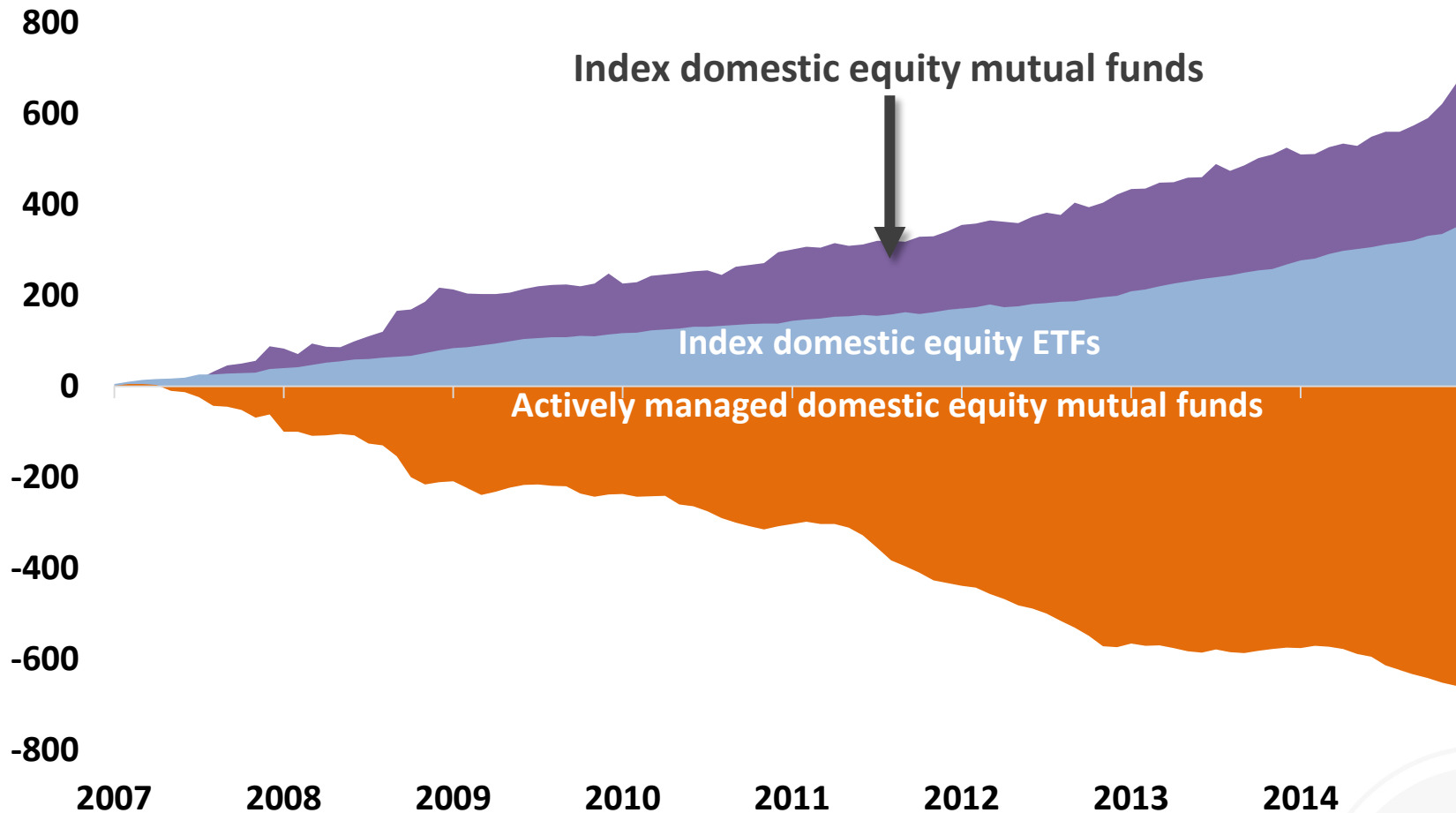
# Indexes are not Consistently Attractive

Returns | Active vs. Passive | Annualized Returns Ending June 2013  
**With** and **Without** Survivorship Bias


	1 YEAR		5 YEARS		10 YEARS		15 YEARS	
	With	W/Out	With	W/Out	With	W/Out	With	W/Out
Upper Quartile	24.6	24.6	8.6	10.6	9.0	11.4	7.2	9.9
Median	21.8	21.8	7.3	7.3	8.2	8.3	5.7	5.9
Lower Quartile	19.8	19.8	6.0	4.6	7.3	5.7	4.9	2.6
S&P 500 Index	20.6	20.6	7.0	7.0	7.3	7.3	4.2	4.2

# Current Trend in Active Strategies

Some of the Outflows from Domestic Equity Mutual Funds Have Gone to ETFs



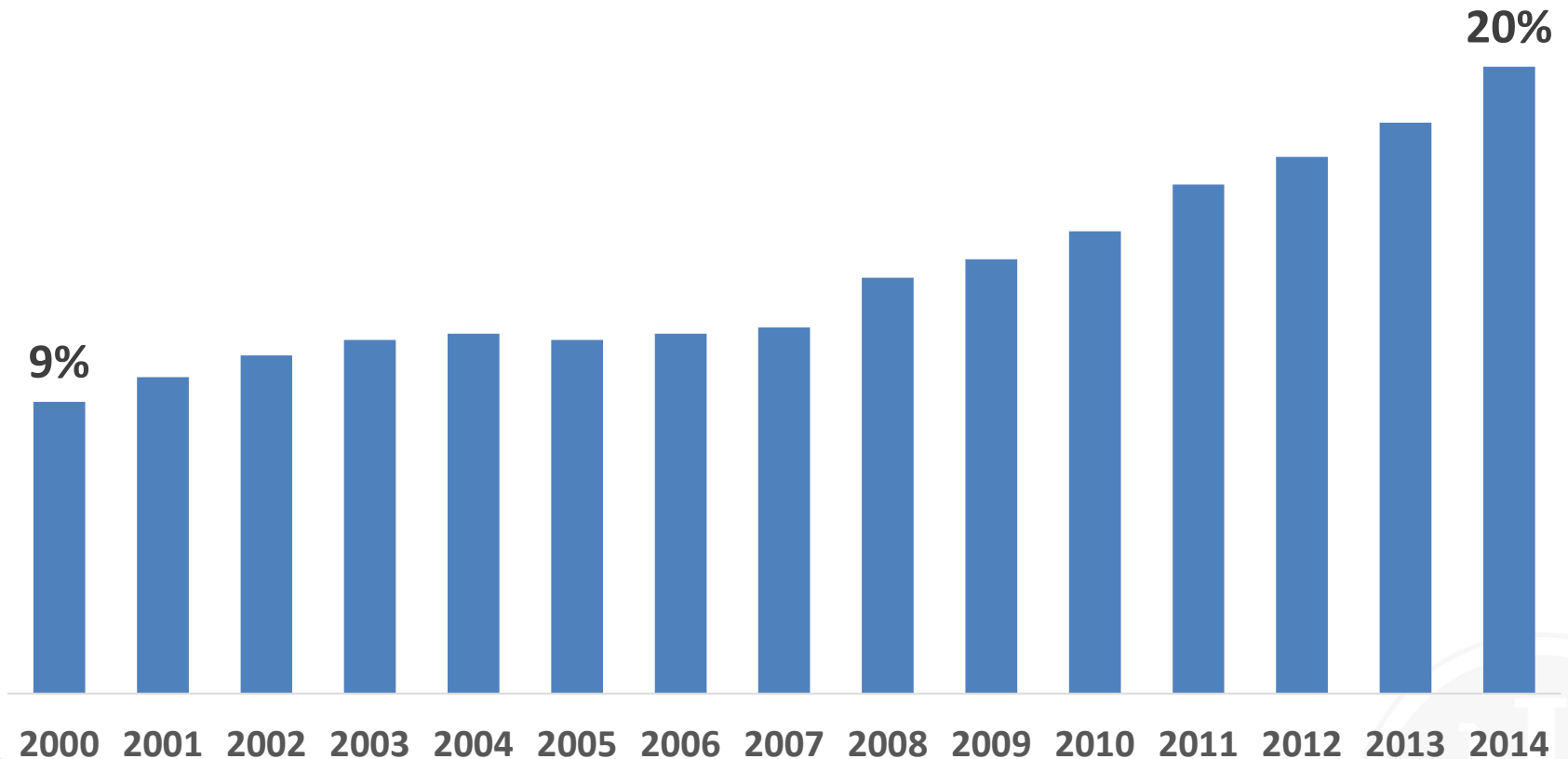
• Cumulative flows to and net share issuance of domestic equity mutual funds and index ETFs, billions of dollars; monthly, 2007–2014  
Note: Equity mutual fund flows include net new cash flow and reinvested dividends. Data exclude mutual funds that invest primarily in other mutual funds.  
Source: Investment Company Institute and Commonfund

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# Current Trend in Passive Strategies

Passive Strategies as a Percentage of Equity Mutual Fund Total Net Assets



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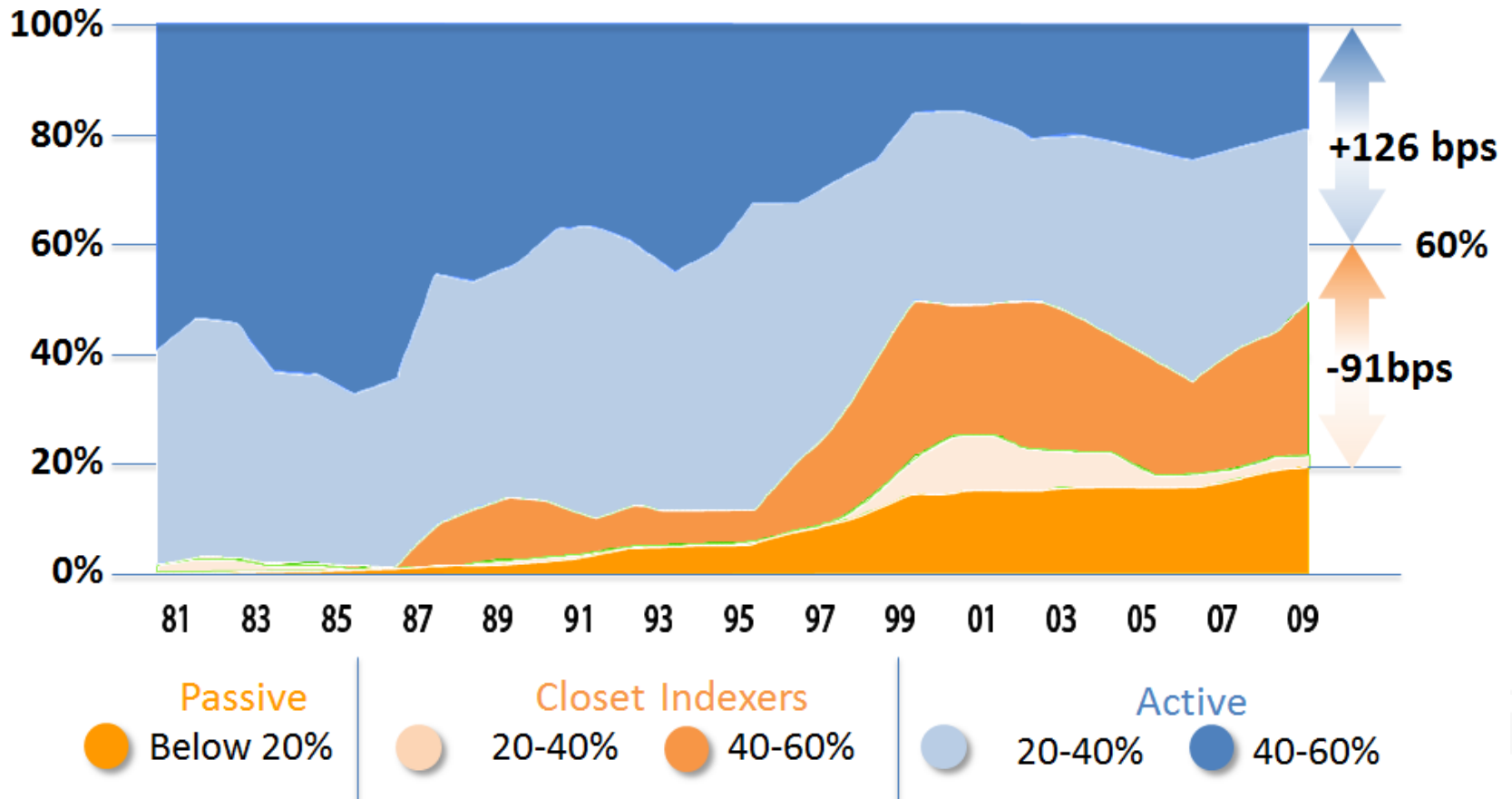
Source: Investment Company Institute and Commonfund

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# Trends in Closet Indexing

## 1980-2009 Share of Mutual Fund Assets



Source: Petajisto, Antti. "Active Share and Mutual Fund Performance."

# Why 73% of Endowments Actively Manage U.S. Equities

## Investment Pool Assets and Benchmark Returns

### 11 Year Annualized Performance

Annualized Return

8

7

6

5

4

0

5

10

15

20

Standard Deviation



# Two Proof Points – Real World Equity Returns

	1 Year	3 Year	5 Year	10 Year
Foundation A March 31, 2015				
Return	6.4%	12.2%	10.4%	7.2%
Benchmark	5.4%	11.0%	9.3%	6.6%
Foundation B December 31, 2014				
Return*	7.3%	20.7%	13.9%	9.5%
Benchmark	5.5%	16.1%	10.8%	6.6%
*Before Investment Management costs				



# Active vs. Passive

1.  
Avoid Closet  
Indexers

2.  
Must have long  
term view for  
active  
management to be  
effective.

3.  
Not all active  
managers are the  
same. Resources  
required.

4.  
Endowments are  
proof of positive  
relative  
performance.

5.  
Cost and fees  
matter.

6.  
Alpha needed for  
Intergenerational  
Equity.



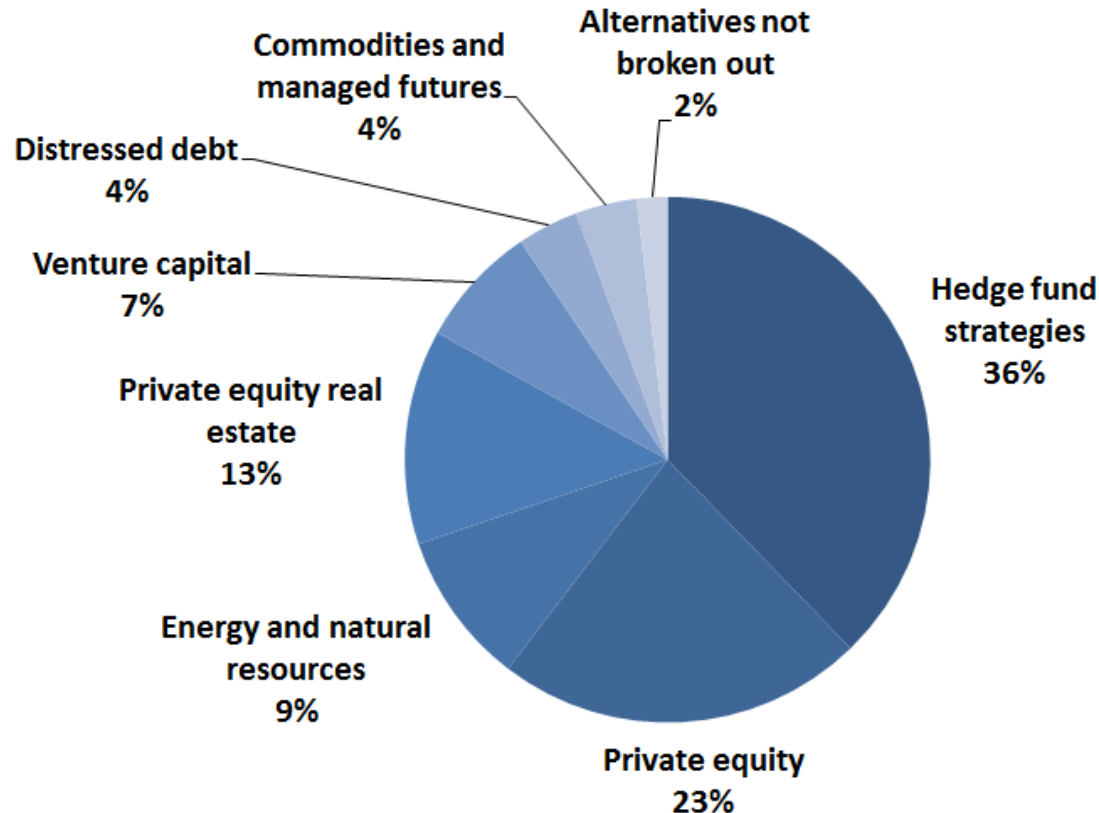


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# HEDGE STRATEGIES

# Alternatives by Strategy

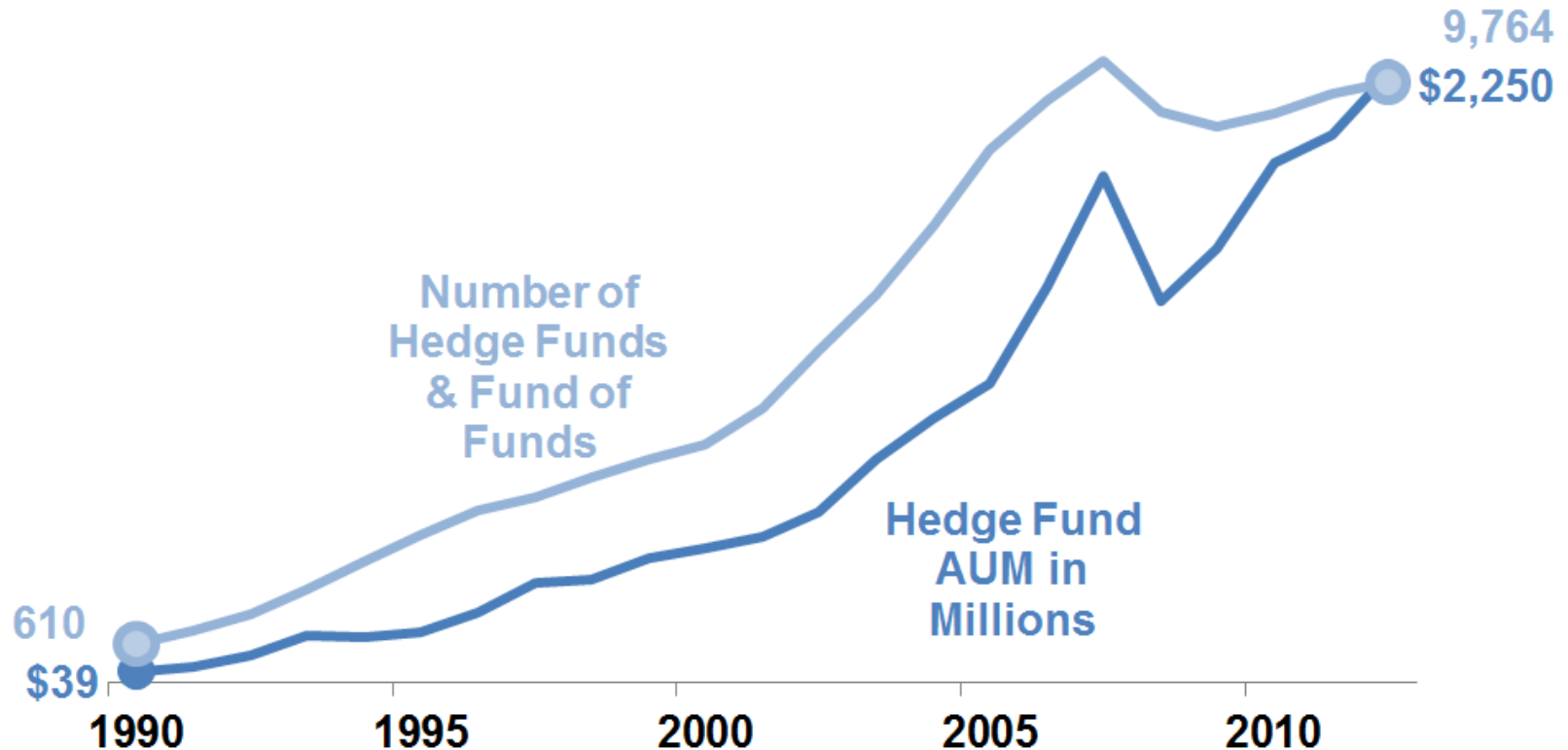
Steady Increase Alternatives Over 10-Years | 6/30/2013



Source: 2014 NACUBO-Commonfund Study of Endowments, values may not add to 100% due to rounding.

# Growth of Hedge Funds

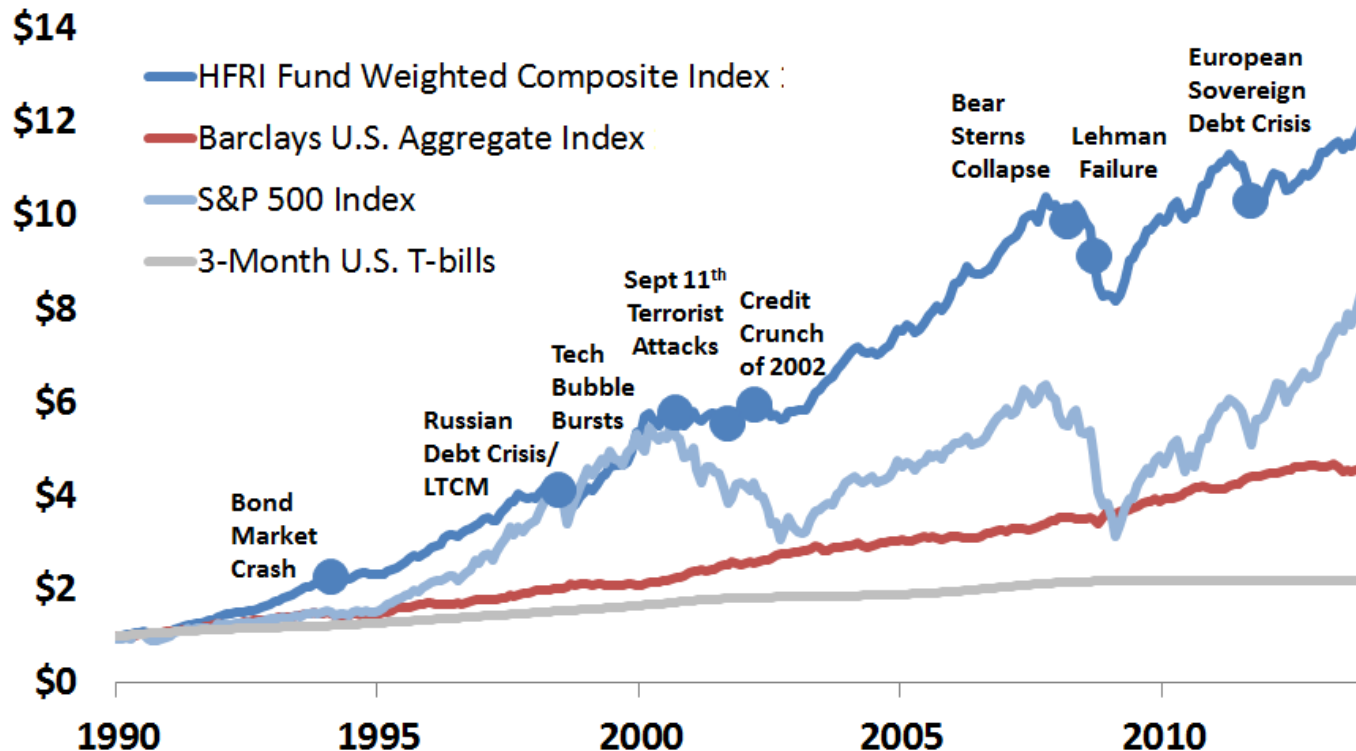
## AUM (1990-2013)



# The Case for Hedge Funds

## Jan 1990-Dec 2013

### Cumulative Growth of \$1



Source: HFRI, Bloomberg

# The Case for Hedge Funds

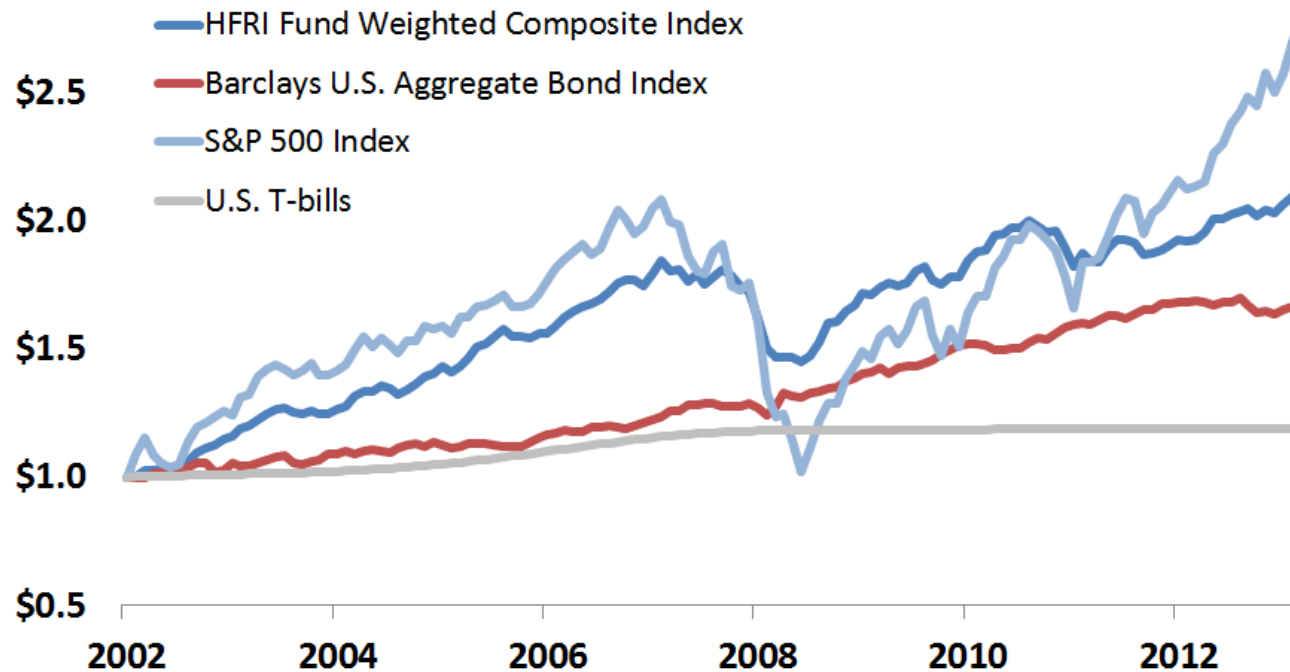
## Time Period Reset (Oct 2002-Dec 2013)

10-Year return ending June 30, 2012

	Return	Std Dev
Hedge funds used by colleges and universities (avg)*	5.48%	7.6%
S&P 500 Index	5.33%	16.7%

### Cumulative Growth of \$1

\$3.0



Last five years HFRI Fund of Fund 2.75%

S&P 500 13.95%

Source: HFRI, Bloomberg, \*2013 NCSE

- Appendix





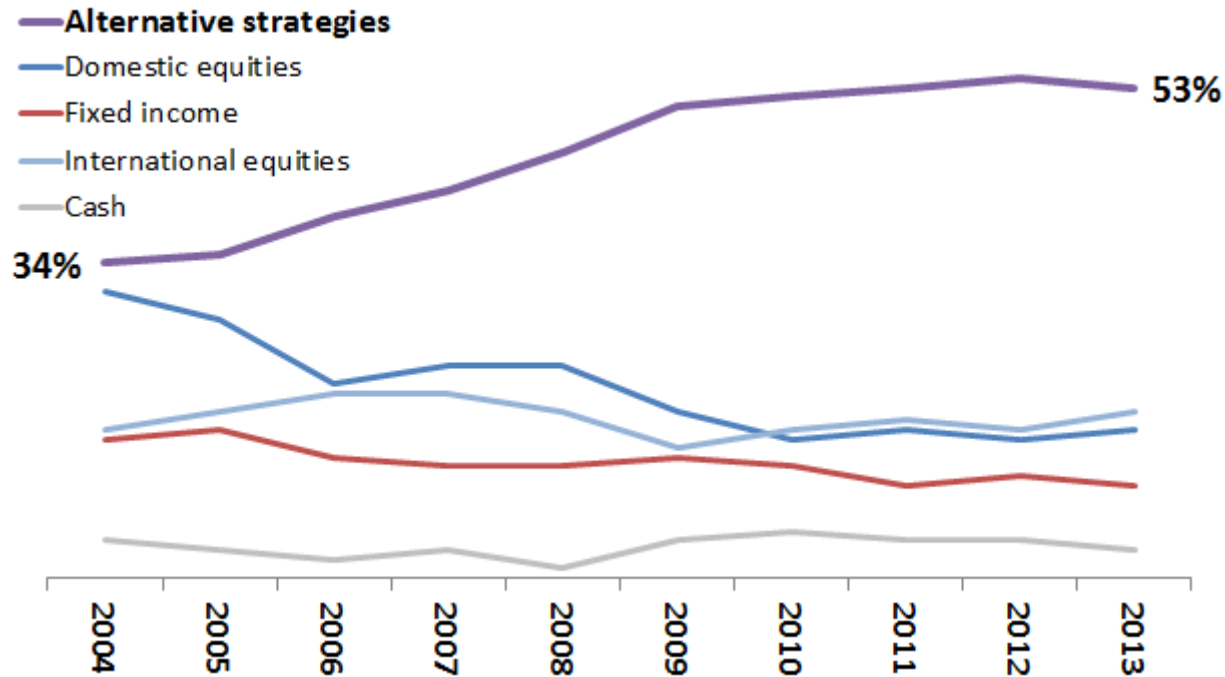


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# ALTERNATIVES

# Alternatives Allocation

Steady Increase of Alternatives Over 10-Years | 6/30/2013



Source: NACUBO-Commonfund Study of Endowments, 2013

# January 2015 Periodic Table of Hedge Fund Returns

## Total Returns Ranked in Order of Performance for Key Credit Suisse Hedge Fund Indices

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 YTD
	Emg. Mkts. 20.25%								
Emg. Mkts. 20.46%	Global Macro 17.37%								
Distr. Secs. 15.58%	L/S Equity 13.65%		Conv. Arb 47.35%	Global Macro 13.45%		Distr. Secs. 11.78%	L/S Equity 17.73%		
Multi-Strat. 14.54%	CS HF Index 12.58%		Emg. Mkts. 30.02%	Fxd. Inc. Arb. 12.48%		Multi-Strat. 11.17%	Distr. Secs. 16.02%		
L/S Equity 14.38%	Multi-Strat. 10.08%		Fxd. Inc. Arb. 27.4%	Mgd. Futures 12.2%		Fxd. Inc. Arb. 11.05%	Multi-Strat. 11.21%	Mgd. Futures 18.36%	
Conv. Arb 14.29%	Eq. Mkt. Neutral 9.25%		Multi-Strat. 24.64%	Emg. Mkts. 11.33%	Global Macro 6.43%	Emg. Mkts. 10.27%	CS HF Index 9.72%	Multi-Strat. 6.09%	Mgd. Futures 6.02%
CS HF Index 13.86%	Risk Arb. 8.77%		Distr. Secs. 20.95%	Conv. Arb 10.97%	Fxd. Inc. Arb. 4.68%	L/S Equity 8.2%	Eq. Mkt. Neutral 9.29%	L/S Equity 5.54%	Global Macro 2.69%
Global Macro 13.54%	Distr. Secs. 8.35%		L/S Equity 19.46%	CS HF Index 10.95%	Eq. Mkt. Neutral 4.49%	Conv. Arb 7.82%	Emg. Mkts. 8.8%	Fxd. Inc. Arb. 4.38%	Short Bias 1.88%
Eq. Mkt. Neutral 11.15%	Short Bias 6.02%		CS HF Index 18.58%	Distr. Secs. 10.26%	Short Bias 3.86%	CS HF Index 7.67%	Conv. Arb 6.05%	CS HF Index 4.14%	Multi-Strat. 1.19%
Fxd. Inc. Arb. 8.65%	Mgd. Futures 6%		Risk Arb. 12.02%	Multi-Strat. 9.28%	Multi-Strat. 1.83%	Global Macro 4.57%	Risk Arb. 4.89%	Global Macro 3.11%	CS HF Index 0.81%
Risk Arb. 8.15%	Conv. Arb 5.19%	Mgd. Futures 18.33%	Global Macro 11.54%	L/S Equity 9.27%	Conv. Arb 1.12%	Risk Arb. 2.8%	Global Macro 4.32%	Distr. Secs. 2.55%	Emg. Mkts. 0.66%
Mgd. Futures 8.05%	Fxd. Inc. Arb. 3.82%	Short Bias 14.88%	Eq. Mkt. Neutral 4.06%	Risk Arb. 3.15%	Risk Arb. 0.78%	Eq. Mkt. Neutral 0.85%	Fxd. Inc. Arb. 3.81%	Emg. Mkts. 1.52%	L/S Equity 0.28%
Short Bias -6.62%		Risk Arb. -3.26%	Mgd. Futures -6.58%	Eq. Mkt. Neutral -0.84%	CS HF Index -2.53%	Mgd. Futures -2.92%	Mgd. Futures -2.56%	Eq. Mkt. Neutral -1.2%	Conv. Arb -0.21%
		Global Macro -4.62%	Short Bias -25.02%	Short Bias -22.45%	Mgd. Futures -4.17%	Short Bias -20.4%	Short Bias -24.93%	Risk Arb. -1.31%	Eq. Mkt. Neutral -0.37%
		CS HF Index -19.07%			Distr. Secs. -4.22%			Conv. Arb -1.68%	Fxd. Inc. Arb. -0.81%
		L/S Equity -19.74%			Emg. Mkts. -6.7%			Short Bias -5.61%	Risk Arb. -0.85%
		Distr. Secs. -20.48%			L/S Equity -7.31%				Distr. Secs. -1.05%
		Multi-Strat. -23.64%							
		Fxd. Inc. Arb. -28.83%							
		Emg. Mkts. -30.41%							
		Conv. Arb -31.58%							
		Eq. Mkt. Neutral -40.33%							

Source: 2015, Credit Suisse Hedge Index LLC.



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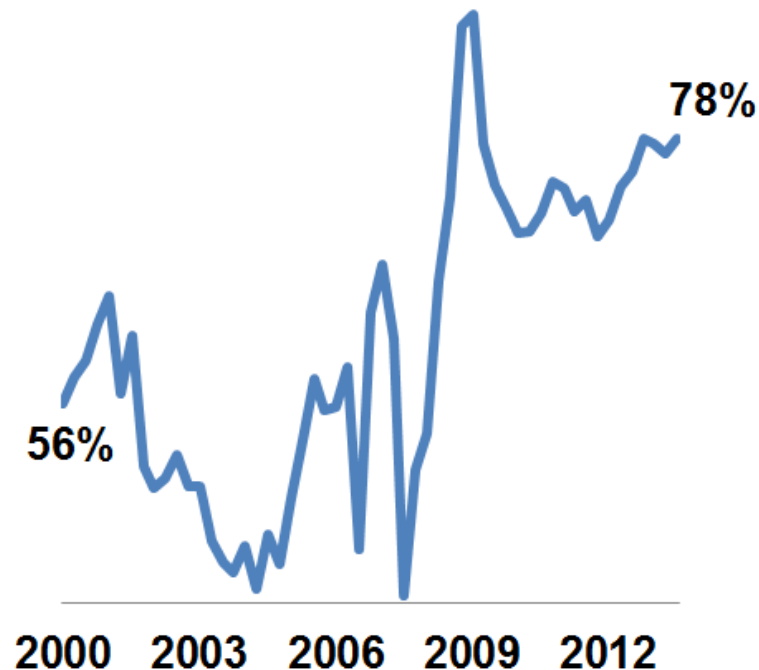
# **VENTURE CAPITAL STRATEGIES**

# Venture Capital Landscape

## Fundraising and Market Correlations

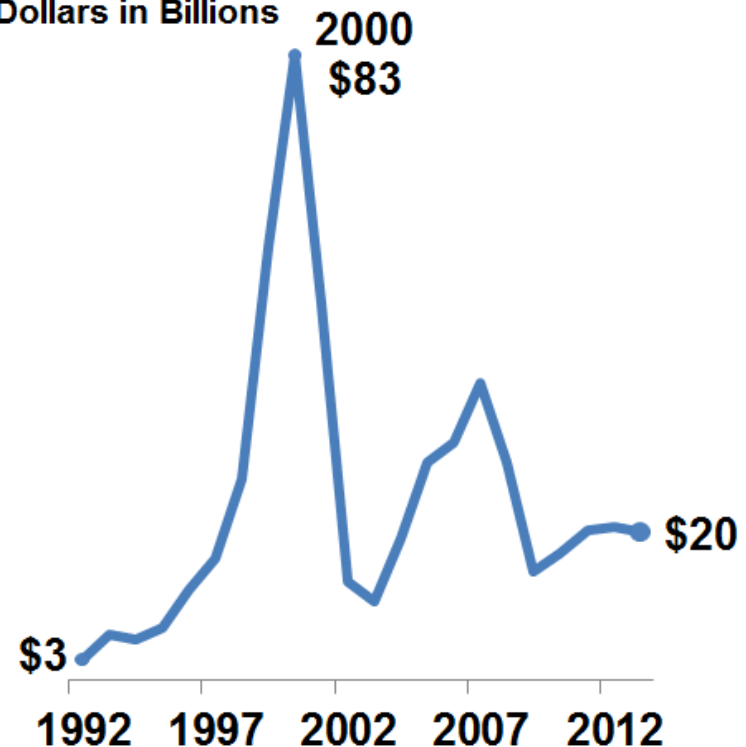
### Correlations

Venture Capital & Russell 2000 Index  
5-Year Rolling | Jan 2000 - Sept 2013



### Fundraising

Venture 1992-2013  
Dollars in Billions



Sources: VentureSource, Bloomberg, Thomson One.com

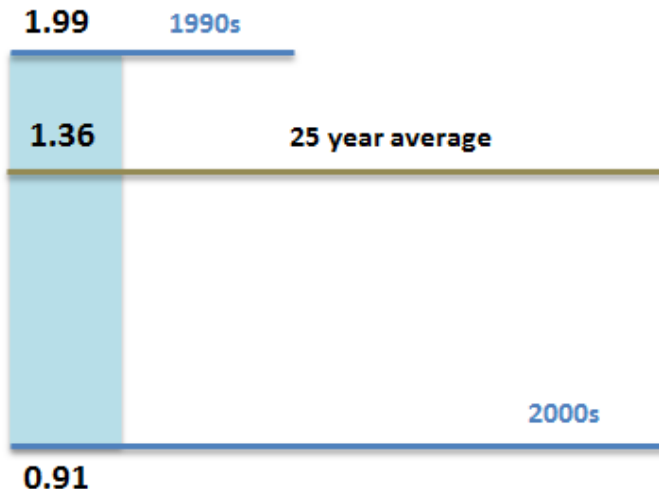
# Illiquidity Premium | Venture Capital Public Market Equivalent (PME)

## Research Findings

Has Persistence Persisted in Private Equity?

PME Range\*

Tale of Two Decades



## Research Findings

2013 NACUBO-Commonfund Study of Endowments

Time-weighted return (YOY)

10-years ended 6/30/2013

### Equity Type

7.9%	Public	S&P 500 Index
5.8%	Venture	2012 NCSE   All Respondents

Persistence in Performance\*\* | Are there good GPs? Historically, yes!

		Current Fund Quartile					PME
		1	2	3	4	Total	
Previous Fund Quartile PME	1	49.4%	20.5%	16.9%	13.3%	100%	2.85
	2	28.0%	32.0%	26.7%	13.3%	100%	1.38
	3	27.0%	30.2%	22.2%	20.6%	100%	1.34
	4	3.9%	23.5%	27.5%	45.1%	100%	0.69



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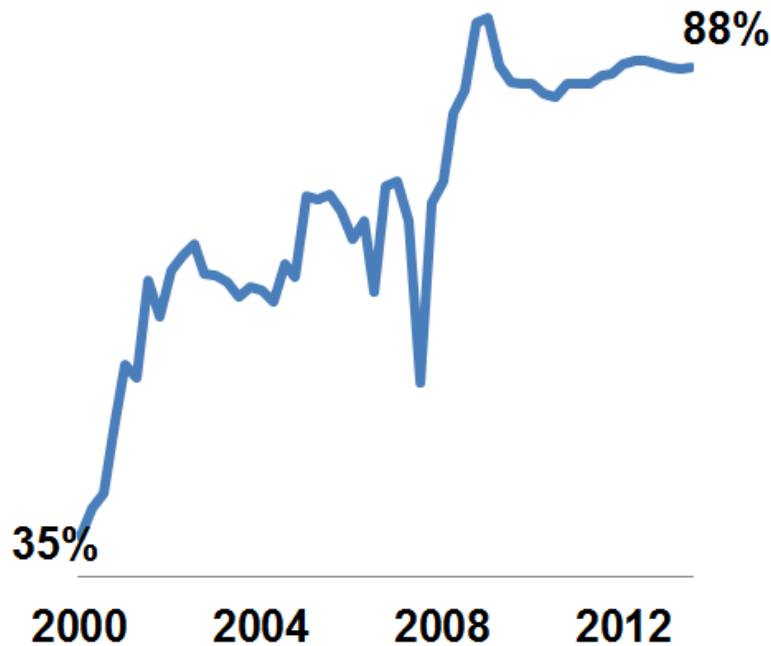
# PRIVATE EQUITY STRATEGIES

# Private Equity Landscape

## Fundraising and Market Correlations

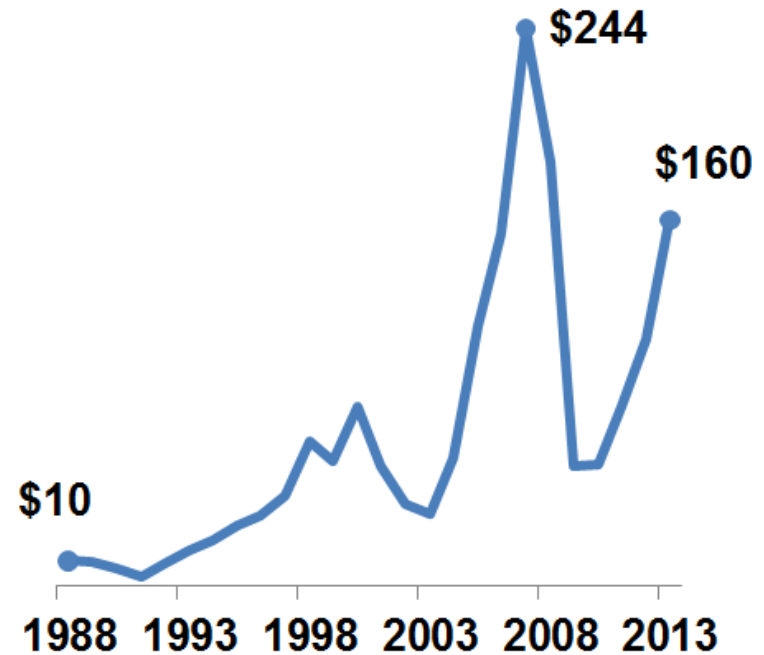
### Correlations

All Private Equity & S&P 500 Index  
5-Year Rolling | Jan 2000 - Mar 2013



### Fundraising

U.S. Private Equity 1988-2013  
Dollars in Billions



Sources: VentureSource, Bloomberg, Thomson One.com



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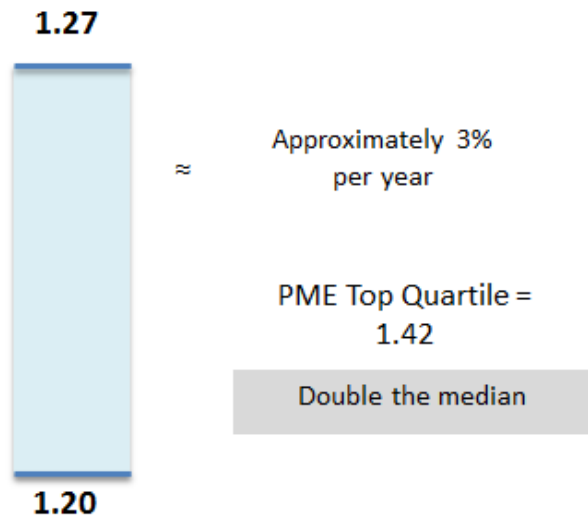
# Illiquidity Premium | Private Equity

## Public Market Equivalent (PME)

### Research Findings

Private Equity Performance: What Do We Know?

PME Range\*



### Research Findings

2013 NACUBO-Commonfund Study of Endowments

Time-weighted return (YOY)

10-years ended 6/30/2013

Equity Type		
7.9%	Public	S&P 500 Index
8.4%	Private	2012 NCSE   All Respondents
11.1%	Private	2012 NCSE   >\$1 Billion cohort

Source: Burgiss data, Private Equity Performance: What Do We Know? working paper by entitled Harris, Jenkinson and Kaplan; for vintage years 1984 through 2008 with performance through March 2011.

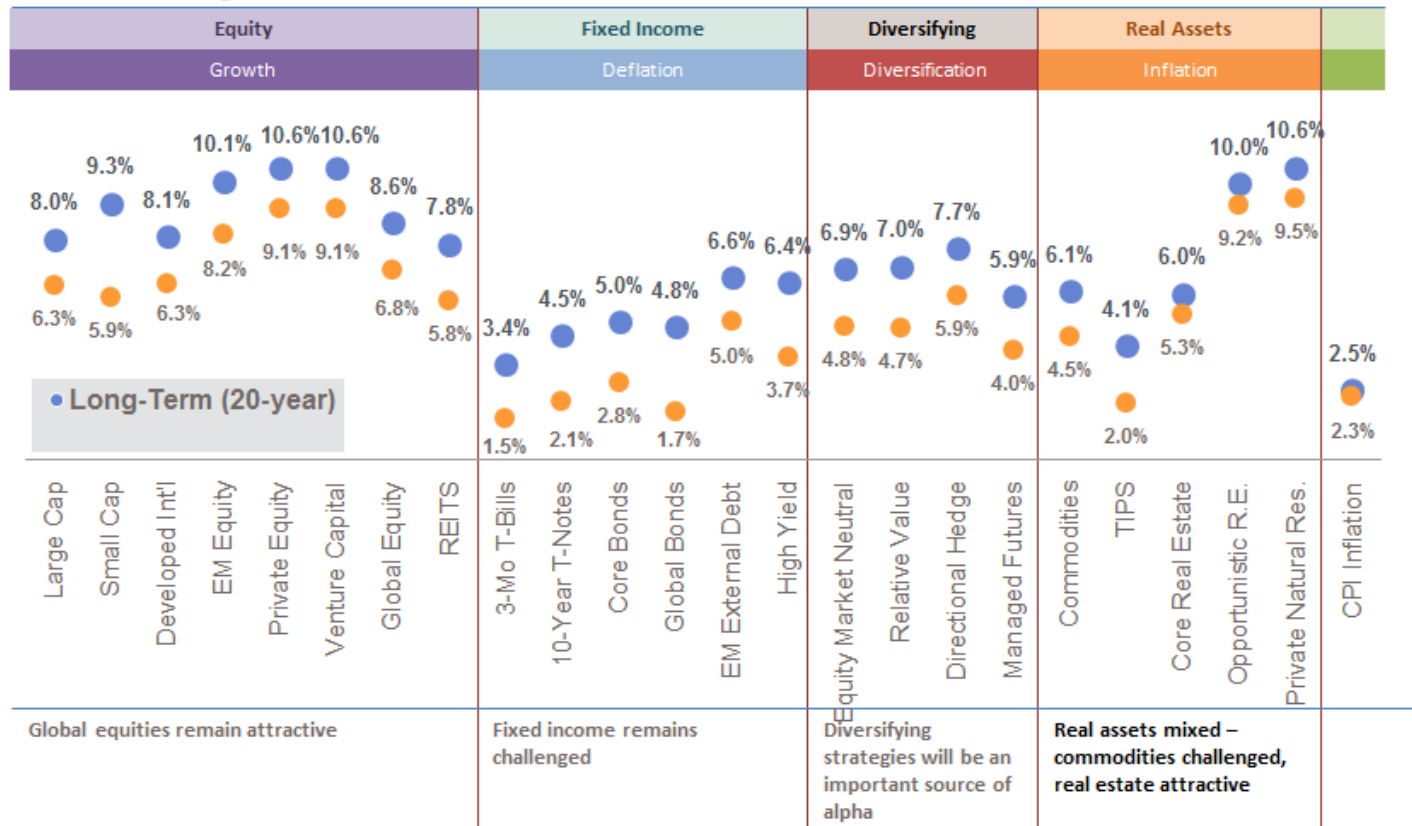


**M.J. Murdock**  
Charitable Trust

# Commonfund Long- and Medium-Term Return Forecasts

## Commonfund Point-of-View

### Investment Strategies



- **Long-Term (20 Years) / Policy** – estimates based upon historical returns, the academic literature, the expected future equilibrium macroeconomic environment and expected active management excess return.
- **Medium-Term (5-Year) / Cyclical** – estimates based upon historical returns, the academic literature, current valuations, the expected medium term macroeconomic environment and expected active management excess return.
  - **Forecasts** are as of January 2014 and runs through end of 2018. (As of August 2014)

# Advantages of Long-Term Institutional Investors

1. Institutional investors have a longer timeframe than individuals who tend to have shorter timeframes
2. Unsophisticated investors buy winners/sell losers at inefficient horizons
3. The appeal of dividends and capital gains varies with investor type
4. Most institutional investors do not pay taxes
5. Fees and liquidity can be better for institutional investors



# The Rise of the Behaviorists

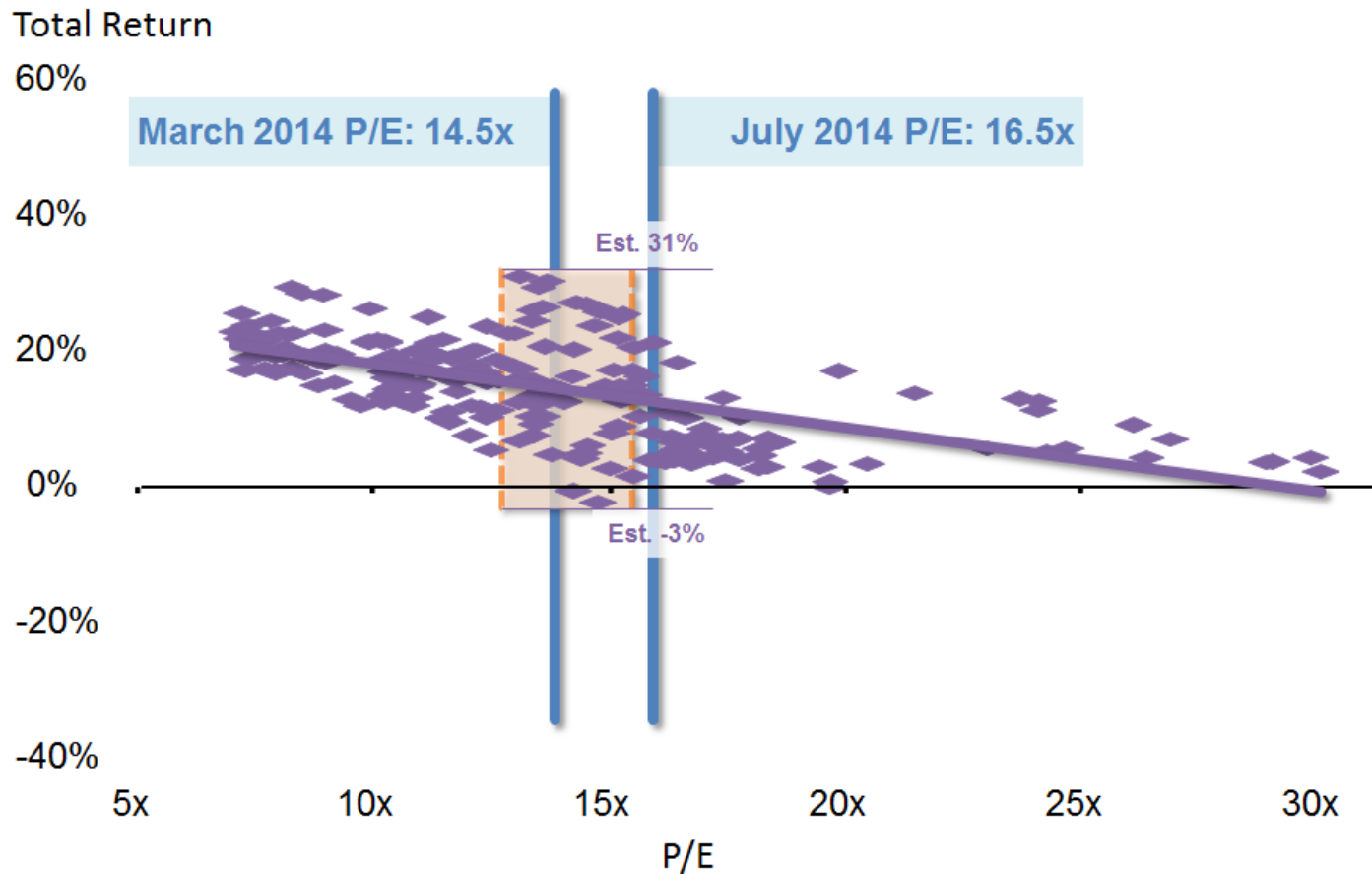
“Be fearful when others are greedy and greedy when others are fearful”



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Charitable Trust

# Do Valuations Matter

P/E and Total Return Over 5-yr. Annualized Periods  
Quarterly, 1W 1952 to 1Q 2008



# Avoid Index Inefficiencies

- **Equities**

- Market weights not equal-weighted
- Periodic reconstitution creates telegraphed demands for liquidity (buys, sells)
  - Example 1: Equal-Weight vs. Cap-Weight S&P 500 Index
  - Example 2: Russell 2000

- **Fixed income**

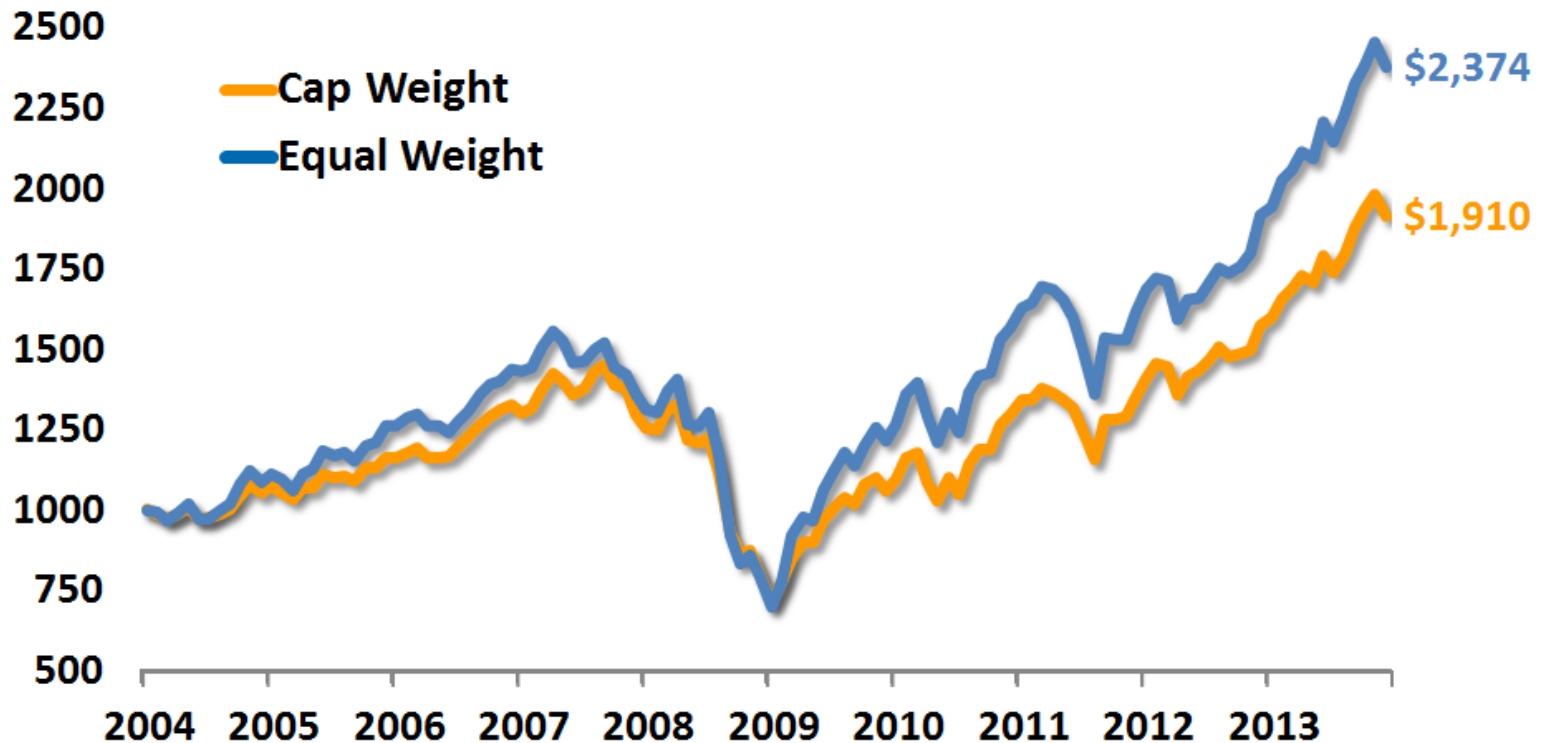
- Index constituents driven by issuance
- Index additions occur month end, issuance continuous
- Odd lots and idiosyncratic plays remain outside indexes
  - Example: JGBs in Citi WGBI



# Market Cap vs. Equal Weight

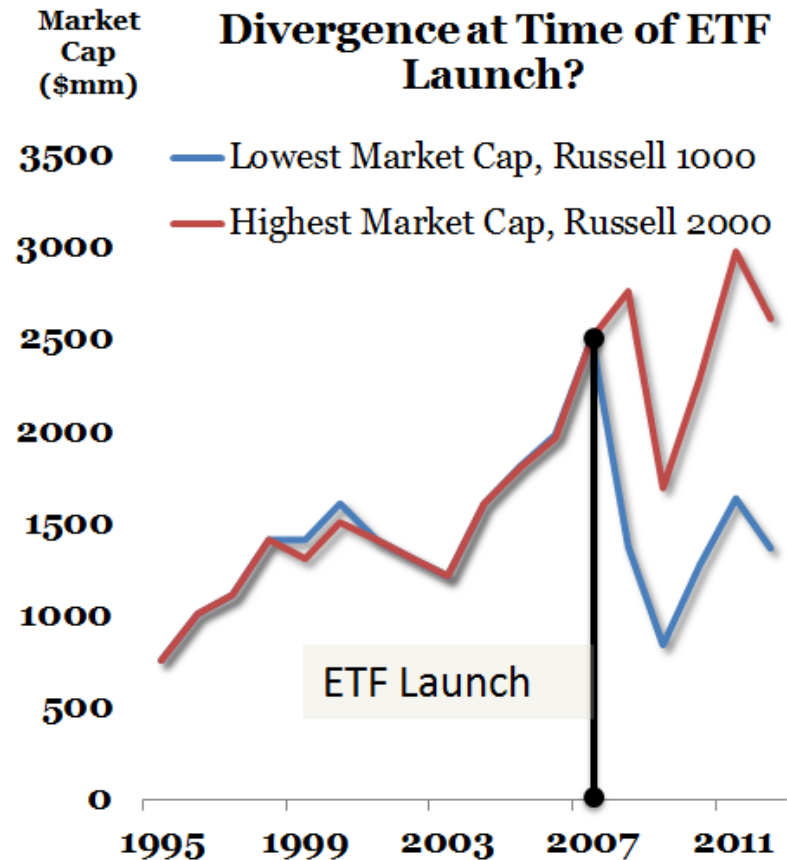
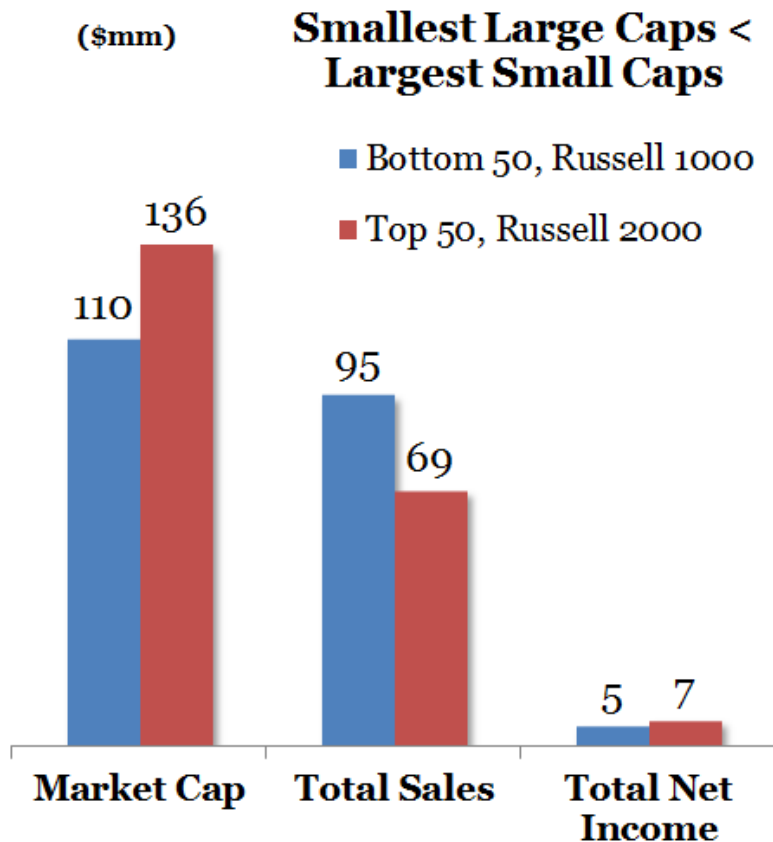
## Cumulative Return Chart (02/2004 to 01/2014)

Growth of a Dollar



# What's In an Index?

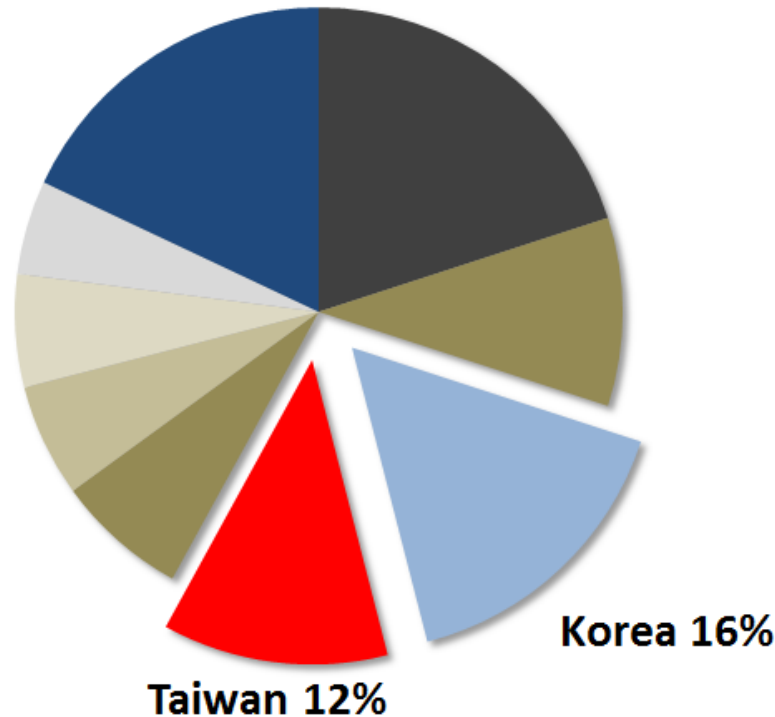
Russell Equity Index Market Cap Breaks Not Where You Might Have Expected



Source: Horizon Research Group, 2013



# Emerging Markets' Capitalization



Market Cap | \$162.0 Billion



Market Cap | \$92.4 Billion

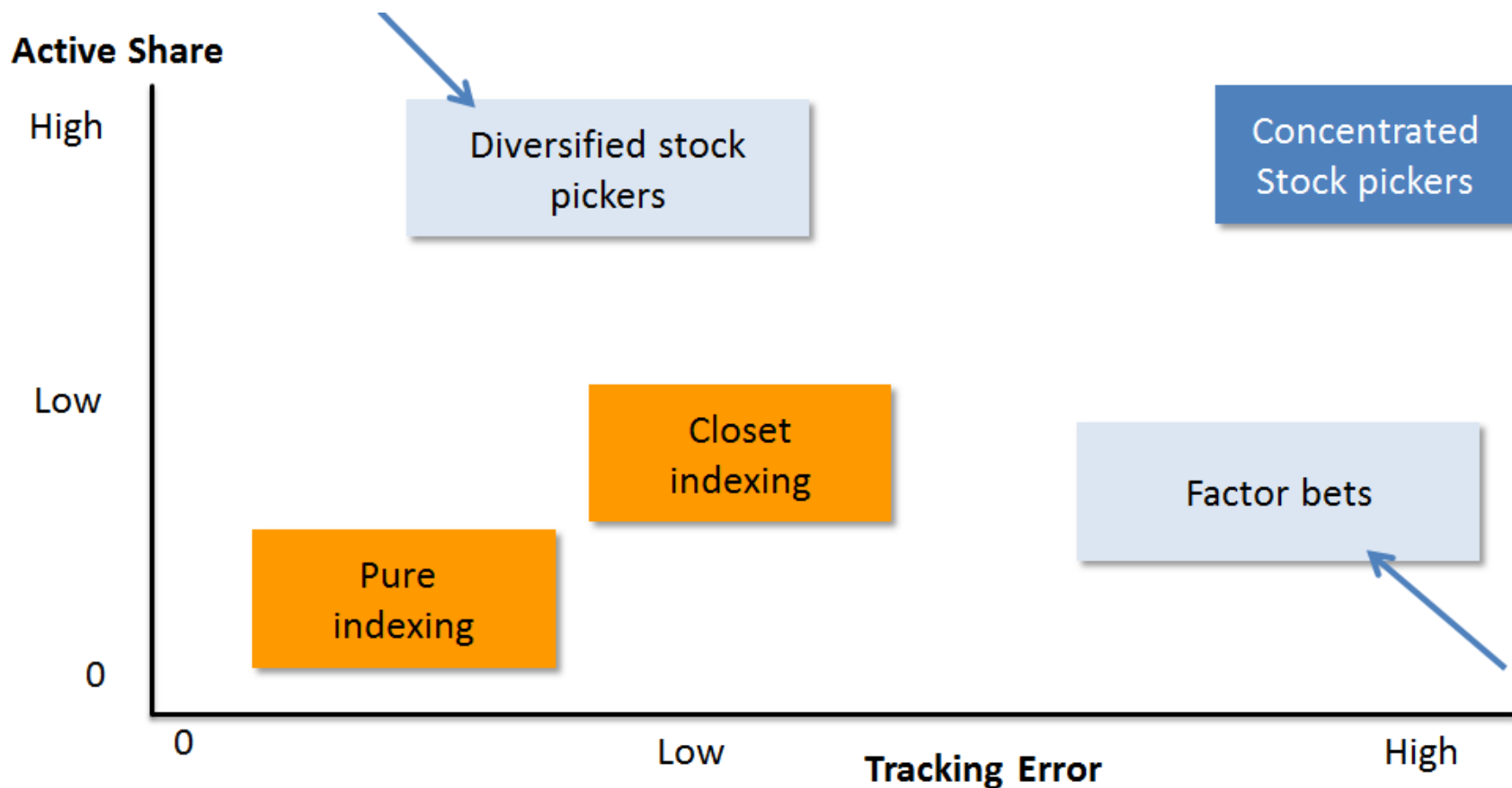
- |                   |              |
|-------------------|--------------|
| ■ China 20%       | ■ Brazil 10% |
| ■ Korea 16%       | ■ Taiwan 12% |
| ■ South Africa 7% | ■ Russia 6%  |
| ■ India 6%        | ■ Mexico 5%  |
| ■ Other 18%       |              |

Source: MSCI, Bloomberg as of January 31, 2014

# Pursue Truly, Not Seemingly, Active Investment

- Passive increasing
- Tracking error and active share both informative about performance
- High active share, low tracking error ideal
- Successful managers need skill, conviction and opportunity

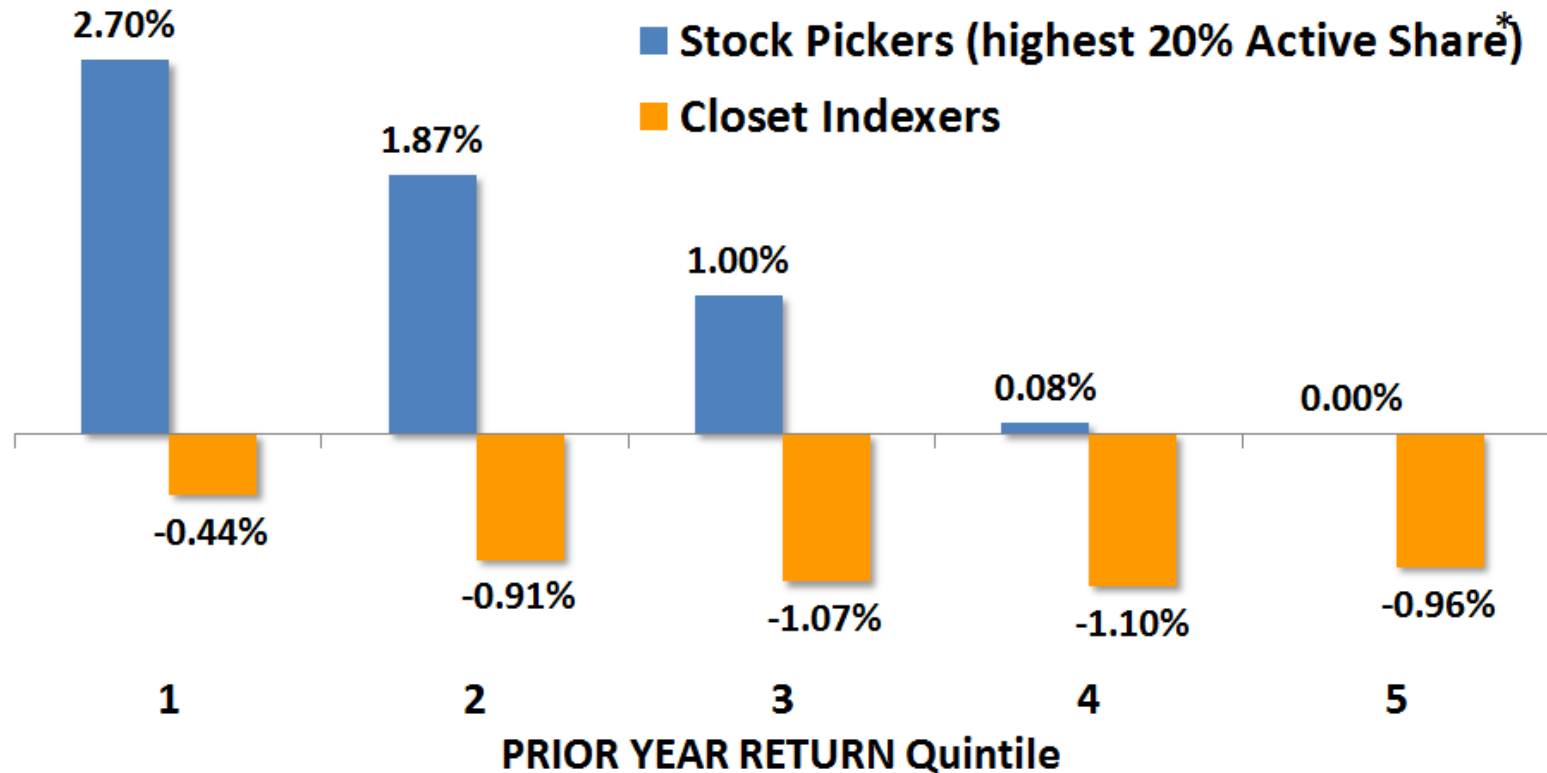
# Active Share, Tracking Error and Passive Management



# Greater Performance Persistence for Active Funds

Excess Net Returns (relative to benchmark after expenses)

Performance per year

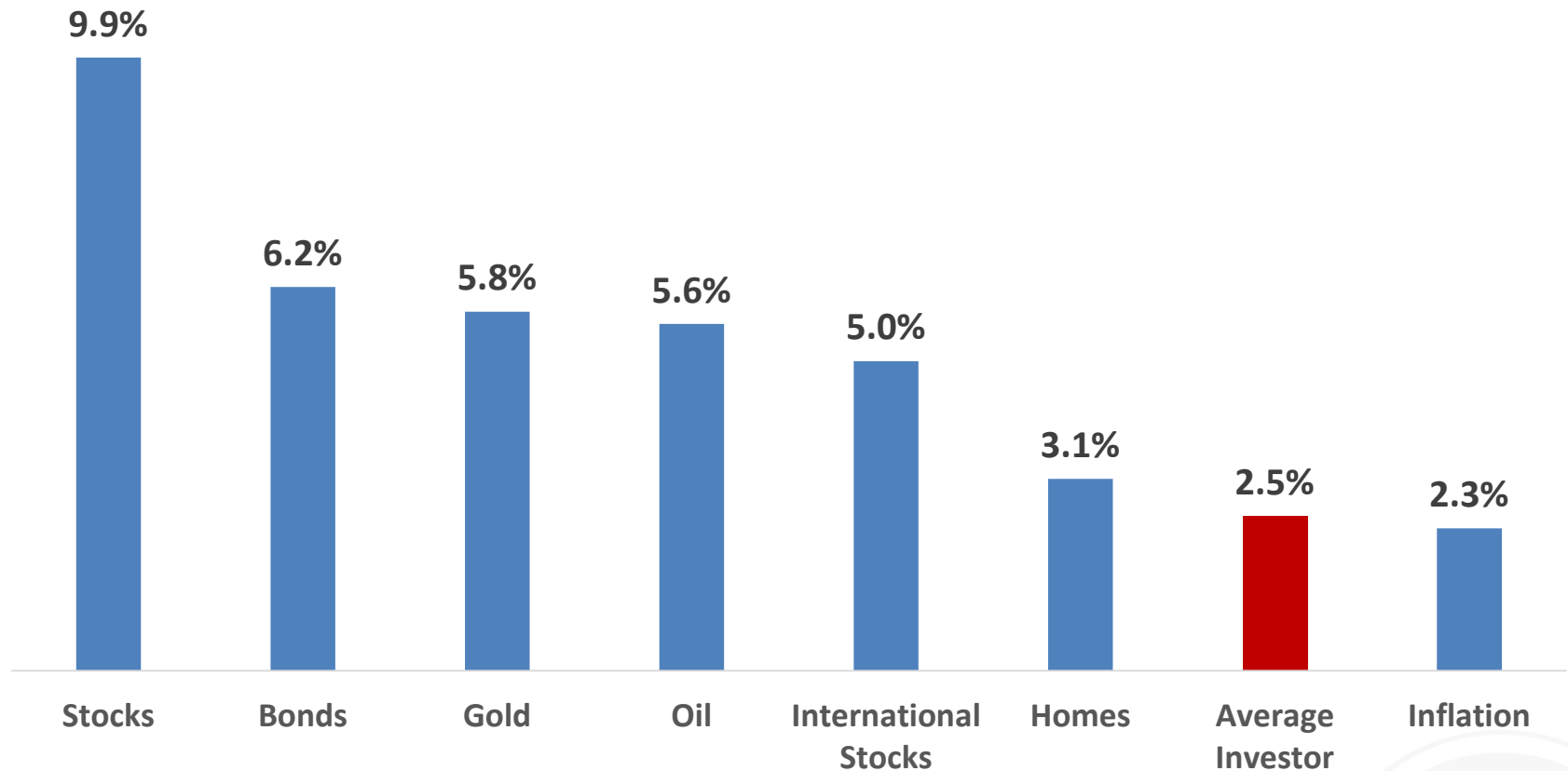


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Source: Martijn Cremers, Mendoza College of Business; Univ. of Notre Dame

# Strategy/Asset Class | Annualized Returns

Over 20 Year Period (1995-2014)



- Source: Blackrock and Dalbar. Average Investor is represented by Dalbar's average asset allocation investor return for retail mutual funds and Commonfund

