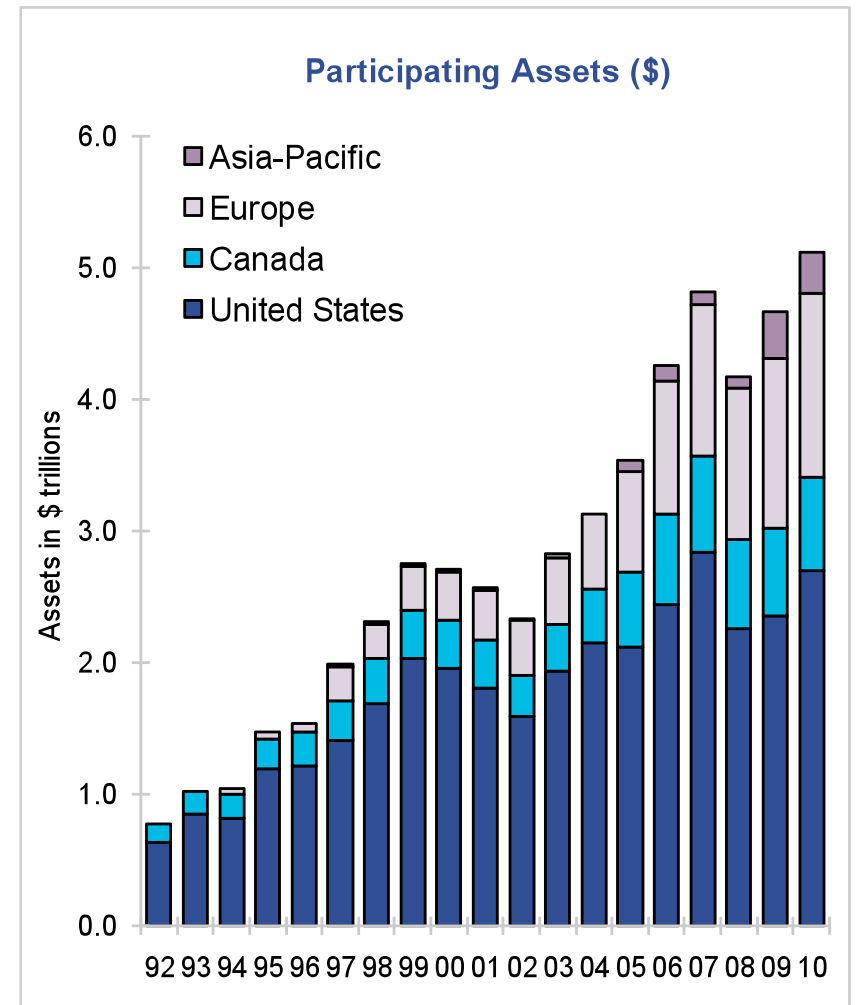


Research conclusions are drawn from the CEM Global Investment Benchmarking Database.

- 201 U.S. funds with aggregate assets of \$2.7 trillion participated in 2011.
- The database includes the following metrics:
 - Holdings
 - Policy/Reference Portfolio Weights
 - Fund & Asset Class Returns
 - Asset Class Benchmarks & Returns
 - Costs
 - Liability structure
- Benchmarking focus is:
 - What you paid - Costs
 - What you got - Returns & Value Added
 - What you risked



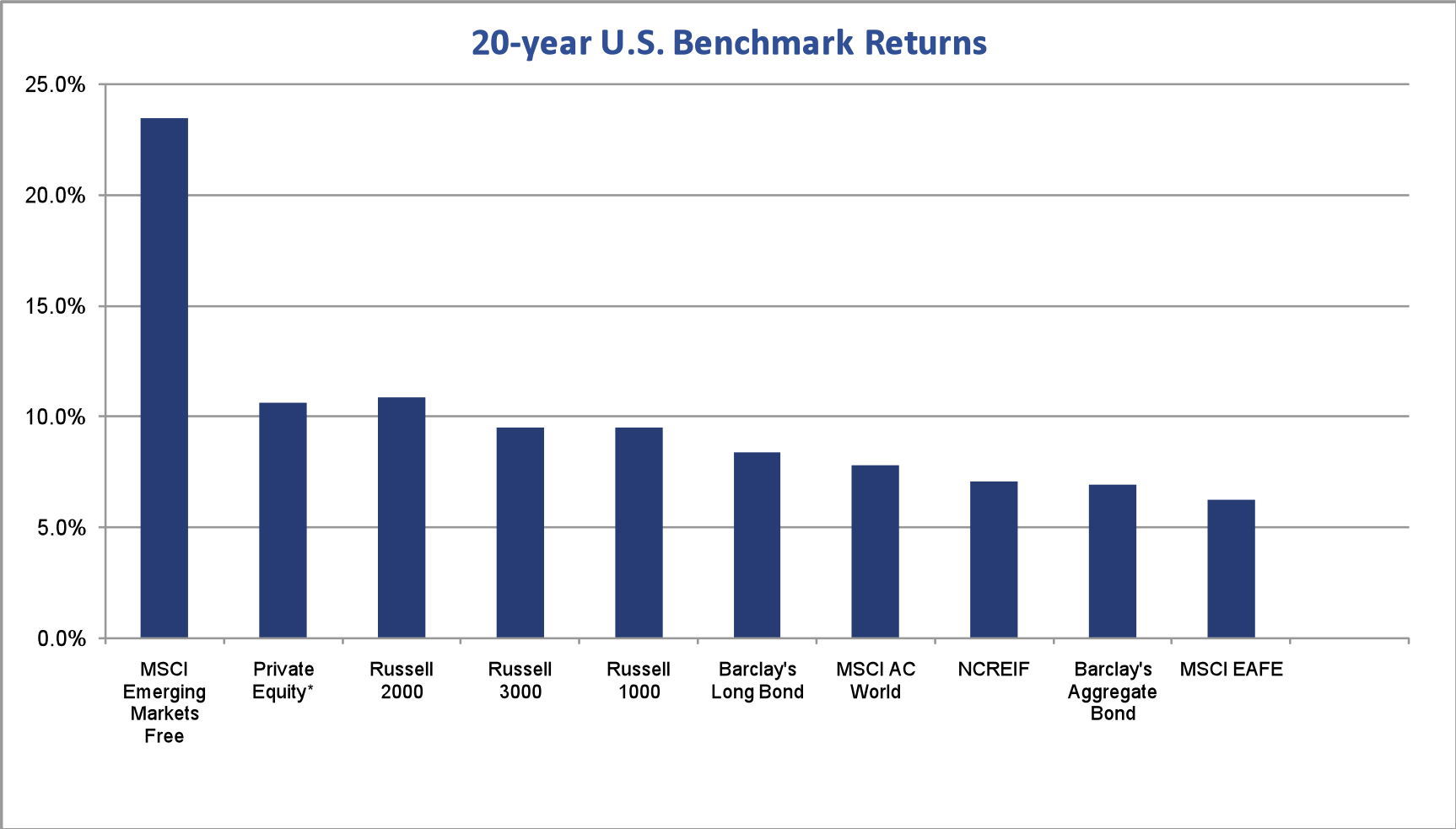
Key U.S. performance results:

- Policy returns (from asset mix) are by far the biggest component of total returns.
- U.S. funds in the CEM database generated 20 bps of value added from active management after costs.

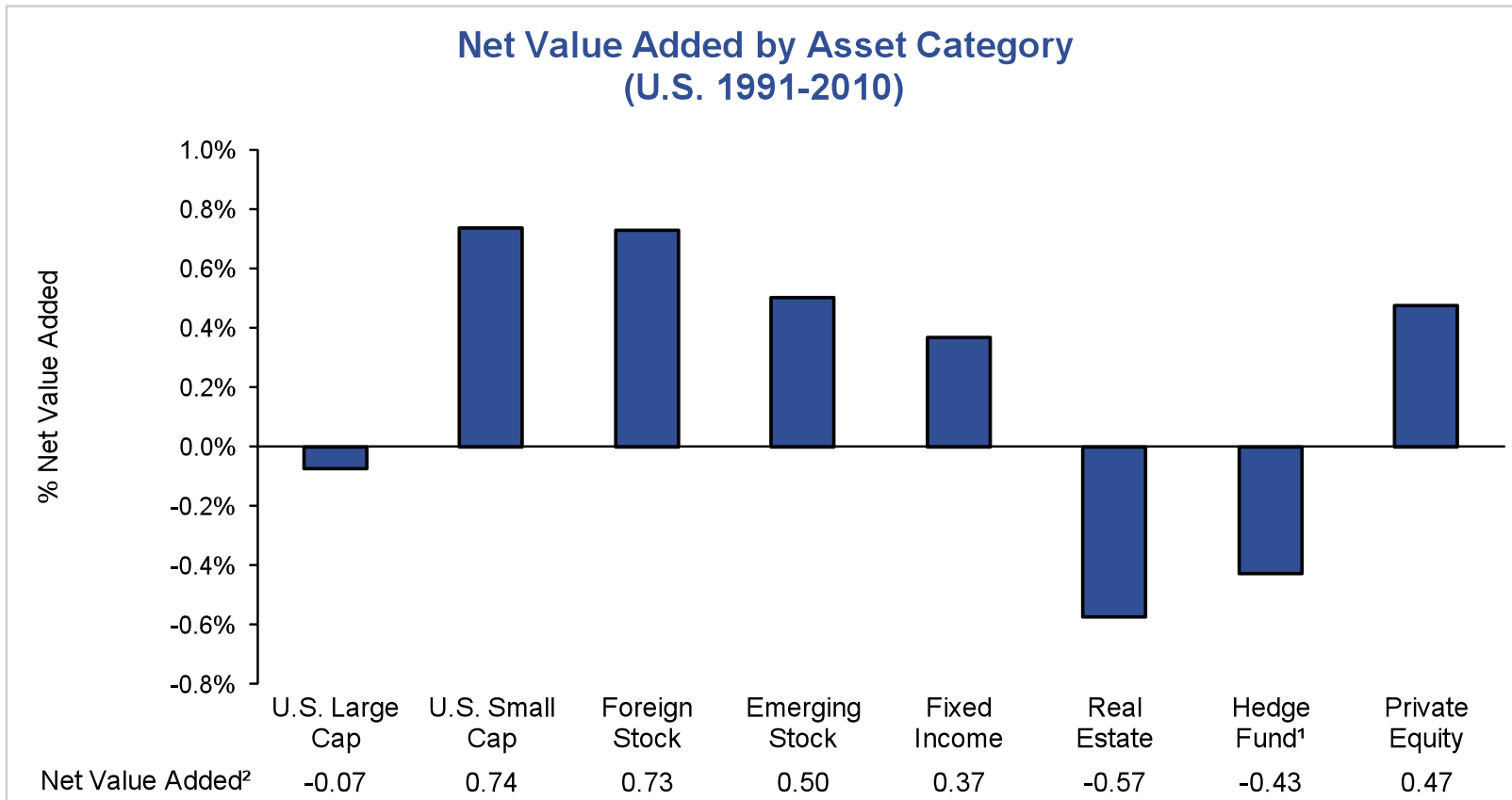
<u>U.S. Funds*</u> (20-year average)	
Total Return	9.92%
- <u>Policy Return</u>	<u>9.29%</u>
= Gross Value Added	0.63%
- <u>Costs</u>	<u>0.44%</u>
= Net Value Added	0.20%

* Number of annual observations: 3,234
Median fund size: \$ 4.1 Billion

Asset mix is the primary driver of total return. Below are key 20-year U.S. benchmark returns.



U.S. funds generated positive 20-year NVA for U.S. Small Cap, Foreign Stock, Emerging Stock, Fixed Income, and Private Equity.



1. Hedge Fund gross value added performance reflect data for the 11 years ending 2010.
2. Value added analysis is from 3,281 annual fund performance observations from the CEM U.S. universe for the 20-year period ending 2010. Value added reflects the holding weighted value added of all mandates in each asset category including indexed holdings. Averages shown above are the simple average of the annual averages of all observations of funds with holdings in the asset category for each year.

Fund characteristics associated with higher net value added:

- 1. More internal management was better.**
- 2. Large funds did better than small funds.**
- 3. Higher costs reduced net value added.**

More internal management was better.

A 10% increase in internal management was associated with 3.9 bps higher net value added.

- Internal management was better primarily because of lower costs.
- The general trend has been to less internal management.
- Typically, only very large funds use internal management.

Large funds did better than small funds.

For every ten-fold increase in size, net value added increased by 15 bps.

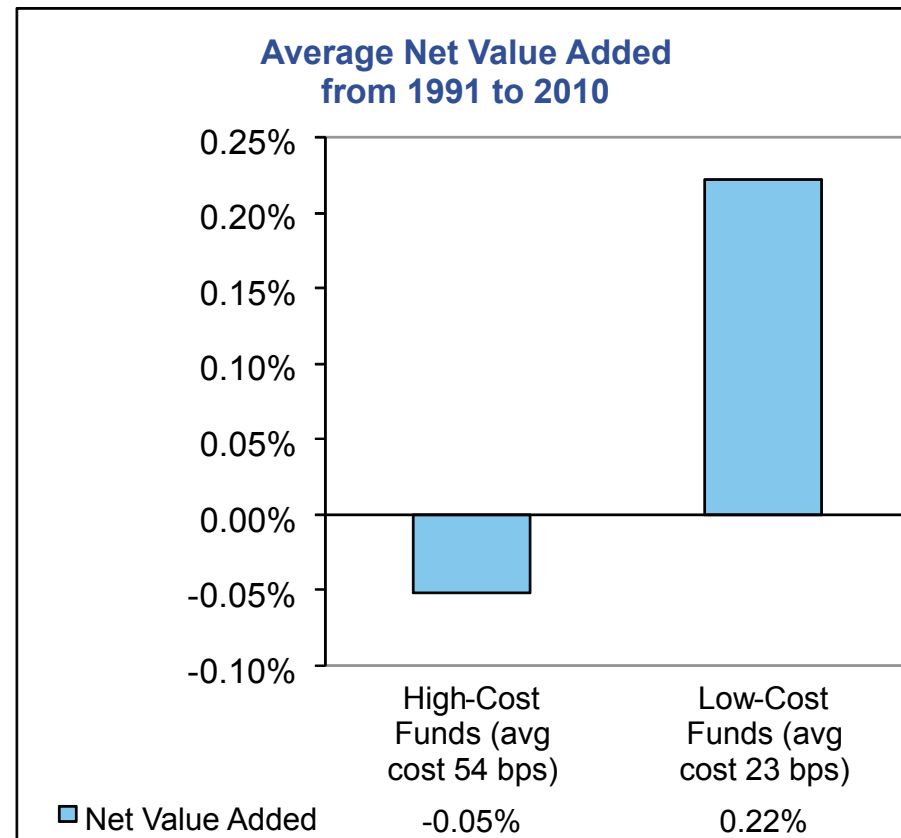
Larger funds outperform because of:

- Lower total costs
- More internal management
- Private market asset classes, especially private equity and real estate:
 - higher holdings
 - lower costs
 - higher returns

Higher total cost reduced net value added.

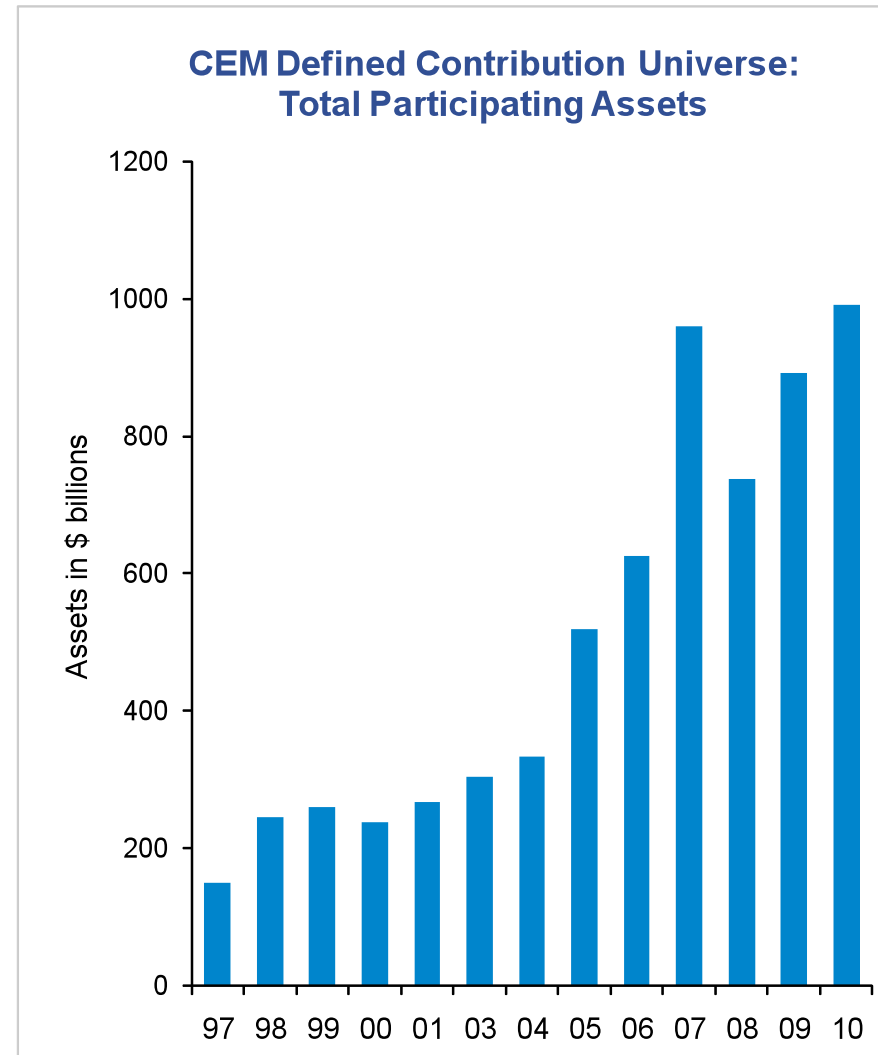
An increase in cost of 1 bps was related to a 0.6 bps decline in net value added.

Another way to demonstrate the impact of costs is to split the CEM universe in half based on size. The average net value added of low-cost funds was 27 bps higher than high-cost funds.



The CEM DC database consists of 170 U.S. plans with aggregate assets of \$991 billion.

- In 2011, the median U.S. DC plan had \$2.3 billion in assets and the average had \$5.8 billion.
- 139 were corporate plans and 43 were public and other.



U.S. DB plans have outperformed DC plans.

DB versus DC Return and Value Added - U.S.			
	DB 14-year Average ²	DC 14-year Average ²	Difference
Total Return	8.26%	7.08%	1.19%
- Policy Return ¹	<u>7.68%</u>	<u>6.60%</u>	<u>1.07%</u>
= Gross Value Added	0.58%	0.47%	0.12%
- Costs	<u>0.45%</u>	<u>0.41%</u>	<u>0.04%</u>
= Net Value Added	0.13%	0.07%	0.07%
# of Observations	2,456	1480	

1. DC policy return = weights of holdings X benchmarks
2. 14 years ending 2010. Equals simple average of annual averages.

Asset mix differences have been the primary reason for the better performance of U.S. DB plans.

DB versus DC Asset Mix - U.S.				
	Asset Mix ¹		Returns ²	
	DB	DC	DB	DC
Large Cap Stock	31%	36%	6.1%	3.2%
Small Cap Stock	6%	7%	8.5%	6.7%
Foreign Stock	20%	6%	6.3%	4.1%
Company Stock	0%	18%	n/a	8.5%
Fixed Income	32%	11%	7.1%	7.1%
Stable Value/GICs	0%	19%	n/a	5.0%
Cash	2%	4%	3.7%	3.3%
Real Estate, REITs & Other Real Assets	4%	0%	9.6%	n/a
Hedge Funds	2%	0%	5.1%*	n/a
Private Equity	3%	0%	12.0%	n/a
Total	100%	100%		
# of Observations	2,409	1,480		

1. 14 years ending 2010. Equals simple average of annual asset mix weights.
2. Equals the compound average of the annual averages. * Except hedge funds which are an 11-year average.