

# **The Great Debate**

**“Resolved: The Cost of Investing  
Is the Determining Factor in the  
Success of Investing”**

**John C. Bogle**

**Grant’s Spring Conference**

**April 7, 2015**



# The Low-Cost Proposition

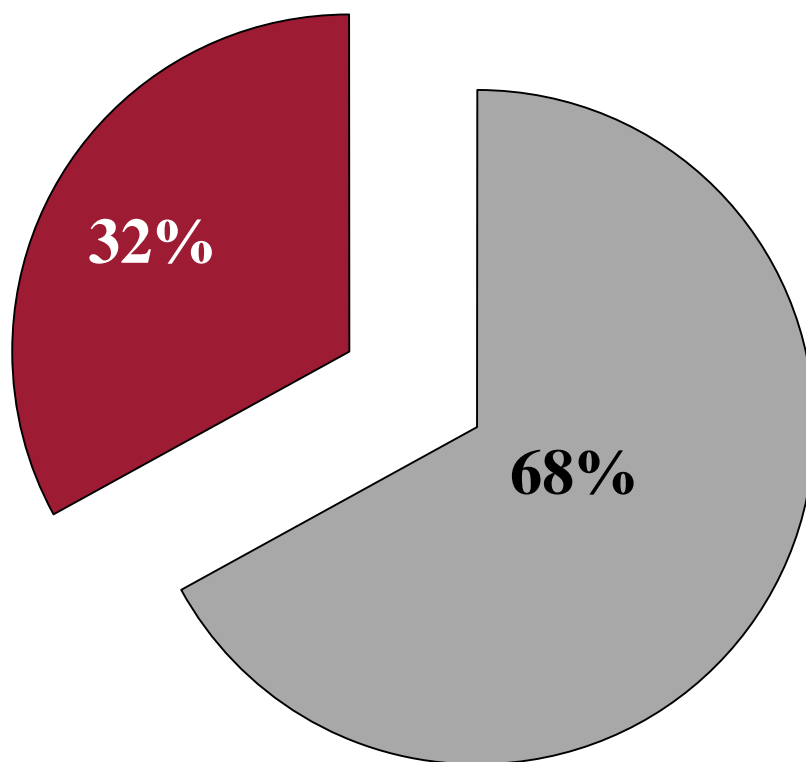
- 1. Gross Market Return: Shared by Investors as a Group—“Zero-Sum Game”**
  
- 2. Costs of Investing:**
  - A) Shared by Active Investors—High (2%)**
  - B) Shared by Index Investors—Low (0.05%)**
  
- 3. Therefore: Low-Cost Investors Must Earn Higher Net Returns.**

**Q.E.D.**

# The Cost Matters Hypothesis

## U.S. Equities Managed by Mutual Funds and Institutional Investors

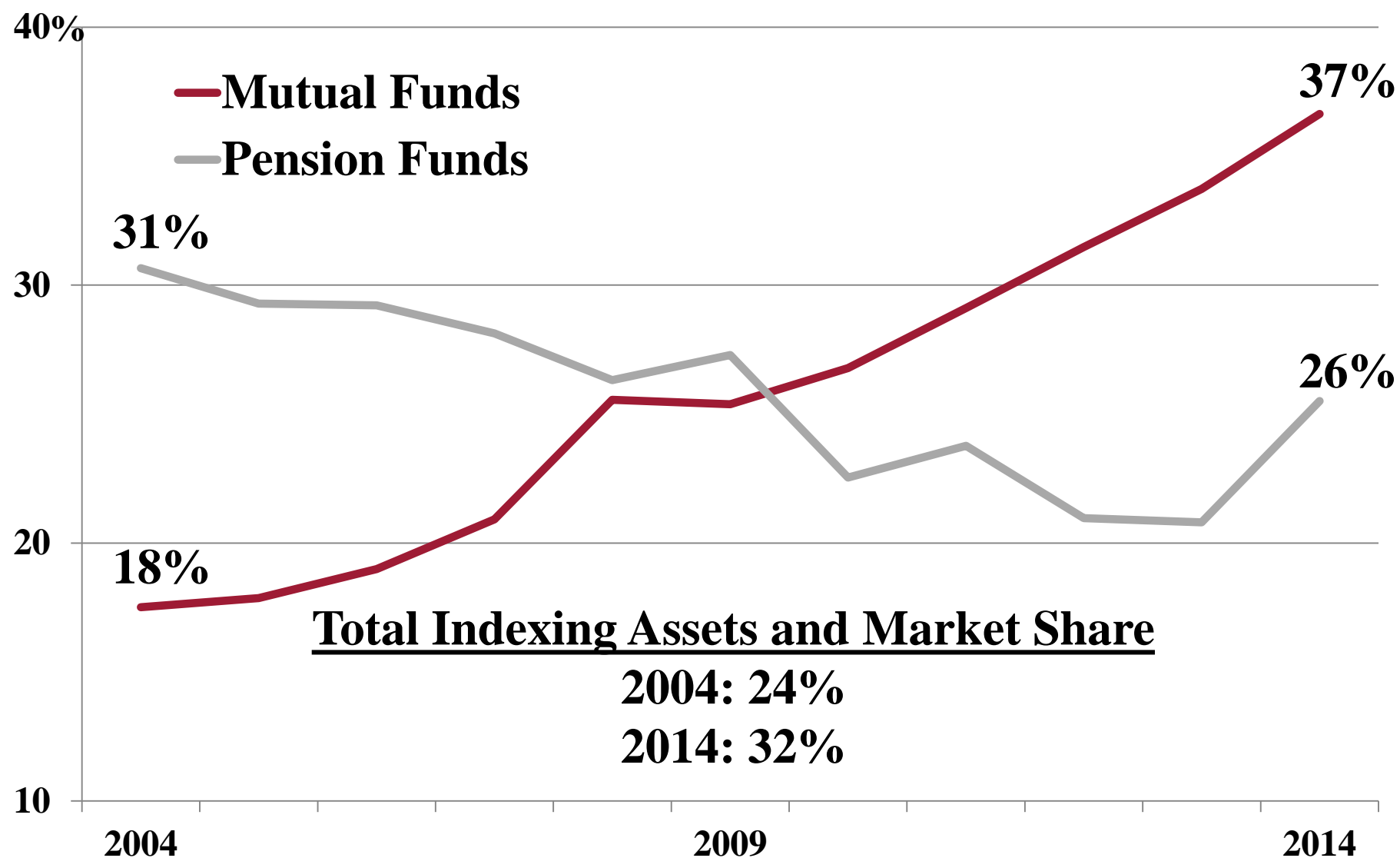
**Index Investors:**  
Own the market  
at *low* cost  
**\$3.6 T**



**Active Investors:**  
Own the market  
at *high* cost  
**\$7.5 T**

# Indexing Market Share

## Index Strategies as a Percentage of Total U.S. Institutional Equity Assets

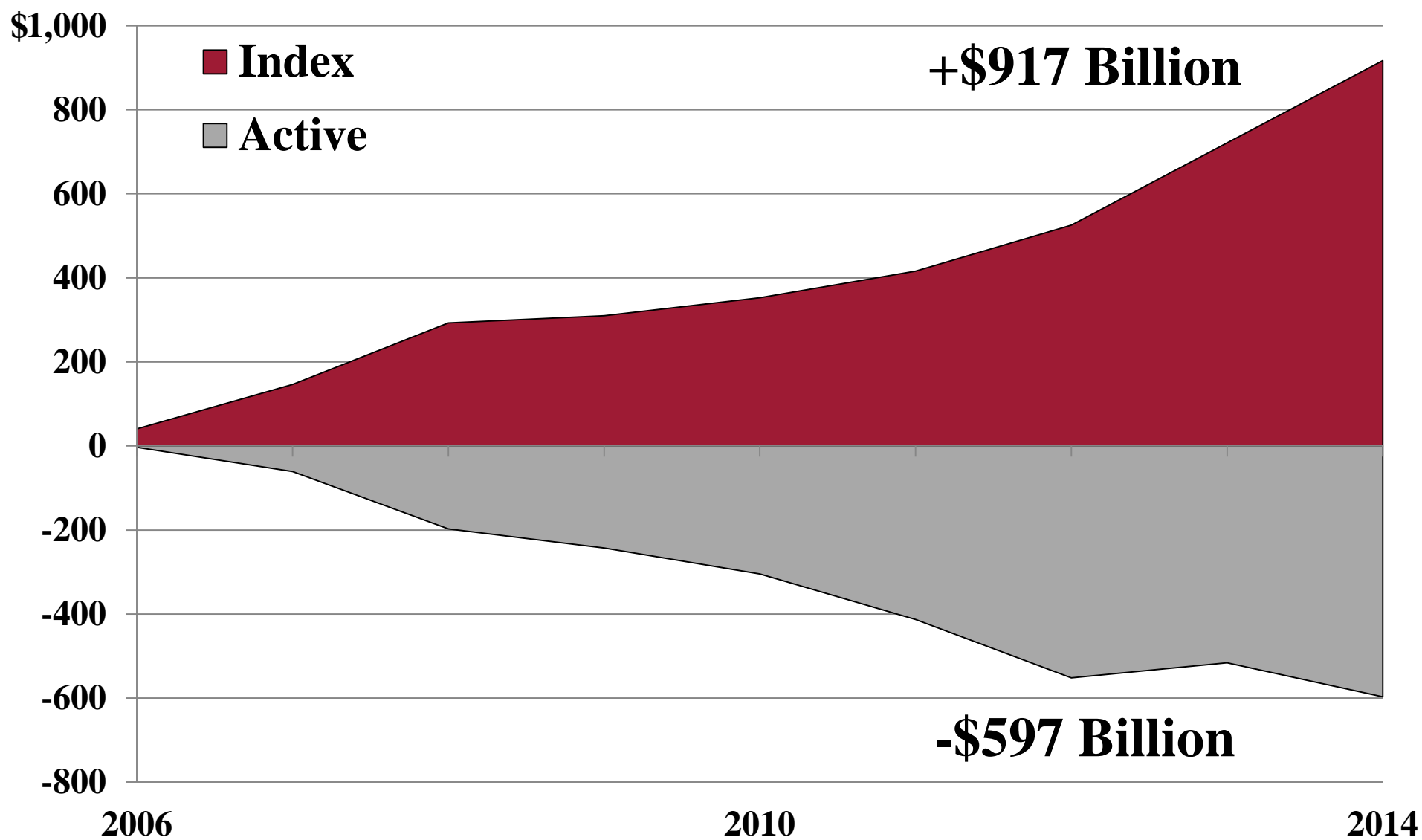


Source: Strategic Insight Simfund, Empirical Research Partners

# U.S. Equity Fund Cumulative Net Cash Flow, 2006-2014

## Passive Index Funds versus Actively Managed Funds

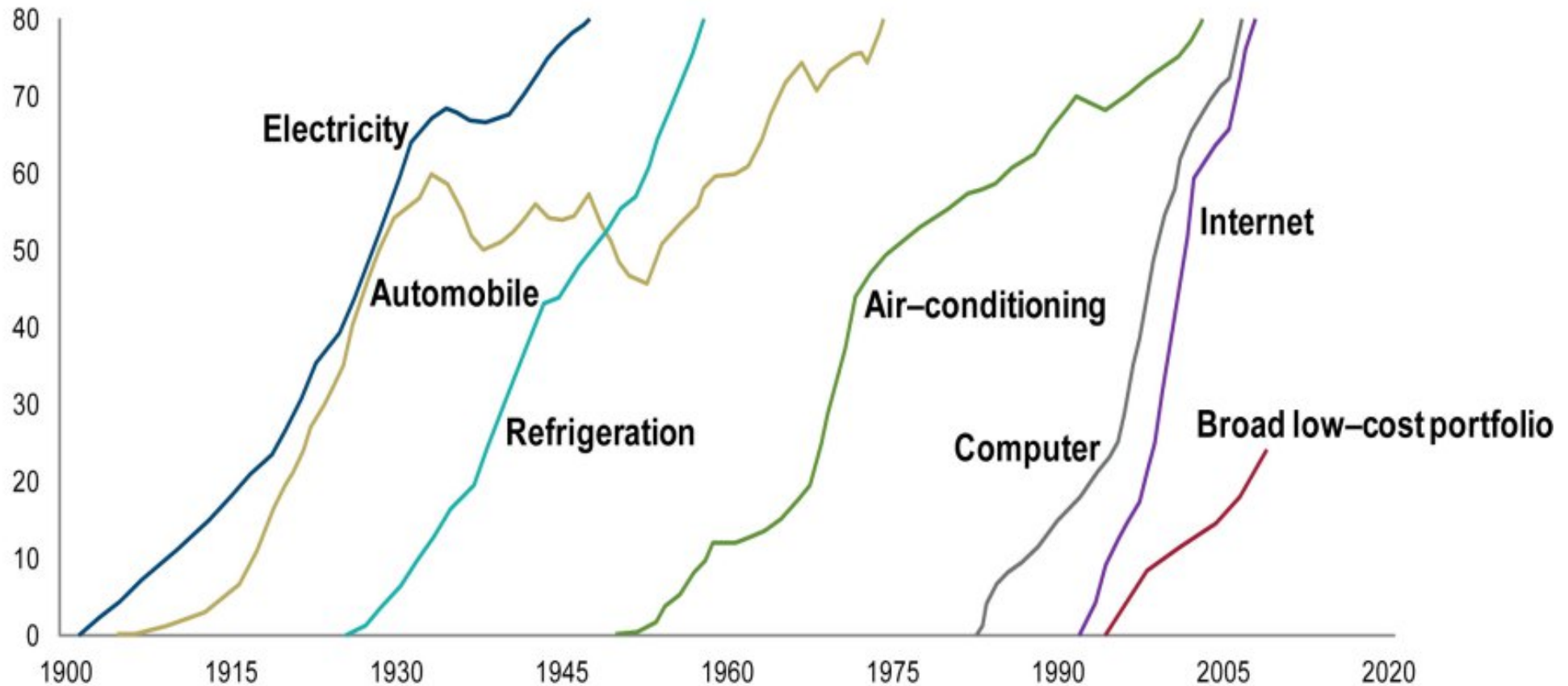
### Cumulative Net Cash Flow into Index and Active Mutual Funds and ETFs



Source: Strategic Insight Simfund

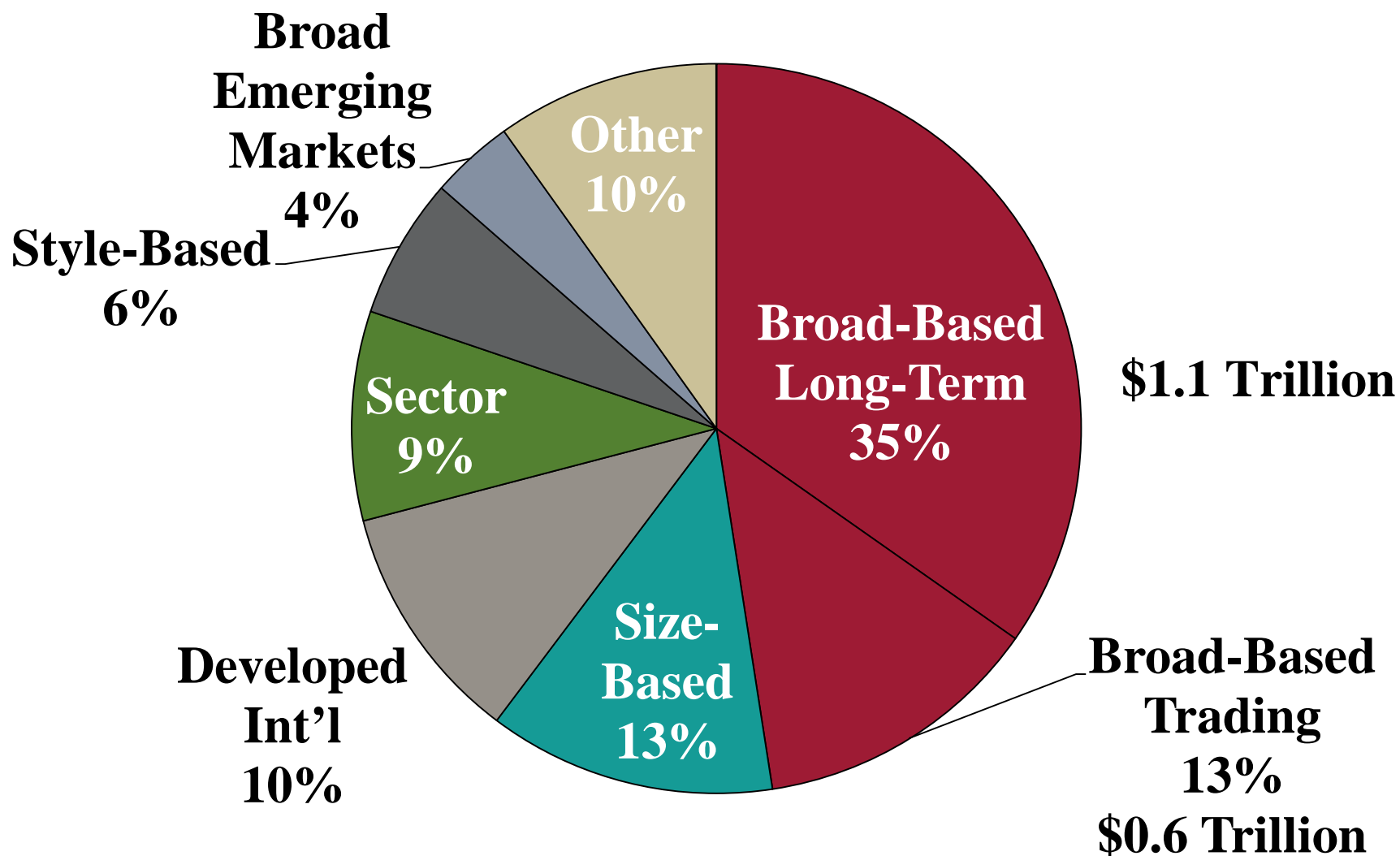
# Adoption of a Great Idea

## Market Penetration Rates



*Source: Adapted from Visualizing Economics and The New York Times.*

# Popularity of S&P 500 Index Overrated



**Adjusted for holdings of institutional and individual traders, only \$1.1 T of index funds are held in broad-based portfolios by long-term investors.**

# The Original Index Fund vs. ETFs

## **First Index Fund (1974)**

- **Own the U.S. stock market**
- **Diversify to the Nth degree**
- **Minimize transaction costs**
- **Tiny expense ratio—500 Index: 0.05% (Admiral)**
- **Bought to be held—“forever”**

## **Exchange-Traded Index Funds**

- **Pick your own index (1,100 now available)**
- **Diversify within sector you chose**
- **Lower expenses ... but not too low (0.50%)**
- **Bought to be traded (average annual turnover of large ETFs: 1244%)**



# “The Arithmetic of All-In Expenses”

9.

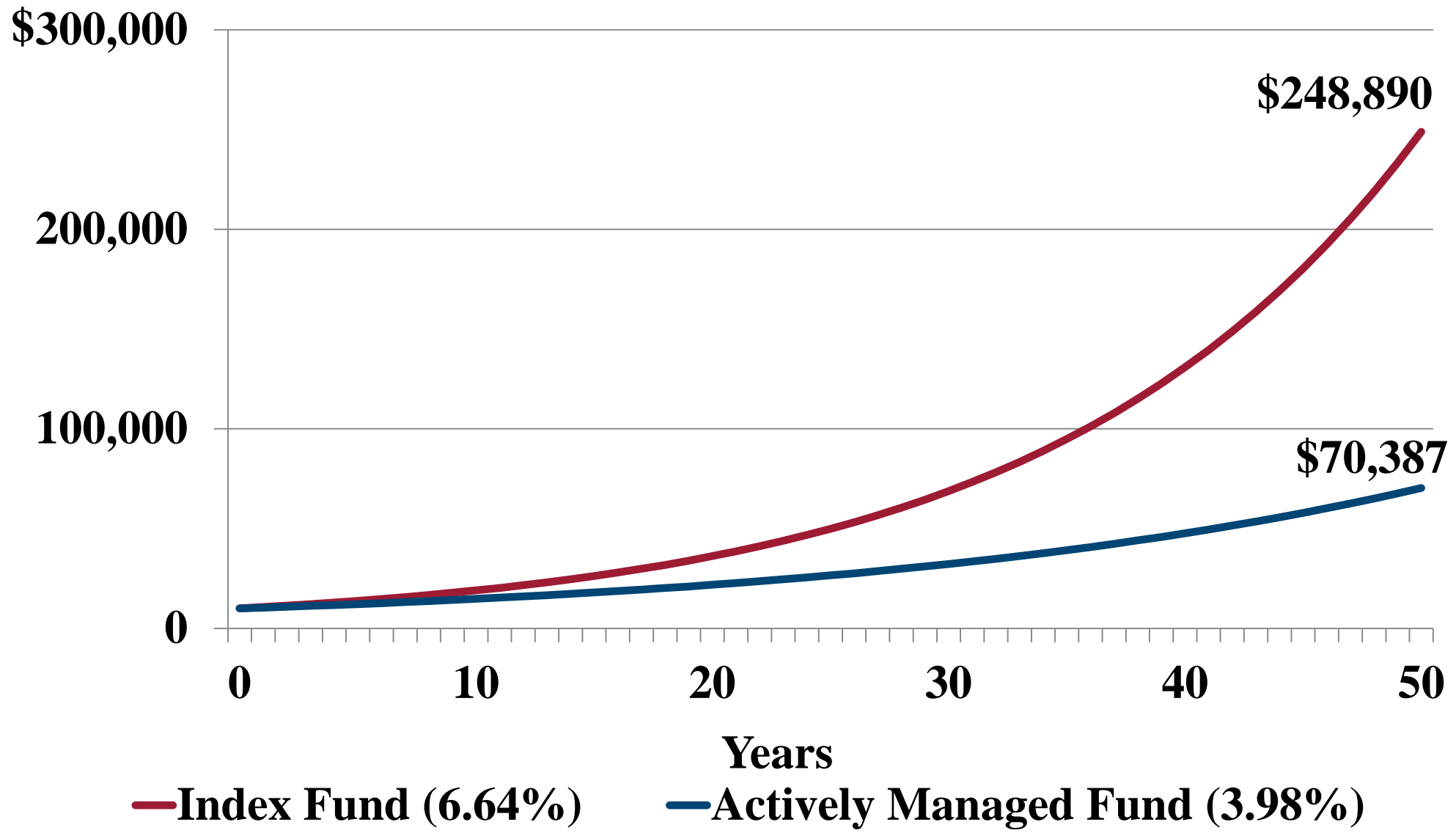
## *Financial Analysts Journal*

	<b>Actively Managed Fund</b>	<b>Index Fund</b>
<b>Expense Ratio</b>	<b>1.12%</b>	<b>0.06%</b>
<b>Transaction Costs</b>	<b>0.50</b>	<b>0.00</b>
<b>Cash Drag</b>	<b>0.15</b>	<b>0.00</b>
<b>Sales Charges/Fees</b>	<b>0.50</b>	<b>0.00</b>
<b>All-In Expenses</b>	<b>2.27%</b>	<b>0.06%</b>
<b>Tax Inefficiency</b>	<b>0.75</b>	<b>0.30</b>
<b>Total Costs</b>	<b>3.02%</b>	<b>0.36%</b>
<b>Gross Return (assumed)</b>	<b>7.00%</b>	<b>7.00%</b>
<b>Net Return</b>	<b>3.98%</b>	<b>6.64%</b>

Note: **Counterproductive investor behavior** (buying high and selling low) has historically reduced returns to active fund investors **by another 1.5-2.0% annually** according to Morningstar.

# The Miracle of Compounding Long-Term Returns Without the Tyranny of Compounding Long-Term Costs

**Growth of \$10,000 over a 50-year investment lifetime**



# Where Does the Disbelieving Investor Turn?

- **Value-seeking, footnote-reading, neurologically and emotionally qualified managers?**
- **Hedge funds?**
- **Superinvestors of Graham and Doddsville?**
- **Gurus?**
- **Variable annuities?**
- **Actively managed mutual funds?**
- **Index funds?**

## Jack to Jim

**The vast majority of American families are sentenced to a lifetime of investing in the existing mutual fund penal system. But if they're smart, they'll do their time in an index fund.**

# Challenges Faced by Investors in Active Funds

- 1. High Costs—2% annual cost = 63% of the long-term return on stocks.**
- 2. Critical erosion (60%+) of dividend income.**
- 3. Giant Size—Mutual funds own 33% of all U.S. equities. “A fat wallet ...”**
- 4. High Turnover—130% of assets.**
- 5. Marketing—“We make what will sell.” Fund failure rate 50% per decade.**
- 6. Investor (and salesman) focus on past returns.**
- 7. Outside ownership of managers (40 of top 50).**

# Aren't There Mutual Funds That Avoid These Problems?

**Yes, but not very many.**

**Characteristics these funds share:**

- 1. Managers, not marketers.**
- 2. Reasonable expense ratios.**
- 3. Low portfolio turnover.**
- 4. Limitations on size.**
- 5. Interim returns that may vary sharply from the market's return.**
- 6. Investment professionals own and operate the management company.**

# Better than the Morningstar Rating System?

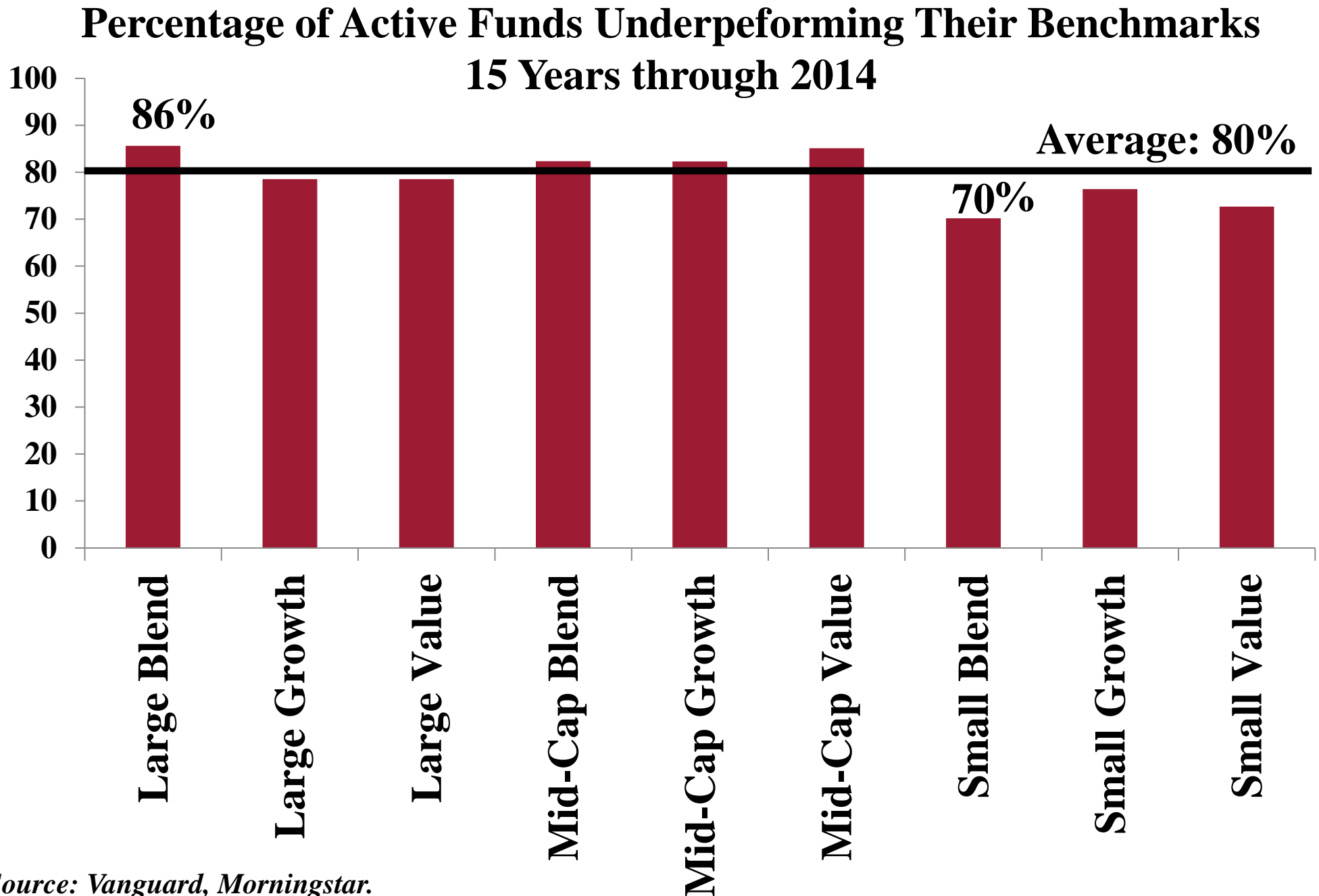
**“Investors should make expense ratios a primary test in fund selection. They are still the most dependable predictor of performance.”**

**Russel Kinnel**

**Morningstar, August 2010**

# Result: Underperformance

## 80% of Active Funds Underperform Over the Long Term



Source: Vanguard, Morningstar.



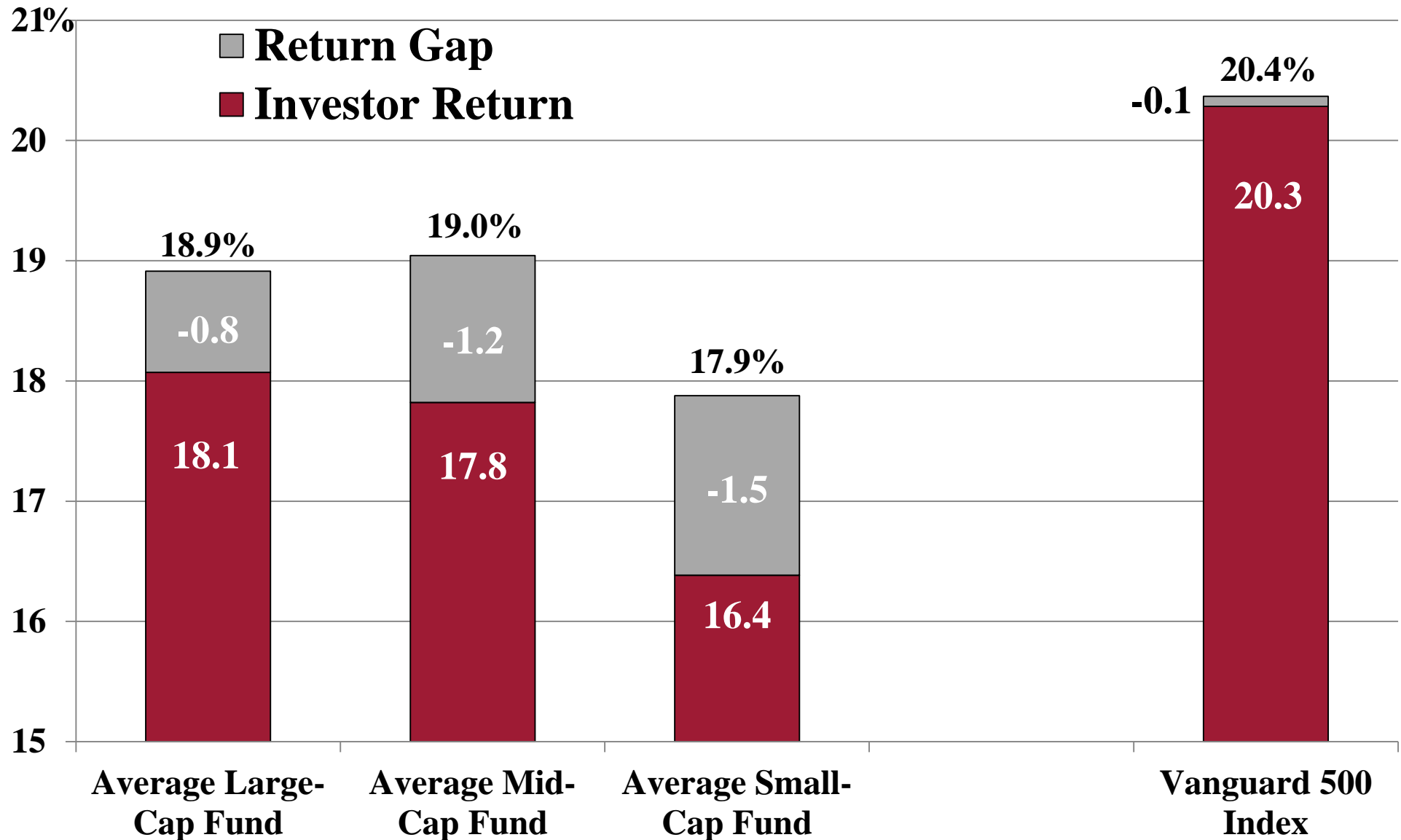
# Fama French 2010

**“...[G]oing forward we expect that a portfolio of low cost index funds will perform about as well as a portfolio of the top three percentiles of past active winners, and better than the rest of the active fund universe.”**

*Source: “Luck versus Skill in the Cross-Section of Mutual Fund Returns,”  
The Journal of Finance, October 2010*

# Index Fund Investors Capture a Higher Share of Fund Returns

## 3-Year Average Annual Returns—Mutual Funds versus Fund Investors



# Can You Pick At Least 21 Superior Managers?

	<b>Index Fund Portfolio</b>	<b>Active Fund Portfolio</b>
<b>Number of Managers in Year 1</b>	<b>0</b>	<b>3</b>
<b>Number of Managers after 50 Years</b>	<b>0</b>	<b>21</b>

**Note: Average tenure of active managers—8 years.**

**Ignores fund failures, estimated at 5% annually (50% per decade).**

# Lack of Persistence in Performance of Active Mutual Funds

Rankings for the 5 years ending 2009			Where they ranked in the subsequent 5 years		
Quintile	5-Year Return*	Number of Funds	Highest Quintile	Lowest Quintile	Merged/Closed
1	Highest	1,091	14%	24%	10%
2	High	1,083	12	16	22
3	Medium	1,084	15	13	26
4	Low	1,085	14	10	38
5	Lowest	1,032	14	9	45

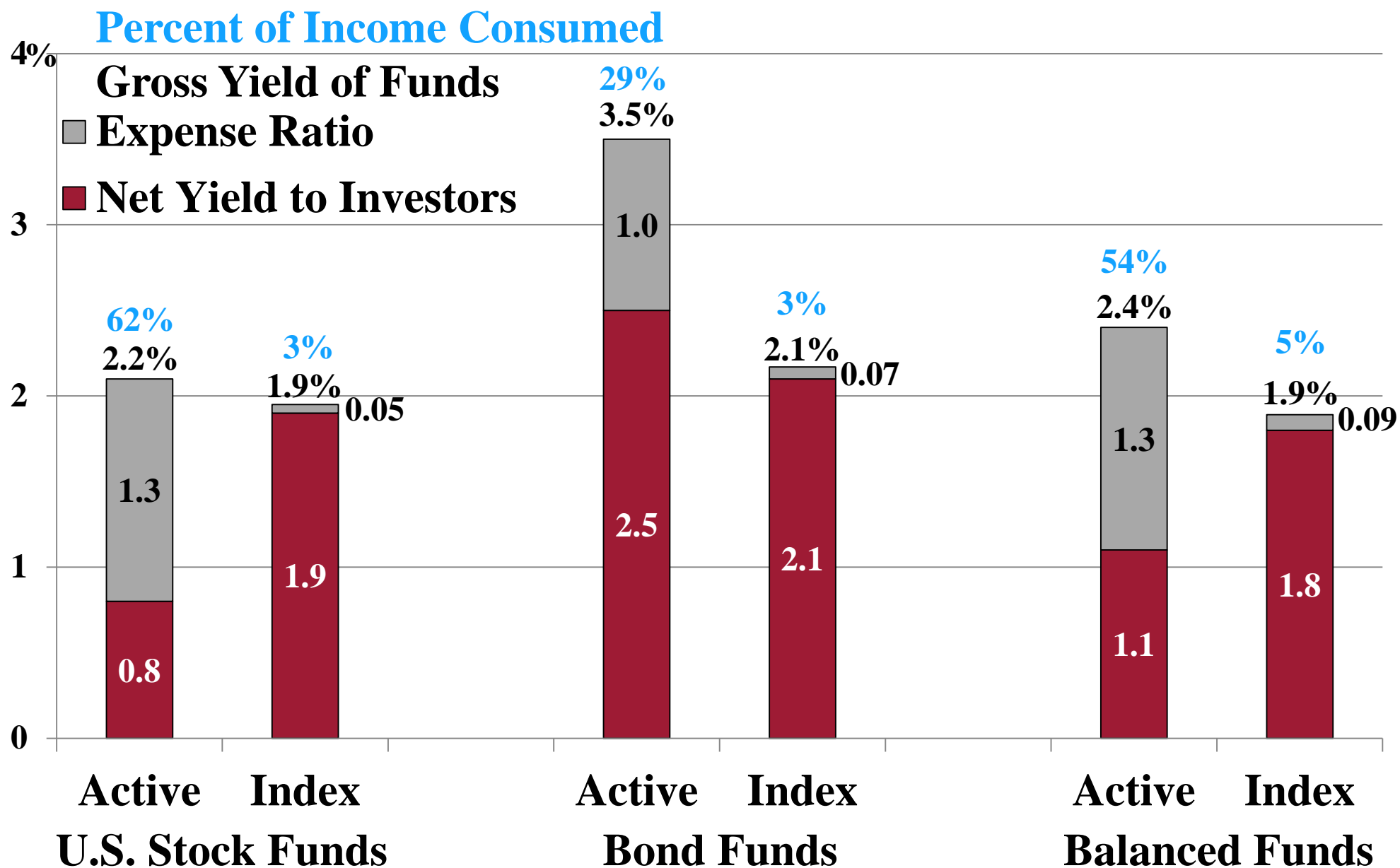
\*Excess return vs. benchmark.

Note: Number of failed funds—1,499

# Conclusion

**Yes, the cost of investing is the determining factor, and the overpowering odds for success favor the index fund.**

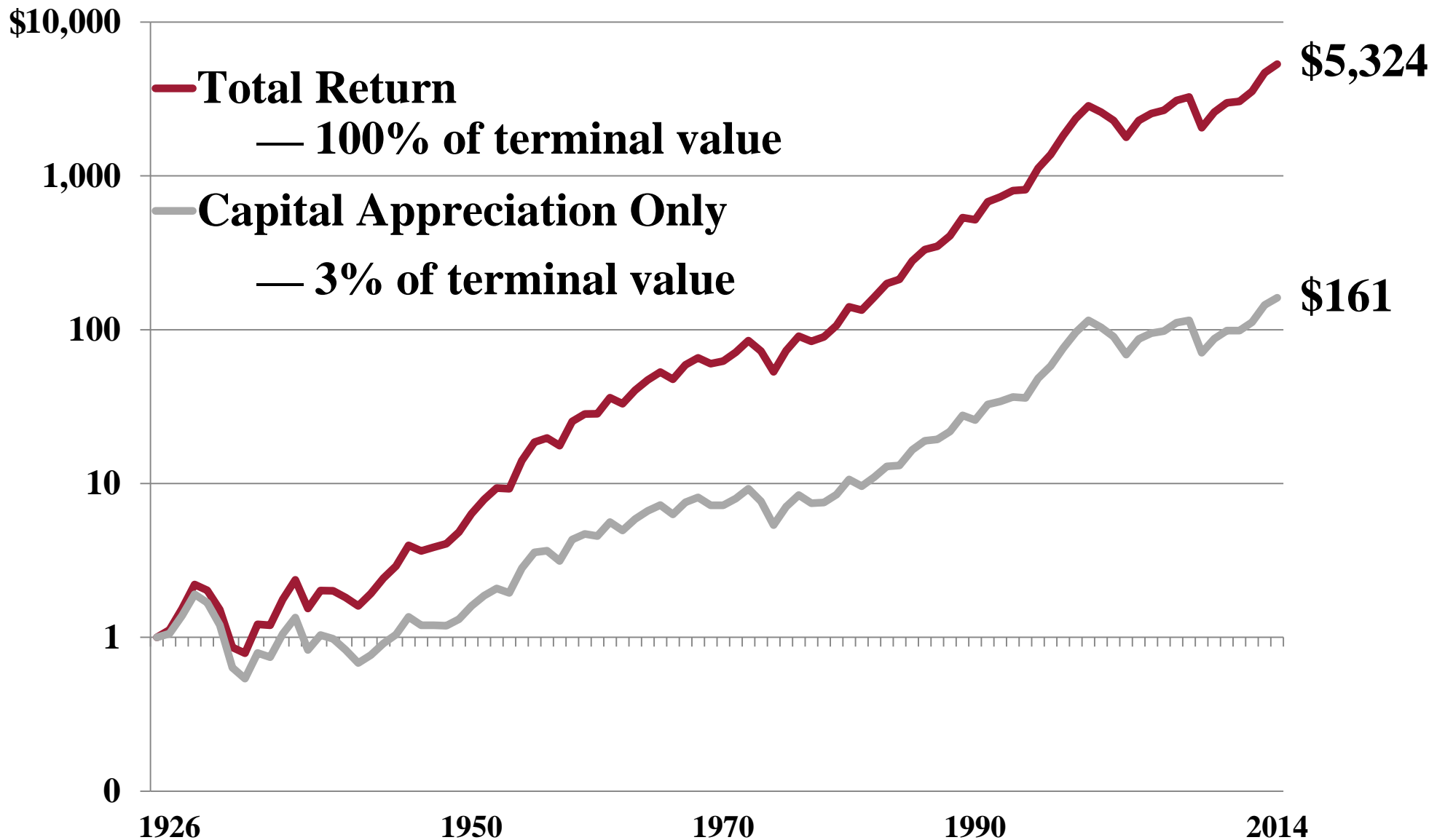
# Dividend Yields and Expense Ratios, 2/2015



Source: Morningstar. Note: Index fund yields and expenses for Vanguard Admiral share classes.

# Dividends Matter!

## Growth of \$1 in the S&P 500 with and without Dividends Reinvested



# Jack and Jim Agree!

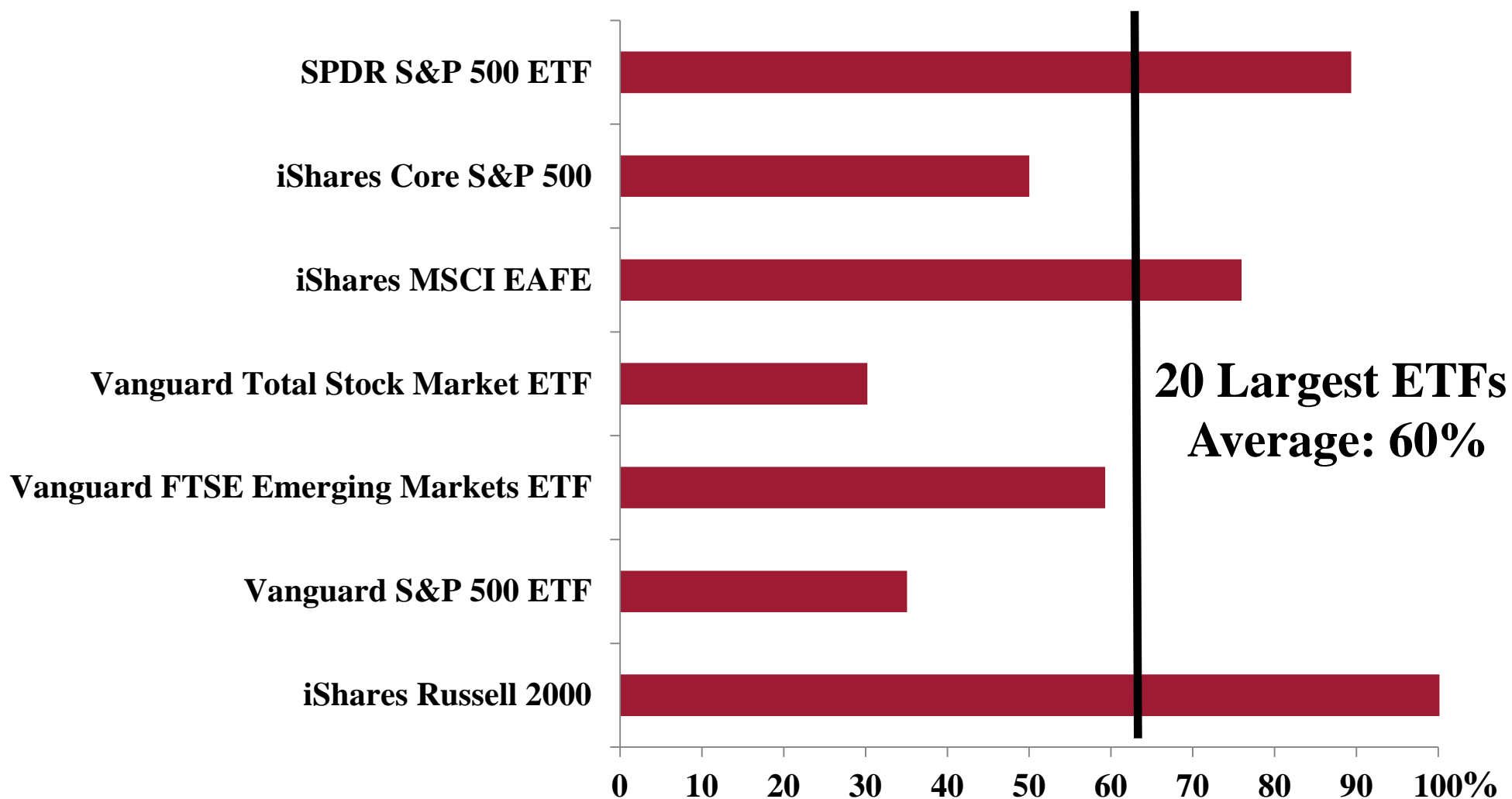
**“For obvious reasons it is impossible for investors as a whole, and therefore for the average investor or speculator, to do better than the general market.... [But] it is possible for a minority of investors to get significantly better results than the average. Two conditions are necessary for that. One is that they must follow sound principles ... related to the value of securities, not to their market price action. The other is that their operation must be different than that of the majority. They have to cut themselves off from the general public and put themselves in a special category.”**

*Benjamin Graham, 1963*



# ETF Institutional Ownership

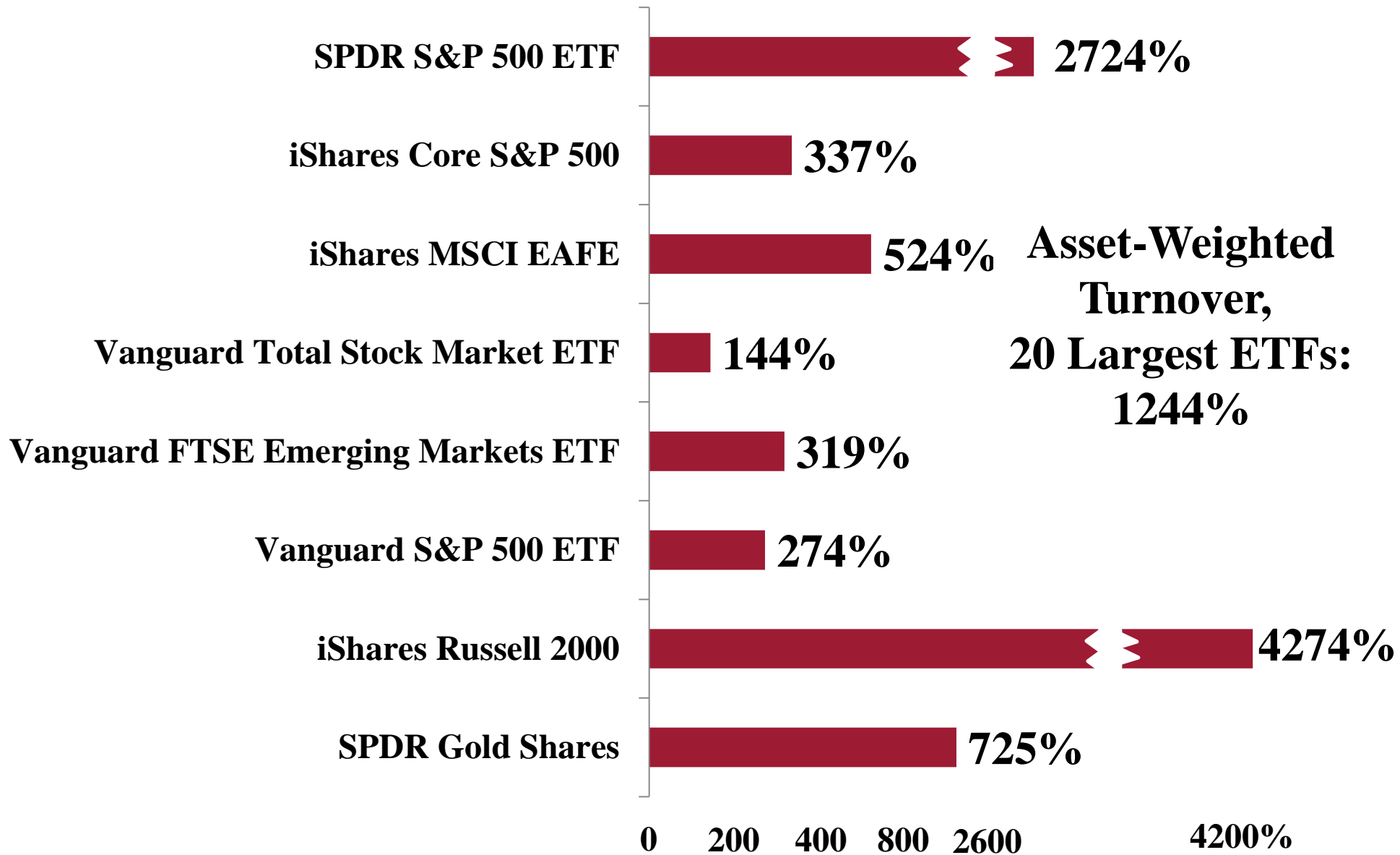
## Institutional Ownership Percentage of Selected ETFs



*Source: NASDAQ*

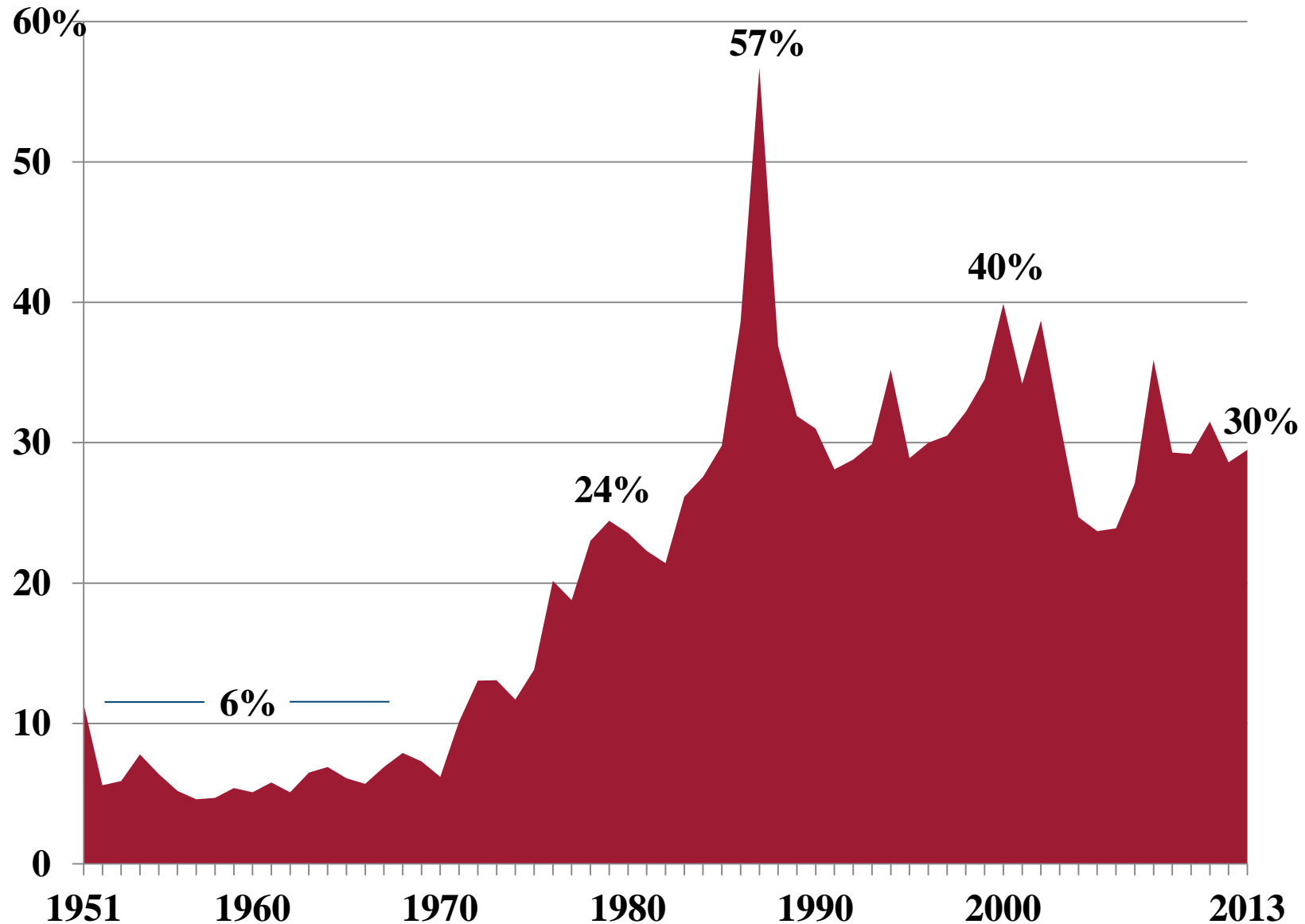
# ETF Turnover

## 2014 Dollar Turnover as a Percentage of Average Annual Assets



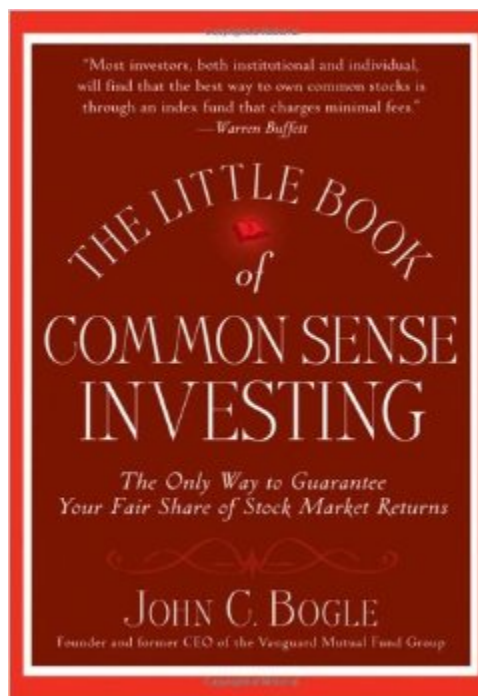
# Mutual Fund Redemption Rates

## Redemptions and Exchanges Out as a Percentage of Average Net Assets



Source: Investment Company Institute

# The Little Book of Common Sense Investing



There are a few investment managers, of course, who are very good – though in the short run, it’s difficult to determine whether a great record is due to luck or talent. Most advisors, however, are far better at generating high fees than they are at generating high returns. In truth, their core competence is salesmanship. Rather than listen to their siren songs, investors – large and small – should instead read Jack Bogle’s *The Little Book of Common Sense Investing*.

—Warren Buffett, 2014 Berkshire Hathaway Annual Report

# Long-Term Holdings of Equity TIFs and ETFs

	Exchange-Traded Funds		Traditional Index Funds		Total Index Funds	
	Assets	% of Total	Assets	% of Total	Assets	% of Total
<b>Total Broad-Based U.S. Equity Funds</b>	<b>\$509 B</b>	<b>31%</b>	<b>\$1.0 T</b>	<b>65%</b>	<b>\$1.5 T</b>	<b>48%</b>
<b>Amount Held by Institutional Traders (60% of ETFs)</b>	<b>305 B</b>	<b>12%</b>	--	--	<b>305 B</b>	<b>10%</b>
<b>Amount Held by Individual Traders (20% of ETFs)</b>	<b>102 B</b>	<b>6%</b>	--	--	<b>102 B</b>	<b>3%</b>
<b>Amount Held by Long-Term Investors (20% of ETFs)</b>	<b>\$102 B</b>	<b>6%</b>	<b>\$1.0 T</b>	<b>65%</b>	<b>\$1.1 T</b>	<b>35%</b>

<b>Name</b>	<b>Total Assets 2014 (in \$Millions)</b>	<b>Total Ret YTD</b>	<b>Total Ret Annlzd 5 Yr</b>
<b>Jacob Small Growth</b>	<b>\$16</b>	<b>15.3</b>	<b>13.6</b>
<b>Monteagle Informed</b>	<b>\$11</b>	<b>13.0</b>	<b>9.6</b>
<b>Oberweis Small-Cap Opportunities</b>	<b>\$8</b>	<b>12.5</b>	<b>15.2</b>
<b>BlackRock Mid-Cap Growth</b>	<b>\$386</b>	<b>11.4</b>	<b>14.9</b>
<b>Tocqueville Opportunity</b>	<b>\$74</b>	<b>11.3</b>	<b>18.0</b>
<b>Hodges Small Intrinsic Value</b>	<b>\$19</b>	<b>11.2</b>	<b>N/A</b>
<b>Century Small Cap</b>	<b>\$331</b>	<b>10.5</b>	<b>16.2</b>
<b>Jacob Micro Cap Growth</b>	<b>\$12</b>	<b>9.8</b>	<b>13.2</b>
<b>Tanaka Growth</b>	<b>\$15</b>	<b>9.3</b>	<b>10.6</b>
<b>Scotia Dynamic U.S. Growth</b>	<b>\$57</b>	<b>8.9</b>	<b>20.4</b>
<b>Vanguard 500 Index Admiral</b>	<b>\$198,712</b>	<b>0.9</b>	<b>14.4</b>
<b>Vanguard Total Stock Mkt Idx Adm</b>	<b>\$383,003</b>	<b>1.8</b>	<b>14.8</b>

# Dividend Yields and Expense Ratios, 2/2015

Category	Net Yield	Expense Ratio	Gross Yield	Percentage Consumed by Expenses
<b>U.S. Stock Active</b>	<b>0.8%</b>	<b>1.3%</b>	<b>2.2%</b>	<b>62%</b>
<b>U.S. Stock Index</b>	<b>1.9</b>	<b>0.05</b>	<b>1.9</b>	<b>3</b>
<b>Int'l Stock Active</b>	<b>1.4</b>	<b>1.5</b>	<b>2.8</b>	<b>51</b>
<b>Int'l Stock Index</b>	<b>2.6</b>	<b>0.14</b>	<b>2.7</b>	<b>5</b>
<b>Bond Active</b>	<b>2.5</b>	<b>1.0</b>	<b>3.5</b>	<b>29</b>
<b>Bond Index</b>	<b>2.1</b>	<b>0.07</b>	<b>2.1</b>	<b>3</b>
<b>Muni Active</b>	<b>1.5</b>	<b>1.0</b>	<b>2.5</b>	<b>39</b>
<b>Muni Index*</b>	<b>2.2</b>	<b>0.12</b>	<b>2.3</b>	<b>5</b>
<b>Balanced Active</b>	<b>1.1</b>	<b>1.3</b>	<b>2.4</b>	<b>53</b>
<b>Balanced Index</b>	<b>1.8</b>	<b>0.09</b>	<b>1.9</b>	<b>5</b>

*Source: Morningstar. Note: Index fund yields and expenses for Vanguard Admiral share classes.*

*\*Vanguard Long-Term Tax-Exempt Fund*

# ETF Turnover

## 2014 Dollar Turnover as a Percentage of Average Annual Assets, 10 Largest ETFs

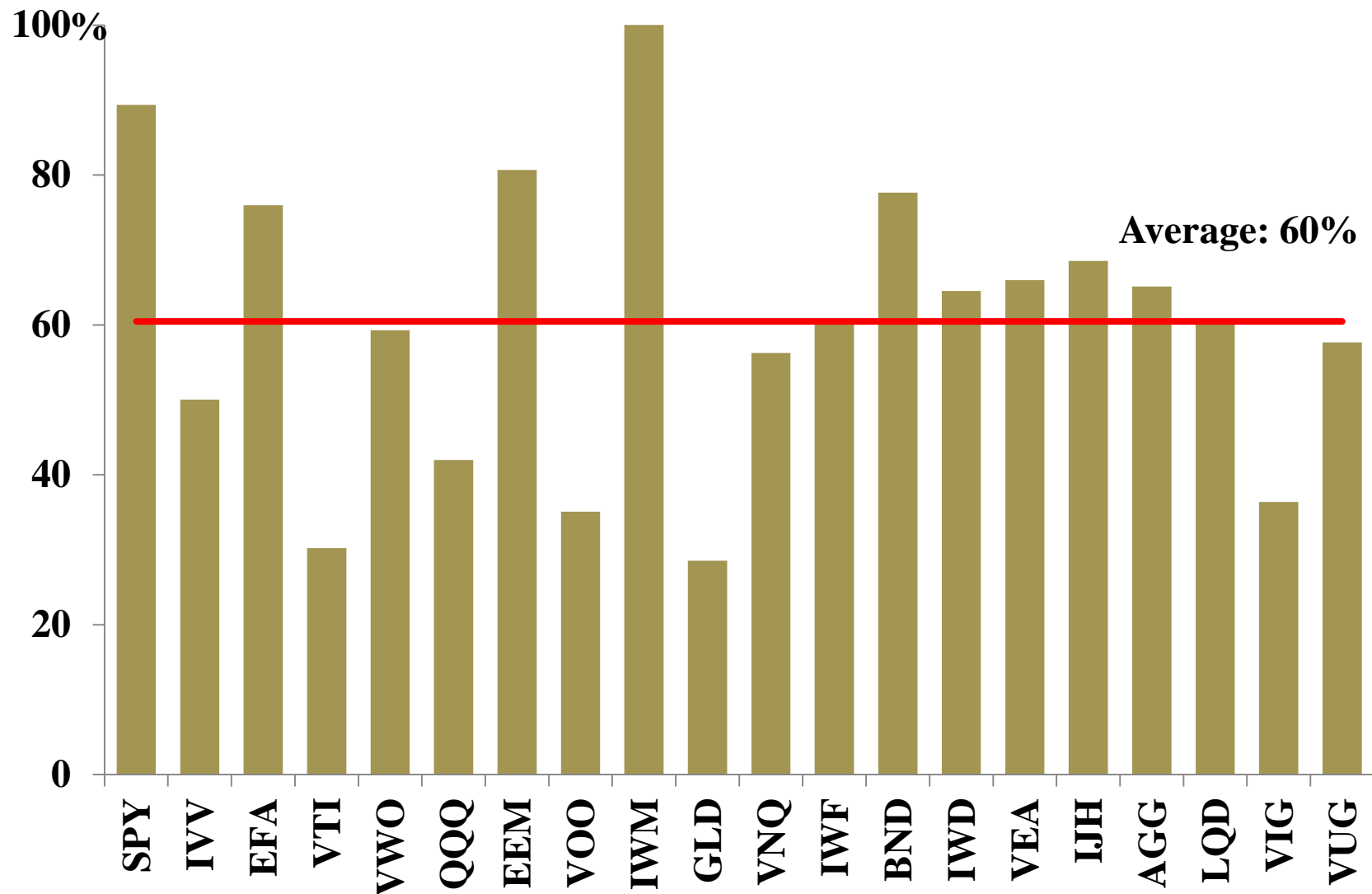
ETF	2014 Turnover
<b>SPY-SPDR S&amp;P 500</b>	<b>2724%</b>
<b>IVV-iShares Core S&amp;P 500</b>	<b>337</b>
<b>EFA-iShares MSCI EAFE</b>	<b>524</b>
<b>VTI-Vanguard Total Stock Market</b>	<b>144</b>
<b>VWO-Vanguard FTSE Emerging Markets</b>	<b>319</b>
<b>QQQ-PowerShares QQQ</b>	<b>2057</b>
<b>EEM-iShares MSCI Emerging Markets</b>	<b>1738</b>
<b>VOO-Vanguard S&amp;P 500</b>	<b>274</b>
<b>IWM-iShares Russell 2000</b>	<b>4274</b>
<b>GLD-SPDR Gold Shares</b>	<b>725</b>
<b>Asset-Weighted Average Turnover</b>	<b>1614%</b>

*Source: Morningstar*



# ETF Institutional Ownership

Institutional Ownership Percentage of the 20 Largest ETFs



Source: NASDAQ

# Broad-Market Indexing

	<b>Broad-Market Funds (S&amp;P 500/ Total Market)</b>	<b>Total Equity Assets</b>	<b>Broad-Market Share</b>
<b>Traditional Index Funds</b>	<b>\$921 B</b>	<b>\$1.57 T</b>	<b>59%</b>
<b>Exchange-Traded Funds</b>	<b>\$365 B</b>	<b>\$1.70 T</b>	<b>21%</b>

*Source: Strategic Insight Simfund*