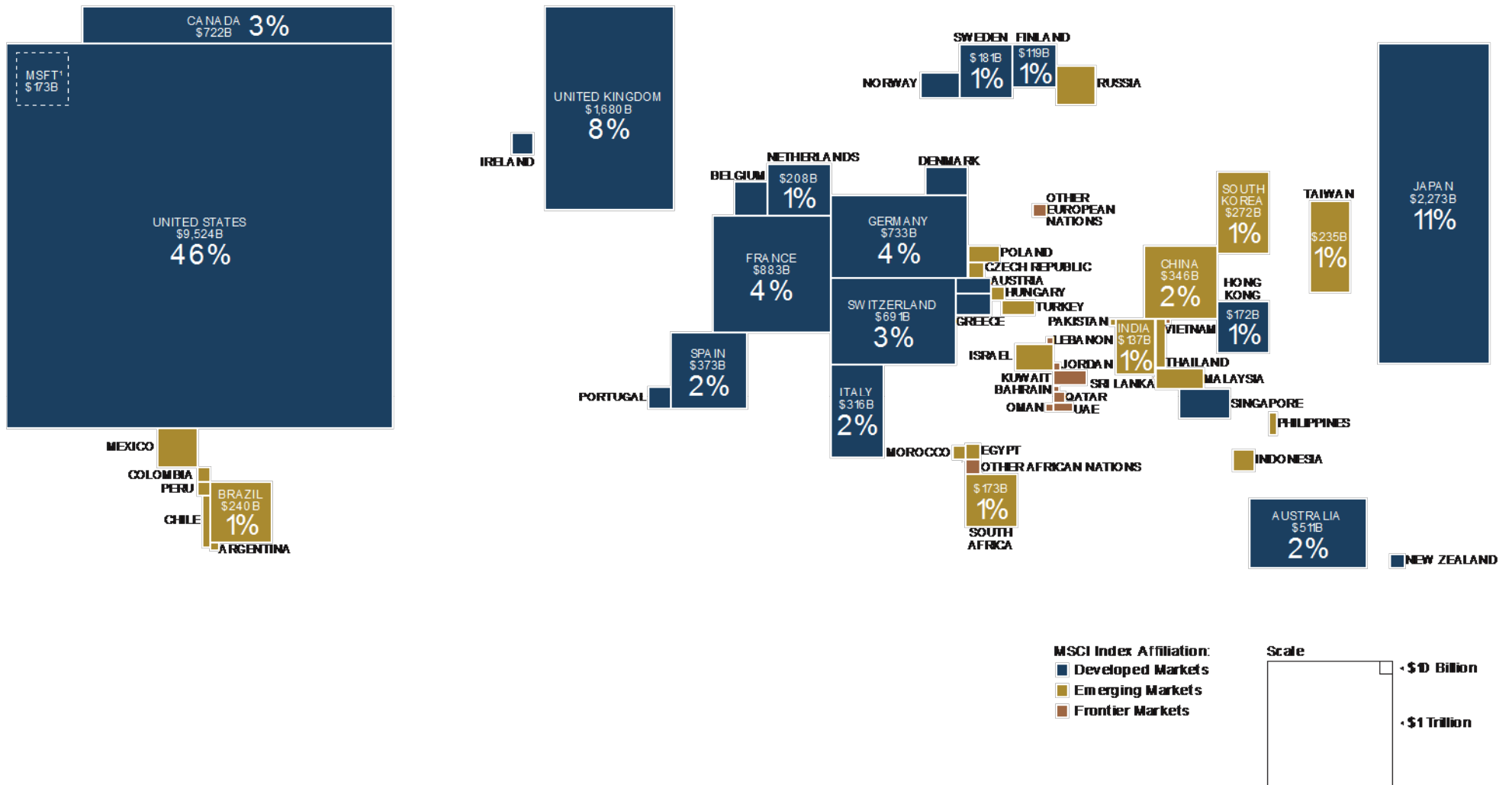


## Investment Considerations

- Reduce expenses.
- Diversify systematically.
- Minimize taxes and turnover.
- Think long-term.
- Apply discipline.
- Hold low-cost funds.
- Maintain asset allocation.

# World Market Capitalization

\$20.9 Trillion as of December 31, 2008



In US dollars. Map reflects countries in the MSCI Provisional All Country World Index, MSCI All Country World Small Cap Index, and MSCI Frontier Markets Index. Market cap data is free-float adjusted. MSCI data copyright MSCI 2009, all rights reserved. Vietnam data provided by MFMI. Many small nations not displayed. Totals may not equal 100% due to rounding. For educational purposes; should not be construed as investment advice. 1. An example large cap stock provided for comparison.

# Efficient Markets Hypothesis

Eugene F. Fama, University of Chicago

## The Hypothesis States:

- Current prices incorporate all available information and expectations.
- Current prices are the best approximation of intrinsic value.
- Price changes are due to unforeseen events.
- “Mispricings” do occur but not in predictable patterns that can lead to consistent outperformance.

## Implications

- Active management strategies cannot consistently add value through security selection and market timing.
- Passive investment strategies reward investors with capital market returns.

# Value Added: Efficient Market Investing

## Asset Class Management

- Grounded in the efficiency of capital markets.
- Captures specific dimensions of risk identified by academic research.
- Minimizes transaction costs and enhances returns through trading and engineering.

## Active Management

- Attempts to beat the market through security selection and market timing.
- Undermines asset class exposure to keep up with the most “promising” securities.
- Generates higher fees, trading costs, and tax consequences due to increased turnover.

## Index Management

- Accepts asset class returns.
- Allows commercial benchmarks to define strategy.
- Sacrifices transaction costs and turnover in favor of tracking.

# The Importance of Long-Term Discipline

<b>Annualized Compound Returns (%)</b>	<b>1926-2008</b>	<b>1965-1981</b>	<b>1982-2008</b>
<b>S&amp;P 500 Index</b>	9.62	6.33	10.64
<b>One-Month US Treasury Bills</b>	3.70	6.66	5.16

The S&P data are provided by Standard & Poor's Index Services Group. One-Month US Treasury Bills data © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld).

For illustrative purposes only. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money.

# The Impact of Volatility

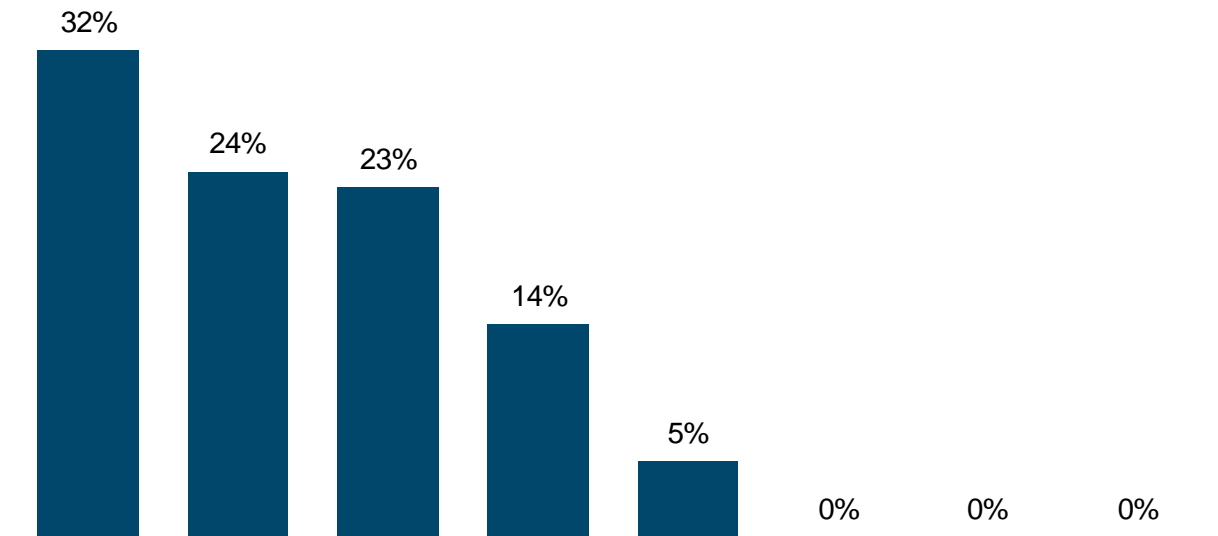
## Impact on a Hypothetical \$100,000 Portfolio

	Year 1 Return	Year 2 Return	Average Return	Compound Return	Value at End of Year 2
<b>Portfolio #1</b>	50%	-50%	0%	-13.4%	\$75,000
<b>Portfolio #2</b>	10%	-10%	0%	-0.5%	\$99,000

# Fixed Income vs. Large Stocks

Monthly: January 1926-December 2008

Rolling Time Periods	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	30 Years	40 Years
Total Number of Periods	985	961	937	877	817	757	637	517
Number of Periods One-Month T-Bills Outperformed S&P 500 Index	314	230	214	126	44	0	0	0



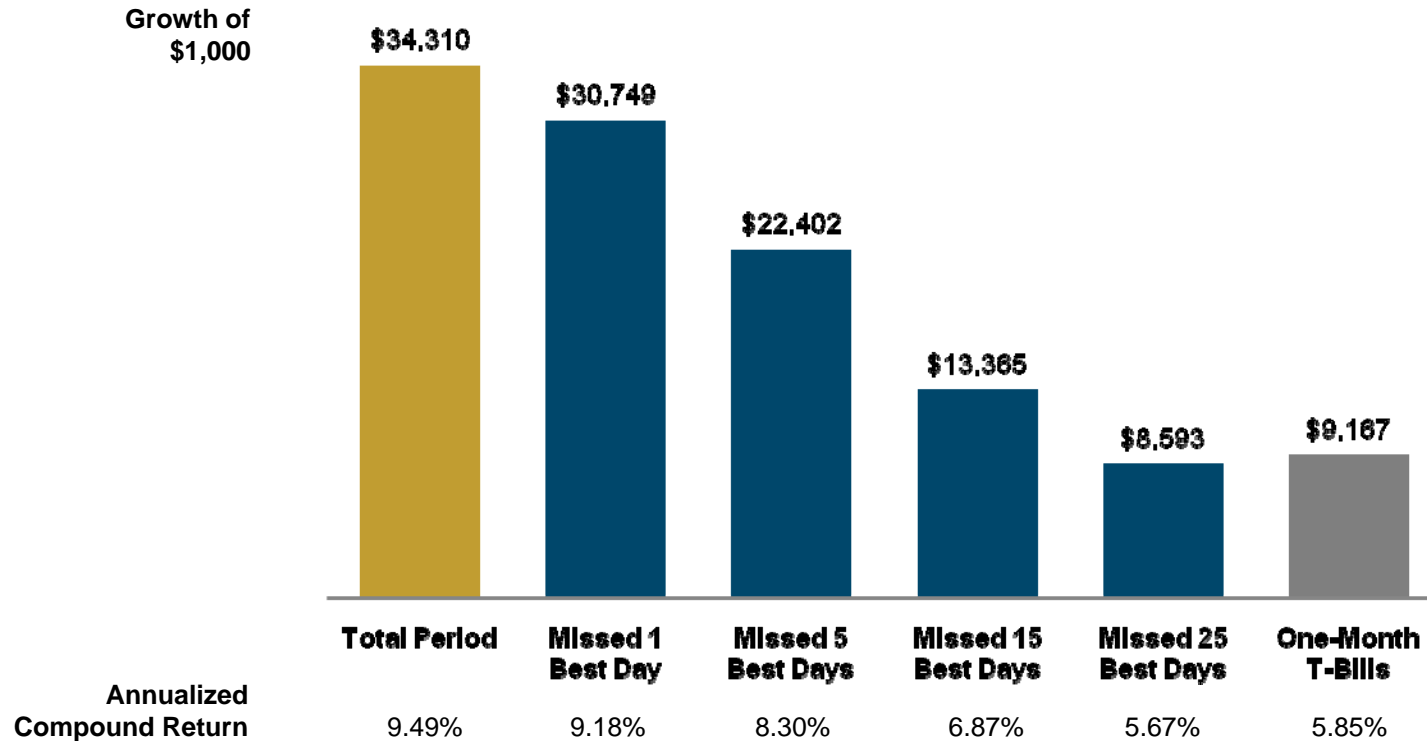
Percentage of All Rolling Periods Where One-Month T-Bills Outperformed S&P 500 Index

The S&P data are provided by Standard & Poor's Index Services Group. One-Month Treasury Bills © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld).

Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money. Even a long-term investment approach cannot guarantee a profit. Economic, political, and issuer-specific events will cause the value of securities, and the portfolios that own them, to rise or fall. Because the value of your investment in a portfolio will fluctuate, there is a risk that you will lose money. Indexes are referred to for comparative purposes only and do not represent similar asset classes in terms of components or risk exposure; thus, their returns may vary significantly. The S&P 500 Index measures the performance of large cap US stocks. One-Month T-Bills measure the performance of US government-issued Treasury bills.

# Performance of the S&P 500 Index

Daily: January 1, 1970-December 31, 2008



Performance data for January 1970-August 2008 provided by CRSP; performance data for September 2008-December 2008 provided by Bloomberg.

The S&P data are provided by Standard & Poor's Index Services Group. CRSP data provided by the Center for Research in Security Prices, University of Chicago.

US bonds and bills data © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld).

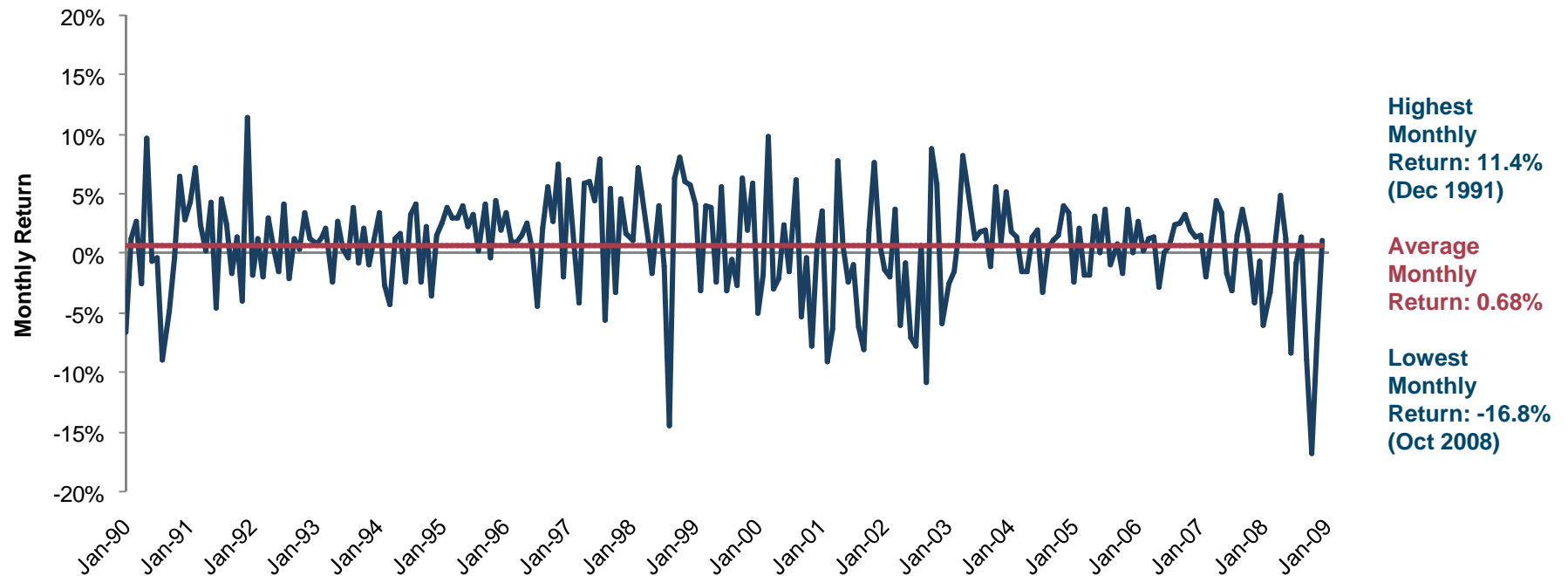
Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio.

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# S&P 500 Index Returns

Monthly: January 1990-December 2008



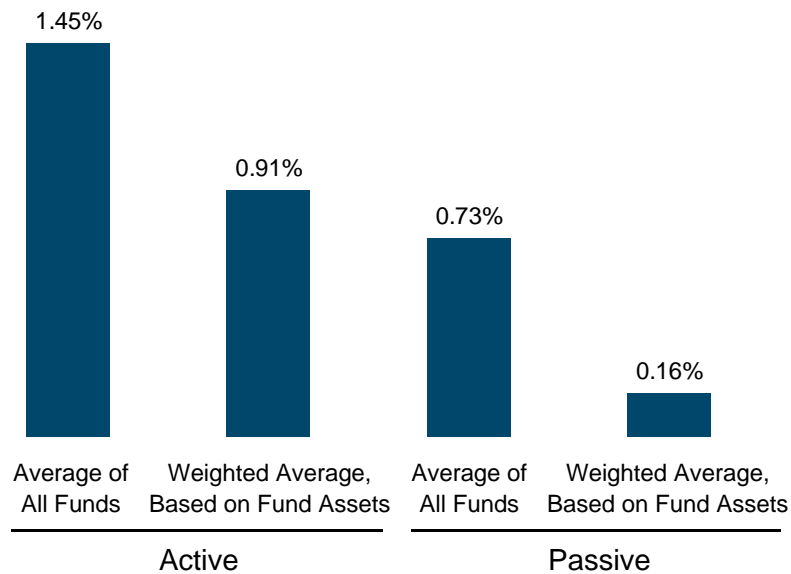
Sources: Dimensional; the S&P data are provided by Standard & Poor's Index Services Group. Indices are not available for direct investment; their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

# Mutual Fund Expenses

“After costs, the return on the average actively managed dollar will be less than the return on the average passively managed dollar for any time period.”

—William F. Sharpe, 1990 Nobel Laureate

### Domestic Mutual Fund Expense Ratios



### International Mutual Fund Expense Ratios

