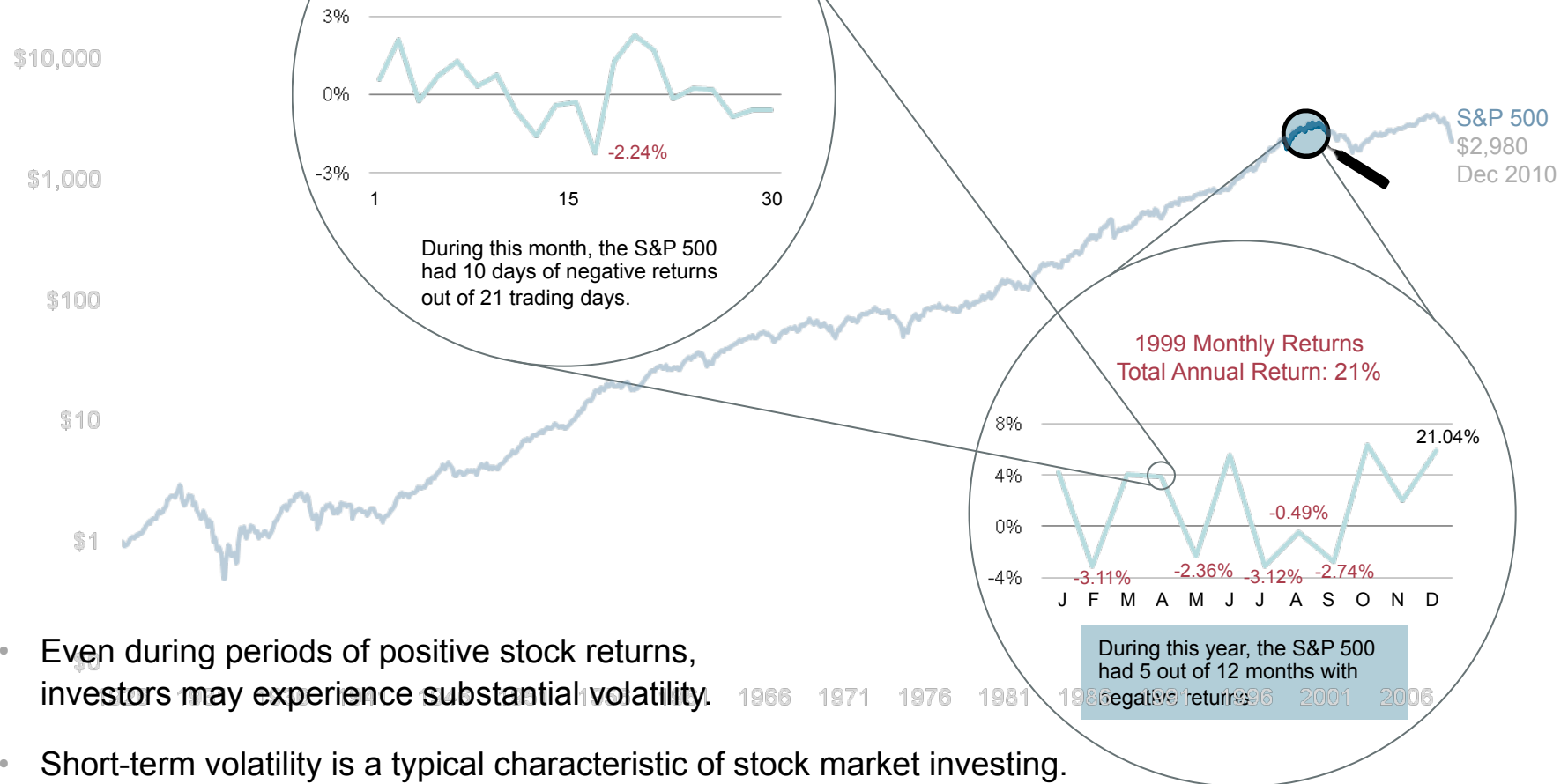


# Long-Term Returns vs. Short-Term Volatility

1999 S&P 500 Illustration



- Even during periods of positive stock returns, investors may experience substantial volatility.
- Short-term volatility is a typical characteristic of stock market investing.
- Long-term returns are the sum of short-term volatility.

# Market Downturns—A Historical Perspective

Simultaneous Index Monthly Downturns

As of December 31, 2012

	Domestic Large Cap	Domestic Small Cap	International	Emerging
	S&P 500	CRSP 6-10	MSCI EAFE	MSCI Emerging
Fund Equivalent Index	Index	Index	Index	Markets Index
Start Date	January 1970	January 1970	January 1970	January 1988
End Date	December 2012	December 2012	December 2012	December 2012
Threshold	-7%	-7%	-7%	-7%
<b>Historical Simultaneous Index Monthly Downturns (7% threshold)</b>				
April 1970	-8.9%	-16.9%	-8.4%	—
November 1973	-10.8%	-18.9%	-14.4%	—
August 1974	-8.3%	-8.2%	-10.4%	—
September 1974	-11.7%	-8.4%	-7.4%	—
March 1980	-9.9%	-17.5%	-10.7%	—
October 1987	-21.5%	-28.7%	-14.0%	—
August 1990	-9.0%	-12.6%	-9.7%	-12.8%
August 1998	-14.5%	-20.6%	-12.4%	-28.9%
February 2001	-9.1%	-10.0%	-7.5%	-7.8%
September 2001	-8.1%	-14.9%	-10.1%	-15.5%
July 2002	-7.8%	-14.8%	-9.9%	-7.6%
September 2002	-10.9%	-7.3%	-10.7%	-10.8%
June 2008	-8.4%	-9.4%	-8.2%	-10.0%
September 2008	-8.9%	-8.9%	-14.5%	-17.5%
October 2008	-16.8%	-21.4%	-20.2%	-27.4%
May 2010	-8.0%	-7.7%	-11.5%	-8.8%
September 2011	-7.0%	-10.9%	-9.5%	-14.6%
<b>Average</b>	<b>-10.6%</b>	<b>-13.9%</b>	<b>-11.1%</b>	<b>-14.7%</b>
<b>Annualized Average Compound Return over Subsequent Periods (starting the next month)</b>				
1 Year	13.6%	25.3%	9.0%	24.8%
3 Years	10.5%	19.6%	8.9%	19.9%
5 Years	10.5%	19.4%	11.7%	25.6%
10 Years	10.5%	16.1%	9.3%	15.2%

- Simultaneous asset class volatility and negative returns have occurred in the past.
- Despite these downturns, investors who remained disciplined were rewarded in the long run.
- Use balanced diversified portfolios and focus on long-term results.

Sources: The S&P data are provided by Standard & Poor's Index Services Group; CRSP Index returns from the Center for Research in Security Prices, University of Chicago; MSCI data copyright MSCI 2013, all rights reserved. MSCI EAFE Index is net of foreign withholding taxes on dividends. MSCI Emerging Markets Index is gross of foreign withholding taxes on dividends. Annualized average compound return over subsequent periods is calculated as the compound growth rate required to produce the average total return over the same time period. Performance for periods greater than one year are annualized. Indices are not available for direct investment; therefore, their performance does not reflect expenses associated with management of an actual portfolio. Past performance is not a guarantee of future results and there is always the risk that an investor may lose money.

**Page 1:**

Equities offer a higher expected return than fixed income assets over the long term. However, this return premium comes with higher risk, which is manifested in short-term volatility. This slide illustrates that short-term losses are often embedded in longer-term gains. The graph shows the growth of \$1 invested in the S&P 500 Index in 1926 until the present, and details the index's performance during a single year (1999). The first bubble plots monthly returns and the adjacent bubble shows daily returns for a single month (April 1999). Although the S&P 500 Index delivered a strong 21.04% return in 1999, five of the months had negative returns. The market delivered a 3.9% total return during April, even though it closed with losses on many days. Investors who want to capture the higher returns of stocks must accept the possibility of experiencing daily, monthly, and yearly losses along the way. Disciplined investors must focus on the big picture while knowing that short-term volatility will often test their resolve.

**Page 2:**

This chart lists the months in which all asset classes simultaneously experienced a downturn, which is again defined as a 7% or greater drop in monthly market value. All performance periods are from 1970 to December 2012. For example, April 1970 was the first month in this time period in which the S&P 500, CRSP 6-10, and MSCI EAFE indexes all experienced a monthly downturn (-7% or greater) simultaneously. It is interesting to note that all three indexes experienced simultaneous negative performance in only 15 months since 1970 (480 months)—or only about 3% of the time. Since 1988, which is the earliest available time period for the MSCI Emerging Markets Index, all four indexes have fallen below the -7% threshold in only nine of 264 months—or about 3.4% of the time. The first month was in August 1990. Although asset class correlations may tend to rise during periods of extreme negative performance, this chart shows that these four major asset classes have rarely experienced severe monthly downturns together. This fact highlights the importance of global diversification in a portfolio.