

## CAP SIZE PERFORMANCE

“U.S. Undercurrents” is a new series of briefs covering the U.S. stock market and the disparity between its various size and sector segments. The series begins with an exploration of historic divergence across size benchmarks. We’ll use the [S&P 500®](#) to represent the domestic large-cap segment, the [S&P MidCap 400®](#) to cover mid-cap issues, and the [S&P SmallCap 600®](#) to represent small-cap stocks.

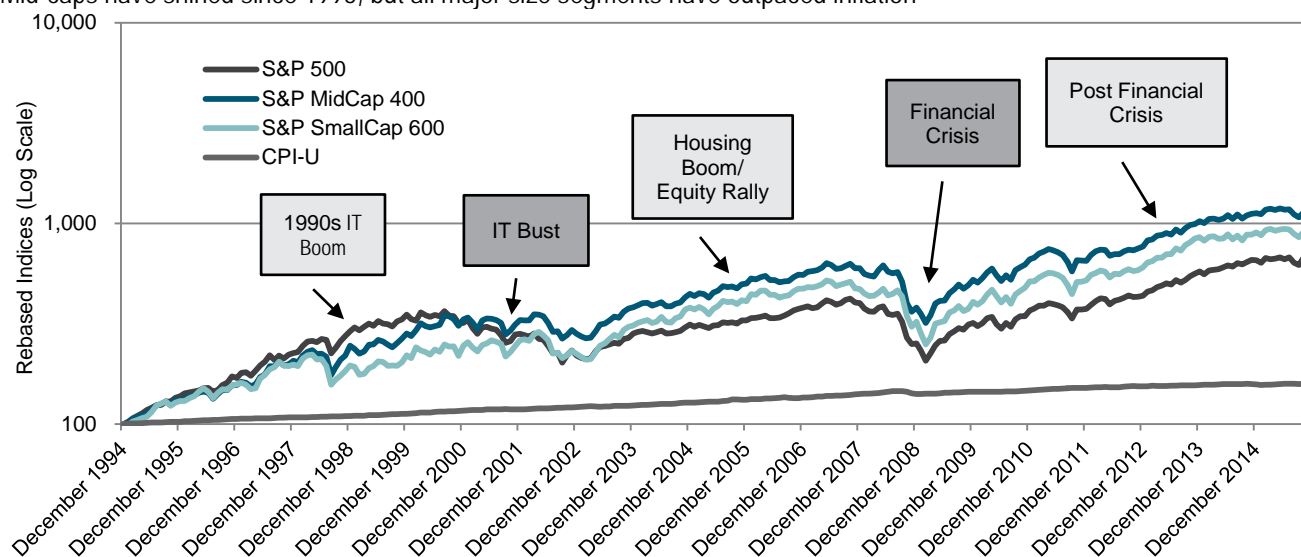
## OVERVIEW

During the sample period of December 1994 through November 2015, all three size segments handily outpaced U.S. inflation, as measured by the Consumer Price Index for All Urban Consumers (CPI-U), which grew at a compound rate of approximately 2.24% per year. However, there were some periods when the results looked less encouraging. For example, as of February 2009 (the trough of the global financial crisis), the cumulative 10-year total return (including reinvested dividends) of the S&P 500 was approximately -29.5%. This was a period during which inflation had risen by about 29.2%. This left large-cap investors with an impairment to their cumulative purchasing power on the order of -58.7% over the preceding 10 years.

On the other hand, investors in mid- and small-cap shares stayed ahead of the game. Even at the market low of the financial crisis, the S&P MidCap 400 and S&P SmallCap 600 enjoyed 10-year cumulative returns of 42.3% and 41.8%, respectively—both comfortably ahead of inflation.

### Exhibit 1: Divergence Among Size Benchmarks

Mid-caps have shined since 1995, but all major size segments have outpaced inflation



Source: S&P Dow Jones Indices LLC, [Federal Reserve Economic Data](#). Rebased index levels derived from monthly total returns. Data from December 1994 to November 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

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S&P Dow Jones Indices' Market Attributes® series provides market commentary highlighting developments across various asset classes.

## RECENT BOOMS AND BUSTS

Over the past 20 years or so, investors in the U.S. stock market have endured several boom and bust cycles. Booms have generally lasted longer than busts. The average duration of the IT Boom, the Housing Boom and concurrent equity rally, and the Post-Crisis Recovery was 70 months (as of November 2015). The average duration of the IT Bust and the Financial Crisis is about 21 months. Perhaps this is not surprising, as recovering from deep price corrections takes time—the arithmetic of market cycles tell us that a 50% price decline requires a subsequent price appreciation of 100% to break even. The market, as the old saying goes, climbs a “wall of worry.” In all of the boom and bust periods, large caps consistently offered the lowest volatility but not always the best risk-adjusted return (see Exhibit 2).

### S&P 500

From the outset of 1995 through the bursting of the IT bubble in 2000, large-cap stocks recorded gains in excess of both mid- and small-cap stocks. But since the low of September 2002, the large caps have yet to regain their leadership—though the S&P 500 (TR) has provided lower volatility than its siblings (14.18% versus 16.59% for the S&P MidCap 400 and 17.98% for the S&P SmallCap 600).

### S&P MIDCAP 400

From January 1995 to November 2015, mid caps have led the pack in both absolute return (compounding at a rate of 12.37% per year, including dividends) and risk-adjusted return (0.71). During the IT cycle of the late 1990s, mid caps participated in the upside, but they did not give as much back as large caps on the downside, from 2000 to 2002. This set them up for outperformance over the remainder of the period, through November 2015.

### S&P SMALLCAP 600

The technology bust of 2000-2002 produced a relatively mild correction in small-cap stock prices, though these shares had not run up as much as large- or mid-cap shares. For the entire sample period, small-cap issues provided an absolute return premium to large caps, but they trailed the mid-cap segment. Though small caps outperformed large caps, these stocks consistently exhibited the most volatility, so periods of relative outperformance were not a free lunch.

Exhibit 2: Monthly Total Returns During Different Economic Cycles			
IT Boom	S&P 500	S&P MidCap 400	S&P SmallCap 600
January 1995-August 2000 (%)	265.54	247.13	149.32
Number of Months	68	68	68
Number of Years	5.7	5.7	5.7
Annualized Return (%)	25.70	24.56	17.49
Standard Deviation (%)	4.16	4.96	5.23
Annualized Standard Deviation (%)	14.40	17.18	18.13
Annualized Return/Annualized Risk	1.8	1.4	1.0
IT Bust			
September 2000-September 2002 (%)	-44.73	-23.33	-14.61
Number of Months	25	25	25
Number of Years	2.1	2.1	2.1
Annualized Return (%)	-24.77	-11.97	-7.30
Standard Deviation (%)	5.11	6.00	6.74
Annualized Standard Deviation (%)	17.69	20.79	23.34
Annualized Return/Annualized Risk	-1.4	-0.6	-0.3
Housing Boom/Equity Rally			
October 2002-October 2007 (%)	108.39	136.51	140.32
Number of Months	61	61	61
Number of Years	5.1	5.1	5.1
Annualized Return (%)	15.54	18.45	18.83
Standard Deviation (%)	2.78	3.22	3.72
Annualized Standard Deviation (%)	9.62	11.17	12.88
Annualized Return/Annualized Risk	1.6	1.7	1.5
Financial Crisis			
November 2007-February 2009 (%)	-50.95	-49.37	-51.35
Number of Months	16	16	16
Number of Years	1.3	1.3	1.3
Annualized Return (%)	-41.39	-39.98	-41.75
Standard Deviation (%)	5.66	7.36	7.58
Annualized Standard Deviation (%)	19.62	25.49	26.27
Annualized Return/Annualized Risk	-2.1	-1.6	-1.6
Post-Crisis Recovery			
March 2009-November 2015 (%)	226.61	259.89	273.15
Number of Months	81	81	81
Number of Years	6.8	6.8	6.8
Annualized Return (%)	19.17	20.89	21.54
Standard Deviation (%)	3.92	4.65	5.07
Annualized Standard Deviation (%)	13.58	16.10	17.56
Annualized Return/Annualized Risk	1.4	1.3	1.2

Source: S&P Dow Jones Indices LLC. Cumulative total returns calculated from monthly total return index levels. Data from January 1995 to November 2015. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## CALENDAR YEARS

The IT Boom during the late 1990s saw a string of consecutive years in which the size premium, theorized by professors Eugene Fama and Kenneth French, turned out to be negative. But small- and mid-cap stocks have generally been the (relative) winners since 2000. Over the entire sample period, the average calendar year outperformance of mid caps relative to large caps was 2.52%, while for small caps relative to large caps it was 1.23%.

The overall range in performance among all three size benchmarks varied from less than 1% (YTD 2015) to almost 30% in 1998, at the height of the IT Boom. It has paid to be diversified across cap-size segments, but more in some years than in others.

Exhibit 3: Relative Size Performance Based on Monthly Returns							
Year	S&P 500 (%)	S&P MidCap 400 (%)	S&P SmallCap 600 (%)	Range (%)	Relative Size Performance (%)		
				(Max-Min)	(Small-Large)	(Small-Mid)	(Mid-Large)
1995	37.58	30.95	29.96	7.62	-7.62	-0.99	-6.63
1996	22.96	19.20	21.32	3.76	-1.64	2.12	-3.76
1997	33.36	32.25	25.58	7.78	-7.78	-6.67	-1.11
1998	28.58	19.11	-1.31	29.88	-29.88	-20.42	-9.46
1999	21.04	14.72	12.40	8.64	-8.64	-2.32	-6.32
2000	-9.10	17.51	11.80	26.61	20.90	-5.71	26.61
2001	-11.89	-0.60	6.54	18.42	18.42	7.14	11.28
2002	-22.10	-14.51	-14.63	7.59	7.47	-0.12	7.59
2003	28.68	35.62	38.79	10.10	10.10	3.17	6.93
2004	10.88	16.48	22.65	11.77	11.77	6.17	5.60
2005	4.91	12.56	7.68	7.64	2.77	-4.87	7.64
2006	15.79	10.32	15.12	5.48	-0.68	4.80	-5.48
2007	5.49	7.98	-0.30	8.28	-5.79	-8.28	2.49
2008	-37.00	-36.23	-31.07	5.92	5.92	5.16	0.77
2009	26.46	37.38	25.57	11.81	-0.89	-11.81	10.92
2010	15.06	26.64	26.31	11.58	11.24	-0.33	11.58
2011	2.11	-1.73	1.02	3.84	-1.10	2.75	-3.84
2012	16.00	17.88	16.33	1.87	0.32	-1.55	1.87
2013	32.39	33.50	41.31	8.93	8.93	7.81	1.11
2014	13.69	9.77	5.76	7.93	-7.93	-4.01	-3.92
YTD as of November 2015	3.01	2.08	2.95	0.93	-0.05	0.88	-0.93
				Mean Size Premium:	1.23	-1.29	2.52
				Median Size Premium:	-0.05	-0.33	1.11

Source: S&P Dow Jones Indices LLC. Calculated from monthly total return index levels. Data from January 1995 to November 2015. Dark blue cells represent best performers and light blue cells represent worst performers. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## TRAILING PERIODS

In each time period in Exhibit 4, as was also the case in our boom and bust table (Exhibit 2), the small-cap benchmark experienced the highest volatility and the large-cap benchmark exhibited the lowest. Though the S&P MidCap 400 has been the performance leader throughout our sample, different benchmarks have led in different periods. In terms of risk-adjusted performance, leadership has also shifted between size segments.

<b>Exhibit 4: Benchmark Comparison</b>			
<b>Entire Period (January 1995-November 2015)</b>	<b>S&amp;P 500</b>	<b>S&amp;P MidCap 400</b>	<b>S&amp;P SmallCap 600</b>
Annualized Return (%)	9.55	12.37	11.24
Annualized Standard Deviation (%)	15.08	17.34	18.62
Annualized Return/Annualized Risk	0.63	0.71	0.60
<b>3 Years to November 2015</b>			
Annualized Return (%)	16.09	15.19	16.70
Annualized Standard Deviation (%)	10.49	11.46	12.94
Annualized Return/Annualized Risk	1.53	1.33	1.29
<b>5 Years to November 2015</b>			
Annualized Return (%)	14.40	13.05	14.25
Annualized Standard Deviation (%)	11.90	13.91	15.01
Annualized Return/Annualized Risk	1.21	0.94	0.95
<b>10 Years to November 2015</b>			
Annualized Return (%)	7.48	8.71	8.44
Annualized Standard Deviation V	15.05	17.75	19.04
Annualized Return/Annualized Risk	0.50	0.49	0.44
<b>15 Years to November 2015</b>			
Annualized Return (%)	5.15	9.16	10.12
Annualized Standard Deviation (%)	15.00	17.28	18.72
Annualized Return/Annualized Risk	0.34	0.53	0.54
<b>20 Years to November 2015</b>			
Annualized Return (%)	8.38	11.45	10.42
Annualized Standard Deviation (%)	15.32	17.63	18.87
Annualized Return/Annualized Risk	0.55	0.65	0.55

Source: S&P Dow Jones Indices LLC. Cumulative total returns calculated from monthly total return index levels. Data from January 1995 to November 2015. Returns annualized through November 2015. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## CONCLUSION

Performance disparity among segments of the stock market can be observed in various ways, and the S&P U.S. Equity indices provide a convenient framework for this analysis. While all three major size segments of the U.S. stock market almost always move in the same direction, the magnitude of performance differences among them can sometimes be quite significant. From January 1995 through November 2015, the S&P MidCap 400 was the leader in terms of absolute and risk-adjusted performance. In upcoming briefs, we'll take a closer look at size benchmark fundamentals, followed by an examination of economic sectors across cap sizes.

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