
Mid Caps Defy Conventional Wisdom in Crisis and Recovery

Matthew J. Bartolini, CFA

Head of SPDR Americas Research

Executive Summary

The current market environment has created a lot of uncertainty, given the large drawdowns and equally strong rallies. Investors positioning equity portfolios today may want to review the performance of various equity exposures during past systemic crises and use the insights they gain to inform future and current decisions.

Conventional wisdom states that large-cap stocks hold up best when major risk events cause downturns in the equity markets and that small-cap stocks take the lead when the market recovers from such crises. We sought to determine the validity of those assumptions. In particular, we set out to learn how mid-cap stocks had performed relative to large and small caps as the markets entered and exited the downturns that accompanied past systemic crises.

We began our analysis by identifying the systemic risk events that occurred during the past 26 years. Then we looked closely at the relative drawdowns of large-, mid- and small-cap stocks and the time each group took to recover its losses. Our analysis found something surprising: during periods of systemic risk since the mid-1990s, contrary to conventional wisdom, large caps did not fall the least as the market declined, and small caps did not lead the recoveries. Instead, mid caps fared the best during both phases.

Defining Systemic Risk Events

We wanted to focus our research exclusively on major crisis periods characterized by contractions in both the global economy and business fundamentals. We sought to exclude microbursts of volatility related mainly to changes in investor sentiment, as when the market sold off in 2015 following China's devaluation of the yuan, in 2016 after the Brexit vote, and in 2019 after a rise in trade tensions. Such sentiment-driven events tend to have relatively short-lived repercussions compared with true systemic crises.

We zeroed in on periods that met three criteria:

- Global earnings per share fell more than 10%¹
- The MSCI All Country World Index fell more than 15%
- Global GDP declined by more than 30% from the prior year

To study the relative performance of different market-cap groups during the periods we identified, we reviewed index performance data for large caps (defined as the S&P 500®), mid caps (the S&P Mid Cap 400) and small caps (the S&P Small Cap 600). Live data on the S&P Mid Cap 400 Index prior to 1994 are unavailable, so our research covers the 26 years between 1994 and 2019.

Three periods in that timeframe met our criteria:

- The Asian Currency/Russian Financial Crisis
- The Bursting of the Dot-com Bubble
- The Great Financial Crisis

Figure 1

Overview of Major Crisis Periods

<p>The Asian Currency / Russian Financial Crisis June 30, 1997 – January 31, 2000</p>	<p>Stress in certain Asian economies led to a financial panic and credit crunch. Foreign investors attempting to withdraw their money flooded exchange markets with the currencies of countries in crisis, weighing down their exchange rates. This environment contributed to a plunge in oil prices, which fell as low as \$11 per barrel in late 1998. The collapse of oil prices contributed to a financial crisis for Russia, which devalued its currency and defaulted on its debts. Those developments, in turn, contributed to the implosion of Long-Term Capital Management, a billion-dollar hedge fund, destabilizing world financial markets.</p>
<p>The Bursting of the Dot-com Bubble December 31, 1999 – May 31, 2004</p>	<p>Excessive speculation led to a bubble in shares of internet and software-related companies and enabled many pre-revenue firms to go public at inflated market values. When the bubble burst, the U.S. equity market plummeted, wiping out more than \$5 trillion in U.S. stocks. The tech-heavy NASDAQ 100 index fell 83% from its peak.²</p>
<p>The Great Financial Crisis January 31, 2007 – April 29, 2011</p>	<p>Participants in the financial system took on excessive leverage and overextended credit while reducing lending standards. These conditions contributed to the failure or near-failure of several large financial institutions, setting off a credit and liquidity crisis. U.S. household wealth declined by more than \$1.1 trillion from its peak; the S&P 500 fell 59%; and house prices declined by nearly 20%.³</p>

Other periods narrowly missed qualifying as systemic risk events. For example, global GDP and global corporate earnings fell significantly in both 2012 and 2015, but not enough to meet our definition of such an event. Moreover, the S&P 500 gained 13% in 2012 and slipped just -4% in 2015.

The economic crisis sparked by the COVID-19 pandemic will likely qualify as a fourth systemic risk period. We have already witnessed a severe reduction in economic growth, more than 30 million American jobs lost, a double-digit decline in corporate profits, and a greater-than 30% market drawdown.⁴ The recovery has not yet been completed with enough of a lookback period to provide confidence that we are out of the crisis period yet, so this data set is incomplete.

Bolstering the Sample Size

Since our analysis covers only three time periods, we sought to strengthen its statistical validity by considering 16 different large-, mid- and small-cap exposures for each of the three systemic risk periods under review:

Broad-market exposures

- Weighted by market cap
- Equal weighted

Style exposures

- Growth weighted by market cap
- Value weighted by market cap
- “Pure” growth weighted by factor exposure (stocks with stronger growth characteristics received larger weightings)
- “Pure” value weighted by factor exposure (stocks with deeper value characteristics received larger weightings)

Intrasector exposures

- Large-, mid- and small-cap exposures in all GICS sectors

For the three time periods under review, we measured each market cap exposure’s maximum drawdown and the number of days before it returned to its previous peak. Reviewing the relative performance of 16 distinct groupings of large, mid and small caps across the three crises increased our degree of confidence in the validity of any patterns we identified.

A Consistent Pattern of Mid-Cap Outperformance

During the three systemic risk events under consideration, mid-cap stocks experienced smaller drawdowns than either large- or small-cap stocks and also took less time to recover. These findings run contrary to two common beliefs: that shares of the largest firms hold up the best in a downturn, due to their greater resources and more-mature business models; and that shares of more domestically oriented, nimble, “risk-on” small caps are the fastest to recover after the market turns up.

Broad-Market and Style Exposures

Overall, mid caps represented by broad-market and style exposures had a smaller average drawdown than large- and small-cap exposures did. They also recovered considerably faster. Averaging the results of market-weighted, factor-weighted and equal-weighted exposures across the three systemic risk events gives a high-level picture of our findings:

Figure 2
Combined Averages

	S&P 500 Index	S&P Mid Cap 400 Index	S&P Small Cap 600 Index
Avg. Drawdown (%)	-42.93	-41.20	-45.05
Avg. Recovery (Days)	544	304	432

Source: Bloomberg Finance L.P. as of May 13, 2020. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.** Green shading represents the smallest average drawdown % and fastest average days to recovery, while the red shading represents the largest average drawdown % and longest average days to recovery.

The results were fairly consistent. In four of the six sets of broad-market and style exposures under review, mid caps had both smaller drawdowns and faster recoveries than large or small caps did (see below). In the equal-weighted exposure, mid caps had the quickest average recovery time, but their average drawdown (-40.84%) narrowly exceeded that of large caps (-40.02%).

Among all the broad-market exposures that we reviewed, only market-weighted growth followed the pattern expected by conventional wisdom, with large caps losing the least in the downturn and small caps recovering the fastest.

Figure 3
Broad-Market and Style Exposures
 Average Drawdowns & Recoveries

	S&P 500 Index	S&P Mid Cap 400 Index	S&P Small Cap 600 Index
Mkt. Cap Weight			
Avg. Drawdown (%)	-40.62	-38.05	-43.05
Avg. Recovery (Days)	638	258	366
Value			
	S&P 500 Value Index	S&P Mid Cap 400 Value Index	S&P Small Cap 600 Value Index
Avg. Drawdown (%)	-42.08	-38.66	-44.06
Avg. Recovery (Days)	567	319	543
Growth			
	S&P 500 Growth Index	S&P Mid Cap 400 Growth Index	S&P Small Cap 600 Growth Index
Avg. Drawdown (%)	-40.96	-43.56	-46.00
Avg. Recovery (Days)	525	456	389
Pure Value			
	S&P 500 Pure Value Index	S&P Mid Cap 400 Pure Value Index	S&P Small Cap 600 Pure Value Index
Avg. Drawdown (%)	-44.40	-41.50	-45.56
Avg. Recovery (Days)	398	311	606
Pure Growth			
	S&P 500 Pure Growth Index	S&P Mid Cap 400 Pure Growth Index	S&P Small Cap 600 Pure Growth Index
Avg. Drawdown (%)	-49.52	-44.59	-46.17
Avg. Recovery (Days)	853	257	343
Equal Weight			
	S&P 500 Equal Weighted	S&P Mid Cap 400 Equal Weighted	S&P Small Cap 600 Equal Weighted
Avg. Drawdown (%)	-40.02	-40.84	-45.46
Avg. Recovery (Days)	282	224	342

Source: Bloomberg Finance L.P. as of May 15, 2020. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.** Figures based on total returns. Green shading represents the smallest average drawdown rank % and fastest average recovery rank %. Red shading represents the largest average drawdown rank % and longest average recovery rank %.

We considered the possibility that mid caps' shallower average drawdowns and faster average recoveries may have resulted from especially strong results in a small number of sectors. We tested this possibility by calculating drawdowns and recovery figures for each cap range within each of the GICS (Global Industry Classification Standards) sectors.

We found that returns of the three market-cap ranges within sectors largely followed the same patterns as in the broad-market and style exposures. Using an equal-weighted average of the results across sectors in all three periods, we found that mid caps had smaller average drawdowns and quicker recoveries than either large or small caps did (see below). It's interesting to note that, when measured by this metric, mid caps occupied a sweet spot:

- During drawdowns, mid caps performed only slightly better than did large caps but significantly stronger than small caps did
- During recoveries, mid caps got back to their previous peak only slightly faster than small caps did but far more quickly than did large caps

Figure 4
Sector Averages

	Large Cap	Mid Cap	Small Cap
Avg. Drawdown (%)	-45.46	-45.20	-47.05
Avg. Recovery (Days)	927	628	646

Source: Bloomberg Finance L.P. as of May 15, 2020. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.** Figures based on total returns. Green shading represents the smallest average drawdown rank % and fastest average recovery rank %. Red shading represents the largest average drawdown rank % and longest average recovery rank %.

The results within each sector tell a similar story. For each of the three systemic risk periods, we ranked large, mid and small caps in all sectors⁵ by both average drawdown and days until recovery. Our findings:

- Mid caps had the smallest or second-smallest drawdown 23 times and the fewest instances with the largest drawdown (five)
- Mid caps had the fastest or second-fastest recovery time 25 times and the fewest instances with the longest recovery period (three)

The average rankings within sectors also indicate strong relative results for mid caps. They had the highest average rank for smallest downturn, and their average rank for recovery time came in one basis point behind that of small caps.

Figure 5
Average Drawdown and Recovery Rank

	Large Cap	Mid Cap	Small Cap
Avg. Drawdown Rank (%)	2.01	1.74	2.25
Avg. Recovery Rank (%)	2.49	1.76	1.75

Source: Bloomberg Finance L.P. as of May 15, 2020. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.** Figures based on total returns. Green shading represents the smallest average drawdown rank % and fastest average recovery rank %. Red shading represents the largest average drawdown rank % and longest average recovery rank %.

We also wanted to compare large, mid, and small caps' risk and return throughout the three systemic risk periods we identified. We considered risk and return measures during those periods for all 16 exposures and also for just the six broad-market and style exposures.

This analysis found that, during the three systemic risk periods, mid caps produced considerably stronger average returns and average returns per unit of risk. Mid caps' standard deviations were somewhat higher than those of large caps.

Figure 6
Risk and Return Metrics

	Large Cap	Mid Cap	Small Cap
All Exposures (Broad-Market, Style and Sector)			
Avg. Annualized Return (%)	4.3	9.8	5.8
Avg. Annualized Standard Deviation (%)	27.2	28.6	29.7
Avg. Return per Risk Ratio	0.16	0.34	0.19
Broad-Market and Style Only			
Avg. Annualized Return (%)	4.6	11.4	7.9
Avg. Annualized Standard Deviation (%)	23.8	25.2	25.7
Avg. Return per Risk Ratio	0.19	0.45	0.31

Source: Bloomberg Finance L.P. as of May 15, 2020. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.** Figures based on total returns. Green shading represents the highest average annualized return %, lowest average annualized standard deviation, and highest average return per risk ratio. Red shading represents the lowest average annualized return %, highest average annualized standard deviation, and lowest average return per risk ratio.

Taken as a whole, this research suggests that investors should be skeptical of the conventional wisdom that large caps typically hold up the best when systemic crises cause markets to drop and that small caps recover the most quickly when the market rebounds. Those assumptions did not prove true during the three systemic risk events that have occurred since the mid-1990s — and in fact, mid caps provided a more efficient balance of performance during both drawdowns and recoveries than either large caps or small caps did.

Theories to Explain Mid-Cap Outperformance in Crises

Mid-sized companies have certain qualities that may help explain how they produced these results:

- Mid caps' businesses are relatively mature, with repeatable revenues and reliable cash flows from defined user bases, which may help them meet breakevens and continue operating in difficult economic environments
- They are close enough to the economy to benefit from stimulus
- They may be more nimble than are larger firms, possibly enabling them to change operating models more quickly to react to the systemic change

In short, mid-sized firms may occupy a sweet spot, pairing much of the operational dexterity of small caps with much of the business maturity associated with large caps. Characteristics such as these might explain how mid-cap stocks managed to outperform shares of both larger and smaller firms during the last three systemic crises.

Investors may want to revisit any assumptions they have made based on conventional wisdom about the relative performance of market-cap sizes during times of crisis. Our research finds that such assumptions have been flawed in the past and suggests that investors may want to consider the role that mid caps might play in difficult market environments.

Endnotes

- 1 Based on trailing weighted 12-month EPS of the MSCI ACWI
- 2 Bloomberg Finance L.P. as of May 13, 2020
- 3 Bloomberg Finance L.P. as of May 13, 2020
- 4 Bloomberg Finance L.P. as of May 13, 2020
- 5 Nine of the 11 current GICS sectors were available to analyze during the first two periods; 10 were available in the third.

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Glossary

Dot-Com Bubble The speculative stock-market run-up of the late 1990s that grew out of excitement about the potential of the Internet. While companies such as eBay and Amazon were born in this period, countless other start-ups with vague business plans and no profits were funded by investors dreaming of winning big. The fervor peaked on March 10, 2000, and a nearly three-year bear market followed.

Drawdown A specific decline in the stock market during a specific time period that is measured in percentage terms as a peak-to-trough move.

GICS, or Global Industry Classification Standard A financial-industry guide for classifying industries that is used by investors around the world. The GICS structure consists of 11 sectors, 24 industry groups, 68 industries and 157 sub-industries, and Standard & Poor's (S&P) has categorized all major public companies into the GICS framework. The rubric was developed in 1999 by MSCI and S&P. The 11 sectors are Energy, Materials, Industrials, Consumer Discretionary, Consumer Staples, Health Care, Financials, Information Technology, Telecommunication Services, Utilities and Real Estate.

Global Financial Crisis (GFC) The economic upheaval of 2007-2009 that is generally

considered the largest downturn since the Great Depression of the 1930s. The GFC was triggered largely by the sub-prime mortgage crisis that led to the collapse of systemically vital US investment banks such as Bear Stearns and Lehman Brothers. An aggravating factor was the speculative spike in energy that lifted oil prices to almost \$150 a barrel in the summer of 2008, and which surely contributed to the economic slowdown.

Gross Domestic Product, or GDP The monetary value of all the finished goods and services produced within a country's borders in a specific time period. Economic growth is typically expressed in terms of changes in GDP.

MSCI All Country World Index A free-float weighted global equity index that includes companies in 23 emerging market countries and 23 developed market countries and is designed to be a proxy for most of the investable equities universe around the world.

Styles The investment approach or objectives used to make choices in the selection of securities for a portfolio, with the most common value and growth for equities.

S&P 500® Index A popular benchmark for U.S. large-cap equities that includes 500 companies from leading industries and captures approximately 80% coverage of available market capitalization.

S&P MidCap 400 Index A benchmark that seeks to target the mid-cap portion of the US equities market. The index covers more than 7 percent of the U.S. equities market. Included in

the index are companies with market cap in the range of \$1 billion to \$4.5 billion. This range is reviewed from time to time to ensure consistency with market conditions.

Volatility The tendency of a market index or security to jump around in price. Volatility is typically expressed as the annualized standard deviation of returns. In modern portfolio theory, securities with higher volatility are generally seen as riskier due to higher potential losses.

State Street Global Advisors
One Iron Street, Boston, MA 02210
T: +1 866 787 2257

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Investments in mid-sized companies may involve greater risks than those in larger, better known companies, but may be less volatile than investments in smaller companies.

Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect capital gains and losses, income and the reinvestment of dividends. You cannot invest directly in an index.

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