Large-Cap Core

A Winning Strategy Across the Economic Cycle

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EXECUTIVE SUMMARY

- The U.S. stock market represents half of global equity value, and three-quarters of U.S. stock value is in large-cap stocks.

- As the asset class representing the largest market, large-cap stocks typically provide the foundation for diversified portfolios.

- Actively managed Large-Cap Core strategies are designed to outperform across a full economic cycle while avoiding the risks associated with market timing, style drift, and financial strength in more targeted strategies such as Large-Cap Growth and Large-Cap Value.

- Investments in unmanaged Large-Cap Core meaningfully exceed investments in unmanaged Large-Cap Growth and Large-Cap Value.

- Despite their solid long-term track record, actively managed Large-Cap Core strategies have in recent years experienced meaningful deterioration in the percentage of managers outperforming the benchmark S&P 500.

- These results have contributed to a significant shift of assets out of actively managed Large-Cap Core strategies and into passive strategies, primarily S&P 500 index funds and S&P 500 tracking ETFs.

- When managed well, active Large-Cap Core strategies can provide downside investment protection and better leverage shifts across the market cycle than passive strategies, while also providing risk-management characteristics that are difficult to replicate through Large-Cap Growth and Large-Cap Value strategies.

LARGE-CAP STOCKS IN THE U.S. MARKET

Large-cap domestic stocks are where the money resides. While U.S GDP represents about one-quarter of global GDP, the U.S. stock market represents roughly half of global equity value. In the U.S., large-cap companies represent roughly three-quarters of the value of the domestic stock market. These companies have a significant overseas presence, in many cases deriving up to half of their earnings outside the U.S.

When you invest in U.S. large cap, you are investing in the world.

Large-cap investing is often broken down into three categories: Large-Cap Growth, Large-Cap Value and Large-Cap Core. And each of these categories can be further broken down by management approach: Active or Passive.

Large-Cap Growth (LCG) portfolios hold stocks of companies that are expected to grow faster than the broad market as measured by revenue, earnings, cash flow or other metrics. LCG portfolios are designed to outperform in risk-on periods and in periods of economic recovery or accelerating growth.

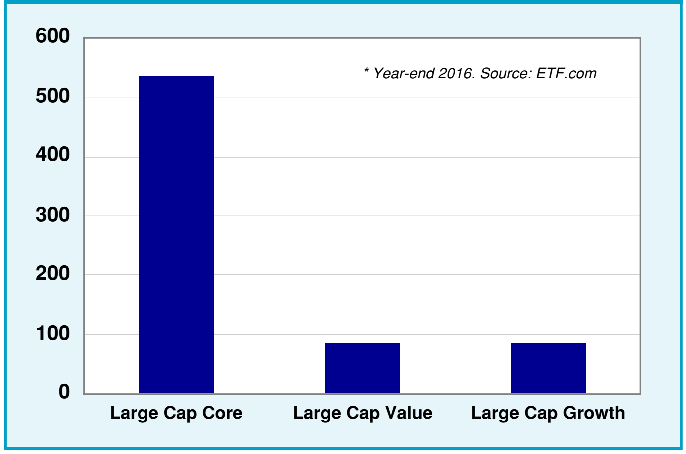
Large Cap Value (LCV) portfolios hold stocks of companies perceived to be trading below intrinsic value. A frequently used metric for value stocks is that they trade below book value (stockholders' equity divided by shares outstanding). While value stocks are sometimes mispriced due to an earnings miss or strategic disruption, many companies are permanently classified as "value" based on slow-growing earnings, highly mature or regulated end-markets, or other factors. LCV portfolios are designed to outperform in defensive phases and periods of weak economic growth.

Large-Cap Core (LCC) portfolios, sometimes called "blend" portfolios, include a mix of large-cap growth and value companies. In recent years, index investing has emerged as an alternative to LCC investing, and even more recently index investments have shifted from mutual funds to exchange traded funds (ETFs). Most passive Large-Cap Core portfolios are based on the S&P 500 index and date from the first Vanguard S&P 500 index fund created by John Bogle in 1975. Index ETFs are primarily passive vehicles that reflect the infrequent changes in S&P 500 asset composition.

Actively managed LCC portfolios are designed to perform evenly across the economic cycle. In periods of expansion, growth names within the composite compensate for underperformance by defensive value names. And in periods of economic contraction, defensive value names compensate for the underperformance of growth stocks.

Chart 1 shows the current AUM of exchange-traded funds deployed into Large-Cap Growth, Large-Cap Value, and Large-Cap Core strategies (source: ETF.com).

LARGE-CAP ETF AUM ($BIL.)



THE CHALLENGES OF ACTIVE MANAGEMENT

Calendar 2016 was a good year across the board for equity investors. The S&P 500 ended 2016 up more than 10% on a capital-appreciation basis and more than 12% on a total-return basis (including dividends). The DJIA and Nasdaq Composite also logged double-digit gains, while the Russell 2000 shocked with a 20%-plus gain, all of it coming in the post-election rally.

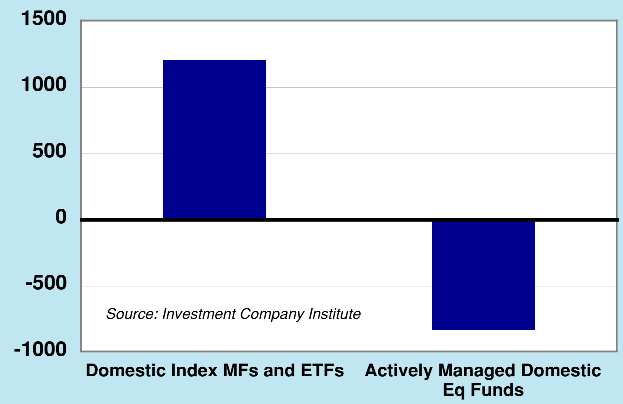
But while overall index performance was solid, just one-third of active equity managers – who are often paid handsomely for their services — beat the benchmark S&P 500 (source: Thomson Reuters Lipper). Little surprise, then, that U.S. equity mutual funds experienced a record $288 billion in withdrawals in 2016 (through 11/30/16).

Withdrawn funds were largely reinvested in passive investments such as S&P 500 index funds and ETFs. Each of these categories logged more than $100 billion in inflows last year.

Notably, outflows from domestic equity mutual funds were higher in 2016 than in 2015, the previous record year for outflows. Investors appear to be losing patience with actively managed domestic equity strategies, and we believe that deterioration in both absolute and relative performance is a key source of this frustration.

Chart 2 illustrates that index-based ETFs have benefited from the trend toward index-based products (source: Investment Company Institute). Between 2007 and 2015, domestic equity index mutual funds and exchange traded funds grew by $1.2 trillion, reflecting new cash inflows as well as reinvested dividends. During that period, index ETFs grew at nearly twice the rate of domestic equity index mutual funds.

ASSET FLOWS 2007-2015 ($BIL.)



Much of this inflow has come at the expense of active managers. Between 2007 and 2015, actively managed domestic equity mutual funds experienced a net outflow of $835 billion, which also factors in the reinvestment of dividends (source: Investment Company Institute).

ASSET CLASS PERFORMANCE

While large-cap strategies may hold the assets of 75% of U.S. stock market participants, small- and mid-cap strategies have delivered the strongest performance over the past 20 years. Table 1 shows 20-year unmanaged asset-class performance, including data compiled by Informa and MFS. Each of the asset class categories shown corresponds to a well-known benchmark aligned with that asset class's size, style, and other characteristics.

ASSET CLASS PERFORMANCE

Annualized Total Return	1996-2015	Benchmarks:
Small & Mid Cap	9.5%	Russell 2500
Small Cap	8.8%	Russell 2000
Large Cap Value	8.5%	Russell 1000 Value Index
Large Cap Core	8.2%	S&P 500
Large Cap Growth	7.6%	Russell 1000 Growth Index
Diversified	7.4%	Equal allocation all segments (ex. Cash)
Fixed Income U.S.	5.3%	Barclays U.S. Aggregate Bond Index
International Equity	4.8%	MSCI EAFA Index
Fixed Income Global	4.5%	JP Morgan Global Government Bond Index
Cash	2.4%	U.S. Treasury 3-month T-bill Index

Source: Informa; MFS

Large-Cap Core, which is represented by the S&P 500, achieved an annualized return of 8.2% for the period 1996-2015, above the median return for the major asset classes. However, LCC's multiyear performance still lagged the long-term performance of Small and Small & Mid-Cap names, and slightly lagged the performance of Large-Cap Value. Over the 20-year period, Large-Cap Core exceeded the performance of Large-Cap Growth, domestic and foreign bonds, international stocks, and cash.

While performance analysis across a 20-year span is meant to capture multiple cycles, performance across shorter spans may tell a different story. For the 10 years between 2005 and 2014, the S&P 500 averaged a total return of 7.6%, or 60 basis points less than the average annualized return over 20 years between 1996 and 2015. Additionally, moving the "frame" of the measurement period can result in meaningful changes in performance. For the trailing 10 years through November 2016, the S&P 500 averaged an even smaller annualized return of 6.7%.

These shorter-term comparisons may be contributing to the movement of funds from active to passive strategies.

LARGE-CAP CORE VS. LARGE-CAP GROWTH & VALUE

As the largest asset class in the market, large-cap stocks typically provide the foundation for diversified portfolios. As noted above, investors may invest in active or passive large-cap strategies, and in different tranches, including Large-Cap Growth, Large-Cap Value and Large-Cap Core.

Large-Cap Core (LCC) has several advantages over Large-Cap Value (LCV) and Large-Cap Growth (LCG). Table 2 shows the annual returns for LCC, LCV, and LCG for each year between 1996 and 2015.

A principal risk for both LCV and LCG is market timing. In Table 2, we have highlighted several years in which the dispersion of returns between LCV and LCG is so substantial that it would impact the multiyear performance of either style (assuming a major deployment of funds into either style in the highlighted years).

Large-Cap Core, which includes both growth and value stocks, is designed to avoid market-timing risks by capturing much of the upside in rising, risk-on markets while providing downside protection in defensive or declining markets.

LCG tends to outperform in risk-on markets but to underperform in defensive or declining markets. Thus, an LCG investor who came into the market in the late 1990s or in 2007 would have suffered disproportionate losses relative to the benchmark and may not have subsequently recouped all of these losses.

LCV investors also face market-timing risks. An LCV investor who came into the market in 1998 or 2009 would have seen sharply lagging returns relative to the benchmark.

A further risk associated with LCG and LCV portfolios is style drift. The accelerated pace of sector rotation and the greater dispersion of sector returns in recent years has caused stocks to fluctuate more frequently between the growth and value camps. Efforts to enforce strict adherence to a style definition – for example, that value stocks trade at a discount to the benchmark price/book ratio – can generate excessive portfolio churn in a market characterized by frequent sector rotation and high dispersion of sector returns. LCG or LCV portfolios that abstain from this accelerated rebalancing will become increasingly opaque as style drift sets in.

LARGE CAP CORE VS. LARGE CAP GROWTH & VALUE

	Value	Growth	Core
1996	21.6%	23.1%	23.0%
1997	35.2%	30.5%	33.4%
1998	15.6%	38.7%	28.6%
1999	7.4%	32.2%	21.0%
2000	7.0%	-22.4%	-6.1%
2001	-5.6%	-20.4%	-11.9%
2002	-15.5%	-27.9%	-22.1%
2003	30.0%	29.8%	28.7%
2004	16.5%	6.3%	10.9%
2005	7.1%	5.3%	4.9%
2006	22.3%	9.1%	15.8%
2007	-0.2%	11.8%	5.5%
2008	-36.9%	-38.4%	-37.0%
2009	19.7%	37.2%	26.5%
2010	15.5%	16.7%	15.1%
2011	0.4%	2.6%	2.1%
2012	17.5%	15.3%	16.0%
2013	32.5%	33.5%	32.4%
2014	13.5%	13.1%	13.7%
2015	-3.8%	5.7%	1.4%

A final consideration is that LCC reduces financial-strength risk. Managers pursuing an LCG strategy in a risk-on market dominated by a single sector – say, information technology in the late 1990s or biotech in 2015 – risk loading up on high-beta, high-valuation equities of companies that may lack the financial strength to fully address operational challenges. At the other end of the spectrum, LCV managers in a down market may concentrate holdings in deep-value names that are in fact deeply troubled and can deteriorate into value traps.

By maintaining a blend of high-quality growth and value names, LCC portfolios reduce these risks. Table 2 demonstrates that LCC portfolios largely avoid the risks associated with market timing, style drift, and financial strength in LCG and LCV portfolios. We note that in the 20-year period from 1996 to 2015, LCC portfolios had fewer negative years than LCV portfolios. In addition, the steepest annual decline for a LCC portfolio was less than the steepest decline for a LCG portfolio.

ACTIVELY MANAGED LARGE CAP CORE VS. PASSIVE LARGE CAP CORE

As we noted earlier, funds have been leaving actively managed strategies and moving to passive strategies. That isn't always a smart move.

Compared with passive Large-Cap Core, actively managed Large-Cap Core provides downside investment protection and can better leverage shifts across the market cycle. Passive Large-Cap Core products such as S&P 500 index mutual funds and ETFs have experienced significant growth, but they lack mechanisms to mitigate risk. Careful active management can reduce these risks.

Passive index funds capture 100% of the downside in sharply declining markets. The scars inflicted on passive funds in 2002 or in 2008 can take years to heal. Active managers can mitigate declines in sharply falling markets by shifting to a more defensive stance, increasing alternative asset-class exposure, and raising cash. Passive Large-Cap strategies may also be at risk during market crises, such as periods of scarce liquidity, while active managers can turn these crises into opportunities.

Passive sector funds and ETFs can steer blindly into disaster. Funds and ETFs focused on specific sectors were decimated by their exposure to technology in 2000-2002, to financial services in 2007-2008, and to energy in 2014-2015. Active sector management within a broad Large-Cap Core strategy can respond to specific challenges by reducing overall sector exposure and focusing on perceived sector winners, such as large-cap consolidators. Passive funds based on a specific style, such as market-cap or high-yield, also introduce risk. By maintaining benchmark sector weightings, passive Large-Cap Core funds and ETFs echo the risks in passive sector funds during periods of single-sector distress.

THE LONG VIEW

Over the long term, our analysis concludes that Large-Cap Core can add value relative to passive strategies, even though the recent record is mixed. To support our thesis, we have turned to PSN, which provides performance data on more than 100 actively managed Large-Cap Core strategies on a year-to-date, and trailing one-year, three-year, five-year and ten-year basis — as shown in Table 3.

ACTIVELY MANAGED LARGE CAP CORE VS S&P 500 OVER VARIOUS TIME PERIODS

Annualized Total Return *(through 11/30/16)*	**YTD**	**1-year**	**3-year**	**5-year**	**10-year**
S&P 500	9.8%	8.1%	9.1%	14.5%	6.9%
S&P prfrmc Rank among managers	*34*	*31*	*34*	*39*	*69*
Manager Performance					
% of managers beating S&P 500	28.1%	25.6%	29.3%	35.1%	68.3%
Median	8.8%	6.6%	8.7%	14.1%	7.3%
Mean	8.6%	6.7%	8.4%	14.0%	7.3%
High	14.8%	12.0%	11.2%	17.5%	9.3%
First Quartile	10.7%	8.7%	9.2%	15.0%	7.9%
Third Quartile	7.2%	5.4%	7.4%	13.2%	6.8%
Low	1.9%	-0.7%	4.3%	9.6%	5.6%
Number of participating managers	121	121	116	111	101

Source: PSN

For the one-year period ended November 30, 2016, PSN reports that the S&P 500 provided an annualized return of 8.1%.The 121 actively managed Large-Cap Core strategies tracked by PSN generated an average return of 6.7% for the same one-year period. Over that period, only 25.6% of LCC strategies beat the benchmark.

However, for the trailing five-year period, a higher 35.1% of actively managed LCC strategies topped the benchmark return. And for the trailing 10-year period, 68.3% of LCC strategies beat the benchmark. While the performance of actively managed Large-Cap Core is solid across the economic cycle, the higher percentage of active managers outperforming the index in the 10-year period highlights the importance of choosing an active LCC manager with a successful long-term track record.