

# Investing in the Value “Premium”

## Rethinking How to Apply Value Investing in the Index Space

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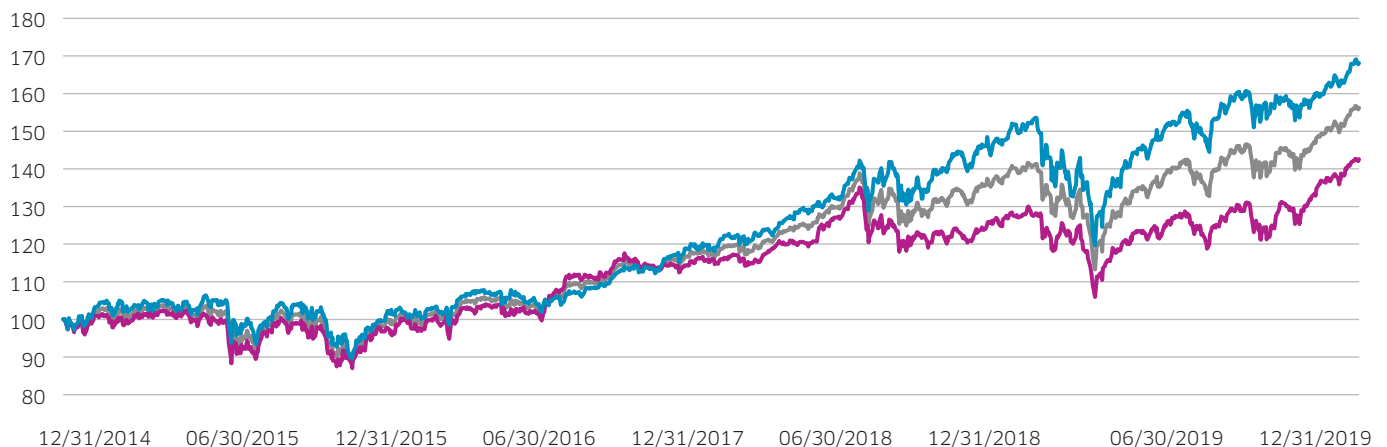
Value was most famously identified as one of three factors by Fama & French in their original asset-pricing model (1994). The value “premium” refers to the excess return generated by investments in companies with lower price-to-book (P/B) ratios, in comparison to those with higher P/B ratios (i.e. growth stocks). The other two factors identified – Beta and Size – refer to the excess return attributable to a stock’s sensitivity to the overall market (i.e., high-beta stocks are net riskier investments and thus command a higher expected return than low-beta stocks) and its size, respectively (i.e. small-cap stocks are net riskier investments than large-cap stocks). Two additional factors were added to the pricing model in 2014 – Profitability and Investment.

Value investing was originally pioneered decades before Fama & French’s academic paper came out in 1994 by Benjamin Graham and Warren Buffett, among others. Over time, large-scale asset management businesses were built around the concept of value investing, and continue to operate at scale today, including Franklin Templeton (part-founded by Sir John Marks Templeton), Baupost Group (founded by Seth Klarman), and Gamco Investors (founded by Mario Gabelli). The substantial academic research (and real-world success) behind value investing acknowledges that periodic underperformance is possible – most notably during the late 1990s. Value’s most recent underperformance is longer-running and, in some ways, unprecedented:

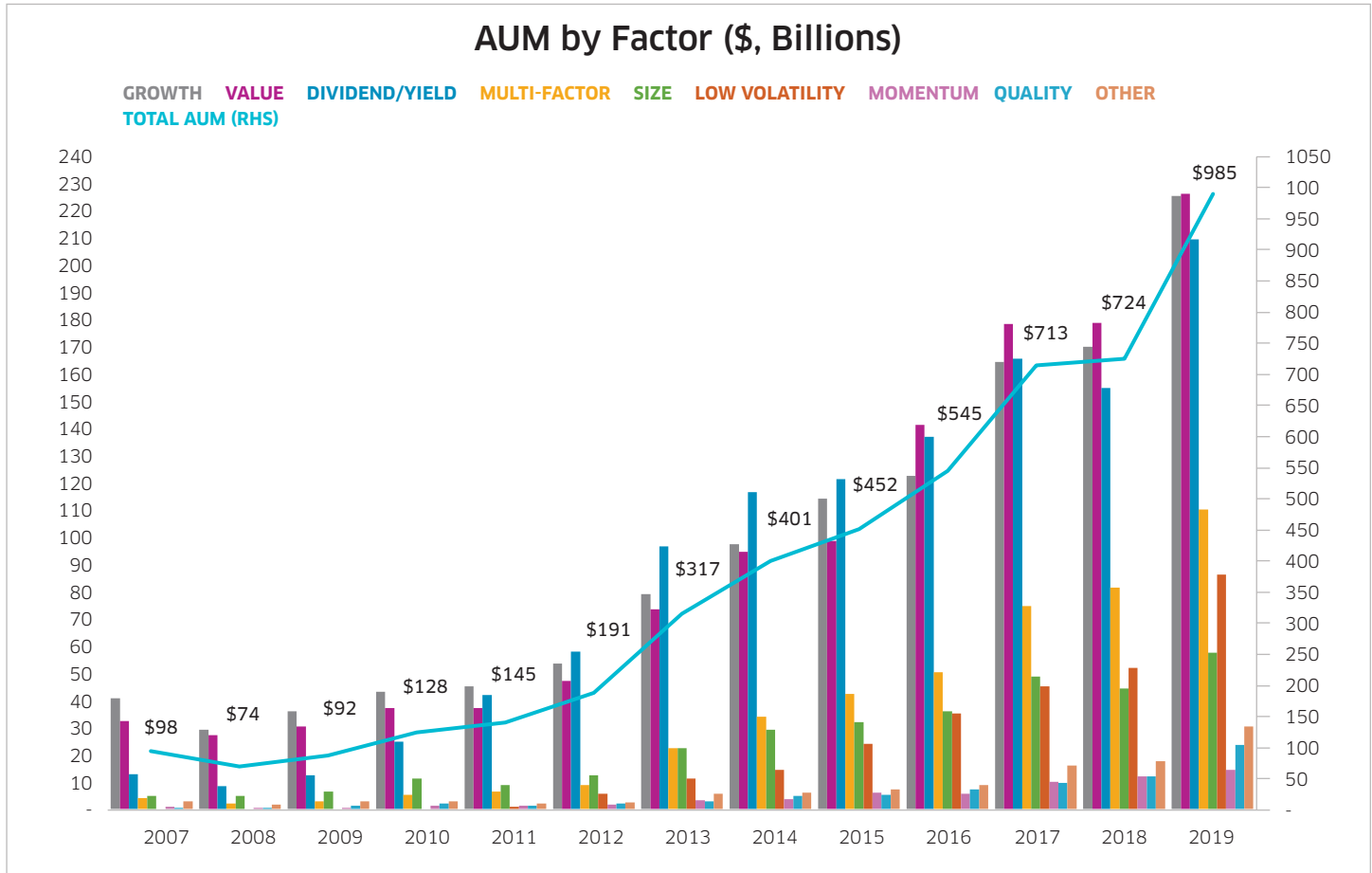
### Nasdaq US Large Cap: Value vs. Growth

From January 1, 2015 thru December 31, 2019, the price of the Nasdaq US500 Large Cap Index increased by 56%; the Large Cap Value Index increased by only 43% (of which 14% occurred in 2016), while the Large Cap Growth Index increased by 68%

NASDAQ US 500 LARGE CAP    LARGE CAP VALUE    LARGE CAP GROWTH



Value as a strategy was historically only available to investors via high-fee, actively managed hedge funds and mutual funds – until the rise of passive indexing generally, and factor ETFs specifically. Today, retail and institutional investors alike can allocate capital to single factor-index-tracked products, including Value, Growth, Dividend/Yield, Size, Low Volatility, Momentum, and Quality. Since 2007, AUM tied to factor indexes has grown by more than 900% to almost \$1T at the end of 2019.



Source: Bloomberg (US listed ETFs)

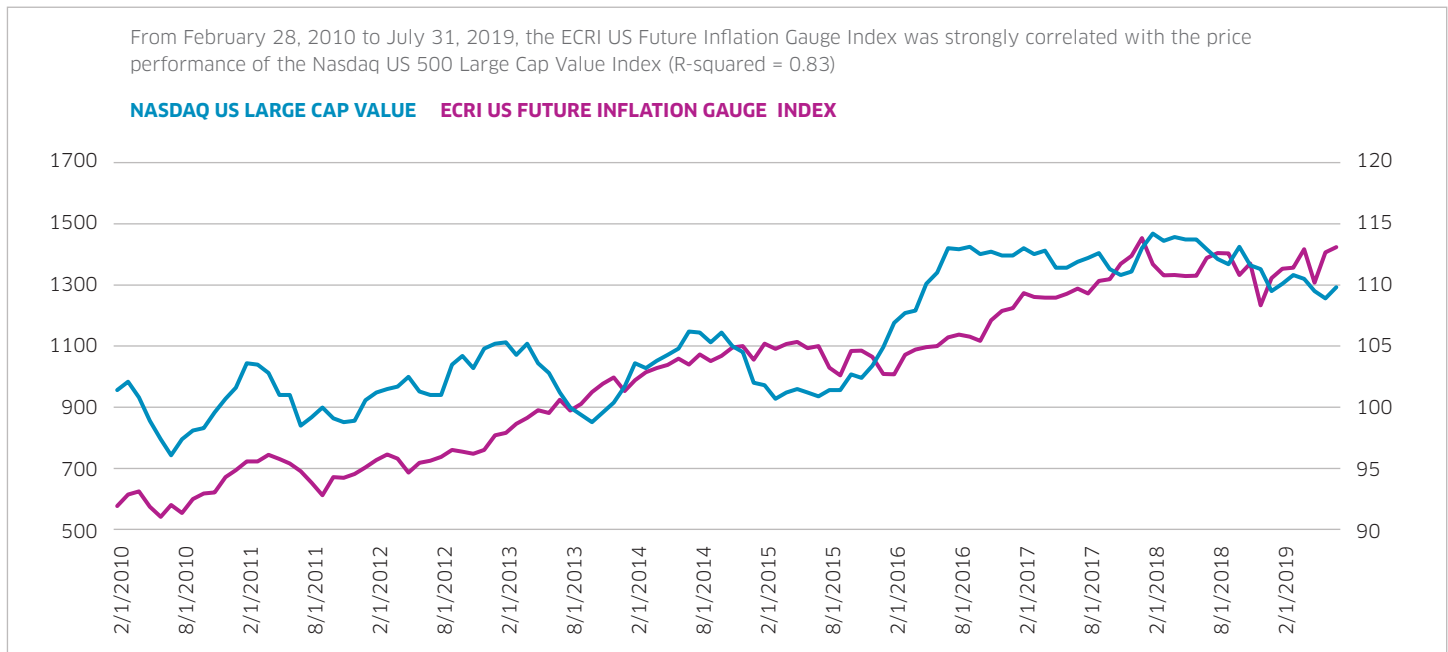
- Value remains the leading factor, with AUM of approximately \$227Bn and annualized growth since 2007 of almost 18%
- Growth is close behind as the 2nd largest factor; its CAGR since 2007 is nearly 15%
- Dividend/Yield is the 3rd largest, with a CAGR since 2007 of over 23%
- Multi-Factor is the 4th largest, with a CAGR since 2007 of almost 29%

Despite its continuing popularity, Value-as-a-Factor has underperformed during the past 5 years, trailing the broad US equity market benchmark (S&P500) in each year except 2016, and generating the lowest returns among all factors in 2014/2015/2018 (see Appendix A). This underperformance has prompted a wholesale reconsideration of whether value investing is an outdated approach, since its reliance on overweighting exposures to low P/B companies implies underweighting many of the high-tech, growth companies which have generally produced the strongest investment returns during this period and represent an ever-larger share of total market capitalization and the overall economy.

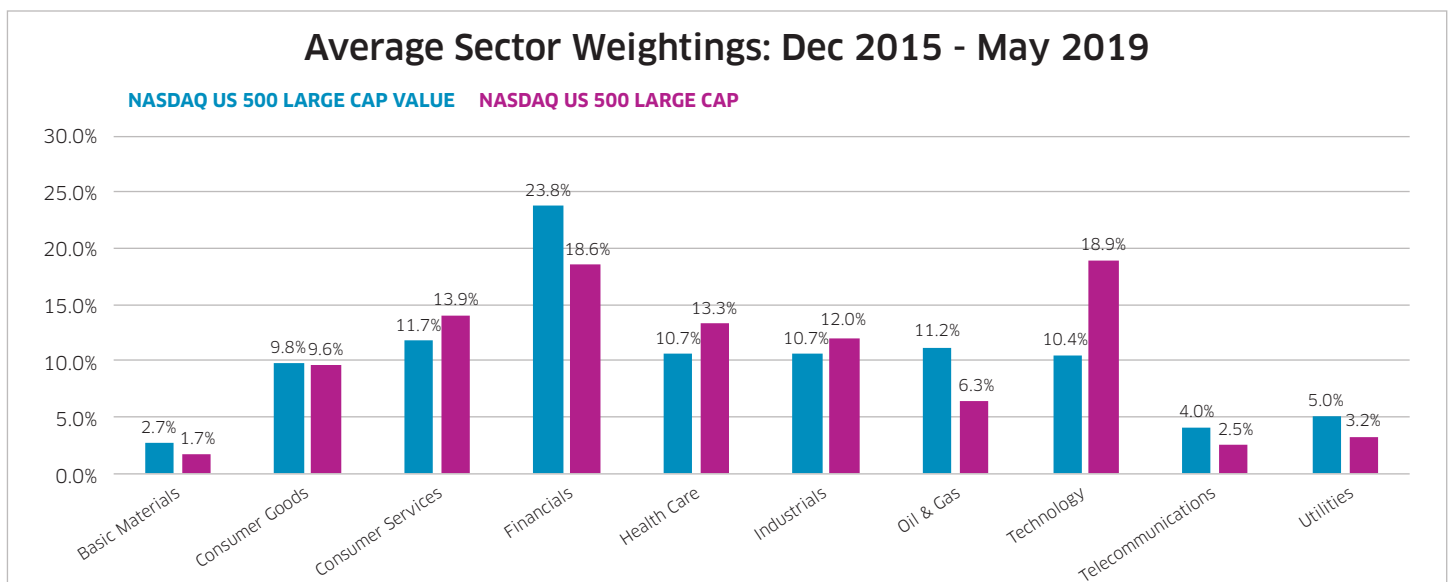
Why would this cause cross-the-board neutralization of the long-running value “premium,” at least as it has been applied in the Indexing space? One very important reason is the knock-on effect of implicit sector bets. Because of the rigorous application of screening based on financial metrics such as P/B (or its inverse, the B/P aka “yield-to-book” aka “book-to-market ratio”), some sectors such as Technology can never attain a weight in a value

index proportional to their market cap weights in a broader benchmark index. Other industries end up becoming automatically over-weighted, causing investors in value indexes to take ongoing, active sector bets - despite the real possibility that certain sectors (especially Energy, Financials, & other rate-sensitive industries) are subject to prolonged periods of secular decline (and eventual reversal). This is a form of uncompensated risk to the plain-vanilla value index investor: by "going long" Value, she is also "going long" whatever sectors have recently become cheap, *regardless* of whether they are primed for recovery this year, next year, or beyond.

To neatly demonstrate this phenomenon, it may be useful to approximate the relationship between the S&P500 Value Index with a popular gauge of inflation - specifically, the ECRI US Future Inflation Gauge Index, which measures investors' *inflation expectations*:



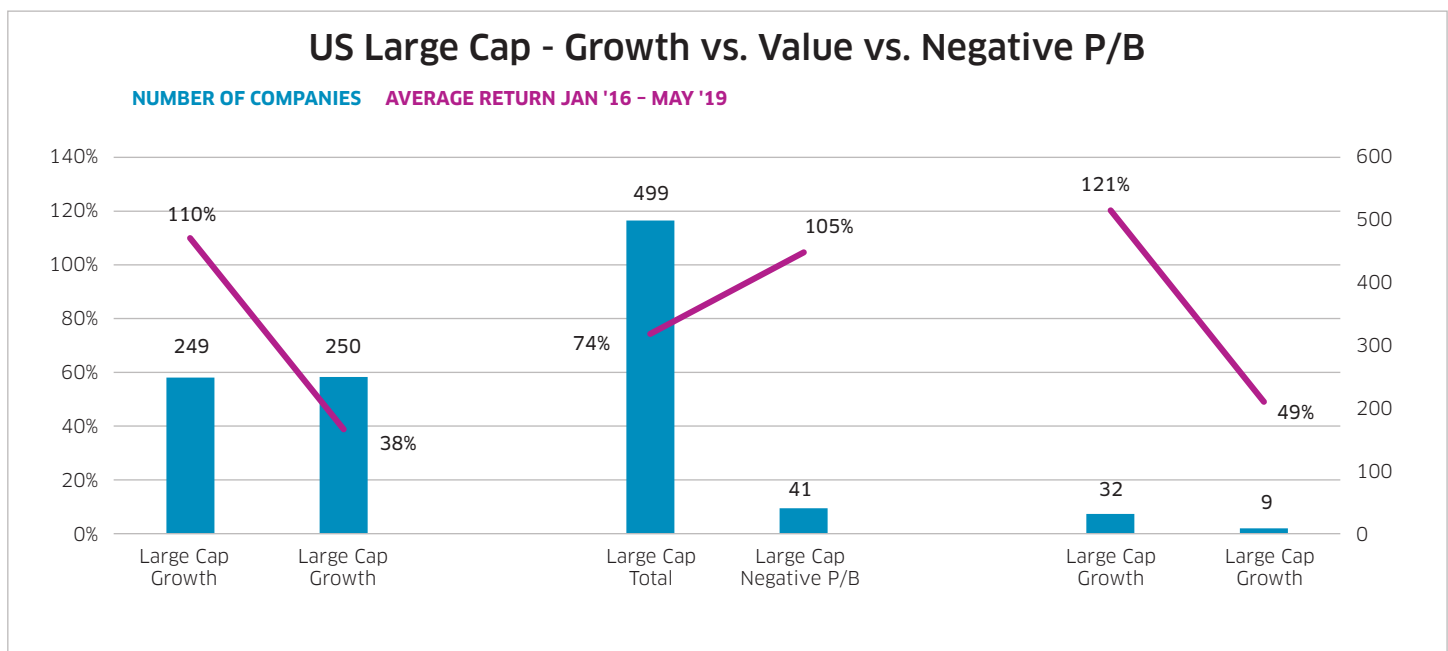
Inflation (and the market's expectations of future inflation) is strongly tied to the market dynamics of commodities and interest rates - and we know that certain sectors' performance will be more strongly tied to the underlying performance of one, or both, macroeconomic indicators. In other words, we can begin to understand the impact of an implicit sector bet overweighting Energy & Financials, for example, which is what we've observed during much of the post-2008 Financial Crisis period:



As is plain to see, the value index has been materially overweighting Financials and Oil & Gas, while underweighting Technology, over the past several years. The combination of low inflation, low interest rates, and robust economic growth has led to persistent outperformance of Growth companies (especially in Technology) vs. Value companies. This provides further evidence for the theory that Value in general will underperform as a factor during periods of both high economic growth and muted inflation (as it did in the late 1990s).

## The Limitations of Price-to-Book in the 21st Century

Recent research (Penman & Reggiani) has sought to explain why value investing is intuitively less effective for large-caps vs. smaller caps. Part of the theory is that the value “premium” is a risk premium like anything else – and “earnings growth risk” is lower for larger, established firms. Their argument is that Book/Price should be used in conjunction with Earnings/Price, in order to convey not just a firm’s level of risk, but also the expected return for that risk. Which is all fine and good – except many value indexes already incorporate E/P or P/E as one of the metrics to bucket companies into Value or Growth. What about book value itself: it’s been the hallmark of value investing since the very beginning in the early 20th century. Does it still make sense to use in the 21st century?



Book value is, at the end of the day, an accounting concept much more so than an economic one. Even when we include returns from 2016, which was by far the most favorable year for Value during the last 5 years, we observe a strange phenomenon: firms with negative P/B ratios outperformed. For obvious reasons, it is not a meaningful ratio to evaluate a firm’s “cheapness” when book value is less than or equal to 0. But it’s even more surprising that these firms outperformed their peers (and the majority of them were tagged as “Growth”). It suggests that the measure itself has a structural deficiency in approximating firm value.

Book value, like other accounting measures, can be artificially manipulated by company management in the worst cases; in a better but still far-from-ideal case, it can simply be misleading to investors as a result of how a company is required to report operating vs. capital expenses. Research & Development and Advertising – 2 operating expenses that over the past few decades have grown to become much more significant for many firms than their capital expenses – are assigned no permanent home on companies’ balance sheets. A persuasive argument exists that advocates for their accounting treatment to be revised, since it is obvious that future earnings power derives from repeated expenses in R&D and Advertising that modern companies undertake in order to build up their IP & brand power. This is likely the biggest shortcoming of book value in today’s modernized economy, with its much greater reliance on intellectual capital (i.e., “intangibles”) than hard, physical capital that is brought onto

the balance sheet and expensed/depreciated over time. Other issues include inconsistency in the treatment of intangibles: acquisitions of intangibles are treated as assets to be amortized over time (via goodwill accounting) and which could be impaired significantly in one reporting period, but this is not the case if they're home grown. Restructurings are also charged as expenses, not capitalized – even though companies undertake restructuring expenses to (usually) fundamentally alter their future earnings potential. Gains (losses) on asset sales are one-time specialty items. Share repurchases, i.e. “buybacks” also exert a distortionary effect, by directly reducing a firm’s book value of equity; in the last decade, especially among large-cap US firms, the popularity of buybacks has soared. The list goes on and on.

## Summary

It is no secret across the investment industry that Value has underperformed most other smart beta, i.e. factor strategies repeatedly over the past decade. It has even led numerous prominent investors and pundits to declare the “death of value investing.” And while the explosion of smart beta indexes (and the ETFs that track them) has generated impressive allocations to Value during the same time period, its dramatic underperformance risks a wholesale stampede of assets out of this perhaps most well-known, and longest-running, factor strategy. So what is to be done?

The arguments in favor of abandoning Value due to technological innovation, and a broader reworking of the global economy, are compelling but only capture one aspect of the story. As with many complex debates within the world of finance, the truth is more nuanced. There is clear evidence that the financial metric most closely tied to Value – price-to-book – is no longer as relevant, or as powerful, as it used to be. Much of the explanation lies in the intricacies of accounting rules. Instead of fighting to declare Value obsolete or in hibernation, investors should consider the likelihood that a value “premium” will reemerge during the next broad economic cyclical shift; when that occurs, investors should be ready to take maximum advantage by utilizing an approach that is more true to the ultimate goal of the strategy: overweighting firms that are trading below their intrinsic value. To do so, one needs a purer, unbiased valuation metric in the first place. Price-to-book has proven that it does not meet that criteria.

## Appendix A

Factor Returns												
*Market data through 12/31/2018, cumulative returns use a start date of 12/29/2006, all returns exclude dividends												
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Value 17.41	Momentum 17.17	Low Vol -23.61	Value 49.26	Growth 26.35	Low Vol 10.87	Value 22.98	Value 45.53	Low Vol 14.48	Low Vol 1.61	Dividend 26.82	Growth 25.44	Low Vol -2.28
Low Vol 16.49	Quality 16.77	Buyback -34.27	Growth 48.43	Momentum 26.26	Buyback 9.07	Momentum 17.16	Buyback 44.56	Quality 14.06	Growth 1.48	Value 17.05	Momentum 22.93	Growth -4.94
Equal Weight 14.12	Growth 5.80	Benchmark -38.28	Equal Weight 42.19	Value 20.89	Dividend 4.40	Equal Weight 15.21	Growth 42.65	Dividend 13.92	Momentum 0.76	Equal Weight 13.05	Benchmark 19.38	Momentum -6.12
Benchmark 13.80	Benchmark 3.24	Growth -39.23	Buyback 29.36	Quality 19.79	Quality 4.39	Growth 13.97	Equal Weight 33.63	Growth 13.12	Quality -0.64	Quality 12.36	Quality 17.16	Benchmark -6.35
Dividend 9.98	Equal Weight -0.34	Equal Weight -41.08	Momentum 27.19	Equal Weight 19.68	Momentum 1.36	Benchmark 13.47	Momentum 31.27	Equal Weight 12.35	Benchmark -0.81	Buyback 11.00	Buyback 16.94	Quality -8.67
Momentum 7.58	Low Vol -2.16	Dividend -41.49	Benchmark 23.49	Buyback 17.52	Growth -0.02	Buyback 12.33	Quality 29.84	Momentum 12.03	Dividend -1.11	Benchmark 9.64	Equal 16.61	Equal -9.53
Growth 6.55	Buyback -2.48	Momentum -46.35	Low Vol 15.52	Dividend 15.82	Benchmark -0.20	Quality 12.05	Benchmark 29.69	Buyback 11.54	Equal Weight -4.26	Low Vol 7.80	Value 15.11	Dividend -11.06
Quality 4.58	Value -6.71	Quality -46.41	Quality 12.20	Benchmark 12.84	Equal Weight -2.18	Low Vol 6.75	Dividend 25.93	Benchmark 11.29	Buyback -5.39	Growth 3.56	Low Vol 14.81	Buyback -11.59
Buyback n/a	Dividend -18.94	Value -49.76	Dividend -1.77	Low Vol 9.79	Value -2.73	Dividend 1.73	Low Vol 19.80	Value 10.43	Value -10.48	Momentum 1.52	Dividend 5.20	Value -14.23

Sources: FactSet, Bloomberg, Nasdaq Global Indexes.

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