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The Investment Engineers

Quantitative Equities

Spring has sprung for Value investing

- Despite the recent Value rally, spreads in valuation multiples remain wide
- Fundamentals and growth forecasts contradict 'cheap for a reason' tag
- Market sentiment is becoming a tailwind for Value stocks

After 'a lost decade' of tepid performance, the Value factor has begun to stage a comeback, following the announcement of successful Pfizer-BioNTech Covid-19 vaccine candidate results on 9 November 2020. Despite the recent rally and reversal of fortunes, spreads in valuation multiples between growth and value stocks remain high compared to their historical levels. This leads us to believe that the Value upswing still has a way to go. But there are other reasons supporting the continuation of the recent Value recovery. Fundamentals for Value stocks have improved in recent months: they are not less profitable nor do they have lower growth expectations than in the past, relative to their expensive peers. Furthermore, market sentiment for Value stocks, in the form of momentum and earnings revisions, is improving. Thus, after a long and harsh 'quant winter', we believe spring has sprung and the Value factor seems ready for summer.

Article
For professional investors
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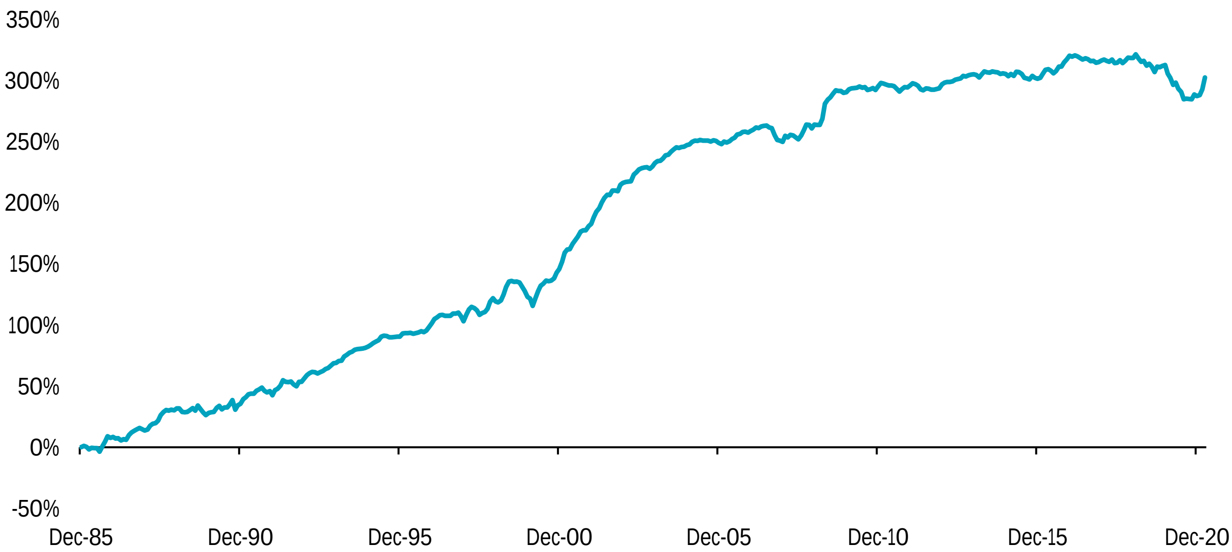
Value is not dead

Value investing is at the center of a heated debate. According to some researchers, the style has fallen victim to accounting deficiencies, causing systemic misidentification of value and fundamental changes.[1] From the perspective of other academics, the style's recent disappointing performance still falls within the range of expected outcomes, based on regular statistical variation.[2] Finally, some practitioners dismiss the arguments according to which the value factor might be structurally impaired.[3]

[1] Please see: Facts about Formulaic Value Investing, An Intangible-adjusted Book-to-market Ratio Still Predicts Stock Returns, Explaining the Recent Failure of Value Investing, or Intangible ironies: investor mispricing of company assets on and off its balance sheet.
[2] Please see: The Value Premium or Reports of Value's Death May Be Greatly Exaggerated.
[3] Please see: Is (Systematic) Value Investing Dead? or Reports of Value's Death May Be Greatly Exaggerated.

Robeco contributed to this debate with a recent research paper.[4] Instead of mainly defending or adjusting the academic version of value investing – based on the book-to-market ratio of equity (HML) – our study showed that a more sophisticated value investment strategy could have delivered a solid long-term track record. Our 'resurrected' or enhanced value factor[5] incorporates ideas that are either well documented in the academic literature or common knowledge among practitioners. Most importantly, we used a combination of value metrics (not only book-to-market, but also EBITDA/EV, CF/P, and NPY)[6] and applied some basic risk management (removing region, sector or country bets). Moreover, we made more effective use of the breadth of the liquid universe of stocks.

Figure 1 | Cumulative return for the enhanced value factor



Source: Refinitiv. The figure shows the composite valuation spread between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Figure 1 illustrates the cumulative performance for the enhanced value strategy for our global sample.[7] Despite its solid long-term track record, this strategy also suffered in recent years, as the value factor was the main cause of the so-called 'quant crisis'[8] or 'quant winter.'[9] In the same vein as other researchers,[10] we also emphasized that the recent poor performance of generic value strategies stemmed from an extreme widening of valuation multiples.

This difference in valuation multiples can be measured with the so-called 'value spread' – the ratio of the valuation multiples of expensive companies versus that of cheap ones. Since cheap stocks by definition have lower multiples than their expensive peers, we scaled the resulting time series by its median, such that the median of the scaled series was equal to 1. Doing so, we could consider value as historically cheap when the valuation difference was below one and vice

[4] Please see: Blitz, D., and Hanauer, M., January 2021, "Resurrecting the Value Premium", Journal of Portfolio Management.
[5] The enhanced value strategy is based on a composite of book-to-market (R&D adjusted), EBITDA/EV, CF/P, and NPY. Value stocks are sorted into quintile portfolios based on the valuation composite and in a region and sector respectively country neutral manner for developed and emerging markets. Quintile portfolios are equal-weighted and reformed monthly.
[6] EBITDA/EV is earnings before interest, taxes, depreciation and amortization to enterprise value; CF/P is cash flow to price; and NPY is net payout yield.
[7] Our sample comprises the standard MSCI All Countries Index constituents, i.e., large and mid-cap stocks across both developed and emerging markets. Details regarding the universe, value definition, neutralities, as well as regional results are provided in the appendix.
[8] Please see: The quant equity crisis of 2018-2020: Cornered by 'big growth
[9] Please see: Will Value survive the quant winter?
[10] Please see: Is (Systematic) Value Investing Dead? or Reports of Value's Death May Be Greatly Exaggerated.

versa. Furthermore, we computed the final value spread as the average spread of three multiples instead of just one: namely market-to-book (R&D adjusted), EV/EBITDA, and P/CF.

For the enhanced value strategy, we observed that towards the end of our sample, the spread in valuation multiples between growth and value stocks reached and surpassed levels last seen at the height of the tech bubble in the late 1990s. This helps to explain why the enhanced value strategy did not come out of the most recent years unscathed.

Figure 2 | Composite valuation spread for the enhanced value strategy

Source: Refinitiv. The figure shows the composite valuation spread between the top and bottom quintile portfolios of the enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

In our view, this recent widening in multiples has several implications. First, diverging valuation multiples between cheap and expensive stocks are inconsistent with the concern that the value premium may have been arbitraged away as a result of it being so well known and due to substantial funds being invested in value strategies. Were this the case, it would be reflected in a narrowing valuation spread over time instead of the widening trend we have witnessed. Therefore, it is highly unlikely that arbitrage activity was the driver of the recent underperformance of value strategies.

Second, diverging valuation multiples suggest that return prospects for value are currently high. The widening of the valuation spread in the late 1990s was followed by mean reversion in the early 2000s, which resulted in the massive outperformance of cheap stocks over their expensive counterparts.

Third, the net spread widening that occurred over our full sample period means that realized returns might even underestimate the true magnitude of the value premium over this period.[11]

Spring has sprung

The two preceding charts include data until the end of March 2021. In line with meteorological seasons, we are keenly observing if the beginning of spring in March also coincided with sprouting value returns following a harsh quant winter.

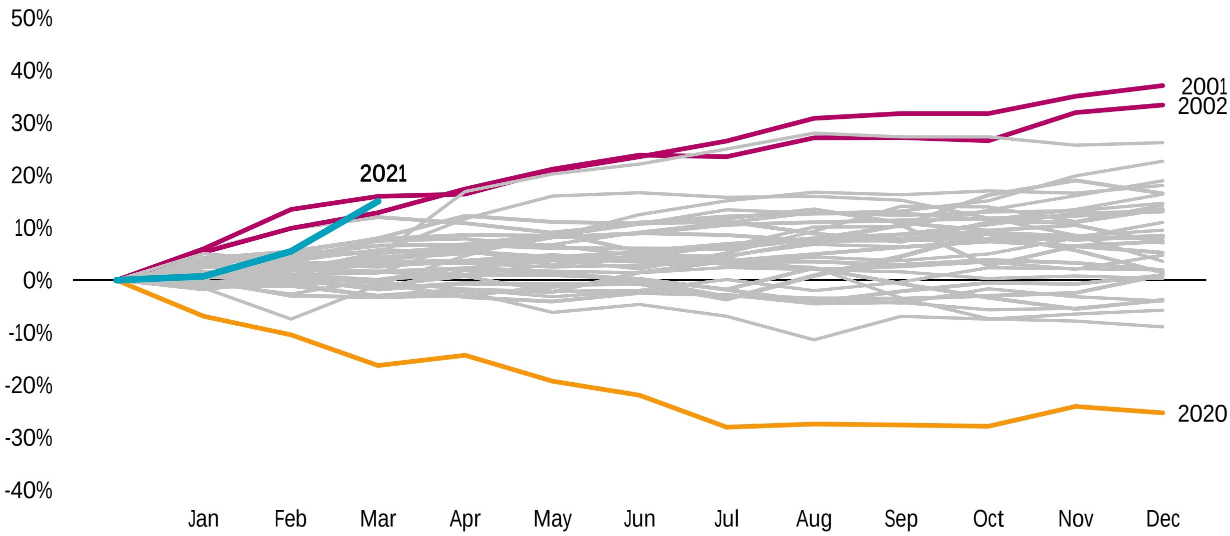
As Figure 1 shows, the drawdown of the enhanced value factor began in January 2019 (the exact starting point of the value drawdown varies across regions) and reached a low point in July 2020 after falling more than 35%. With the

[11] Please see the analysis in our paper and also in this article The Long Run Is Lying to You.

announcement of successful Pfizer-BioNTech Covid-19 vaccine candidate results on 9 November 2020, the long-awaited value comeback was triggered. This recovery started slowly, but due to very strong value returns in March, the enhanced value factor rallied close to 20%.

Indeed, the start of spring has led to the end of the quant winter, even if momentarily. Figure 3 depicts the cumulative performance of the enhanced value factor per calendar year. Interestingly, this shows that the magnitude of the current recovery is similar to the strong value years seen at the beginning of the 21st century.

Figure 3 | Cumulative return for the enhanced value factor per calendar year



Source: Refinitiv. The figure shows the cumulated return spread per calendar year between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

But does value investing's comeback in 2021 mean that the style is now less attractive in terms of the valuation spread? We initially argued that the 2019/2020 drawdown mainly stemmed from an extreme widening of valuation multiples, thus a sharp narrowing should result in positive value returns. When we look at the recent developments in Figure 2, we do see that the value spread has shrunk slightly in 2021. However, it remains considerably wide compared to historical levels, still above the 97th percentile. Therefore, we believe that value investing remains very attractive from a valuation perspective.

Outlook for Value spread and returns

History suggests the valuation spread tends to mean-revert. And although there is a possibility that it could widen again, leading to new highs and disappointing value returns, we believe this outcome is less likely given the current operating performance and growth outlooks for value stocks (see also next subsection).

In fact, a revaluation to more modest spread levels is not necessary for the continuation of the recent value rebound, in our opinion. Even if current relative valuations remain at their extraordinarily high levels, we expect future value returns to be similar to their long-run averages, and perhaps even higher given the net spread widening over our sample period. Meanwhile, a narrowing valuation spread would imply strong tailwinds for value returns. This would sustain the current recovery, just like during the years that followed the dot-com bubble.

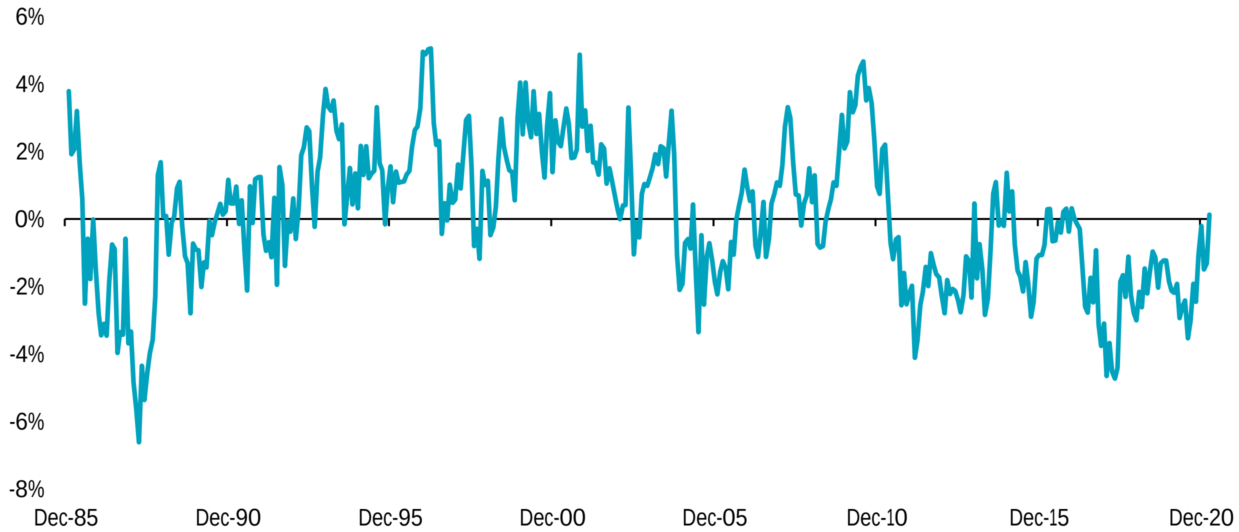
Moreover, changes in the valuation spread do not fully explain the variation in value returns, as newsflow in terms of fundamental performance (improving/deteriorating earnings, cash flows, etc.) and portfolio rebalancing effects (individual value stocks becoming more expensive, thus dropping out out the value portfolio, and the other way round for growth stocks) are also influential. Shifts in the value spread, however, historically explain more than half of the variation in annual value returns in US stocks markets, and a bit less internationally.[12]

The 'cheap for a reason' tag does not hold

One question that remains is that maybe 'this time is indeed different' and value stocks deserve to be cheaper than historically observed. Maybe expensive companies (based on simple valuation multiples) could be much more profitable today than in the past (compared to the dot-com bubble, for example), or their expected long-term growth could be much higher.

Figures 4 and 5 show the spreads in operating performance (proxied by gross profitability, GP/A) [13] and growth expectations (proxied by the IBES median long-term EPS growth forecast, LTG). [14] On average, cheap stocks – according to the enhanced value strategy – display about the same levels of profitability as expensive ones, at a global level, although value stocks exhibit slightly lower profitability on average in the US.[15] Admittedly, cheap stocks have been less profitable between 2017 and 2020. However, their profitability has improved considerably in recent months. In fact, cheap stocks were actually slightly more profitable than their expensive peers at the end of March 2021. Therefore, the current valuation spread cannot be justified by differences in profitability.

Figure 4 | Spread in gross profitability for the enhanced value strategy



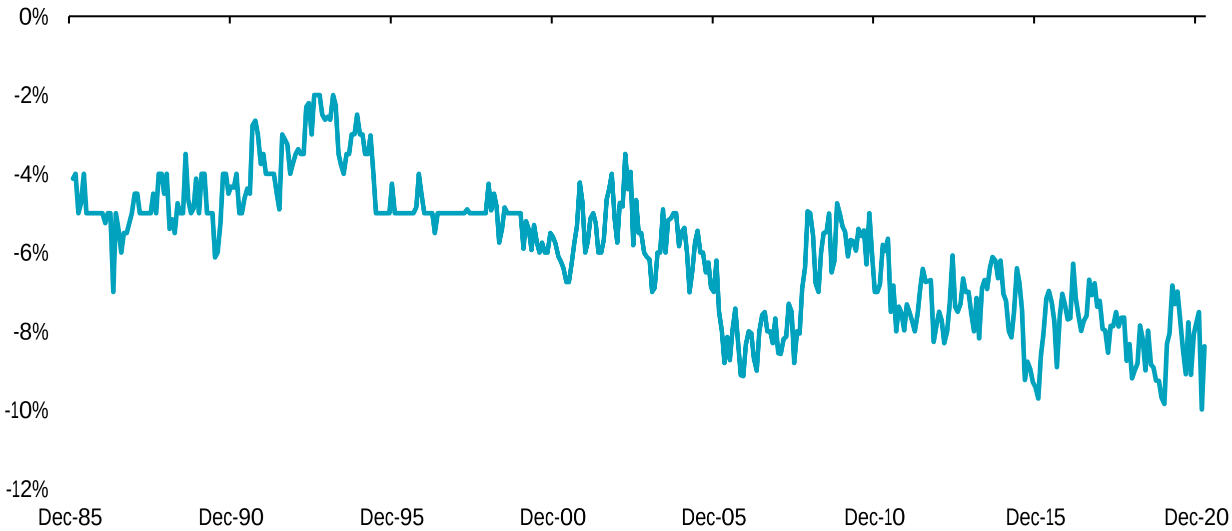
Source: Refinitiv. The figure shows the spread in gross profitability between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Moreover, current profitability is mainly backward-looking, so what about future growth expectations? If profitability levels are the same as those in the present day, then stocks with higher expected growth should trade at higher valuations. Cheap stocks tend to have lower future growth expectations than expensive ones, which explains why the latter are also called 'growth stocks'. However, relative growth expectations are currently not lower than they have been in the previous

[12] Please see: Blitz, D., and Hanauer, M., January 2021, "Resurrecting the Value Premium", Journal of Portfolio Management.
[13] GP/A is gross profit to assets
[14] LTG is long-term growth rate
[15] The difference would be negative for a value strategy solely based on book-to-market. The difference is less pronounced or non-existent for the enhanced value strategy as it is based on a composite of value metrics that use profit measures such as EBITDA and cash flow in the numerator.

15 years, especially for developed markets. Thus, the widening of the value spread over the last three years cannot be traced back to a deterioration in growth expectations for value stocks.

Figure 5 | Spread in long-term growth expectations for the enhanced value strategy



Source: Refinitiv. The figure shows the spread in the IBES median long-term EPS growth forecast between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Figures 4 and 5 show that differences in profitability and expected future growth are unlikely to explain the extreme widening in the value spread seen over the past three years. Nevertheless, we also conducted a more formal test. We calculated an ‘excess valuation spread ’ defined as the residual from a regression of the valuation spread from Figure 2 on the gross profitability and long-term growth expectation spreads. Again, we scaled the resulting time series to have a median of 1. This excess valuation spread can be seen as the abnormal valuation of value versus growth stocks, given their (time-varying) differences in profitability and growth expectations. Figure 6 shows this abnormal valuation spread and suggests that value stocks are still abnormally cheap compared to their history.

Figure 6 | Excess valuation spread (controlling for GP/A and LTG) for the enhanced value strategy

Source: Refinitiv. The figure shows the excess valuation spread between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Market sentiment for Value receives a shot in the arm

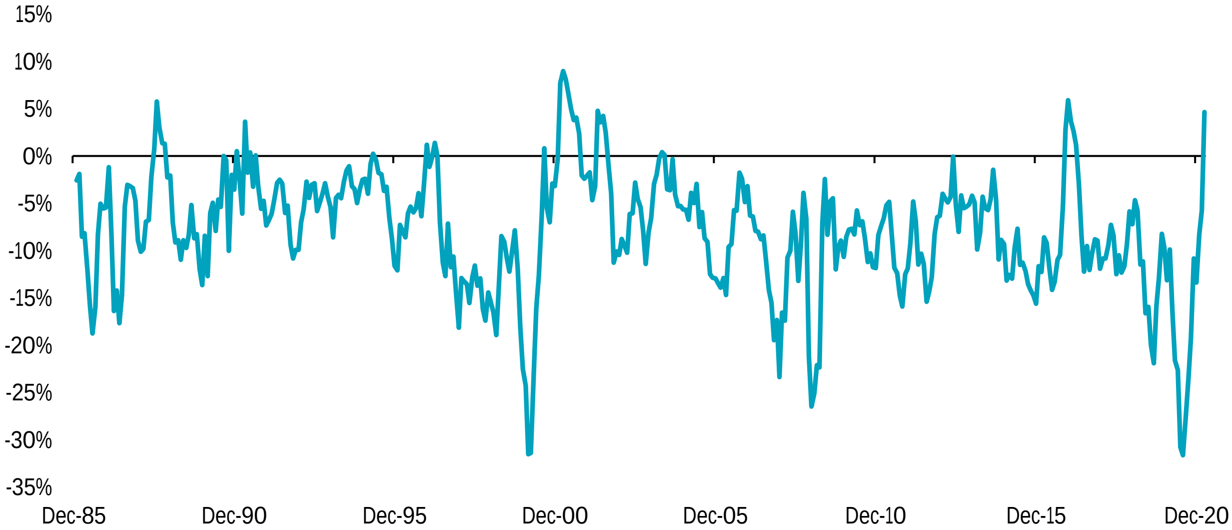
The recent value recovery has led to a change in sentiment regarding value stocks. Price momentum – measured as a stock's return over the last 6 to 12 months – is one way to gauge market sentiment. While value and momentum tend to be negatively correlated – therefore providing diversification benefits – there have been a few periods in history when value stocks exhibited strong momentum. We expect this to happen again in the coming months.

Figure 7 depicts the difference between the median six-month performance of value and growth stocks. The difference has shifted from very negative to positive over the last few months. Since most momentum strategies use price momentum measures over 6 to 12 months and the value turnaround only started about six months ago, they have yet to purchase value stocks significantly. But one should expect them to start buying value stocks in a larger scale now that the market regime shift is clearly reflected in price momentum metrics.[16]

Another way of measuring sentiment is to look at analyst earnings estimate revisions. As we can see from Figure 8, analysts tend to issue more upward than downward earnings revisions for expensive stocks than for cheap ones. However, over the last few months, analyst earnings per share (EPS) revisions for value stocks have been as optimistic as they have ever been in recent history. Although we still have to see if analyst earnings expectations will play out as forecasted, current sentiment is in favor of value.

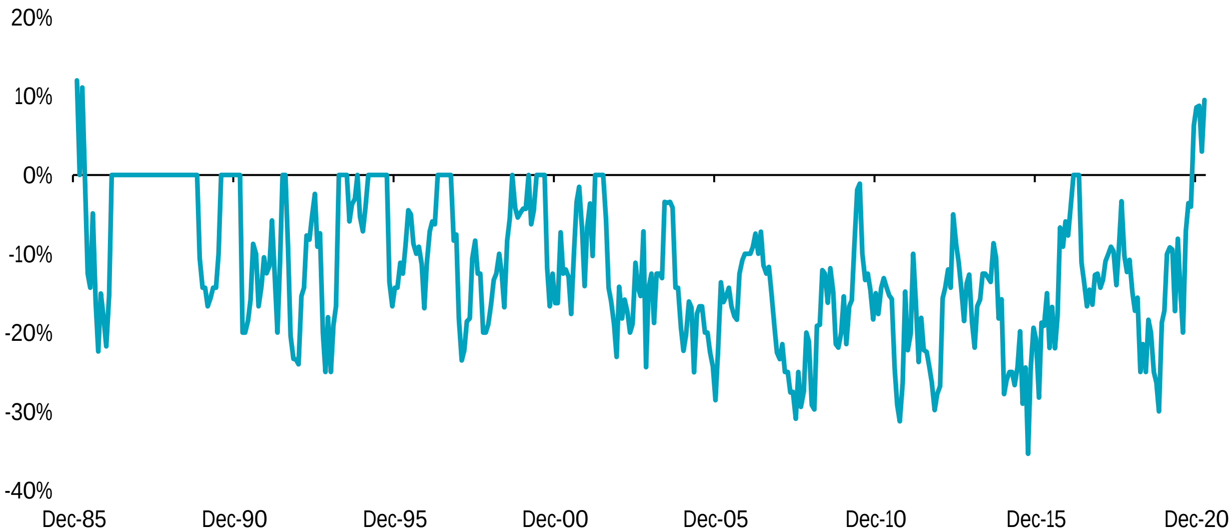
[16] Please see this article Growth-value rotation to prompt major rebalancing of $15bn ETF.

Figure 7 | Spread in Momentum (6-0) for the enhanced value strategy



Source: Refinitiv. The figure shows the spread in 6-0 month momentum between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Figure 8 | Spread in analyst EPS revisions (FY2) for the enhanced value strategy



Source: Refinitiv. The figure shows the spread in analyst EPS revisions (FY2) between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Value seems ready for summer

Value strategies generated strong returns in the first quarter of 2021. Despite the rally, the spread in valuation multiples between expensive and cheap stocks remains at exceptionally high levels. This suggests that the value comeback still has a long way to go. Moreover, value stocks are not less profitable than their 'growth' counterparts. Nor do they have lower growth expectations than in the past, relative to their expensive peers.

If anything, the fundamentals of value stocks have improved in recent months. The excess valuation spread still shows that value stocks are abnormally cheap compared to their history. Furthermore, market sentiment for value stocks is improving. As the price momentum of value stocks continues to improve in the coming months, momentum strategies should start to purchase cheap stocks instead of expensive ones. Alongside this, analyst earnings revisions have almost never been more positive for value stocks, compared to their growth counterparts.

All in all, after a long and harsh quant winter, spring has sprung and value seems ready for summer.

Appendix

The enhanced value strategy and the calculation of the value spread follow the methodology described in Blitz and Hanauer (2021), Resurrecting the Value Premium, The Journal of Portfolio Management Quantitative Special Issue 2021, 47 (2) 63-81.

Universe

The universe for the enhanced value factor at each point in time consists of all stocks in the standard (large/mid-cap) MSCI Developed and Emerging Markets indices at that moment. Before 2001, we do not have access to MSCI index constituent data, so as a proxy, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Enhanced value definition

The enhanced value definition is based on a composite of book-to-market (R&D adjusted), EBITDA/EV, CF/P, and NPY. Value stocks are sorted into quintile portfolios based on the valuation composite. Quintile portfolios are equal-weighted.

Neutralities

We apply region and sector neutrality for developed markets by independently ranking stocks within each region/GICS level 1 industry (11 sectors) bucket. Developed market regions are North America, Europe, and Pacific. For emerging markets, we use country neutrality.

Calculation valuation spread

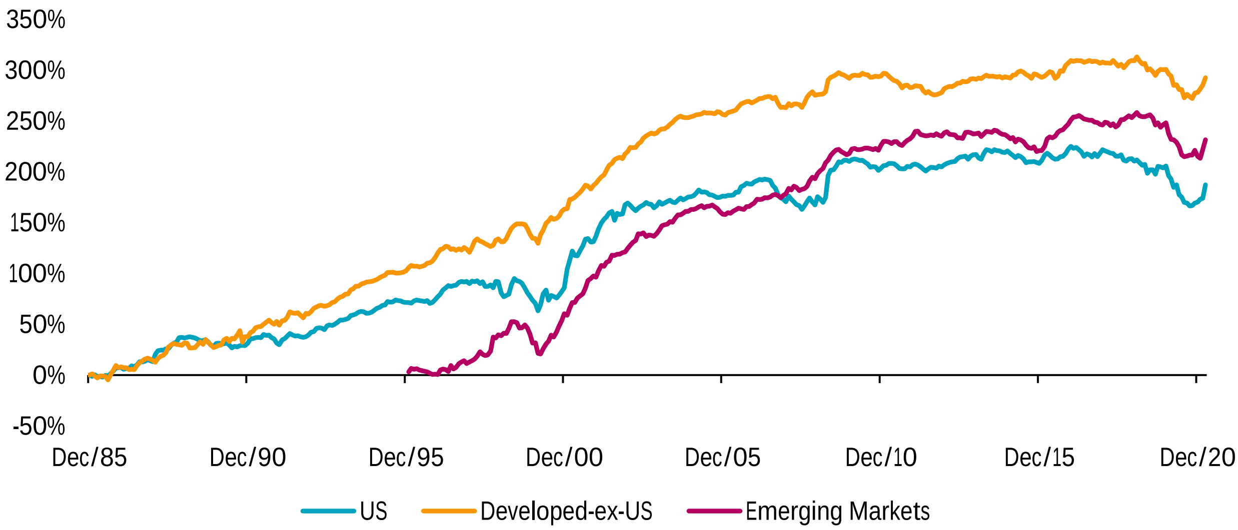
For each multiple and month, we compute the median for both the cheapest and most expensive quintile, and compute the spread as the ratio between the two. For the composite valuation spread, we first standardize each of the three time series by dividing them with their median. Next, we average the three standardized spreads.

Other spreads

We follow a similar approach for the other spreads, but use the difference in the median gross profitability, IBES long-term growth rate consensus, 6-month total return performance, and EPS FY2 revision ratio, respectively, between the cheapest and most expensive quintiles.

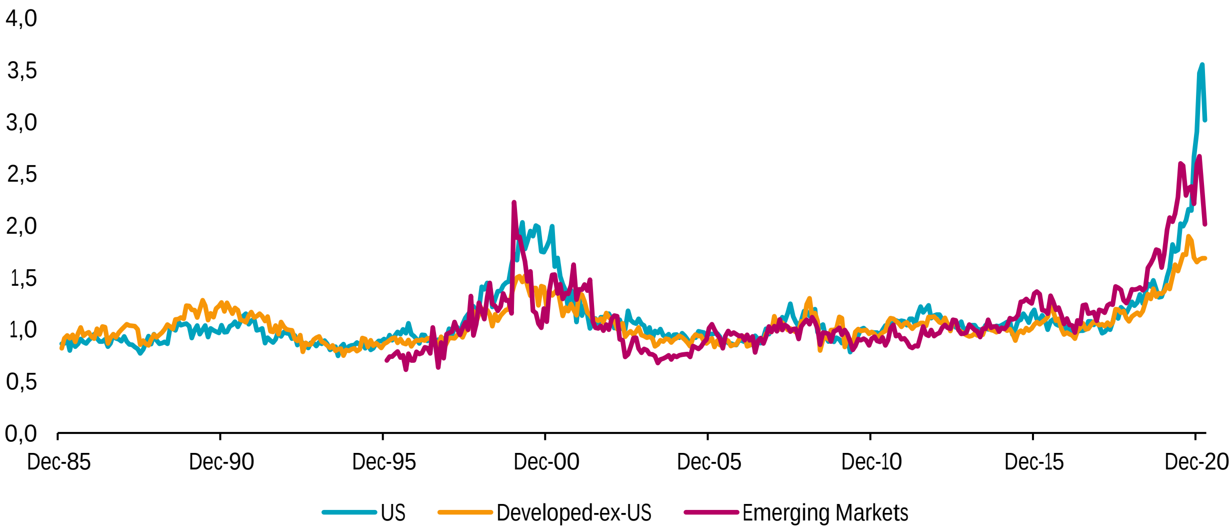
Regional Results

Figure 9 | Cumulative return for the enhanced value factor



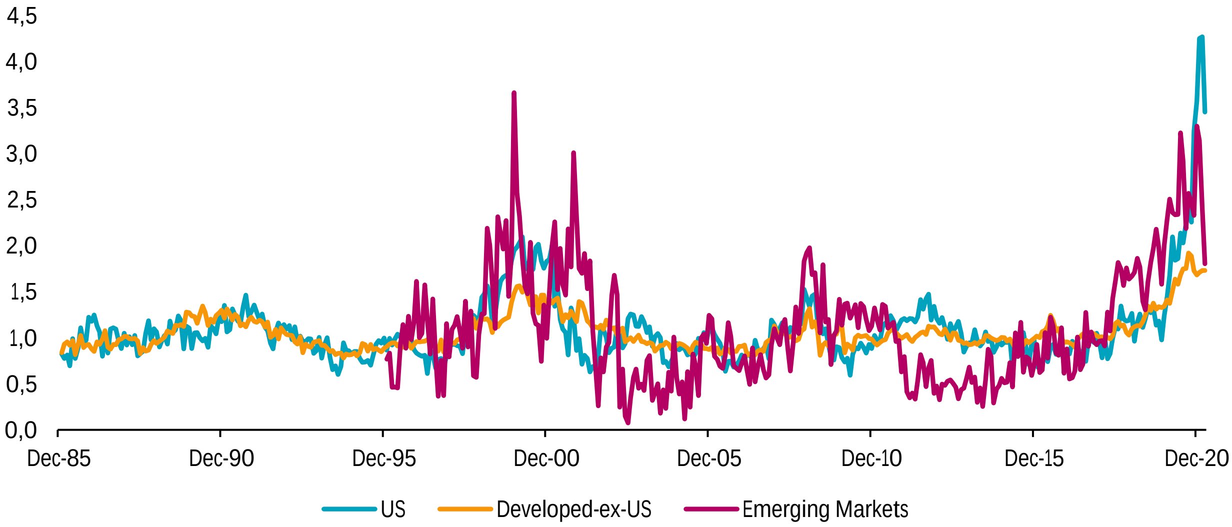
Source: Refinitiv. The figure shows the cumulated return spread between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Figure 10 | Composite valuation spread for the enhanced value strategy



Source: Refinitiv. The figure shows the composite valuation spread between the top and bottom quintile portfolios of an enhanced value strategy. The investment universe consists of constituents of the MSCI Developed and Emerging Markets indices. Before 2001, we use the FTSE World Developed index for developed markets (going back to December 1985), and for emerging markets, the largest 800 constituents of the S&P Emerging BMI at the semi-annual index rebalance (going back to December 1995).

Figure 11 | Excess valuation spread (controlling for GP/A and LTG) for the enhanced value strategy



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