IN BRIEF

• Factors experienced unprecedented moves in the fourth quarter of 2020, capping a volatile and generally challenging year.
• Equity value showed signs of life—though at the cost of an extreme reversal for equity momentum—as a rally in cyclical and low quality stocks took hold.
• The merger arbitrage factor enjoyed another strong quarter and extended gains to all-time highs.
• Macro factors were positive: Directional factors outperformed relative value factors as macro conditions remained largely consistent globally.
• We continue to see an attractive outlook for equity value and equity quality, and note strong directionality among time-series momentum factors that may lift both their risk and their return potential.

OVERVIEW

The year 2020 was one for the history books as the effects of an unprecedented global pandemic spilled over into financial markets. Risk assets continued their climb in the fourth quarter, spurred by historic interventions by central banks and governments, the U.S. election results and positive news around COVID-19 vaccines. Global equity markets rallied to all-time highs: November was several indices’ strongest month on record. Cyclical equities led the way, in a stark reversal from earlier in 2020. High yield spreads ground tighter, commodities pushed higher, long-term U.S. Treasury yields rose, and the USD continued to fall.

Against this backdrop, the factors that we favor experienced unprecedented moves (EXHIBIT 1).

The shift in equity market leadership boosted the equity value factor but coincided with the worst single-day loss in over 30 years for the equity momentum factor. The quality factor extended its decline in a drawdown that was (and continues to be) the largest in over 30 years—within a market rally that became low quality in nature. We view these unprecedented negatives as precursors for

EXHIBIT 1: QUANTITATIVE SOLUTIONS LONG/SHORT* FACTOR RETURNS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Absolute return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity momentum</td>
<td>-25</td>
</tr>
<tr>
<td>Equity value</td>
<td>-20</td>
</tr>
<tr>
<td>Equity quality</td>
<td>-15</td>
</tr>
<tr>
<td>Equity size</td>
<td>-10</td>
</tr>
<tr>
<td>Merger arb</td>
<td>-5</td>
</tr>
<tr>
<td>Macro carry</td>
<td>0</td>
</tr>
<tr>
<td>Macro momentum</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: Factors presented are long/short in nature. Equity factors are represented as 100% long notional exposure, macro factors as aggregation of 5% vol subcomponents. *Long/short beta-neutral implementation of the value factor was hurt by the beta effects on value stocks compared with their expensive/growth counterparts. However, long-only versions of the factor performed well relative to the market.
Value stocks rallied on the back of vaccine announcements, while factor fundamentals generally held up over 2020

EXHIBIT 2: U.S. LONG-ONLY FACTOR RETURNS* (Q4 2020)


*Cumulative excess return vs. Russell 1000 Index.

potentially strong returns in the future. Meanwhile, the equity size factor experienced its third-best quarter in our data’s history (soon after suffering its third-worst quarter in Q1 2020). We remain optimistic in our outlook across equity factors, with valuations supportive of the equity value and quality factors. Despite these tailwinds, we acknowledge that these more fundamentally based factors may require a shift in market regime and in investor sentiment generally to sustain the above-average returns that their valuation spreads imply.

FACTORS IN FOCUS

Equity factors: A reversal for the ages

The Pfizer-BioNTech vaccine announcement on November 9 led to a stark reversal in market leadership: Value stocks outperformed growth stocks, cyclical outperformed defensive companies, and small cap stocks outperformed large caps amid a rally dominated by lower quality companies (EXHIBIT 2). While the recovery in small cap stocks was enough to offset losses from earlier in 2020, value and quality both finished with their worst calendar year returns in the history of our data (since 1990)—as both experienced their worst drawdowns in 30 years.1,2

Despite this choppy and in some cases difficult quarter for equity factors, the fundamentals of companies that rank well from a factor perspective generally held up in 2020. Last quarter, we noted a bout of weakness for the fundamentals of value companies—particularly when assessing net income growth trends—that appeared linked to the impact of COVID-19 on the economy and on markets.3 This weakness, however, has by and large reversed in recent months. Median net income growth of value companies declined by 18% over the past year, compared with a 12% decline for their expensive counterparts—a 6 percentage point (ppt) differential—narrower than the long-term average of 7ppt (EXHIBIT 3). For the momentum and quality factors, COVID-19 appears to have widened growth differentials in both factors’ favor. Strong-momentum companies exhibited net income growth of 11% during the past year vs. weak-momentum companies’ 47% decline in net income—a whopping 58ppt differential, compared with a long-term average of 18ppt. High quality companies have exhibited net income declines of 5% over the past year vs. declines of 29% for low quality companies, a differential of 24ppt, compared with a long-term average of 10ppt.

Given this backdrop, one might have expected the momentum and quality factors to have strongly outperformed in 2020, with value near flat. This conclusion, however, would omit the impact of valuations. In fact, when assessing valuation spreads, it continues to appear that investor preferences (and exuberance, in some cases) have been the predominant driver of factor returns—punishing both value and quality. We have discussed the fundamental cheapness of the value and quality factors individually in past quarters’ reports. This quarter, we examine the two factors jointly (EXHIBIT 4). While the value and quality factors are uncorrelated to each other over the long term, their economic underpinnings share similar behavioral roots. Both factors may be expected to underperform in periods when sentiment overwhelms corporate fundamentals. We believe this is the case today.

1 The value factor has now declined 39% in long/short terms since December 2016, compared with losses of 28% during the dot-com bubble (May 1998–February 2000), while the quality factor has now declined 7% since April 2020.
2 For more information on the drawdown of the value factor and our view on the cyclical nature of recent underperformance, see Yazann Romahi, Garrett Norman and Gareth Turner, “Why value investing is poised to make a comeback in the 2020s,” J.P. Morgan Asset Management, updated as of June 15, 2020.
3 When analyzing the potential impact of themes associated with COVID-19 on factors (such as by comparing factor scores of stocks that are expected to benefit from structural changes accelerated by the coronavirus relative to companies that may be negatively impacted or left behind), the value factor has been impacted negatively, the momentum factor has been impacted positively, and the multi-factor approach has been relatively insensitive to these themes.
Is strong performance ahead for value and quality?

The outperformance of expensive stocks over recent years appears to be the continued inflating of a bubble that should eventually mean-revert. In December 2016, the forward P/E on value stocks stood at 13.2x, while the forward P/E on expensive stocks stood at 25.8x—with both near their long-term P/E averages (12.2x and 24.9x, respectively). Since then, value stocks’ multiples have stayed roughly constant (current average P/E is 13x), whereas multiples on expensive stocks have risen by 127%, to 58.6x. This exuberance is not confined to just the value factor. Value and quality are both at their cheapest levels since the dot-com bubble. High quality companies are typically undervalued relative to lower quality—though investors should arguably pay more for higher quality. (Investors tend to bid up low quality stocks due to their potential for high, albeit volatile, returns: Compare high quality companies’ long-term P/E average of 16.9x with low quality companies’ 17.3x.) That relative discount for high quality companies widened significantly in 2020. High quality companies are now trading at a P/E of 21.8x, vs. low quality companies’ 29.7x.

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This backdrop argues that strong performance lies ahead for both the value and the quality factors. However, we know that valuations alone do not typically catalyze price moves. For value and quality to achieve above-average returns, and for those returns to be sustainable, a move to a different market regime is likely necessary—one in which company valuations are based more on near-term fundamentals than on predications about the distant future, or the rush of investors seeking a lottery ticket. It is nearly impossible to predict when such a regime turn may occur, and it is certainly possible the current market froth may be part of a broader and longer bubble. We do believe, however, that the valuation tailwinds for value and quality will ultimately rule the day.

Macro factors were positive but finished the year in negative territory, on average

Time-series momentum factors benefited from a continued rally across equity and commodity markets. The gains were not enough, though, to offset losses from February-March, when markets were hit by the simultaneous shock of the COVID-19 pandemic and the plunge in oil prices after Saudi-Russian negotiations over production cuts collapsed. Macro factors were quiet elsewhere. Relative value commodity factors were boosted by the strongest rally in soybean prices since the cycle leading up to the global financial crisis. Both carry and momentum factors were positioned for the recent soybean price rally, but performance was uneven across other commodity markets. Fixed income and currency factors were also generally muted over the quarter, particularly from a U.S. dollar-neutral perspective. Carry spreads remain generally below long-term averages, particularly across G10 government bonds and FX markets.
This suggests a diminished potential to capture carry in those markets. Among relative value momentum factors, dispersion in price moves remains average across currencies and commodities. The number of significantly trending assets is as high and directional as it has been in recent history—with time-series momentum positioned almost uniformly long across equity and commodity markets and long across most fixed income markets. (The longer end of the U.S. Treasury curve is a notable exception.)

**CONCLUDING REMARKS**

Equity factors dominated the overall factor space again in the fourth quarter, both in return and volatility terms. The opportunity set also remains most interesting in the equity factor space, with spreads historically wide for both equity value and equity quality, as noted. While we remain most optimistic about the prospects for equity factors, we believe, as always, in diversifying across a broad range of compensated factors while minimizing exposure to uncompensated risks.

### FACTOR OPPORTUNITY SET

The table below summarizes our outlook for each of the factors accessed by the Quantitative Solutions platform. It does not constitute a recommendation but, rather, indicates our estimate of the attractiveness of factors in the current market environment.

<table>
<thead>
<tr>
<th>FACTOR VIEWS</th>
<th>VS. LAST QUARTER:</th>
<th>▲ Upgrade</th>
<th>▼ Downgrade</th>
<th>— No change</th>
</tr>
</thead>
<tbody>
<tr>
<td>VS. LAST QUARTER:</td>
<td>Average</td>
<td>Low average</td>
<td>High average</td>
<td>Above average</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity</td>
<td>Momentum</td>
<td>Neutral on valuation, attractive on dispersion (increase from last quarter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valuation</td>
<td>— Attractive on valuation, attractive on dispersion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>— Attractive on valuation, neutral on dispersion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Size</td>
<td>— Neutral on valuation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event-driven</td>
<td>Merger arb</td>
<td>Negative on deal premia, attractive on % of friendly deals, neutral on activity level (increase from last quarter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macro</td>
<td>Carry</td>
<td>Neutral on FX spreads, neutral on fixed income spread, neutral on commodity spread</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Momentum</td>
<td>Neutral on FX price dispersion, neutral on commodity price dispersion, attractive on significant price trends (increase from last quarter)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: J.P. Morgan Asset Management; for illustrative purposes only.

Our framework for evaluating factor outlooks is centered on the concepts of dispersion, valuation and the opportunity for diversification. For equity factors, we measure dispersion and valuation spreads between top-quartile and bottom-quartile stocks on a market, region and sector-neutral basis. For event-driven factors, we measure implied carry and the level of corporate activity as indicative of the ability to minimize idiosyncratic stock risk. For macro factors, we measure the dispersion or spread between top-ranked and bottom-ranked markets as well as the number of significantly trending markets.

### GLOSSARY

- **Equity momentum**: Long/short global developed stocks, based on price change and earnings revisions; sector and region neutral
- **Equity value**: Long/short global developed stocks based on book-to-price, earnings yield, dividend yield, cash flow yield; sector and region neutral
- **Equity quality**: Long/short global developed stocks based on financial risk, profitability and earnings quality; sector and region neutral
- **Equity size**: Long/short global developed stocks based on market capitalization; sector and region neutral
- **Merger arb**: Long target company and short acquirer (when offer involves stock component) in announced merger deals across global developed markets
- **Event-driven (other)**: Conglomerate discount arbitrage, share repurchases, equity index arbitrage, post-reorganization equities and shareholder activism
- **Macro carry**: FX G10 carry, FX emerging market carry, fixed income term premium, fixed income real yield, commodity carry
- **Macro momentum**: FX cross-sectional momentum, commodity cross-sectional momentum and time-series momentum across equity, fixed income and commodity markets
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