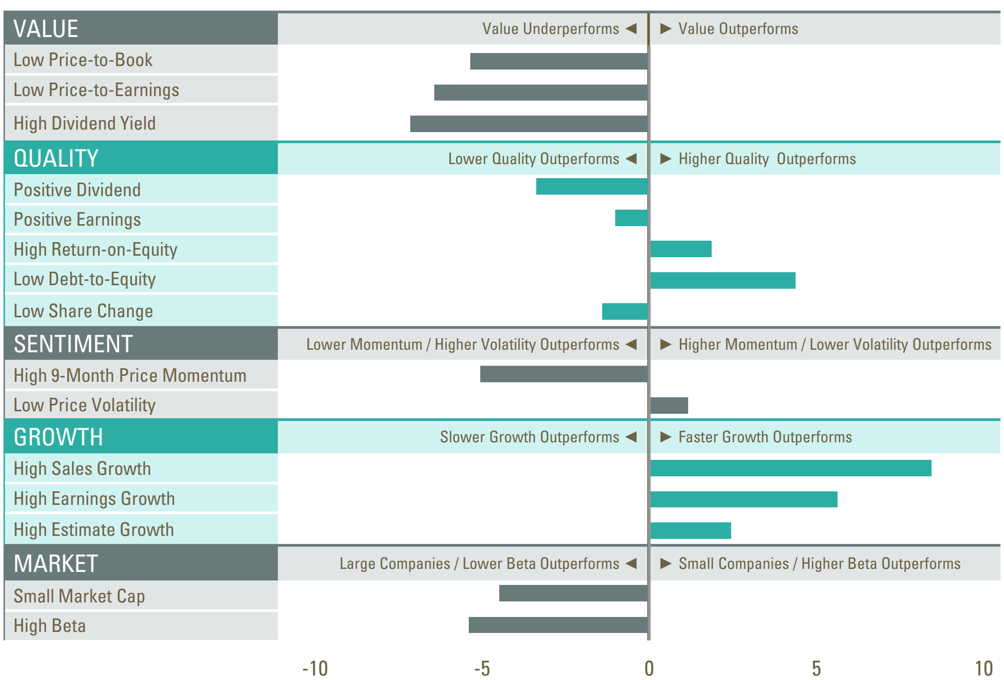
Quantitative Review of U.S. Equities

2Q 2021

- U.S. equity markets continued to rally through the second quarter, with the S&P up 8.6% for the quarter and 15.3% YTD. Remarkably, the S&P 500 is now up 96.1% since its low on March 23, 2020, and 29.9% from its February 2020 pre-pandemic highs.
- Value factors led the markets higher, as they have since the fourth quarter 2020, until faltering in mid-May and June. As a result, these factors had mixed performance for the quarter but were still quite strong for the year to date.
- Growth stocks initially lagged as value stocks dominated but then in mid-May again began to outperform. Their results are therefore mixed for the quarter but still trailing versus the market in the first half of 2021.
- With the stock market continuing to rally higher, more defensive factors generally performed poorly, as they have since March 2020, with most high quality and lower volatility factors producing negative returns. Large-cap stocks were an exception as they outperformed smaller caps within most market segments.
- With the shift in market leadership, at least temporarily, back to growth from value this quarter, the higher price momentum factor was mixed across the Russell domestic equity indices.
- **Research Spotlight: Market Returns after Strong Performance Periods:** The S&P 500 gained 56.4% over the 12 months from March 31, 2020, to March 31, 2021, generating concern that the market has risen too far, too fast. We review market returns following other periods of very strong market gains to determine if unusual gains historically triggered a subsequent market retreat.

Figure 1 Second Quarter 2021 Russell 1000 Index Factor Returns
QTD; % Return Difference Between Factor's[1] High and Low Quartile; Russell 1000 Index; As of 6/30/2021



Source: Brandywine Global, FactSet, FTSE Russell

A NOTE FROM BRANDYWINE GLOBAL'S DIVERSIFIED EQUITY TEAM

This paper is the quarterly report by Brandywine Global's Diversified Equity team on quantitative factors impacting the U.S. equity markets. In each publication, we will provide a standardized report on factor behavior for the quarterly and year to date periods. In addition, we will provide brief comments highlighting important and interesting trends in factor behavior and discuss recent work we are engaged in to better understand these trends. Understanding market performance through the unique lens of factor returns often brings early illumination to equity opportunities as well as areas of risk concentration. We use a longer-term perspective on the behavior of various factor returns to develop Diversified Equity strategies at Brandywine Global.

Brandywine Global

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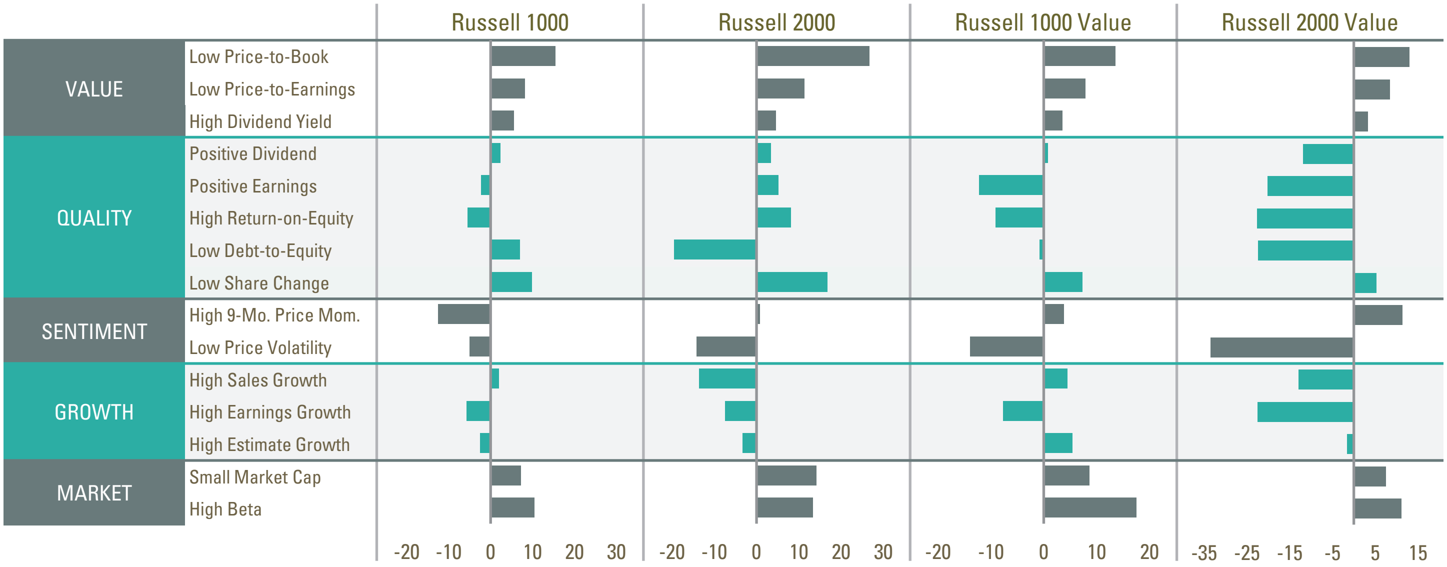
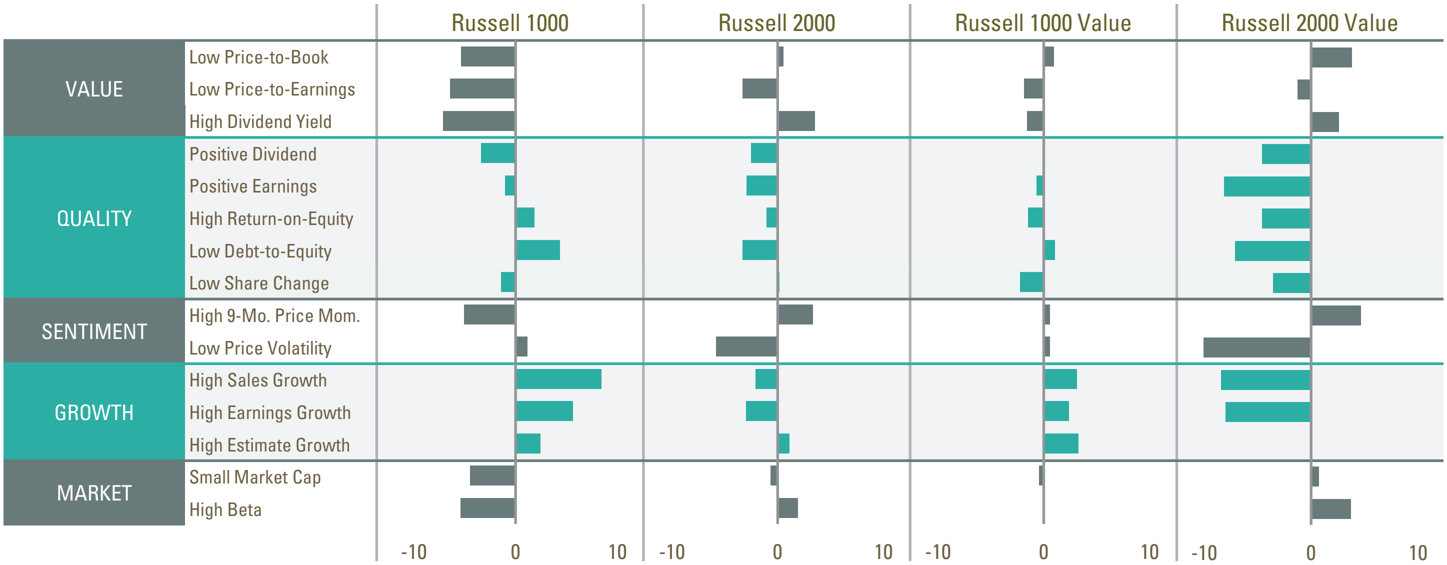
Figure 2 U.S. Equity Factor Returns
YTD; % Return Difference Between Factor's[1] High and Low Quartile; As of 6/30/2021





Source: Brandywine Global, FactSet, FTSE Russell

SECOND QUARTER AND YEAR TO DATE 2021 FACTOR RETURNS

After rising consistently since last summer, yields on the 10-Year Treasury peaked at the end of the first quarter at 1.74%, then drifted lower in the second quarter to close at 1.47%. The easing in rates reflects concerns about sustaining global growth past the reopening surge, particularly with new COVID-19 variants and slow movement toward global universal vaccination, as well as the U.S. Federal Reserve's (Fed's) continued commitment to low rates and effective messaging regarding the temporary nature of recent inflation. The U.S. equity market continued to rise, with the S&P 500 gaining 8.6% in the second quarter, 15.3% year to date, and a remarkable 96.1% since its March 23, 2020, low. While equities maintained their advance, market leadership shifted in mid-May, at least temporarily, with growth stocks again taking the lead and value stocks producing weaker returns. This switch significantly impacted the returns for many, but not all, market factors in our analysis.

After an extended period of underperformance, value factors experienced a strong surge in late 2020 and early 2021. However, in mid-May and into June this year, low price-to-earnings and low price-to-book factors again experienced below-market returns. One major driver of this performance swing is the reversal in returns from financials. Through late 2020 and early 2021, this sector was among the strongest performers, but in June this group produced negative returns within the Russell 1000 Index while the market overall continued to rise. Lower long-term rates and a flatter yield curve were one contributor to the financials reversal as banks and insurance companies tend to benefit from higher long-term rates. Value's significant weighting in energy stocks only partially offset the financials losses as energy did well with rising oil prices. With June's poor value factor returns, the group was weaker for the quarter, but stronger performance earlier this year meant that the value factors were still strongly positive for the year to date. Financials and energy remain among the strongest groups for the first half of 2021.

Growth factors' recent performance mostly mirrors the experience for the value factors. After a long period of dominating U.S. equity markets, growth stocks trailed in late 2020 through May of this year. As the value factors began to fade in mid-May, high sales, earnings, and estimated growth did better, particularly among large-cap stocks, while high sales and earnings growth remained weaker among small caps. Stronger sectors boosting high sales include communication services, consumer discretionary, and technology, all of which include FAANG stocks (Facebook, Amazon, Apple, Netflix, and Google). While these stocks did outperform recently, their returns were more constrained than in 2020. For instance, Amazon was up 49.3% in 2020's first half while the Russell 1000 Index fell -2.8%, but in June of this year, Amazon only gained 6.7% compared to the Russell 1000's 3.5% return. As with the value factors, growth factors' recent strength has led to positive performance for the quarter (at least among large-caps) but has not offset the lagging returns for the year to date.

Russell index returns in **Figure 3** confirm the recent results for the growth and value factors. In June, the Russell Growth Index outperformed within each market-cap category. For the quarter, the results were mixed with growth easily outperforming in the Russell 1000 and Russell Mid Cap Indices while value did better for the Russell 2000 and Microcap indices. For the year to date, the value index was able to hold onto a significant lead across the market-cap ranges.

Figure 3
As of 6/30/2021

	2021					
	June		Second Quarter		Year to Date	
	Growth	Value	Growth	Value	Growth	Value
Russell 1000 Index	6.3%	-1.2%	11.9%	5.2%	13.0%	17.1%
Russell Midcap Index	6.8%	-1.2%	11.1%	5.7%	10.4%	19.5%
Russell 2000 Index	4.7%	-0.6%	3.9%	4.6%	9.0%	26.7%
Russell Microcap Index	6.4%	-0.6%	3.1%	4.8%	20.6%	36.7%

Source: FTSE Russell

With the at least temporary switch in market leadership from value back to growth this quarter, the stock price momentum factor was negative to neutral, with the greatest lag among larger-cap stocks. The previously low momentum group included the FAANG-dominated communication services, consumer discretionary, and information technology stocks. The higher momentum stocks that underperformed in June had a large financials weighting.

As the market continued to move higher throughout this quarter, more defensive factors, such as high dividend, positive earnings, high return-on-equity, low share change, and low volatility, all performed poorly, especially in June. For the year to date, most of these factors are also negative, although low share change did well earlier in the year, due to its strong weighting in financials and industrials, and remains positive year to date. The defensive factors have also done better year to date in the Russell 2000. Perhaps surprisingly, smaller cap and higher beta stocks lagged in June and the quarter despite the market's continue rise, however, they are still positive year to date, as reflected in the Russell Index returns in **Figure 4**.

Figure 4
As of 6/30/2021

	2021		
	June	Second Quarter	Year to Date
Russell 1000 Index	2.5%	8.5%	15.0%
Russell Midcap Index	1.5%	7.5%	16.3%
Russell 2000 Index	1.2%	5.4%	17.0%
Russell Microcap Index	2.2%	4.1%	29.0%

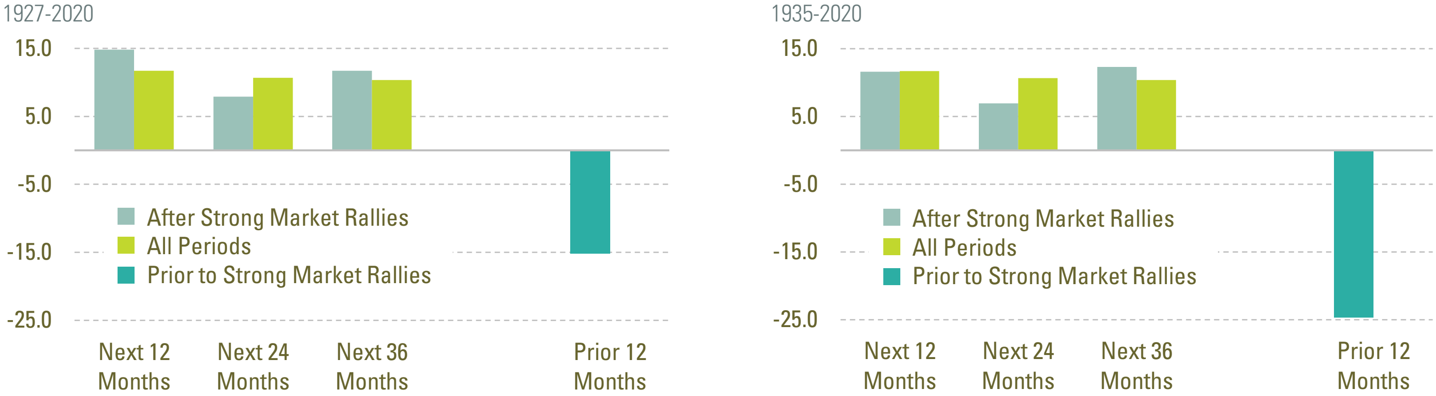
Source: FTSE Russell

RESEARCH SPOTLIGHT: MARKET RETURNS AFTER STRONG PERFORMANCE PERIODS

The S&P 500 rose 56.4% from March 31, 2020, to March 31, 2021 and gained 80.7% from the market bottom on March 23, 2020, through March 31, 2021, generating concern that the market has risen too far, too fast. We review market returns following other periods of very strong market gains to see historically how markets have performed after such significant gains. For this analysis, we use the market return variable from the Kenneth French Data Library, which includes all stocks traded on the NYSE, AMEX, and NASDAQ exchanges. We look for 12 month periods in which the market return exceeded 50%, selecting the largest return for any clustered 12-month periods. Such periods occurred only seven times since 1927, an average of once every 13 years, and only once every 17 years since the 1930s. We then calculate the annualized market return for the following 12, 24, and 36 months to identify if historically such strong performance reflected excessive exuberance which was then followed by a market retreat. We present our results here with two different views, one including all seven occurrences since the late 1920s and one excluding the 1933 rally since its returns were exceptionally large at 157%, whereas the largest return in the other periods was 76%.

The results indicate that, historically, a period of extraordinarily large U.S. equity market returns is not usually followed by a large retracement. As shown in **Figure 5**, the average returns in the 12 months, 24 months, and 36 months following the large rally were similar to long-term average returns, with better than average returns for the 12- and 36-month periods and below average returns for the 24-month period. In addition, returns were positive in 5 out of the 7 subsequent 12-month periods and for 6 out of 7 periods following 24 and 36 months.

Figure 5 Market Returns After Strong Rallies



Source: Kenneth French Data Library

While every period is unique, the recent rally fits into the historical pattern with its 65% gain (using the Kenneth French market definition) compared to the historical average of 62% (excluding 1933). The recent rally was preceded by a 12-month negative return (-8.7%), as were all but one of the past seven cases, with an average -15.1% decline. Of course past results are no guarantee of future outcomes, but the historical evidence suggests that a significant market decline is not the most likely outcome following an unusually strong market rally.

[1] Factor returns represent return differences between top quartile (75%) and low quartile (25%) equities by each characteristic. Market: Market Capitalization and Market Beta (Market Sensitivity Coefficient); Value: Price-to-Earnings (P/E based on trailing 12-month operating earnings), Price-to-Book, Dividend Yield (Among dividend-paying stocks); Quality: Positive Earnings (Positive earnings stocks - Stocks with no earnings), Positive Dividend (Dividend-paying stocks - Stocks with no dividend), Share Change (12-month change in shares outstanding), Return-on-Equity, Debt-to-Equity; Sentiment: Price Momentum (9-month price change), Price Volatility; and Growth: Earnings Growth (1-year earnings growth), Sales Growth (1-year sales growth).

[2] Crisis events since 1963 include Kennedy Assassination 11/21/1963; Martin Luther King Assassination 4/4/1968; U.S. Bombs Cambodia and Kent State Shooting 4/29/1970; Olympic Athlete Hostage Crisis 9/15/1972; Arab Oil Embargo 10/18/1973; Nixon Resignation 8/9/1974; USSR in Afghanistan 12/24/1979; Hunt Silver Crisis 2/13/1980; Ronald Reagan Shot 3/30/1981; Falkland Islands War 4/1/1982; U.S. Invades Grenada 10/24/1983; U.S. Bombs Libya 4/15/1986; Stock Market Crash 10/2/1987; Invasion of Panama 12/15/1989; Iraq Invades Kuwait 8/2/1990; Gorbachev Coup 8/16/1991; ERM U.K. Currency Crisis 9/14/1992; First World Trade Center Bombing 2/26/1993; Russia-Mexico-Orange County Crisis 10/11/1994; Oklahoma City Bombing 4/19/1995; Asian Stock Market Crisis 10/7/1997; Russian Debt/Long-Term Capital Management 8/7/1998; Al-Qaeda - Sept. 11 Terrorist Attacks 9/11/2001; Lehman Brothers Failure - Global Financial Crisis 9/15/2008; European Sovereign Debt Crisis and 2010 Flash Crash 5/6/2010; 2011 Stock Market Crash 8/1/2011; 2018 Global Stock Market Decline 10/1/2018. The coronavirus and Saudi-Russian Oil Price War 3/9/2020 are not included in test data set. Returns start with the first whole month after event. Research performed by Brandywine Global Investment Management, LLC., Philadelphia, PA.