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## **ANATOMY OF TWO BENCHMARKS: THE RUSSELL 3000 AND RUSSELL 1000**

Asset management firms typically have benchmarks to which they compare the performance of their investment product offerings. For instance, such firms will typically compare the performance of their offerings to relevant benchmarks to see whether they outperformed (had a rate of return greater than the benchmark's) or underperformed (had a rate of return less than that of the benchmark).

A couple of common U.S. equity benchmarks are the Russell 3000® and Russell 1000®. In the discussion below, we take a closer look at those Russell benchmarks. More specifically, we examine:

- The current composition of each benchmark in terms of capitalization size, investment style (value versus growth) and sector representation;
- How stock price movements contribute to overall index returns through time; and
- The relative performance of those benchmarks over the last 15 years, including how growth and value stocks have performed.



## DRILLING DOWN INTO MARKET CAPITALIZATION, INVESTMENT STYLE AND SECTORS

For starters, let's define what exactly the two benchmarks are. The Russell 3000® Index consists of the three thousand largest (in terms of market capitalization or market cap) U.S. stock issues whereas the Russell 1000® consists of the largest one thousand stock issues. (The market capitalization of a stock issue is the product of the market price of each share and the number of shares freely floating in the market place. The Russell indexes utilize freely floated shares rather than shares outstanding in their calculation of market cap.) The Russell 1000 is a subset of the Russell 3000 and consists of companies with *relatively larger* market capitalizations. As a result, as of June 30 the indices reflected respectively the performance of approximately 98% and 92% of the investable U.S. equity market.

Note, however, that the Russell 1000 is not exclusively made up of large capitalization (large-cap) stocks. As of June 30, that index consisted of 41.2% in "pure" large-cap stocks (stock issues having market caps of at least \$49.39 billion), 29.9% in medium/large-cap stocks (issues having market caps of \$16.16 to \$49.39 billion), and 29% in small- to medium-cap stocks. Moreover, the largest 200 stocks in the Russell 1000 represented over 71% of that index's market cap as of June 30. So, large-cap stocks have a large weight in the Russell 1000, but that index also contains a considerable amount of lower capitalization sizes as well. Nonetheless given its huge (92%) weight of the U.S. equity market, it is obvious that the Russell 1000 stocks have had considerable influence over the behavior of the broader-based Russell 3000. Indeed, the distribution of stocks in the Russell 3000 by market cap size looks very similar to that of the Russell 1000 except for the fact that the "3000" has 7.2% in "pure" small-cap stocks (those having market caps of \$1.8 billion or below) versus only 0.9% in the "1000."

In addition to capitalization size, it is also possible to look at the indices in terms of two major investment styles, growth and value. Value stocks are defined by Russell as those with lower price-to-book ratios and lower forecasted growth, whereas growth stocks are those with higher price-to-book ratios and higher forecasted growth. However, the Russell indices also include a "hybrid" style category called "Partial Growth and Value". As a result, as of June 30,

growth stocks composed 36.9% and 36.8% of the Russell 1000 and 3000 indices respectively (basically the same weight). During that period, value stocks constituted 30.9% and 31.2% respectively of the two indices. The remainder of the overall style weight was in the "hybrid" partial growth and value category, which carried about a 32% weight in each of the two indices. Note that the higher weight in pure growth stocks may simply be reflecting the fact that prices of growth stocks have performed better than those of value stocks recently. Given that style weights are based on the market capitalizations, better relative price performance in one style over another (say, as recently, growth outperforming value) tends to raise the weight of the better-performing style and lower the weight of the worse-performing style.

Both Russell indices reflect similar weightings across economic sectors. As of June 30, both indices, for instance, had sizeable double-digit weights in the information technology (about 17%), energy (15–16%), financial (about 14%), health care (almost 12%), and industrials (11–12%) sectors. In addition, each had high single-digit representations in the consumer staples (9–10%) and consumer discretionary (about 9%) sectors. And rounding things out, the indices also included a smattering of lower-weighted sectors such as materials (about 5%), utilities (4%), and telecom services (3%).

## HOW STOCK PRICE MOVEMENTS CONTRIBUTE TO INDEX RETURNS THROUGH TIME

The relative performance of an investment style or sector within the Russell indices (or other indices) is not static over time. That contribution depends heavily upon the relative price performance of given style or sector stocks. The relative price performance of style or sector stocks (or, for that matter, any set of stocks) influences overall index performance through two channels: 1) a direct relative price contribution to (or deduction from) overall index returns and 2) relative changes in weights within the index. The first channel is obvious: as the relative price of style or sector stocks rises, the relative contribution of that style or sector to overall index returns also increases. However, the second channel is less obvious, namely, as the relative price of given style or sector stocks rises, the relative weight attached to those style or sector stocks within the (cap

weighted) index also rises, exacerbating the direct positive contribution to overall index return derived from that price change. [This feature is classic to all capitalization-weighted stock indices: cap weights, since they are also a function of price, tend to exacerbate the contribution to overall index return from a change in the price of a stock (for instance, a growth stock) or set of stocks.]

### HOW HAVE THE TWO INDICES PERFORMED OVER THE LAST FIFTEEN YEARS?

Now, let's take a look at how the Russell 3000® and Russell 1000® have behaved on a relative basis over the last two decades. We will examine relative price performance by taking the ratio of one index to another. (Please note that we are examining here how the two indices performed historically on a relative price, not total return, basis.) For instance, to examine how the Russell 3000 has performed relative to the Russell 1000, we will graph the ratio of the Russell 3000 total return index to that of the Russell 1000. When the Russell 3000 is outperforming the Russell 1000, the graphed ratio should be rising. When the "3000" is underperforming the graph should be falling. Similar exercises can be performed to assess the relative performance of growth and value investment styles and of sectors (sector versus sector or

sector versus overall index). Unfortunately, due to data constraints, we will only focus on two such graphical relative performance analyses: 1) a comparison of the Russell 3000 Index to the Russell 1000 Index and 2) a comparison of the Russell 1000 Growth Index to the Russell 1000 Value Index. Furthermore, all of the graphs presented will be based upon monthly average data of stock price indices, not total return indices.

First, let's turn to a graph (shown below) of the relative price performance of the two indices over the past fifteen years.

As the graph shows, the Russell 3000 significantly underperformed (shown by the declining segment on the graph) the Russell 1000 from the early through the late 1990s and outperformed (shown by the rising segment) from the early 2000s through the middle of 2007. The underperformance during the 1990s may have been due to the relatively consistent price outperformance of large-cap growth stocks during that period, boosting the Russell 1000's performance versus the Russell 3000 which has a heavier weight on small-cap stocks. But by 2000, the outperformance of the large-cap growth stocks rapidly faded, and value and smaller cap stocks started to outperform. This probably explains why the Russell 1000 started to underperform the Russell 3000, which has a greater weight on smaller cap stocks.

### RATIO OF RUSSELL 3000 STOCK PRICE INDEX TO RUSSELL 1000 STOCK PRICE INDEX



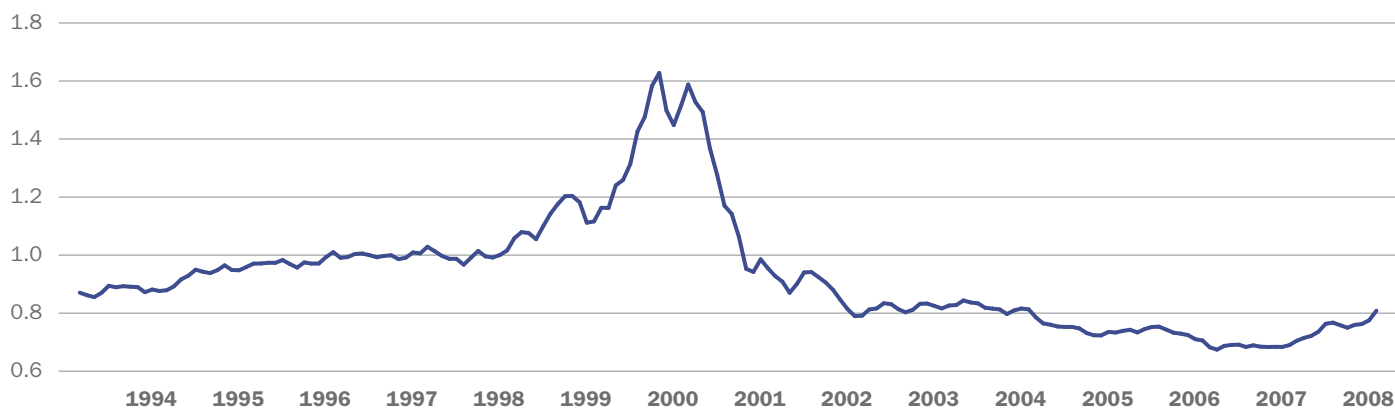
Now, let's take a look at the graph below to see how growth stocks performed relative to value stocks during that period.

Indeed, as mentioned above, growth stocks consistently outperformed value stocks during the 1990s but have underperformed during most of this decade. Much of the growth outperformance during the 1990s was in high-cap growth stocks, with some of those high-cap growth stocks being IT companies (remember how the IT companies capitalization ballooned during the tech "bubble"). Much of the sharp outperformance of growth versus value between

1998 and 2000 can likely be traced to IT stocks soaring to unrealistic levels during the period. Of course, growth's sharp outperformance quickly faded following the bursting of the IT bubble in 2000.

Although both graphs appear to be varying around some sort of "mean" level, one has to be cautious in postulating that these lines are mean reverting. No formal tests for mean reversion were performed here. Furthermore, even if such tests confirmed reversion historically, there is considerable uncertainty about that process continuing in the future.

#### RATIO OF RUSSELL 1000 GROWTH STOCK PRICE INDEX TO RUSSELL 1000 VALUE STOCK PRICE INDEX



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