

APRIL 2008

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# An Introduction to the Global Style Indexes

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*The Russell global style indexes extend the Russell global index family, introducing a series of value and growth indexes that provide investors with a practical, robust tool for the analysis and benchmarking of money manager performance and for the management of exposures. The construction of these indexes is a global extension of the existing, widely followed methodology already used in the Russell U.S. style indexes and the Russell/Nomura index family in Japan. The methodology that has been adopted is based on a thorough quantitative and qualitative assessment of manager behavior, performance patterns and practical considerations.*

*"I couldn't settle in Italy - it was like living in a foreign country."*

Attributed to British soccer player Ian Rush, speaking of the year he spent playing for Italian club Juventus.

Moving beyond your familiar borders creates challenges, neatly summed up by Ian Rush's complaint above.

Nonetheless, over the past thirty or so years, investors of all types have increasingly taken on the challenge of moving from a domestic focus in their portfolios to a global one. As a result, there has been an increasing need for better tools to improve analysis and understanding of global portfolios. In 2007, Russell launched the Russell global index family, in order to provide the market with a rigorous and complete representation of the global equity investment opportunity set. On April 1, 2008 the global family will be extended to include style indexes for each regional and country index, and for each capitalization tier (large, medium, small) within those series.

## **Our purpose: a practical, global view of style**

In this paper, we will describe the principles that lie behind the construction of these style indexes. We will also summarize some of the key research findings that informed the approach adopted. A more detailed description of this research will be published in a forthcoming paper. The Russell global style indexes are driven – as are the global indexes on which they are based – by a view of the global equity market as essentially one large (albeit diverse) investment opportunity, rather than as a series of 60 or more individual markets.

In applying this global view, we have strived for simplicity, robustness and transparency. These practical considerations are important because the indexes are intended to be used for a wide variety of purposes, including: the analysis of money manager portfolios and the attribution of performance; acting as performance benchmarks for specialist mandates; providing insight into the exposures of market participants to growth or value on a global level; and serving as the basis for tools for the management of those exposures through derivatives products, exchange-traded funds and so on.

### **Understanding what style is**

Having stated the purpose of the Russell global style indexes, it is also helpful to be clear about what we mean by “style”.

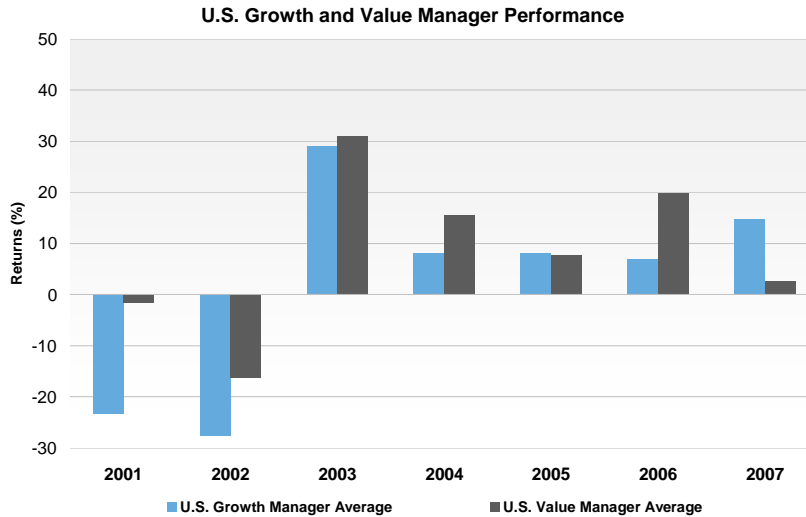
Russell’s view of style is informed by a 38-year history of money manager research and of advising leading investors, and by 23 years’ experience constructing the world’s dominant style indexes. Of an estimated \$1.7 trillion benchmarked to style indexes in the U.S. today, more than 98% is benchmarked to Russell indexes.

First and foremost, style is a reflection of differences in how money managers go about their task of selecting which stocks to hold in their portfolios. Certain approaches to equity investment lead to an emphasis on companies which are expected to perform well: delivering above-average growth in sales or earnings, for example. Other approaches place greater emphasis on valuation: how much must be paid for assets and whether, whatever the prospects of a company might be, those prospects are fairly reflected in the stock price. It was a growing awareness of the importance of this distinction that led, in the late 1980s, to the creation of the Russell U.S. Style Indexes, in order to provide greater insight into manager behavior and a clearer understanding of the sources of performance within that market.

Evidence of this distinction is provided by the return experience of the median manager in the Russell growth and value manager universes, shown in Chart 1. In many years, there is a material difference between the average performance of growth and value managers.



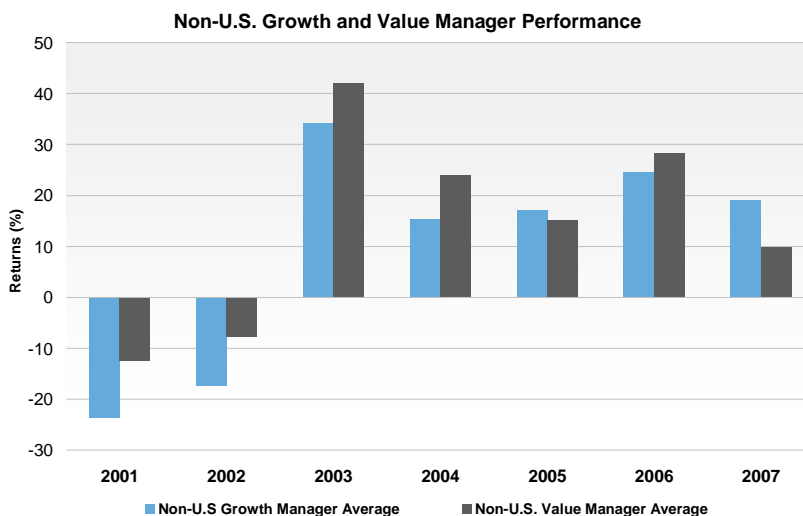
Chart 1: Median U.S. Growth and Value Manager Performance, 2001-2007



Source: Russell Investments

In the context of a global style series, it should be noted that the explicit use of growth and value styles of management has a shorter history outside the U.S., both in domestic and in global portfolios, and has in general not achieved the same extent of market penetration. Partly as a result of this, the degree of exposure to style is typically less among global value or growth managers than it is among U.S. domestic managers. In other words, whereas there are many domestic U.S. value or growth managers whose deviation from the style-neutral position would match or exceed that of the applicable U.S. style index, it is far less common for global value or growth managers to adopt such polarized positions. This may be due in part to the lack of robust and credible style benchmarks for non-U.S. markets. While less starkly differentiated than their U.S. counterparts, there is nonetheless clear divergence in the performance patterns of global ex-U.S. growth and value managers, shown in Chart 2.

Chart 2: Median Global ex-U.S. Growth and Value Manager Performance, 2001-2007



Source: Russell Investments

Style is not exclusively a question of how money managers behave. There has also been extensive academic study over the years of differences in the performance patterns of growth and value stocks. Style has become recognized as a factor (along with others such as size, industry, beta and so on) that contributes to stock performance. Periodic changes in style leadership have long been understood as a feature of stock markets around the world, and this style cycle has over time become an increasingly global phenomenon as markets have become more closely linked to one another.

It is important to note that style is a more elusive concept than, for example, size. The market capitalization of a company offers an objective and clear measure of size: there is, in general, little debate about whether Company A is larger than Company B or not. There is, however, no single definitive measure of style. Value managers differ in the emphasis that they place on various valuation factors. And what growth managers are looking for in a stock tends to be more difficult to capture via objective quantitative factors than what value managers are looking for. The academic world likewise draws on several potential definitions of style.

So while style is unquestionably real, it is a far more subjective concept than it might at first sight appear. It is wise to recognize this as we consider how to go about constructing style indexes; we are not aiming to capture some theoretical ideal, but rather to create a broad – and practical – overlay onto a complex and diverse universe of money management approaches. While a great deal of analysis – quantitative and qualitative – lies behind the Russell style indexes, we recognize that there is nothing to gain by over-engineering.

### **We tested against several measures of the effectiveness of a style index**

The purpose of our style indexes and our view of style, described above, guide how we went about extending the existing style indexes within the U.S and Japan, to a global set of indexes.

Possible methodologies were tested against the holdings of managers in Russell's research database. This analysis was conducted for each of the past five years to neutralize the impact of any temporary current effects. We also tested how effectively they were able create differentiable style return patterns, following the typical academic approaches. In addition, we conducted tests of the stability of various possible approaches, and of the degree of turnover that they would generate at each annual reconstitution.

Because value and growth management of global portfolios is still in a state of development, we relied also on a qualitative assessment of possible style definitions. To this end, we drew on the expertise of Russell's manager research analysts. These are specialists whose job is to understand the approaches of money managers in all of the major markets of the world, and who as a result are in a position to provide unrivalled insight into exactly what lies behind the approach adopted by these managers.

Further insight was drawn from the Russell Index Client Advisory Board, which is made up of leading plan sponsors, money managers and brokers. This group widened even further the breadth of perspectives on which we were able to draw. Among the valuable guidance provided by this group was a clear reminder of the importance of a transparent, practical approach.

### **The Russell approach: building from an established and market-accepted base**

Our style indexes divide the global market into growth and value segments that are roughly equal in size. They are rebalanced annually, in order to update index membership for capitalization and valuation changes that have occurred in the past year.

#### ***The U.S.***

As would be expected, the existing U.S. style indexes constitute the U.S. portion of the new global style indexes. The annual rebalancing of these indexes will therefore be essentially unaffected by the creation of the global style series<sup>1</sup>. Investment managers have specialized on the basis of style for decades in the U.S., given the breadth and depth of stocks trading on U.S. exchanges. Characteristics and performance of style indexes have shown strong distinctions between growth and value companies in the U.S. since at least the 1980s.

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<sup>1</sup> The one change that will occur is in the way that missing style data is handled, since a more comprehensive algorithm is necessary to support the global series than was necessary for the U.S domestic series. This change is expected to have minimal impact on the U.S. style indexes.

Consideration was given to the question of whether the U.S. style indexes should be changed to a global relative approach, to be consistent with the treatment of other countries within the global style indexes. A global relative approach would have impacted the U.S. style indexes in a variety of ways, including increased turnover and a highly variable distribution between growth and value – as opposed to 50/50 - over the past 10 years. Our analysis showed that the effectiveness of the global style indexes at capturing global manager behavior is not materially altered (for better or worse) whether the U.S. indexes are built separately, or using a global relative approach across all countries. However, their effectiveness at capturing manager behavior within the U.S. market would be affected, if the current 50/50 balance within the U.S. were to be changed.

Consultation with our Client Advisory Board resulted in the recommendation to maintain a U.S. relative approach, because of the impact to the U.S. style indexes if a global relative approach were to be adopted. For these reasons, the existing U.S. approach is being retained as the basis for the construction of the U.S. slice of global style index series.

### ***Japan***

Similar to the U.S., the existing Russell/Nomura Style Indexes will be retained for the Japan component of the Russell Global Style Indexes. The Russell/Nomura Style Indexes are the dominant style index series in Japan, however there are some important differences relative to the U.S. domestic style management in Japan has a shorter history and is less prevalent than in the U.S. The construction of the Russell/Nomura indexes also takes a different approach than the U.S.: it is based on a single style variable, rather than two, and reconstitution (along with the associated style rebalancing) occurs at the end of November (based on data available at the end of October), rather than June (based on data available at the end of May). This latter feature is a result of 80% of Japanese companies having a fiscal year ending in March, meaning that fresh financial statements are generally not available for a June reconstitution. November reconstitution in Japan therefore permits the use of more up-to-date company information.

Despite these differences, we do not subscribe to the view that somehow Japan is materially different than other markets. Unquestionably, it has some unique characteristics (as does every market) but (like other markets) it has become increasingly integrated into the global market and continues to become more so as time passes.

Unlike in the U.S., market participants in Japan were cautiously receptive to the possibility of supporting two style weights, and having a Japanese slice of the global style index that is different from the domestic style index. We will therefore continue to monitor whether investors' needs are best served by continuing to handle Japan separately within the global framework.

### ***Other countries***

Outside the U.S and Japan, the case for separating out individual countries or regions on the basis of style is weaker. The more individual companies can be compared to their global peers (rather than their domestic peers), the more the end result will be seen as a truly global index series. And, as would be expected, our analysis confirms that the global-relative approach tends to create better alignment with global manager behavior than a country-by-country approach across each of the more than 60 markets.

A consequence of using this global-relative approach is that individual markets and regions will tend to be allocated unevenly between the global value and growth indexes. In 2007, for example, 35% of Australia's market capitalization was allocated to the Russell Global Value Index and 65% to the growth index. Such deviations from a 50/50 allocation reflect that it is possible for certain countries to be systematically or cyclically more weighted towards one style or the other, just as it is possible for certain sectors of the market to be.

### ***Large and small cap***

Traditionally, many investors restricted their non-domestic allocations to large cap stocks – typically only the top 50-70% by market cap. This was a practice rooted in convenience and practicality. But as international investment has increased, investors are looking to complete their coverage and the need for a credible small cap index has grown.

The Russell Global Index series is divided into large, small and all-cap segments – a division very familiar to users of the U.S. series with its iconic 1-2-3 design (with approximately 1,000 stocks – or 90% of the market capitalization – making up the large cap Russell 1000<sup>®</sup> index, approximately 2,000 stocks – or 8% of the market capitalization – making up the small cap Russell 2000<sup>®</sup> index, and the combination of the two making up the broad market Russell 3000<sup>®</sup> index).

The global style definition will be applied separately to the large cap and small cap segments. Thus, the Russell Global Large Cap Index will be divided into a Russell Global Large Cap Growth Index and a Russell Global Large Cap Value Index and similarly for the Russell Global Small Cap Index. The broad market global value and growth indexes will be the sum of the appropriate large cap and small cap parts.

This approach follows the one already adopted for the U.S. and Japanese style indexes. It ensures that both the large cap and the small cap indexes retain a broadly equal split between growth and value and the influence of large cap companies does not skew the characteristics of small stocks.

In summary, for the construction of style indexes, the broad market global index is divided into six parts (a large and small cap part within each of the U.S., Japan and the rest of the world), each of which is allocated roughly equally between the value and growth styles, and which are then recombined to produce the global style indexes. These broad market indexes will be

further broken down such that each of the existing regional and country indexes within the Russell global index family will have a corresponding growth and value index.

This approach has been driven by a desire to apply a truly global perspective to the question of style, by the practical needs of investors, and by extensive quantitative and qualitative research into the behavior of money managers worldwide.

### **Practical and effective measures of value and growth**

We have already noted that style, while unquestionably real, is ultimately a subjective phenomenon. Despite this, style indexes must be based upon some objective measure chosen to capture each broad approach.

The existing approach within the U.S. has, since 1993, used a two-variable model to determine the style classification of companies within the Russell 3000 Index. In this model, a company's book-to-price ratio (B/P) is used as a measure of value while the I/B/E/S forecast long-term growth rate (LTG) is used as a measure of growth. Individual stocks within the Russell 1000 and Russell 2000 indexes are allocated between the value and growth indexes based on their rank relative to other companies in the index, as measured by a combination of B/P and LTG.

While these two variables alone are clearly not an exact replication of the full richness of manager behavior, they have proved remarkably robust, effective and consistent over time. Extending the definition of style in the U.S. to include more variables was considered and rejected in Houghton and Pritamani (2005)<sup>2</sup>, and, as part of the global style research, that question was again addressed.

As would be expected, the issue of which variables to use is more complex when looked at from a global perspective. In particular, questions must be asked such as:

*How available is any given variable?*

*How comparable is any given variable across markets?*

*Do any distortions appear as more variables are added?*

*Is there an impact on turnover?*

### **A word on the timing of style rebalancing**

Membership of all parts of the global indexes is reconstituted each June and for many years style membership in the U.S. has been rebalanced at the same time as membership is reconstituted. Outside Japan, there is no serious argument for separating the date of style rebalancing from the date of membership reconstitution. While the most popular dates for filing financial statements differ somewhat from country to country, concerns over possible staleness

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<sup>2</sup> Houghton, K. and M. Pritamani (2005). *US Equity Style Methodology Commentary*. Russell Research Commentary (August).

of data are relatively minor. In the U.S., for example, 75% of companies use a December financial year end. For the world excluding the U.S and Japan, the most popular financial year end is also December, representing 76% of companies. So, Japan apart, relatively fresh data is available in the first few months of each year, making the use of a June date for style rebalancing optimal.

**Value variables**

Of the many potential candidate variables, those listed in Table 1 below were identified as being the most likely to produce meaningful style results, as well as being the most commonly used in value manager investment processes. Importantly, they also had acceptable coverage. These variables were analyzed in depth, both individually and in a number of different combinations. Of the individual variables, the most effective at capturing value manager investment styles across a range of markets (U.S., Japan, global, global ex-U.S. and others) were book-to-price and cash flow-to-price.<sup>3</sup>

**Table 1 – Candidate value variables**

Book/Price	Sales/Price
Cash Flow/Price	Dividend Yield
Earnings/Price	Forecast Earnings/Price

Given potential concerns over the consistency of definitions across markets, we also considered various combinations of factors, on the grounds that any distorting effects may be diluted by the use of an increased number of variables. An increased number of variables would also improve data coverage (although this was a minor consideration in the case of the value variables, since most are derived from commonly reported financial data.)

However, the best combinations of variables - notably book-to-price in combination with cash flow-to-price – did not materially improve on the effectiveness of book-to-price on its own. This remained true if even more complex combinations were brought into play.

What is more, turnover tended to be higher with the more complex choices of value variables. Book value has the advantage of being more stable from year to year than other candidate variables. This in turn results in less volatile indexes, lower turnover, and hence lower cost to investors.

The quantitative and qualitative analysis in combination led to the conclusion that, at this time, a multi-variable definition of value would provide no material improvement over the simpler

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<sup>3</sup> While this summary is expressed in terms of the value and growth variables in isolation, the analysis actually considered the various pairings, looking at the overall effectiveness of each candidate value variable when paired with each candidate growth variable.

approach already adopted within the U.S. and Japan. What is more, the effectiveness of book-to-price at capturing style effects across a broad range of markets was remarkably robust, despite it being, on the surface, a very crude measure. Does book-to-price incorporate the full complexity of the range of approaches that exist to value management around the world? Obviously not. But would a more complex definition do a noticeably better job? Our analysis suggests not.

**Growth variables**

If the full complexity of value management is difficult to distil down to a single variable or a simple set of variables, growth management is even more so. By its nature, it tends to be a more judgment-based approach to investment (while it is obviously reasonable, for example, for a value manager to screen certain quantitative variables to identify potentially “cheap” stocks for consideration, it would be strange for a growth manager to conduct the reverse exercise to identify “expensive” ones).

The candidate variables considered for growth are listed in Table 2, below. As was done for the value candidates, each of these was analyzed in depth, both individually and in a number of combinations with other growth variables.

**Table 2 – Candidate growth variables**

EPS Growth (3- and 5-year trailing)	I/B/E/S Forecast Short-term Growth
Sales Growth (3- and 5-year trailing)	Price Momentum
I/B/E/S Forecast Long-term Growth	Sustainable growth

Unlike the case of the value variables, which tended to have good data availability in almost all markets, coverage was less than ideal for the growth variables. The single most effective variables were LTG and sustainable growth (i.e. Return On Equity multiplied by one minus the payout ratio). Of particular interest was the potential combination of a forward-looking growth variable (such as LTG) with a backward-looking growth measure (such as trailing sales growth). As with the value variables, however, it was difficult to find a discernible improvement in effectiveness through the use of a combination of variables, even though data coverage was better. One conclusion that we drew from this was a reassurance that the substitution mechanism for missing data (which uses country- and industry-based average values in place of missing values) is robust even in the global arena, and as effective a mechanism for addressing concerns over data coverage as more complex alternative approaches.

In total, the analysis of growth characteristics led to the conclusion that the most effective growth measure to use continues to be LTG whether the question is looked at from a U.S. perspective or a global perspective. However, the situation in Japan merited special attention. Style rebalancing in Japan will, for the reasons mentioned above, continue to take place in

November, rather than June, creating a dislocation between Japanese style rebalancing and global index membership reconstitution. Likewise, data availability for LTG is notably worse in Japan than in other markets. It is difficult to make the case for the use of a different variable within Japan, when our established practice in that market has been to use no growth variable at all – and our analysis does not show any marked benefit in terms of capturing Japanese or global manager behavior by doing so. For these reasons, the existing approach – of using a value factor but no growth factor – has been retained in Japan.

In summary, we have found no compelling reasons to move away from the established, simple approach to style that has long been applied within the U.S. and Japanese markets, and with which the market is highly familiar. We recognize that this approach is only a broad generalization of the reality of investment styles, but we also believe that this is appropriate given the ultimately subjective nature of style itself and the subtle changes that occur over time – especially in the global context where the application of value and growth management is less developed than in the U.S.

B/P and LTG have long provided a very practical and effective definition of style within the U.S. and continue to do so, as well as providing the best basis on which to expand to a truly global set of style indexes. Japan will also continue with the current approach to style, based on a single variable and a November rebalancing date.

We will continue to periodically review our choice of style factors, in full consultation with investors, money managers, and others. Our definitions will no doubt evolve in time. But, for now, we are persuaded that market needs are best suited by the global style approach described above, an approach that is well-tested and well-understood by participants and simple to follow.

### **Conclusion: the application of style to the global investment stage**

In summary, the Russell global style indexes have been created to fill the need for a truly global perspective on the question of style. We built from the existing model – which the market has voted best through weight of assets - with a firm eye on global investor and money manager practices and on the lessons learned from our experience in the U.S. and Japan.

It is our expectation that the availability of the Russell global style indexes will provide greater insight into money manager portfolios and performance patterns, as well as permitting market participants to understand and manage their exposures better. Also, if our U.S. experience is any guide, the Russell global style indexes will provide credible benchmarks for investors and product providers who desire a clearer distinction between global growth and value markets.

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First use: April 2008.

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