Perceived wisdom has been that, over time, value as a style outperforms growth, and the entire history of style indexes bears out this premise. This fact may prompt some plan sponsors to question whether it’s worth investing in growth at all. If they do deem growth investing to be worthwhile, within the growth spectrum it might seem preferable to skew toward growth-at-a-reasonable-price (GARP) managers, given the value elements of this substyle. However, it could be argued that the forces underlying value’s tendency to outperform over history have done their job so well that they have driven markets to a point of equilibrium, where value no longer has an inherent advantage and growth no longer has a secular tendency to underperform. Under such a scenario, style cycles going forward would fluctuate from a starting point that is more stable than in the past. Plan sponsors may need to rethink what point along the growth–value spectrum would be most desirable in this new environment. 

Suggesting that growth no longer can underperform may seem bold considering the beating that growth has taken at the index level over the past seven years. It’s even bolder considering growth’s long-term underperformance as a style: For example, the Russell 1000 Growth Index has underperformed the Russell 1000 Value Index over their entire history of almost 30 years (11.9 percent versus 14.6 percent between 1979 and 2006). If the client benchmark that growth managers use to define their universe is inferior, as the long-term performance would suggest, won’t the universe derived from it be inherently

Editor’s note: This article was based on research conclusions reached in the first half of 2007. While growth indexes have outperformed value indexes since that time, relative valuations for growth versus value—the cornerstone of the argument promulgated in this paper—remain near historic lows.
inferior as well, leading to a fundamental disadvantage for growth investors? Remember, we are talking about indexes at this point; the story is different when we get to active managers later in this paper. However, there is a strong argument that growth indexes are inferior: They typically are constructed from underperforming factors. Most style benchmarks originally were constructed by dividing a broad universe in half based on price-to-book, putting the most expensive stocks in growth and the least expensive in value. This methodology placed the growth index at a built-in disadvantage, because expensive stocks tend to underperform cheap ones (see figure 1, top). In 1995, Russell attempted to do a better job of reflecting what a growth manager actually looks for by adding long-term growth expectations as another factor to define style indexes. Still, this characteristic also has a fundamental flaw. High-forecast-growth stocks are likely to disappoint, because they represent the companies most vulnerable to mean reversion. Consequently, a high-forecast growth index also will tend to underperform one built from low-forecast growth (see figure 1, bottom).

If we believe that growth indexes have been disadvantaged inherently, why would we suddenly suggest that they may be running out of room to underperform? What’s changed? What primarily has changed is the fact that growth stocks may be priced at previously uncharted lows, not only relative to their own history but, more importantly, relative to value stocks. Unjustified excesses appear to have been wrung out of the system. In fact, valuation spreads have collapsed to levels seemingly near their practical limits.

The forces causing cheap stocks to outperform have been so powerful that deeply discounted valuations largely may have been driven from today’s stock market. What seems to remain is a group of stocks in the value domain that do not appear particularly cheap relative to other stocks, and a group of stocks in the growth domain that do not appear particularly expensive. So inexpensive, in fact, do growth stocks now appear that it may be questionable whether they can grow any less expensive, and therefore to what extent they may further underperform value stocks.

**Historical Drivers of Value Investing Have Been Diminishing**

Before we explore the consequences of this assertion, let’s elucidate what, exactly, has been causing cheap stocks to outperform, and why these factors no longer may be as powerful as they once were.

The academic literature reflects two schools of thought on why cheap stocks outperform. One theory is based on the premise that markets are fully efficient; in effect, that you get what you pay for. In the end, all risk-adjusted return is the same, so value stocks return more simply because they’re riskier, and investors want compensation for this risk. The second theory is that markets try to be efficient, but they don’t always succeed. When they’re not being efficient, behavioral biases are getting in the way, and these can be exploited. Both of these explanations are quite plausible, and both have seemed to work well over...
time. However, there now are indications that might suggest neither driver will remain as powerful going forward.

Looking first at the efficient-market explanation, cheap stocks outperform because they mean revert. Risky stocks get less risky, and investors become more willing to pay for them. Meanwhile, the investor who was willing to take these stocks on when they were being shunned by everyone else profits handsomely. This strategy has worked over time because there always seemed to be a large pool of risky stocks in which to fish.

This phenomenon appears to be becoming less and less the case; indeed, the pool of risky investments has been shrinking. Systemic risk seems to have declined meaningfully, as illustrated in the variability of gross domestic product (GDP) (see figure 2, top). We use the United States here as an example, but the same phenomenon can be observed virtually anywhere in the world. In this case, you see significant variability in the late 1980s, but then economic volatility drops and remains low. The diminished variability may be the result of globalization and more effective policies from central banks. As the world economy has globalized, country-specific shocks get spread out like ripples in a pond. And while I’m not suggesting that central bankers are infallible, they have been doing a far better job of dampening the level and volatility of inflation.

If systemic risk is dampened, how does that translate into company-specific risk? More-muted economic cycles make it easier for managements to plan and avoid big mistakes. Firms can be more confident in their decisions simply because they face less risk. We see this reflected in U.S. corporate bankruptcy filings, which peaked in the late 1980s and have been working their way down ever since (see figure 2, bottom). If economies and companies are facing less risk than they used to, investors need not demand as much of a discount today as they might have 10 or 20 years ago to take on a stock that now is inherently less risky.

Under the behavioral-bias theory, markets also are efficient over the long term, but it may take investors some time to catch up with changing circumstances. That’s because of anchoring—the tendency for investors to extrapolate into the future the facts they know from the past.

In the growth domain, this often results in assumptions that successful companies will continue to be successful, making buyers willing to pay a big premium to own them. As these companies mean revert, the premiums embedded in their stock prices go away and they underperform. On the flip side, for companies that have been unsuccessful over time, sellers
are willing to accept a discounted price for these stocks to get them out of their portfolios, assuming they will remain unsuccessful into the future. As these companies mean revert, however, the discount goes away. So, it would seem that all you have to do is look for companies that have been unsuccessful and whose stocks are discounted as a result, then wait for them to mean revert and make money. This is a broad oversimplification, of course, but that’s the essence of the behavioral-anomaly argument.

Growing Awareness of Behavioral Biases

This theory first was fleshed out in the mid-1990s in a *Journal of Finance* article by academicians Lakonishok, Shleifer, and Vishny (1994). Lakonishok et al. noted that they were puzzled as to why arbitrageurs had not driven out the unjustified discounts created by behavioral biases. They had two theories. First, people simply were unaware of the money that could be made by exploiting these biases. When the argument was formulated in 1994, after all, quantitative portfolio management still was in relative infancy. Second, the authors asserted that institutional investors were predisposed to owning successful companies rather than unsuccessful ones. In overlooking the unsuccessful ones, they perpetuated unjustified discounts.

Times certainly have changed since 1994, as behavioral anomalies now would appear to be well understood. Academic literature clearly has taken note: A rough count of articles in academic journals since 1994 that cite Lakonishok et al. reveals more than 350. There also are indications that the general public has become more aware of it. A December 2006 cover article in *Time* magazine on the psychology of risk talked about all the components of risk underlying these behavioral anomalies. So the concept no longer is a secret to the general public, either.

Awareness is only part of the story; more investors have been acting on this awareness. Quantitative portfolio management may have been in the early stages of development when Lakonishok et al. formulated their theory, but that no longer is the case. Quantitative management has been growing steadily, accounting for more than 40 percent of the assets in new mandates during 2005 and 2006 (see figure 3). These managers are in the business of exploiting anomalies. Models don’t have behavioral biases. In addition, the assertion that institutional investors favor growth stocks no longer necessarily is true. Since 2001, institutional investors have favored value stocks and value managers (see figure 4), whose investment...
approach is predicated upon exploiting behavioral biases.

It now is hard to imagine—with all of the attention focused upon behavioral biases, insofar as they generate exploitable valuation discounts—that there is very much left to exploit today.

Are Growth Stocks Today’s Cheap Stocks?

Indeed, the relative valuations of the Russell 1000 Growth Index versus the Russell 1000 Value Index indicate that the premium for growth stocks has fallen about as far as it can (see figure 5). Historically, the growth index has sold at a premium to the value index because, as discussed earlier, growth stocks were the ones that investors felt more comfortable owning and value stocks made them nervous. The size of the premium varied over time with investors’ comfort levels. As they became less secure owning value stocks, they were willing to pay more for growth and the premium went up. At those times when the risk in value seemed less scary, the premium went down.

Looking at relative price-to-book as an example shows that the premium expanded in the late 1970s and early 1980s, during the energy crisis that U.S. President Jimmy Carter called “the moral equivalent of war,” coinciding with long gas lines and the Iranian hostage crisis. It went back down and headed up again a few years later with twin recessions. This was a bad time for value stocks, but relative price-to-book fell again when things normalized, only to head upward with the savings and loan crisis in the late 1980s and early 1990s. The Internet bubble of the late 1990s produced the same pattern. What’s interesting, however, is that each time that relative price-to-book came back down, it did so to a lower level. This is logical because when a more-expensive asset underperforms a cheaper one for a long time—again, we’re looking at the index level—their valuations gradually will converge. In the early 1980s, the relative price-to-book for growth versus value stayed well above two times, peaking at 2.9 times—in other words, the growth index’s price-to-book was nearly triple that for the value index. At the end of 2006, that ratio was less than 1.5 times, roughly half the early-1980s peak. You can look at a variety of measures—price-to-sales, price-to-cash earnings, price-to-forecast earnings, for example—and see similar patterns. These relative valuations all started out high and ended lower, reaching the 1.3 or so range by the end of 2006. While there certainly has been a cyclicality to these measures’ movements, there also appears to have been an underlying secular decline as well.
The question is, how much lower can relative valuations go? Equilibrium can’t be below parity, or a ratio of one, because that would mean that expensive stocks are cheap and cheap stocks are expensive. While semantically interesting, this would be logically impossible. So if you agree that it can’t go below one, where will the premium bottom? Can it go below 1.05? Below 1.1? Below 1.2 or 1.3, where it is today?

Certain clues indicate that we may be getting close to a practical bottom limit. One is when individual metrics start crossing over into that area where expensive stocks are cheaper than cheap stocks. In fact, we saw this happen during 2006, when the S&P 500 Citigroup Growth Index became cheaper than its value counterpart for a period of five months, based on price-to-cash flow (see figure 6). The two indexes since have crossed back, but the fact that they reached this illogical extreme suggests that we could be coming to the end of value’s secular advantage. Growth indexes no longer may be so expensive that they are fated for long-term underperformance, and thus value indexes no longer may be so cheap that we can count on their continued outperformance over time.

Another clue that the secular headwinds against growth may be reaching their practical limits is a study by Morgan Stanley of the portion of the S&P 500’s price that investors assign to the future success of index constituents rather than their present value (see figure 7). This measure takes the trailing 12-month S&P 500 earnings and capitalizes them by the risk-free rate plus the equity risk premium, which gives a normalized price for the index on a going-concern basis. Subtract that normalized price from the actual current price for the index, and that residual, by definition, is the value assigned to index constituents’ future success.

Again, this measure moves up when you would expect—in the early 1980s for a brief period leading up to the 1987 crash, in the early 1990s during the savings and loan crisis and during the Internet bubble—and then heads back down. Through most of history, as it moves up and down, it doesn’t stay in one place very long. That is, until recently. Over the past few years, it came down and remained there, essentially treading water at a near-50-percent discount to the long-term average level.

The Triumph of Mean Reversion
Some might view recent steadiness in the value of future growth as a manifestation of the triumph of mean reversion. Value investors are specialists in...
mean reversion, and it certainly has worked to their advantage so far this decade. On the flip side, however, it has made growth investors perhaps a little too skeptical. The overriding presumption now seems to be that successful companies will be less successful in the future. While as a general principle that's true, investors now seem to be overestimating the pace of mean reversion. As a result, they appear willing to pay lower premiums today for a successful company that likely will be less successful at some point down the road, but not necessarily tomorrow.

Let's turn to the other side of the proposition and look at the level of discount priced into value stocks. Figure 8 shows a measure that our firm's value team uses to track the amount by which the 100 most-attractively valued stocks in the S&P 500 are discounted to the overall index, based on a proprietary valuation model. This measure, too, moves up and down over time. The series dates back to the early 1970s, so we can see big spikes in the nifty-50 era as well as during the savings and loan crisis and the Internet bubble, times when value stocks underperformed and became increasingly attractive. And, again, there is fairly constant up-and-down movement. Over the past few years, however, the measure has come down to historically low levels and stayed there.

Note that figure 8 is just the logical twin of figure 7. Investors appear to be looking increasingly at today's unsuccessful companies as being less unsuccessful in the future, making them less willing than in the past to accept a big discount to get these stocks out of their portfolios. Unreasonable discounts may have been wrung out of value, just as unreasonable premiums seem to have been wrung out of growth. The style indexes now would appear to be fairly valued relative to each other, or at least getting close.

Each of these measures illustrates what we have found to be the historical pattern of style cycle performance over the past 40 years: a seemingly secular trend of value outperformance over time punctuated by brief but intense bursts of growth winning big. As indicated by the spikes in various measures we just reviewed, the most notable growth bursts occurred in the nifty 50, the oil bubble, the savings and loan crisis, and the Internet bubble (see figure 9). Although each of these spikes had some fundamental basis, they reached their ultimate magnitude with help from extreme levels of optimism or pessimism gripping the market. These periods have been relatively short, lasting from one and one-half to three and one-half years, and have generated cumulative growth outperformance ranging from 30 percent to 60 percent.

If the style indexes are at equilibrium today, does that mean we've reached the end of style cycles? No, ...
far from it. There always will be peri-
ods of fear and euphoria to drive the
indexes apart, and mean reversion to
bring them back together. What could
be different is an end to the secular
headwinds that growth investors have
faced for decades. Growth indexes no
longer would appear to be disadvan-
taged by stocks that are too expensive
and destined to underperform an
index of stocks that are fundamentally
too cheap. Under this scenario, style
cycles still would go on. But the cycles
likely would be oscillations around
a constant equilibrium rather than
a secular trend toward value. Fear
or euphoria still would drive sudden
bursts of growth outperformance, and
value still would win as these bursts
settle to the equilibrium. But the
periods between those bursts and re-
visions more likely would be neutral
environments than skewed toward
value, as they have been in the past
(see figure 10).
If we are at equilibrium now, when
is the next burst of growth outper-
formance coming? There’s no way of
knowing. But does it matter? When one
of these periods does occur, it’s a great
time to be a growth investor. But until
then, if today’s environment indeed has
reached equilibrium, growth investors
seemingly would have nothing to lose.
They now would be on a playing field
that’s level rather than pitched against
them, as in the past. If we are approach-
ing an end to the style headwinds that
disadvantaged growth indexes and
hence growth managers’ universes,
there is greater opportunity to outper-
form through stock selection in neutral
environments. The potential for another
sudden burst of growth outperformance
down the road comes, in effect, as a free
option to the growth investor.
What Kind of Growth Manager
for the New Environment?
If we are, in fact, coming into an en-
vironment more conducive to growth
investing, are all growth managers
equally equipped to take advantage of
the opportunity? Intuitively, the answer
might seem to be “yes,” but we set out
to examine this situation in more detail.
First, we should clarify that up to
this point we’ve been talking about in-
herent disadvantages in growth indexes.
When it comes to active managers,
the situation is quite different. Despite
working from a seemingly disadvan-
taged universe, over the past 25 years
the median U.S. large-cap growth man-
ager outperformed its index significant-
ly more than the median value manager
outperformed its index, based on an
average of rolling five-year periods. We
are not saying that growth managers
have had more skill, just that they’ve
had a lower hurdle historically. Through
the combination of a higher premium
on top of a lower index return, the
median growth manager has been able
to end up in line with the median value
manager in terms of absolute returns
(see figure 11, top).
However, growth performance can
be extremely volatile. Historically, that’s
been the trade-off for huge bursts of
outperformance: extended lagging
periods. To help quantify this pattern,
we dissected data from the eVestment Alliance database, looking at the past 10 years for more than 200 large-cap growth managers that had track records for the full period. We found that outperformance was quite intermittent, even for top-quartile managers, the ones with the best track records. Looking at each manager’s average rolling-three-year relative return, nearly half underperformed by 300 basis points or more and just about a fifth by 1,000 basis points or more (see figure 11, bottom). Looking at the same analysis on a rolling one-year basis looks even bleaker. All of the managers—again, this is the top quartile—underperformed the index by 300 basis points or more, on average, and two-thirds lagged by at least 1,000 basis points. This kind of relative return would seem enough to get a manager fired, but such variability has been characteristic of even the best growth managers.

Despite this great fluctuation in growth-manager performance overall, is there further variability within the group itself? For example, during periods when growth underperforms value, would a more GARP-oriented manager fare better than a manager with high growth exposure? Conversely, during those brief, intense periods of growth outperformance, shouldn’t the growth-exposed manager do well while the GARP manager does horribly? It intuitively may not seem to matter whether you have a high-momentum manager or a GARP manager, because each will alternatively do well and poorly at various points along the way. But is the pattern of interim performance inconsequential?

Modest Performance Variation by Beta

To examine these questions, we arrayed our 200-plus-manager universe drawn from eVestment Alliance into four cohorts by various levels of residual beta-to-growth, which measures the relationship between a manager’s excess return to the broad market and that of the growth style index. The higher the beta-to-growth, the more sensitive a manager is to index performance. When the growth index is performing well, high beta-to-growth is preferable and low beta-to-growth is a hindrance. When the growth index is underperforming, the opposite holds true.

This analysis showed a broad range of growth managers, from fairly conservative to highly aggressive. At the conservative end were growth managers that tended to pay more attention to valuations, such as GARP managers, or growth-oriented active core managers. The aggressive end included momentum and other managers that tend to build more concentrated portfolios, make larger sector bets, and pay more attention to growth rates than valuations.
We used betas-to-growth for the past 10 years to arrange the full eVestment Alliance universe into these cohorts and got a relatively normalized distribution, with most toward the center of the spectrum, but still a fair number at either end (see figure 12, top). However, when we eliminated the bottom three quartiles to leave just top-quartile managers, the distribution profile changed (see figure 12, bottom). In this cut, more top-quartile managers tended toward the lower-beta-to-growth, conservative end of the spectrum, with fewer in the end reflecting more aggressive growth managers. This isn’t surprising, considering how much as growth outperformed during the Internet bubble, value delivered even better relative returns in its wake. So it’s only natural that GARP and similar managers with the highest value exposure more likely would make the cut over this period.

Interestingly, the distribution of premiums by cohort tells a different story. Looking at the left-hand set of bars for each cohort in figure 13, average quarterly excess return for each cohort is fairly similar, with only a very slight upward slope from the lowest beta-to-growth to highest. Why would that be? One explanation might be that, when you have one of those bursts of growth outperformance, the more-aggressive growth managers do so well that they eliminate their prior performance lags, and the conservative ones do so poorly that they give back much of the premium they generated in the value-outperformance periods.

What happens if you eliminate the single most intense period of growth outperformance on record, the fourth quarter of 1999? As shown in the right-hand set of bars in figure 13, excess return across the spectrum essentially flattens out, as that for the most-aggressive managers drops meaningfully while that for the most-conservative managers rises noticeably. The spread between the highest- and lowest-return growth managers during this quarter was a remarkable 111 percent. Clearly, a manager could have made a huge contribution to its long-term return by being in the right place in terms of technology stocks in that one quarter, although it may have paid a big price in terms of volatility as the bubble burst.

Timing of Returns Varies Greatly

Although long-term excess returns don’t vary greatly across the manager beta-to-growth spectrum, the timing of those returns can fluctuate tremendously (see figure 14), much as you might...
expect. In the growth quarters during the 10 years of our analysis, defined as those in which the Russell 1000 Growth outperformed the Russell 1000 Value by 200 basis points or more, both groups of more-aggressive growth managers won, but the most-aggressive group was the biggest winner. This is when they have the greatest opportunity to make up ground lost in value quarters, where they lag meaningfully. In value quarters, the conservative end of the spectrum did best. In neutral periods, which we would expect to see a lot more of in an environment where equilibrium becomes the norm, all but the most conservative managers added value, but the second most-aggressive cohort did best overall.

Turning to risk, as you would expect, the most aggressive group tends to be the most diversifying to value managers, although the second group isn’t much less so (see figure 15, top). However, because the second group has been considerably less risky in terms of tracking error, these managers’ combination of return and risk produced the highest information ratio, 0.77, over the past 10 years (see figure 15, bottom).

Based on this analysis, managers in the more-aggressive half of the growth spectrum would have an advantage in an environment of equilibrium, under which value periods could become less plentiful while neutral and growth periods become more so. If there is less underlying tendency for value to outperform, managers in the conservative half of the growth spectrum would have fewer periods in which to outshine the managers in the more-aggressive half. More-aggressive players clearly do best when growth is outperforming as a style. But now, without an inherent value bias to the indexes, they would have a better chance than historically to do well in neutral periods, which could occur with more frequency in such a setting. If we now are starting from a more-level playing field, as various signals might suggest, aggressive-growth managers would seem to be facing fewer circumstances in which they would lose and potentially more in which they could win. Which of the two aggressive cohorts might be most appropriate would be a function of plan sponsors’ risk and volatility appetites, as well as the specific types of value managers they’re seeking to offset. In any case, understanding the type of growth manager most suitable for particular plan structures in a potentially new environment is quite important.

A New World View
It can be tantalizing to consider that the world as we’ve known it for decades now is different. However, a range of quantitative measures seems to indicate that the inherent disadvantages saddling growth indexes for decades could be waning and that excesses in both style indexes—excessive premiums in the case of growth and excessive discounts in the case of value—may have been wrung out. If that is the case, future style cycles would fluctuate around a more stable equilibrium rather than the declining value slope that growth investors have faced in the past. Against this backdrop, this may be a good time for plan sponsors to take a new look at their manager line-ups to ensure they reflect the desired positioning for a new environment for the next near-term cycle as well as the long haul.

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Endnotes
2 Jeffrey Kluger, “Why We Worry About the Wrong Things: The Psychology of Risk,” Time 168, no. 23 (December 4, 2006).
3 The 50 stocks that were most favored by institutional investors in the 1960s and 1970s. Companies in this group usually were characterized by consistent earnings growth and high price-to-earnings ratios. Examples of nifty-50 stocks include General Electric, Coca-Cola, and IBM.
4 Residual beta to growth measures the covariance of the excess returns of the manager versus the broad market to the excess returns of the managers’ growth style index. It is calculated as COVAR (Rp,Rb)/Var (Rb), with Rp defined as the portfolio return minus the broad market return and Rb defined as the growth benchmark return minus the broad market return.