A Repeatable Process

Consultants who analyze investment managers have identified the concept of a "repeatable process". A repeatable process means that an investment manager should continue in the future to process information and execute investment decisions as in the past. We believe the goal of a repeatable process is not only reasonable, but also should be expected by customers.

Disciplined Growth Investors has an investment process which seeks to exploit opportunities in small and mid capitalization stocks within the context of a reasonably diversified portfolio. In the specific arena of small cap investing, our research indicates that the ideal of a repeatable process may be substantially compromised if the investment manager fails to set appropriate limits on the amount of capital invested in this asset class. In our case we believe the appropriate amount is $500 million.

We understand that our limit on small cap assets under management may reduce our capability to solve prospective clients' investment problems. This article is designed to share with customers and other interested parties the thought process behind this policy.

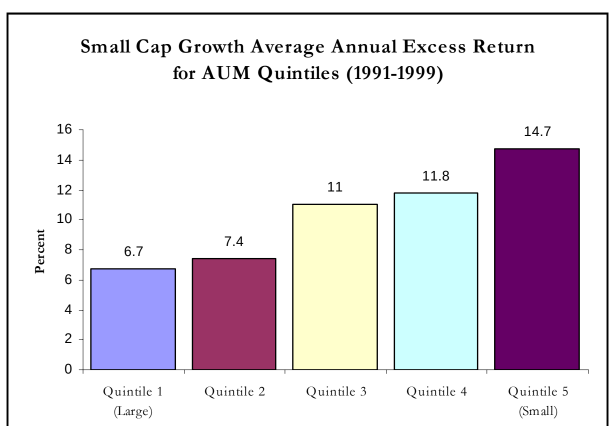
Ascent Into Mediocrity

The investment consulting industry has conducted and published a considerable body of research on investment practices. For our purpose here, we focused on those studies which analyzed the effects of assets under management on investment performance.

The Frank Russell Company was established in 1936 and is considered to be a leading reputable investment consulting firm. In 2002 three Frank Russell analysts, Jon Christopherson, Zhuanxin Ding, and Paul Greenwood published an article entitled "The Perils of Success: The Impact of Asset Growth on Small-Capitalization Investment Manager Performance." One hypothesis the study sought to prove was:

The greater the assets under management the lower the subsequent excess returns.

In the nine calendar years from 1991 – 1999 the rigorous study classified managers each year into quintiles based on assets under management. The study then reviewed the excess returns in the following year for each quintile to see if it supported this hypothesis. The following chart is the results they observed for Small Cap Growth Managers average excess return.



(Source: Frank Russell Company)

The chart on page one shows the average differential between small cap growth managers was a whopping 8.0% per year between the managers in the smallest quintile versus managers in the largest quintile in AUM.

The authors concluded "it would appear prudent for clients of small cap managers to 1) become relatively more demanding of them as their AUM grows 2) remain open-minded about smaller-AUM replacements."

The Frank Russell article warned their readers that the universe of managers used in their study was subject to flaws such as "survivorship bias". We reviewed a study from Ennis Knupp and Associates that addressed this issue as it pertains to small cap manager performance databases. Ennis Knupp was founded in 1981 and is highly respected in the investment management consulting industry. In a piece written in 2001 and published in the Spring 2002 edition of the *Journal of Portfolio Management* entitled "The Small-Cap Alpha Myth", Richard D. Ennis, CFA and his colleague Michael D. Sebastian focused on the statistical validity of performance numbers found in investment manager databases. They concluded that historical performance information for small cap managers may be artificially inflated from *both* "survivorship bias" and "instant history bias." "Survivorship bias", as the name implies, occurs when a manager with poor performance either shuts down or chooses to remove their results from performance databases leaving information from only surviving managers. "Instant history bias" occurs when a manager with a solid track record decides to begin populating databases with historical information that had previously gone unrecorded. The Ennis Knupp white paper suggested that return enhancement of 2% annually is likely for the small cap component of commonly used investment manager databases due to these biases.

The Ennis Knupp white paper did not address this question of whether this artificial performance enhancement would favor one type of small cap manager over another. Our view is that there is not necessarily a rational argument for survivorship bias favoring one size manager over another. Further, Ennis Knupp's white paper estimated a 2% tailwind which pales in magnitude versus the 8% performance differential between the smallest and largest quintile managers found in the Russell article.

In summary, we at Disciplined Growth Investors find the Russell article to be compelling, so compelling that we believe our policy must err on the side of too few assets under management if we are to preserve our process and effectiveness. For us the issue is clear; we must be very disciplined if we are to properly serve our customers in the future.

An Asset Ceiling For Small Cap Growth Managers

Steven DeSanctis of Prudential Securities, inspired by the Frank Russell article, embarked on a study of his own entitled "How Many Assets Can A Small Cap Manager Manage?" This research paper was published on June 17, 2002. Steven has been the lead analyst in Prudential's small cap quantitative research since he took charge of the group in 1999 following a highly effective and longstanding effort by Claudia Mott. In developing his analytical framework Steven made the following four assumptions in determining maximum asset levels in a portfolio.

1. A portfolio of 150 stocks.
2. An investable total universe defined by the Russell 2000 Style Indices.
3. A liquidity requirement of holding positions with no greater than 10 days trading volume.
4. An acceptance of a reduction of the total universe to only 52.1% investable.

Steven tested asset levels of $1 billion, $2 billion, and $3 billion for Small Cap Core, Small Cap Growth and Small Cap Value portfolios. He concluded within his framework "that small-cap growth managers could manage up to $2 billion in assets."

Steven's conclusion was dependent upon a stock market index whose composition changes every June 30th and market liquidity that ebbs and flows. Steven updated his June 17, 2002 study in an article published April 27, 2005. In the new study he concluded that a Small Cap Growth manager could invest up to $3 billion in assets under the same criteria. The drivers of higher AUM were greater trading activity and fewer small companies in the Russell 2000 Index.

The very fact that Steven sought and found an upper limit on assets under management reinforces our main point; *there must be an upper limit on assets under management for small cap managers*. In the next section we examine our reasoning as to why $500 million is the prudent level for us and more importantly for ***our*** clients.

$500 MILLION IN AUM IS RIGHT FOR DISCIPLINED GROWTH INVESTORS

The specifics of our process strongly suggest $500 million is a prudent limit for us.

Our median market capitalization has remained between $400 and $500 million for years. This means half of our holdings have a market cap of less than $400-500 million. Steven's model portfolio had a median market cap of $689 million in 2002 and $845 million in 2005, well above our consistent historical average. If we simply adjust Steve's theoretical limit of $3 billion downwards based on our smaller median caps, our theoretical upper limit would be about $1.5 billion.

Of course Steven was only discussing a theoretical, not necessarily prudent, upper limit.

There is a second clue for us in Steven's study. Steven's theoretical portfolio assumed that 150 stocks comprised the portfolio. Disciplined Growth Investors' process has consistently yielded a portfolio of 45-55 stocks. Since we have about 1/3 the number of names than Steven, we should manage no more than 1/3 Stephen's upper limit. In 2002, our upper limit would have been $666 million; even with Steven's more liberal limits in 2005, our upper limit would be $1 billion.

Our caution is reinforced if we examine a theoretical stock purchase. If we managed $500 million and we wanted to purchase an initial position on a stock with a market cap of $100 million, we would have to purchase 5% of the market cap of that company. If we were to purchase a 1% position of a company with a $400 million market cap, our initial purchase would equal 1.25% of the shares outstanding.

While we do not set a hard upper limit on the percentage of outstanding shares we would own of a particular stock, we believe 5-10% is a reasonable range, depending upon other risk factors, such as allocation risk, valuation risk, execution risk, and financial risk. As of September 30, 2005, we manage about $370 million in our small cap investment portfolios. In only three stocks do we own more than 6% of the outstanding shares of the company, with the largest at 6.9%. These three stocks total less than 5% of the Small Cap Growth portfolio.

In summary we are grateful to Steven DeSanctis for addressing the question about upper limits on assets under management for small cap managers. Adjusting his study for the specifics of our process and adding a prudent reduction to his limits leaves us comfortable with a $500 million limit for our small cap assets.

What Does A $500 Million Limit Mean?

For us, a $500 million limit means that we will cease our marketing efforts when our assets under management exceed $400 million. In line with our longstanding policy to be fair our various constituencies, we will honor those prospects which were identified to us prior to our reaching $400 million.

The larger issue is the possibility of significant appreciation, which may cause the assets under management to significantly exceed $500 million. We seek to achieve this "problem" through superior performance. If we achieve superior performance, we would expect our clients to allocate assets away from us, as many have done in the past. We also pledge to our clients that when our small cap assets under management exceed $500 million we will advise them annually of our ability to manage the assets under our direction. If we determine that our assets under management are too large, we will notify our clients and work with them to rationally reduce their assets with us.

Conclusion

The prophet Mae West once quipped that "Too much of a good thing can be wonderful." It would seem that the wisdom contained in Mae's remarks does not apply to managers of small cap assets. The weight of the evidence is clear: there is a strong inverse correlation between assets under management and investment effectiveness.

Our policy response is to limit assets under management to a prudent amount. This action should pave the way for us to continue to provide our customers with a repeatable and effective investment process.

Disciplined Growth Investors
The Way Wealth Is Built.

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