Small Cap Canadian Equities

Diversification with Capitalization Outshines Large Cap Style Diversification

The "Small Cap Effect", or the ability of small cap stocks to outperform large cap stocks, is alive and well in the Canadian Marketplace. Furthermore, a number of active small cap managers exhibit low volatility profiles, combined with very low correlations to large cap managers, and as a result offer superior diversification when combined with large cap managers. Our analysis showed an average return improvement of over 4% , with a risk reduction of over 1%, can be achieved through diversification with small cap.

Active small cap Canadian equities have, in large part, been underrepresented as part of portfolio asset allocations, in sharp contrast with traditional diversification strategies such as growth/value offsets. Key among the limiting factors are:

I. The most common benchmark, the S&P/TSX Small Cap Index has been a weak performer over the last ten years (ending Dec. 31) returning 6.6% versus the broad S&P/TSX Composite return of 7.9%. This may restrain its adoption in asset mix policy studies where market indices are used for analysis. Over the same period the small cap median returned 11.3% highlighting the success of active management for this strategy and curtailing the use of passive/ETF strategies.

II. Market liquidity also serves to limit capacity in the asset class with many small cap managers closing their doors around $2 Billion in client assets under management. A number of successful track-records have been closed to new-entrants on this basis, another factor which may have dampened enthusiasm for small cap strategies.

III. The Canadian small cap market is heavily tilted towards commodities with the combined Energy and Materials sectors totaling nearly half of the index. While this infuses a higher risk profile into index measures, it also creates a deep pool of alpha sources for active management on both a sectoral exposure and stock selection basis.

Considerable research has been conducted globally analyzing the "Small Cap Effect" which describes the ability of small cap companies and by extension, small cap portfolios to outperform their large cap peers. For managers following bottom-up fundamental valuation disciplines the claim of an information advantage in researching smaller companies is often used to describe one aspect of the small cap effect, namely that these companies do not have the same degree of sell-side analyst research coverage that their large cap peers enjoy. From the buy-side perspective one may state that small cap investing may uncover great ideas before "Bay Street" identifies them.

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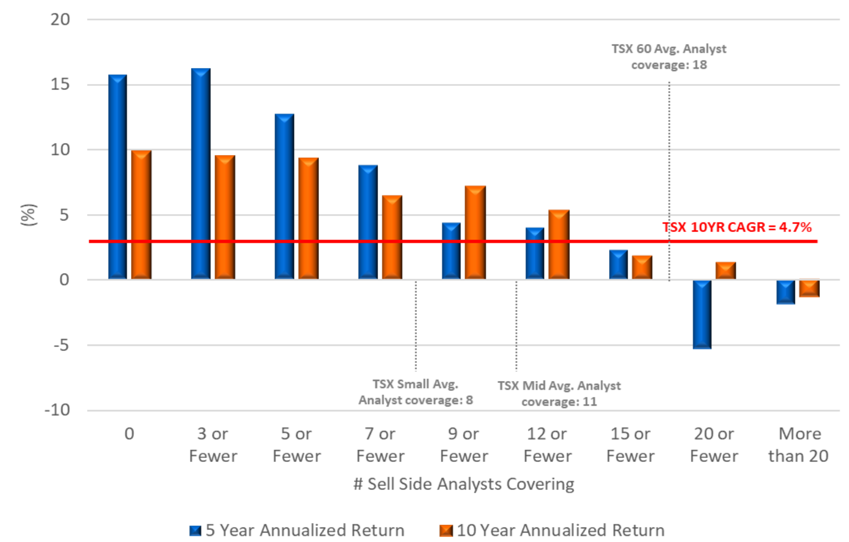
...a considerable portion of the overall active Canadian equity space is largely unexposed to the opportunity available in small cap stocks

The Canadian small cap effect, or information advantage can be illustrated (Figure 1) by comparing the number of sell side analysts covering a given stock and the trailing 5 and 10-year annualized returns of the stock. The results of this study demonstrate a clear and direct relationship highlighting an incremental erosion of returns as sell-side analyst coverage is increased. Companies with three or fewer covering analysts have enjoyed 5-year returns of over 15% and ten-year returns of nearly 10% on an annualized basis. This is in sharp contrast with greater than twenty analysts covering a stock where both five and ten year returns are in negative territory. As a group, the alpha has been effectively researched out of the story — investors cannot exploit an information advantage.

Figure 1: **Stock Performance[1,2] vs. # Covering Analysts**

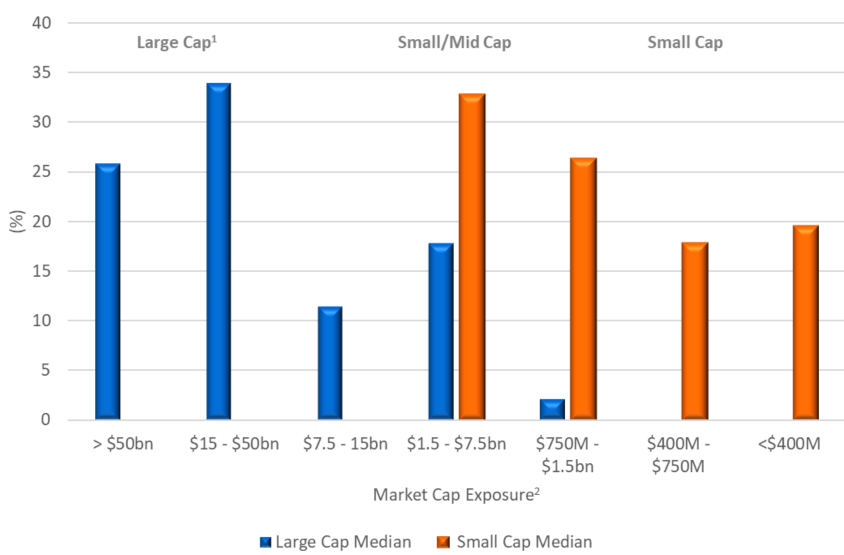


[1] Study universe includes all members of the TSX Composite & TSX Small Cap Indices with 5 & 10 year track records
[2] Returns are for periods ending Aug. 31, 2018

As expected, analyst coverage increases as one migrates from small cap, with an average of 8 analysts covering, to 11 (mid-cap) and 18 analysts on average covering TSX 60 large cap stocks. Companies with seven or fewer covering analysts demonstrate a clear performance advantage over the S&P/TSX Composite ten-year return of 4.7%. In fact many stocks with less than $1 Billion in market capitalization typically have less than three covering analysts and therefore represent a strong candidate pool to exploit the small cap information advantage.

The market cap distribution of the large cap median and the small cap median is summarized in *Figure 2*. While these two approaches are by definition fishing in different ends of the pond, it is interesting to observe that the only meaningful overlap is in the mid-cap bucket of companies with market caps between $1.5 and $7.5 billion. Although it is recognized that all-cap universes and specific larger cap strategies may offer somewhat greater penetration into the small cap realm than the large cap median, it remains clear that a considerable portion of the overall active Canadian equity space is largely unexposed to the opportunity available in small cap stocks.

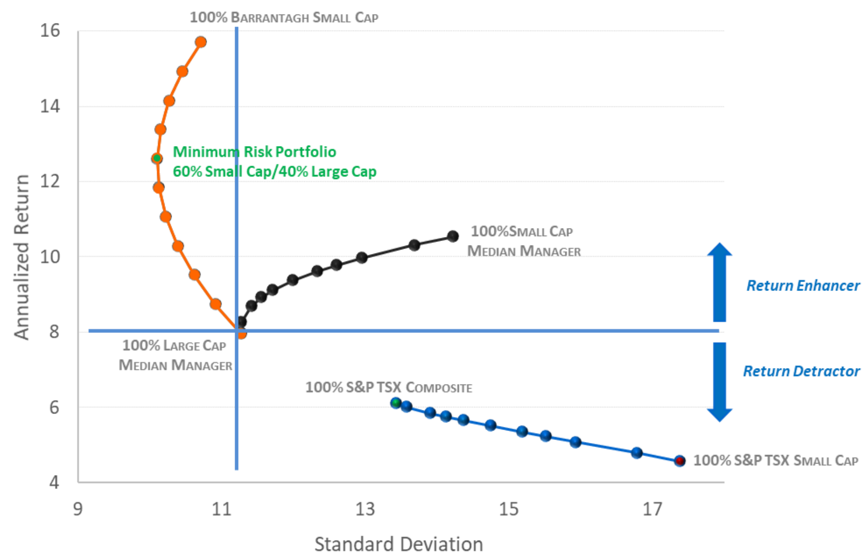
Figure 2: **Market Cap Distribution (%)**



[1] Large Cap Median = Evestment Large Cap Canadian Universe
[2] Market Cap buckets as defined by Evestment

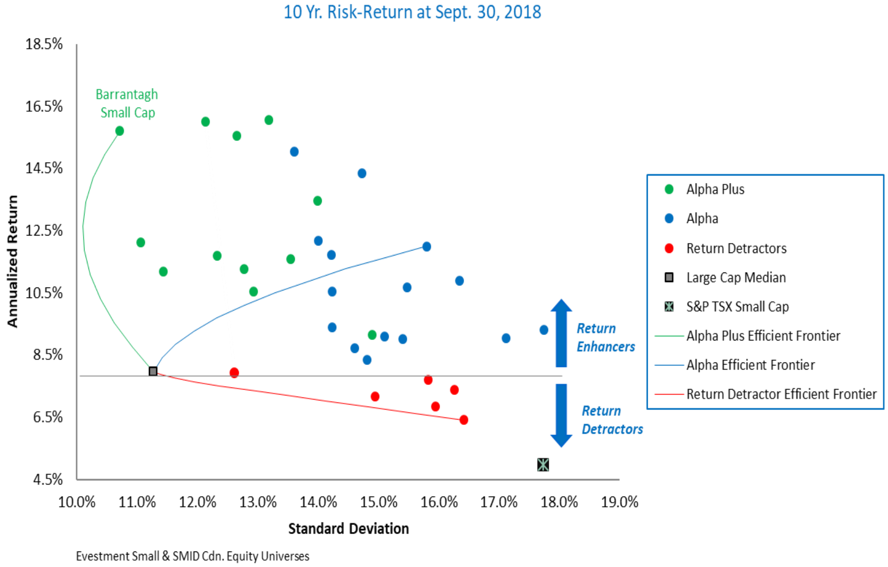
LOOKING FOR STRONG DIVERSIFIERS IN THE SMALL CAP UNIVERSE OF MANAGERS

Figure 3: **Small Cap Asset Mix Policy Allocations**
Periods Ending Sept. 30, 2018



It is interesting to note that small cap as an asset class in Canada is under-represented in client policy asset mixes, an outcome, in part, attributable to the use of index data versus active management in policy asset mix studies. As illustrated in *Figure 3* the TSX Small Cap index has underperformed its large cap counterpart, the S&P TSX Composite, over the past ten years— and done so with a higher risk profile. The TSX Small Cap is nearly 50% energy/materials which adds considerable volatility and has been a long-term performance detractor. Active small cap managers have managed around this risk, as evidenced by median managers which delivered higher return and lower risk vs. the small cap index. Combining the large cap median with the small cap median produces an efficient frontier which does add performance at the cost of higher volatility. By contrast, a combination of the large cap median with a superior diversifier (Barrantagh Small Cap) yields a parabolic efficient frontier which demonstrates the ability to create optimal minimum risk portfolios where the combined portfolio offers a lower risk profile than either small cap or large cap on their own. The minimum risk portfolio is the co-ordinate on the efficient frontier that minimizes risk and is also referred to as the optimal portfolio. This represents the maximum return increase available at the lowest risk level.

Figure 4: **Types of Small Cap Diversifiers**
10 Yr. Risk-Return at Sept. 30, 2018



The next step was to assess all active small cap managers and determine their ability to diversify the large cap median. The study included all managers with ten-year track records in both the Evestment Small and Small/Mid Canadian equity universes for periods ending September 30, 2018. These parameters yielded a total of 33 manager track-records which were grouped in a ten-year risk-return chart. This assessment yielded three clear groups *(Figure 4)* which can easily be identified by the shape of their efficient frontiers when combined with the large cap median.

The study identified twelve ***Alpha Plus*** managers which have the ability to both increase return and reduce risk to a level less than either of the two managers being combined on their own—i.e. superior diversification. This group tended to include managers with a combination of alpha, low risk profiles and low correlation with large cap managers and created parabolic efficient frontiers. The efficient frontier traces the risk/return profile as one incrementally adds small cap exposure to the large cap median.

The second group, or ***Alpha*** managers, were also return enhancers, and created combined portfolios that increased returns, though at the cost of increasing the combined risk profile. This group supports the traditional thinking in regards to small cap allocations, namely that their addition to a portfolio would prospectively enhance returns at the cost of higher volatility. Both the Alpha and Alpha Plus groups exhibited return profiles higher than the large cap median over ten years. The last group identified were the remainder of the sample. Their return profile generated lower ten-year returns than the large cap median manager, with higher risk and are labelled ***Return Detractors***. Over the assessment timeframe a rational allocation would not be made to this group.

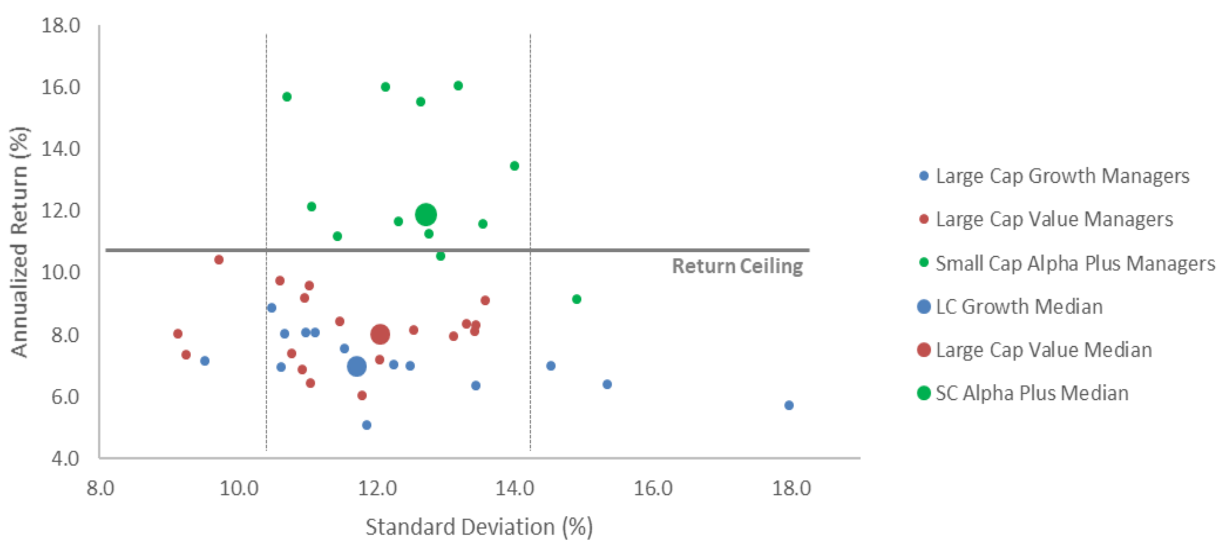
It is, however, clear that as a group the study universe has added considerable value over the large cap median, demonstrating the alpha capture potential in small cap equities. Furthermore, twelve of these managers have superior risk/correlation profiles which permit the creation of combined portfolios with lower risk than either of the standalone large cap and small cap portfolios.

DIVERSIFYING LARGE CAP CANADIAN EQUITY PORTFOLIOS

A common diversification strategy is the combination of growth and value managers. *Figure 5* summarizes these two universes of managers and compares their risk-return profiles to the small cap alpha plus managers previously introduced. Given that portfolio returns are a simple weighted average the potential portfolio returns of any growth and value large cap managers are effectively capped by the top performers in their universes as labelled by the return ceiling. From a value-add perspective the majority of the small cap managers are above this ceiling indicating the potential to increase returns through their addition to a large cap portfolio.

It is also noteworthy that the small cap mangers offer risk profiles within a comparable range of most of the large cap managers as framed by the vertical gray lines.

Figure 5: **Limited Diversification with Large Cap Growth & Value**
10 Yrs Ending Sept. 30, 2018



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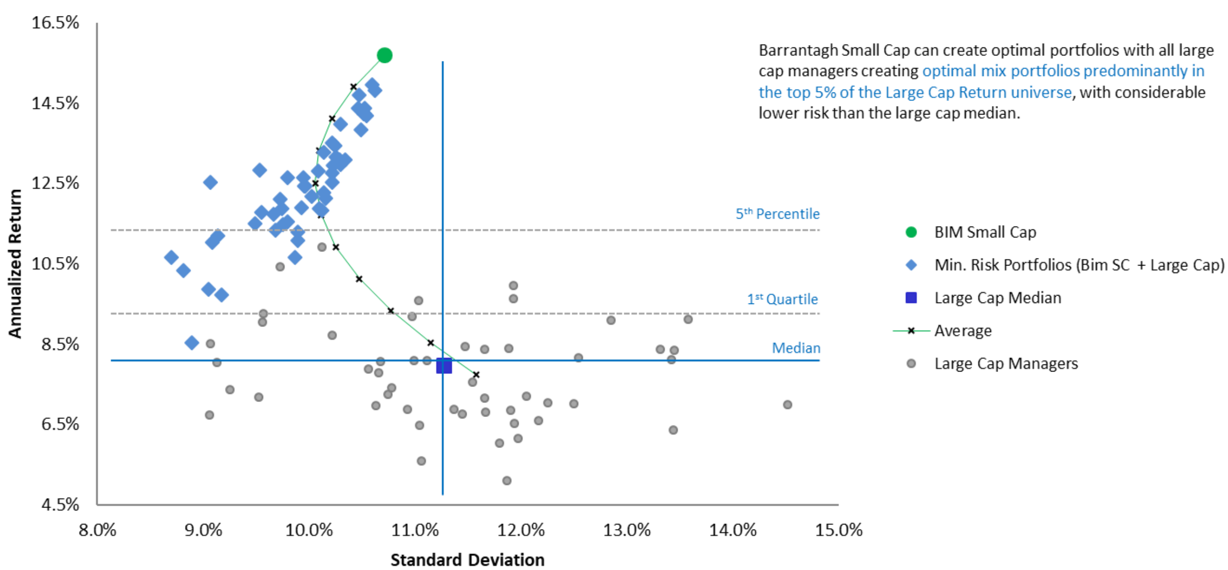
Investment Management

...considerably improve the odds of beating the large cap universe of managers , with the added bonus of lower risk

Extending this analysis the study examined combining the Barrantagh Small Cap Canadian equity portfolio with all large cap managers in the Evestment universe. This included 62 managers with ten-year track records over the study period. The results are summarized in the ten-year risk-return chart below *(Figure 6).* Large cap managers are represented by the gray dots with the horizontal lines representing the large cap universe population median, 1st quartile break and 5th percentile. The blue diamonds represent the optimal, or minimum risk portfolios that can be achieved through the combination of a large cap manager and the Barrantagh small cap portfolio. Optimal minimum risk portfolios can be created with any of the 62 large cap managers examined, with the majority of these outcomes ranking in the top 5% of the large cap performance universe. The average of these results would increase ten-year annualized returns by 4.5% over the large cap median, while reducing the standard deviation by 1.2%.

Diversification with a small cap manager with low-risk characteristics has the potential to considerably improve the odds of beating the large cap universe of managers, with the added bonus of doing so with lower risk. This work supports the notion of a strategic long-term allocation of small cap to policy asset mixes in contrast to tactical market-timing exposure. ***Is this the time to invest in small cap equities? - Strategically the answer is Yes.***

Figure 6: **Minimium Risk Portfolios: Large Cap Universe & Barrantagh Small Cap**
10 Yrs Ending Sept. 30, 2018



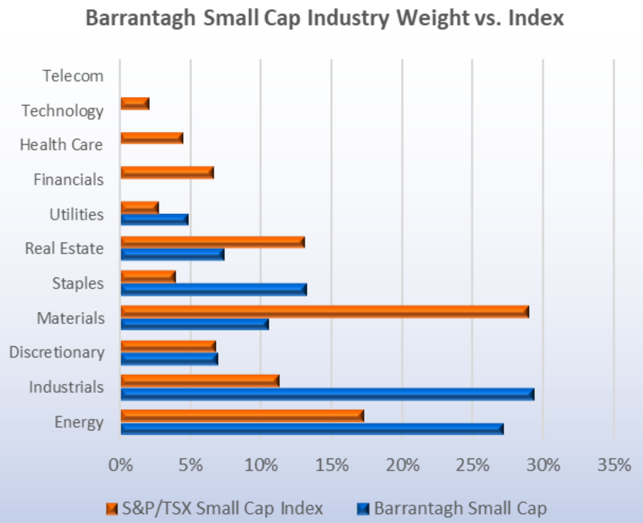
For More Information Please Contact:

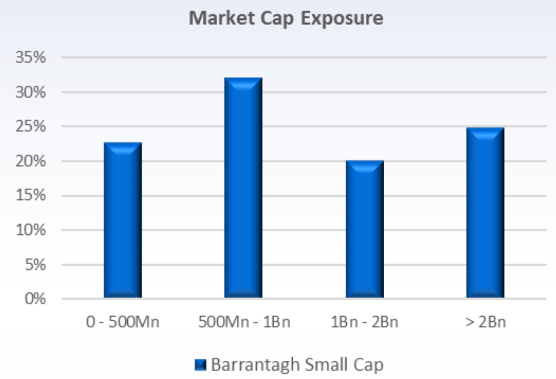
Alan Daxner (Toronto)	Robin Ferguson (Vancouver)
Senior Vice President	Vice President
adaxner@barrantagh.com	rferguson@barrantagh.com
416.864.7958	778.990.3445

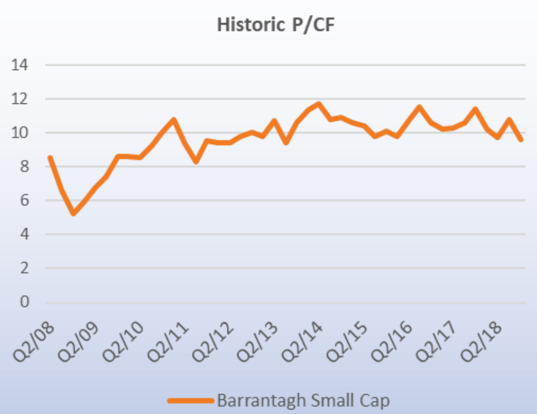
Profile: Barrantagh Small Cap Canadian Equities

Portfolio at December 31, 2018

CHARACTERISTICS	
Number of Holdings	24
Avg. Market Cap	$1.4 Bn
# Industry Sectors	7
Dividend Yield	3.1%
P/CF	9.6X



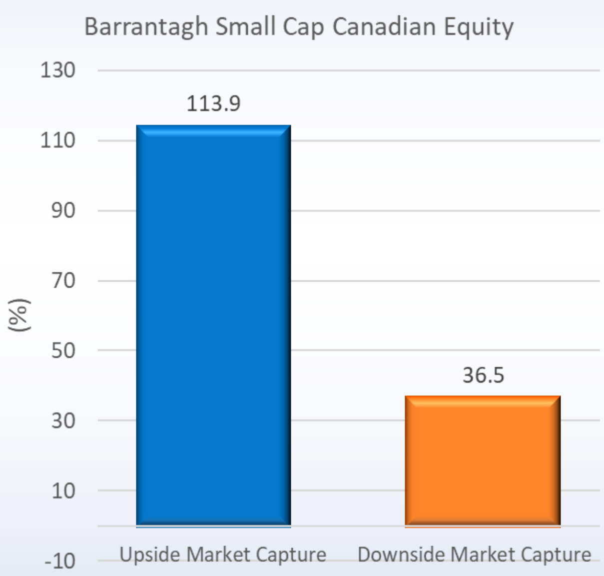




Profile: Barrantagh Small Cap Canadian Equities

Statisitics Since Inception (for Periods Ending December 31, 2018)

	Barrantagh Small Cap Cdn. Equites	Percentile Rank[1]	
Annualized Return	**11.9%**	**1**	**1st Percentile**
S&P/TSX Small Cap	0.3%		
S&P/TSX Composite	3.3%		
Standard Deviation	11.4	1	Lowest Volatility
Sharpe Ratio	*0.96*	*1*	*Highest risk-adjusted return*
Beta	0.46	1	Lower risk than the market
Treynor Ratio	*24.0*	*1*	*Highest risk-adjusted return*



Barrantagh {manx gaelic} trustworthy *adj.*, dependable *adj.*

We are dedicated to preserving our clients' capital while generating growth through consistent application of our value-based fundamental investment philosophy

Barrantagh Investment Management Inc. provides disciplined portfolio management to institutional and individual investors. The firm is committed to a high level of client service provided directly by its experienced partners. We are dedicated to preserving our clients' capital while generating growth through consistent application of our value-based fundamental investment philosophy. We manage portfolios on a segregated basis to meet our clients' investment objectives. Because the firm is owned by our professional staff we maintain a completely independent and objective perspective.

For more information contact: Barrantagh Investment Management Inc. (416) 868-6295