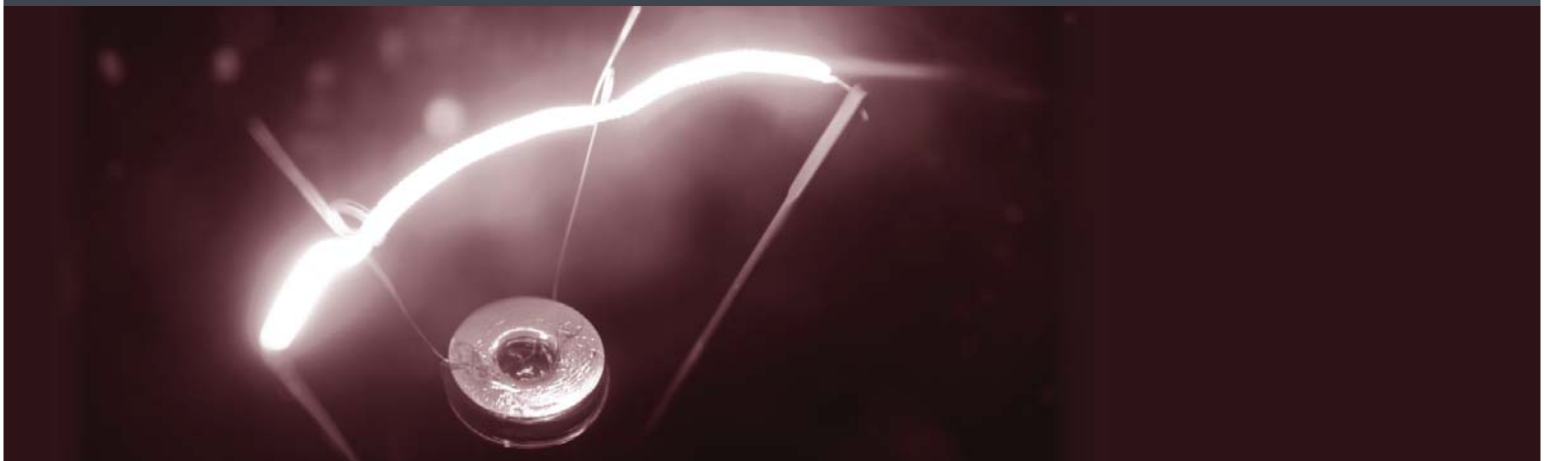
Original Research for Inquisitive Investors



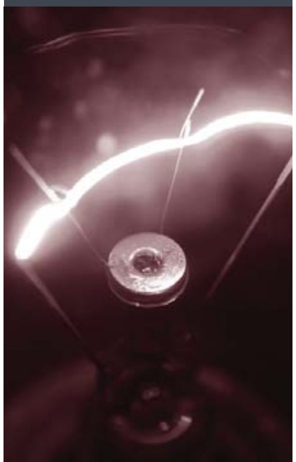
The Next Big Thing Could Be Really Small:

An Introduction to Global Micro-Cap Stocks

The Brandes Institute

BRANDES.COM/INSTITUTE
BRANDESINSTITUTE@BRANDES.COM

An Introduction to Global Micro-Cap Stocks



In this research report, the Brandes Institute and Metis Global Partners collaborate to explore the potential benefits of investing in global micro-cap stocks. Machel Allen, CFA, is President and Chief Investment Officer at Metis Global Partners and a member of the Brandes Institute's Advisory Board.

Executive Summary

Global micro-cap stocks have provided greater diversification benefits and a more robust long-term value premium than small- and mid- to large-cap stocks. Among the features contributing to these benefits for micro caps worldwide:

- a large, diverse universe with little sell-side research coverage
- lower correlations between individual micro-cap stocks as well as other asset classes
- a larger empirical value premium than other equity universes

Together, these attributes have created attractive opportunities for active managers. While some institutional investors have made moderate commitments to micro-cap stocks, the allocations have tended to be country or regionally focused. The opportunity set globally is vast and compelling.

It's a Big, Small World

There are more than 20,000 publicly traded companies around the world with a market capitalization of $50 million or greater. More than 60% of those companies are micro caps (companies with a market capitalization between $50 million and $500 million). As shown in Exhibit 1, the universe of micro-cap companies is nearly twice as large as the global small- to mid-cap stock universe, and more than six times as large as the large-cap universe.

However among micro caps globally, there tends to be little sell-side analyst coverage. Less than half of global micro-cap companies have *any* analyst coverage at all. For those that do, there are only three sell-side analysts on average providing coverage. This is far fewer than larger-cap companies around the world and likely stems from a lack of sufficient revenues for brokerage firms trading these small and sometimes illiquid companies to justify the commitment of research resources. While this lack of coverage certainly adds to the investor challenge of obtaining insightful or even necessary information, it may also create pricing inefficiencies to be exploited by fundamental investors.

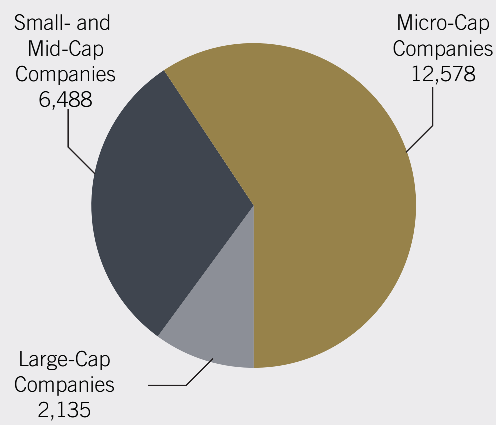
GLOBAL MICRO-CAP STOCKS: THE FACTS

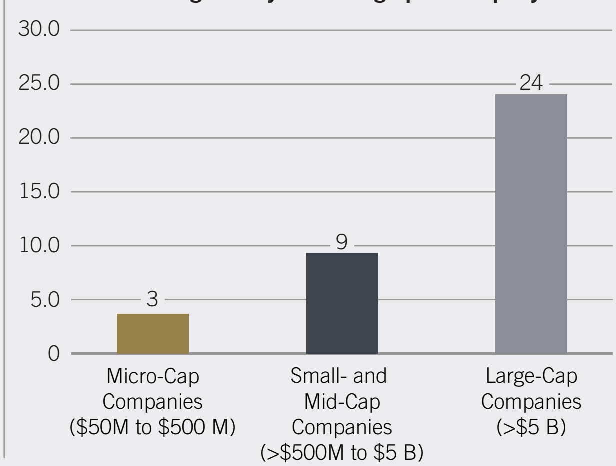
- More than 60% of the more than 20,000 publicly traded companies worldwide are micro caps (market caps of $50 million to $500 million).
- Fewer than 50% of micro caps worldwide have any analyst coverage.
- Only 15% of micro caps worldwide are based in the United States.
- The median age of non-U.S. micro cap companies is 31 years and almost 60% have generated annual positive free cash flow over the last three years.

THE BRANDES INSTITUTE

There are a number of key distinctions between U.S. and non-U.S. micro caps – and these differences highlight the attractive traits of micro caps outside the United States. Non-U.S. micro caps tend to be more mature and, on average, their fundamental characteristics have been more attractive.

Exhibit 1: Global Micro-Cap Companies Are Plentiful, but Underfollowed



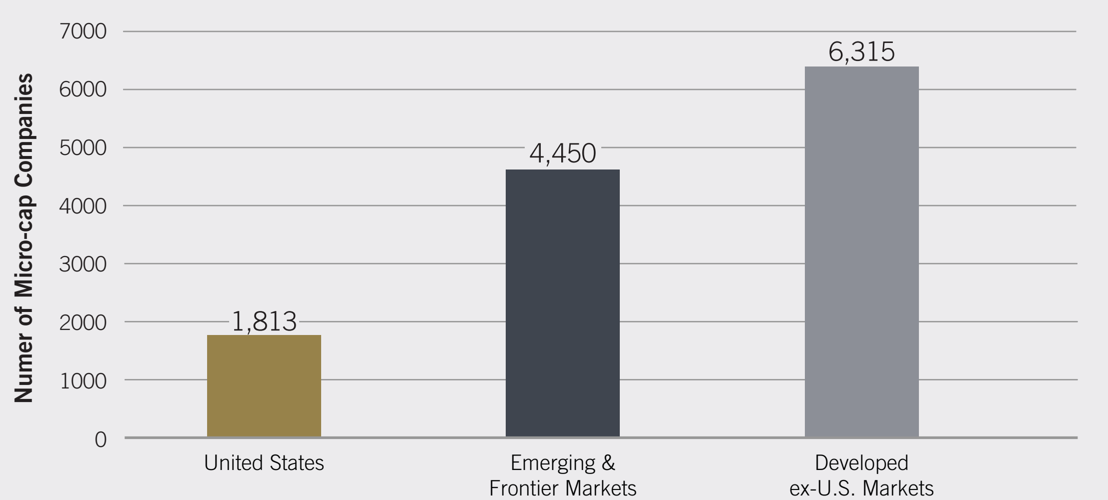


Source for both charts: Worldscope, CapitalIQ via Clarifi as of 4/30/2014

Differences Between U.S. and Non-U.S. Micro Caps

While the opportunity set for micro caps worldwide is vast, it's largely *outside* of the United States. Only 15% of global micro caps are U.S.-based companies vs. 35% domiciled in frontier or emerging countries and 50% in developed non-U.S. markets. See Exhibit 2.

Exhibit 2: Most Micro-Cap Companies Are *Outside* the United States



Source: Worldscope, CapitalIQ via Clarifi as of 4/30/2014

There are a number of key distinctions between U.S. and non-U.S. micro caps – and these differences highlight the attractive traits of micro caps outside the United States. Non-U.S. micro caps tend to be more mature and, on average, their fundamental characteristics have been more attractive. As shown in Exhibit 3, on the follwing page, non-U.S. micro caps have had higher returns on equity (ROE) and higher operating margins[1] than U.S. micro caps. Additionally almost 60% of international micro-cap companies had positive 3-year free cash flow, debunking the myth that micro caps are largely start up or early stage growth companies.

[1] Statistics on operating margins exclude banks due to banks' unique characteristics.

Exhibit 3: U.S. vs. Non-U.S. Micro Caps Fundamental Differences

	U.S. Companies	Non-U.S. Companies
Median Age	23 years	31 years
% of universe generating annual positive free cash flow in the last 3 years	52.9%	58.5%
Return on Equity (%)	2.3%	6.6%
Operating Margin (%)	6.3%	9.8%

Source: FactSet via Clarifi, CapitalIQ, as of 5/31/2014.

Having an opportunity set that is well diversified with no one industry greatly influencing the performance of the overall universe, active investors may be better rewarded for pursuing high conviction allocations different than a market index with less concern for benchmark weights.

Diversification differences are more attractive for micro caps outside the United States, as well. The top three industries for U.S. micro caps account for 28% of the U.S. universe: banks (13%); biotechnology (9%); and oil, gas & consumable fuels (6%). Among non-U.S. micro caps, no one industry accounts for more than 6% of the universe; the top three non-U.S. industries are metals & mining (6%); real estate management & development (5%); and electronic equipment, instruments & components (5%).[2] Having an opportunity set that is well diversified with no one industry greatly influencing the performance of the overall universe, active investors may be better rewarded for pursuing high conviction allocations different than a market index with less concern for benchmark weights.

Exhibit 4: Correlations Between Individual Stocks and Respective Universe Lowest Among Micro Caps

10-year monthly return correlations to universe as of March 2014, March 2004 and March 1994*

	Micro Cap	Small Cap	Mid to Large Cap
2014	0.34	0.43	0.53
2004	0.20	0.31	0.36
1994	0.04	0.41	0.49
Average	**0.20**	**0.38**	**0.46**

Source: Worldscope, S&P via Clarifi as of 5/31/2014. **Past performance is not a guarantee of future results.**

*These three universes reflect the 21,201 stocks drawn from the Worldscope database, segmented according to the following capitalization ranges: $50 million to $500 million for micro caps; $500 million to $2 billion for small cap; and $2 billion to $10 billion for mid to large caps.

[2] Data from FactSet via Clarifi, as of 5/31/2014.

Compelling Correlations

Cross Sectional Correlations

Returns for individual micro-cap stocks worldwide appear to be less influenced by broader market movements. Exhibit 4 shows the average cross-sectional correlations between each micro-cap, small-cap and mid- to large-cap stock and its respective universe over the past 20 years.

The average correlation of 0.20 for micro caps over the entire period suggests micro-cap stock prices move far more independently from their market. By comparison, small- and mid- to large-cap stock prices are nearly twice as influenced by broader market movements.

The average correlation of 0.20 for micro caps over the entire period suggests micro-cap stock prices move far more independently from their market. By comparison, small- and mid- to large-cap stock prices are nearly twice as influenced by broader market movements.

Note however that correlations for micro caps have experienced the greatest increase over the last 20 years. This likely reflects two factors: the effects of globalization on what were once largely local markets and an increase in the free float of market capitalization available among micro-cap companies around the world. Even with this increased correlation, the more independent price movement of global micro-cap stocks has created a meaningful opportunity for portfolio level diversification benefits beyond those of larger equity peers.

Asset Class Correlations

Correlation benefits of global micro caps extend across other asset classes, as well. An examination of 5-year rolling correlations back to 1990 show that correlations to other equity classes were as low as 0.24 and 0.52 for the U.S. and global broad market universes respectively, and were negative among U.S. fixed income. Not surprisingly, the asset class that has the highest correlation to micro caps is the global small-cap universe. See Exhibit 5.

Exhibit 5: Global Micro Caps Have Offered Strong Diversification Benefits

Rolling 5-Year Correlations (1990 to 2013)

	Correlations to Global Micro Caps
U.S. Treasuries Barclays U.S. Government Index	-0.38
U.S. Fixed Income Barclays U.S. Aggregate Bond Index	-0.23
U.S. Stocks S&P 500 Index	0.24
Global Fixed Income Barclays Global Aggregate Bond Index	0.42
Global Stocks S&P Global LargeMid Index	0.52
U.S. Small Caps Russell 2000 Index	0.72
U.S. Hedged Equity HFRI Composite Index	0.87
Global Small Caps S&P Global SmallCap Index	0.95
Global Micro Caps S&P Global <$500M Index	1.00

Source: FactSet; as of 12/31/2013. Returns are gross of management fees, since inception of the Barclays Global Aggregate Bond Index of 12/31/1989 –the index with the shortest history of those compared. **Past performance is not a guarantee of future results.** Rolling periods represent a series of overlapping, smaller time periods within a single performance, longer-term time period. For example, over a 20 year period, there is one 20 year rolling period, eleven 10 year rolling periods, sixteen 5 year rolling periods, and so forth. Please note that all indices are unmanaged and not available for direct investment.

Of course, stocks of microcap companies aren't without their unique set of risks and challenges to the investor. In spite of the correlation benefits noted above, micro caps usually experience more volatility than small-, mid- and large-sized companies, and some of them may operate in countries with greater economic and political risks. Additionally, some of the correlation benefits stem from the fact that there is often lower liquidity in microcaps.

Greater Value Premium

To examine not only the possibility for outperformance among microcaps, but specifically the performance potential among value micro-cap stocks worldwide, we followed the approach of academics Lakonishok, Shleifer and Vishny (LSV).

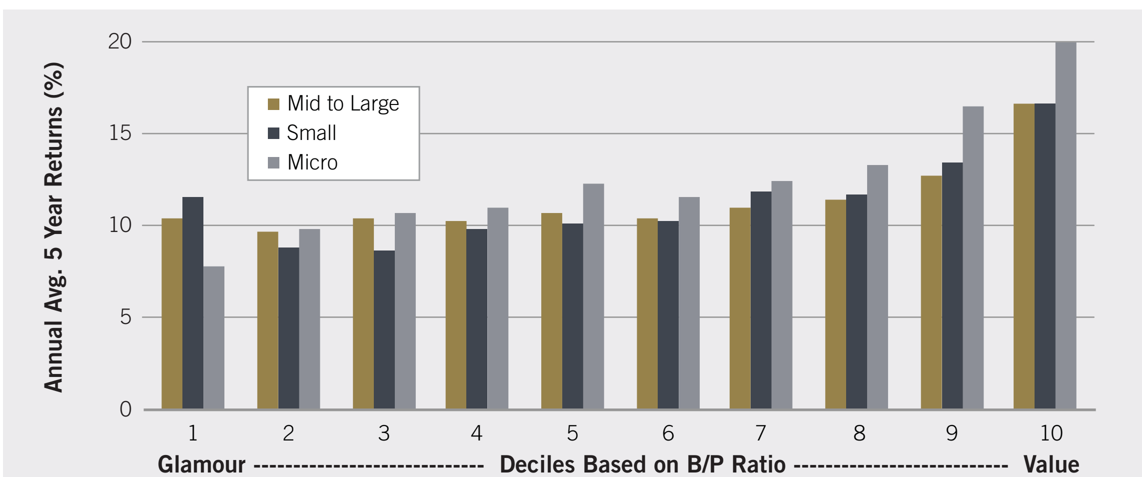
To examine not only the possibility for outperformance among microcaps, but specifically the performance potential among *value* micro-cap stocks worldwide, we followed the approach of academics Lakonishok, Shleifer and Vishny (LSV). The trio showed value stocks in the United States outpaced glamour stocks. LSV defined value stocks as those with more attractive valuation measures (a higher book-to-price ratio, for example) relative to their peers.[3]

Like LSV, we divided a universe of stocks into deciles, ranked by B/P ratios, but broadened the scope to include global markets. We also divided stocks into deciles across three distinct market capitalization segments: micro caps, small caps and mid to large caps. For more details on LSV's methodology, see the Appendix on page 9.

Exhibit 6 shows annualized average returns for value and glamour stocks. While value stocks outperformed glamour within each capitalization segment, the outperformance was most pronounced among micro caps.

Exhibit 6: Value Investing Has Been Successful Among Micro Caps Worldwide

Annualized Average 5-Year Returns by Market Cap Segment (5/31/1990 to 5/31/2014)



Source: Worldscope via Clarifi as of 5/31/2014. **Past performance is not a guarantee of future results.**
See Appendix for performance details.

[3] LSV published "Contrarian Investment, Extrapolation and Risk" in the *Journal of Finance* in December 1994. In this report, the trio showed U.S. value stocks outperformed glamour between 1968 and 1994.

An Active Investor's Paradise

The unique traits among global micro caps explored to this point (including a large, diverse opportunity set with low analyst coverage creating potential pricing inefficiencies, attractive fundamentals, low correlation characteristics relative to other stocks and asset classes, and a robust value premium) suggest the universe offers a compelling case for stock pickers and active management. The remainder of this paper focuses on additional traits that contribute to exploitable inefficiencies, such as:

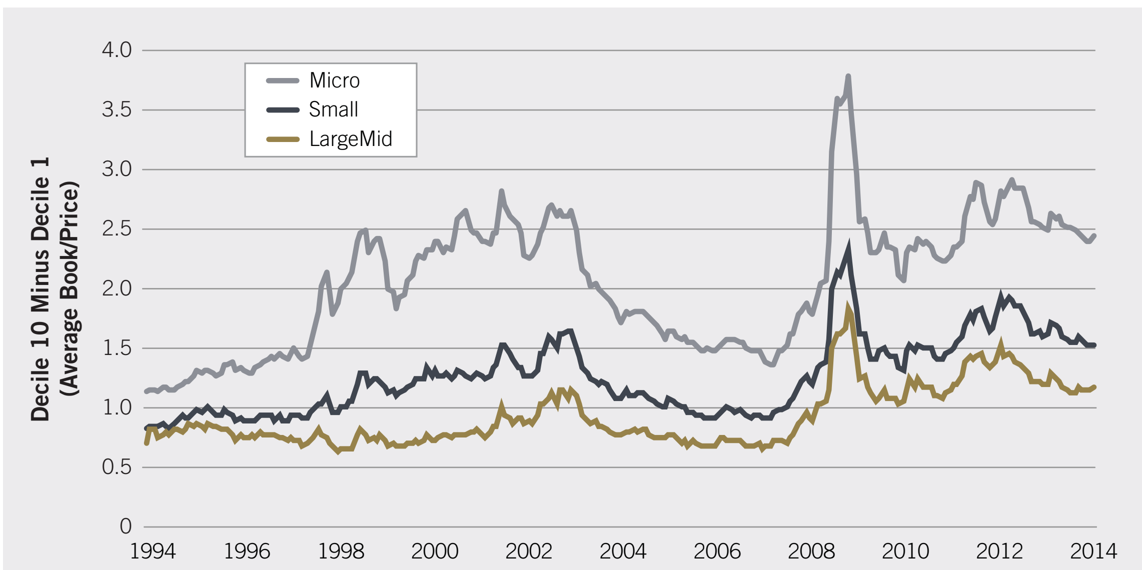
Over the last 20 years, global micro-cap stocks consistently have shown greater dispersion in valuations and thus more fertile territory for an active manager to find potentially mispriced stocks.[4]

- valuation dispersion
- asymmetry of returns and
- short selling inventory

Valuation Dispersion Has Created Opportunity

Consistent with the methodology used in the value premium chart in Exhibit 6, we examined the disparity in valuations within each market-cap segment. Over the last 20 years, global micro-cap stocks consistently have shown greater dispersion in valuations and thus more fertile territory for an active manager to find potentially mispriced stocks.[4] As of May 31, 2014, the disparity for micro caps was 1.6 times greater vs. small caps and more than twice as large vs. mid to large caps. See Exhibit 7.

Exhibit 7: Greater Disparity Between D10 and D1 Micro-Cap Valuations Suggests More Mispriced Opportunities. Difference Between D10 Value Stocks and D1 Glamour Stocks Over Trailing 20 Years



Source: Worldscope via Clarifi as of 5/31/2014. Spread data represented includes 5/31/1994 to 5/31/2014.

The Importance of Return Asymmetry

In general, equities offer a compelling, asymmetrical risk-reward profile. For unleveraged, long only investors, the downside is losing the initial investment; the upside is theoretically unlimited. Applying this notion to our universe of companies, we analyzed the return "tails" for each market-cap segment and its constituents ranked by valuation deciles.

We defined the right tail (or the upside) as the percentage of companies with returns exceeding 60% in a 12-month period; the left tail was the percentage of companies with returns below -60% in a 12-month period. Then we subtracted the left tail from the right tail within each decile. A higher number shows a stronger positive asymmetrical return opportunity as there are a higher proportion of strong performers vs. underperformers. See Exhibit 8 on the following page.

[4] Disparity was measured by subtracting the median B/P ratio for decile 1 from the median B/P ratio for decile 10 (D10 – D1).

To complete our observation of characteristics that have created fertile ground for micro-cap active management we noted a relatively low inventory of stocks available to short (relative to their total market cap) versus small caps or mid to large caps.

Exhibit 8: Value Micro-Cap Stocks Show Greatest Asymmetrical Return Potential

Micro Caps Offer Greatest Reward Potential Measured by % Difference Between Right and Left Tails

		Mid to Large Caps	Small Caps	Micro Caps
Value	10	7.5%	8.6%	9.3%
	9	6.1%	7.8%	8.5%
	8	6.3%	6.7%	7.6%
	7	5.0%	7.0%	7.8%
	6	5.7%	6.2%	7.0%
	5	5.3%	6.4%	7.0%
	4	5.4%	6.0%	6.0%
	3	5.2%	6.2%	5.8%
	2	5.3%	5.1%	4.1%
Glamour	1	1.1%	2.8%	-1.5%

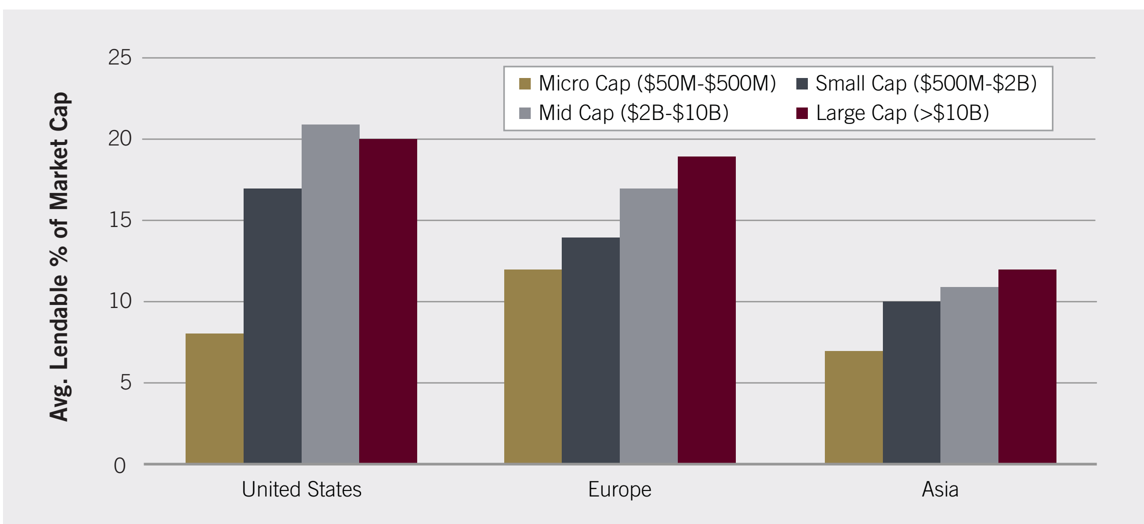
Source: Worldscope via Clarifi as of 5/31/2014. **Past performance is not a guarantee of future results.**

Note the values in Exhibit 8 tend to be higher for micro-cap stocks, particularly in the deciles at the value end of the spectrum (5-10), reflecting a greater proportion of right tail (strong performers) vs. left tail (weak performers). Conversely, among micro caps in decile 1, the high percentage of left tail stocks pulled the difference below zero, reflecting an asymmetrical *under*performance profile.

Shortage of Short Sale Candidates

To complete our observation of characteristics that have created fertile ground for micro-cap active management we noted a relatively low inventory of stocks available to short (relative to their total market cap) versus small caps or mid to large caps. Note the gold bars in Exhibit 9. The lack of short sale opportunities also can exacerbate pricing inefficiencies and create opportunity for fundamental investors.

Exhibit 9: Inventory of Stocks to Short Smaller Among Global Micro Caps



Source: Markit, as of 5/31/2014

Conclusion: Significant Potential for Active Management Among Global Micro Caps

Over the past 20+ years, the value premium the Brandes Institute has quantified in various countries and across market capitalization segments has been evident among micro-cap stocks. In fact, value micro caps delivered better returns than glamour micro caps—and better returns than small- and mid- to large-cap value stocks. They also have shown lower correlations between constituents and their respective universe.

Global micro caps also have shown additional, exploitable inefficiencies including a large and persistent dispersion in valuations, strong return asymmetry and less short-selling inventory relative to small and mid to large caps. Collectively, these traits have created solid opportunities for fundamental, active managers. While some institutional investors have made moderate commitments to micro-cap stocks, the allocations have tended to be country/region focused. As highlighted here, there are significant benefits to applying that focus globally.

Appendix

LSV's Value and Glamour Stock Analysis: Methodology

1) On a specific day each year (April 30), a sample of companies was divided into deciles based on a valuation measure, such as book to price ratio (B/P). The 10% of stocks with the highest B/P ratio were placed in decile 1. For each consecutive decile, B/P ratios decreased; this culminated in stocks with the lowest B/P values forming decile 10. The lower deciles, which consisted of higher-B/P stocks, represented value portfolios. In contrast, the higher deciles—those filled with lower-B/P stocks—represented glamour portfolios.

2) From there, annualized performance for deciles 1 through 10 was calculated over the subsequent five years.[5]

3) The first and second steps were repeated each April 30 creating new 10-decile sets. The annualized returns for each decile set were averaged over all the years of the study creating an annualized average 5-year return for each decile.

We applied LSV's methodology (with a few modifications) to analyze traits and returns among global micro caps between 1990 and 2014. (1990 was the earliest date for which we could get solid, stock-specific fundamental data.) We also introduced the following modifications to LSV's approach:

a) We broadened the universe of study outside the United States. (LSV studied only U.S. stocks traded on the New York and American Stock Exchanges.)
b) Instead of April 30, we reconstituted our universe each June 30.
c) We eliminated the smallest 50% of companies in our global sample to more accurately represent an "investable" universe, in our opinion. Prior to this cut, the smallest company in the universe was <$1 million in market cap; afterward, the smallest company was $45 million, as of 6/30/2013.
d) The remaining 50% of our global sample was divided into the following market-cap segments:
   i) Mid to Large Caps: the top 10% (the largest companies) of the sample
   ii) Small Caps: the 11th through the 25th percentile of companies
   iii) Micro Caps: the 26th through the 50th percentile of companies

[5] For performance measurement, decile weights were rebalanced annually. As a result, deciles began each year with equal weights for all stocks.

Annualized Average 5-Year Returns by Market Cap Segment (5/31/1990 to 5/31/2014)

	Glamour				Deciles Based on B/P Ratio					Value
	1	2	3	4	5	6	7	8	9	10
Micro	7.9%	9.9%	10.9%	11.1%	12.4%	11.6%	12.5%	13.4%	16.7%	20.1%
Small	11.6%	8.9%	8.7%	9.9%	10.3%	10.4%	12.0%	11.8%	13.6%	16.8%
Mid/Lg	10.6%	9.8%	10.4%	10.4%	10.8%	10.5%	11.0%	11.6%	12.8%	16.8%

Source: Worldscope via Clarifi as of 5/31/2014. **Past performance is not a guarantee of future results.**

The Barclays U.S. Government Bond Index is an unmanaged index consisting of U.S. dollar-denominated, fixed-rate, publicly issued bonds. The U.S. Government Index is comprised of the U.S. Treasury and U.S. Agency Indices. The U.S. Government Index includes Treasuries (public obligations of the U.S. Treasury that have remaining maturities of more than one year) and U.S. agency debentures (publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government). The U.S. Government Index is a component of the U.S. Government/Credit Index and the U.S. Aggregate Index. The index is a total return index which reflects the price changes and interest of each bond in the index.

The Barclays U.S. Aggregate Bond Index is an unmanaged index consisting of U.S. dollar-denominated, fixed-rate, taxable bonds. The U.S. Aggregate Bond Index is a broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS. The U.S. Aggregate rolls up into other Barclays flagship indices such as the multi-currency Global Aggregate Index and the U.S. Universal Index, which includes high yield and emerging markets debt. The U.S. Aggregate Index was created in 1986, with index history backfilled to January 1, 1976. The index is a total return index which reflects the price changes and interest of each bond in the index.

The S&P 500 Index with gross dividends is an unmanaged, market capitalization weighted index that measures the equity performance of 500 leading companies in leading industries of the U.S. economy. The index includes 500 leading companies in leading industries of the U.S. economy, capturing 80% coverage of U.S. equities. This index includes dividends and distributions, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Barclays Global Aggregate Bond Index is a broad-based benchmark of the global investment-grade fixed-rate debt markets. The Global Aggregate Bond Index contains three major components: the U.S. Aggregate Index, the Pan-European Aggregate Index, and the Asian-Pacific Aggregate Index. In addition to securities from these three benchmarks, the Global Aggregate Index includes Global Treasury, Eurodollar, Euro-Yen, Canadian, and Investment-Grade 144A index-eligible securities not already in the three regional aggregate indices. The Global Aggregate Bond Index was created in 1999, with index history backfilled to January 1, 1990.

The S&P Global LargeMid Index is a comprehensive, rules-based index measuring global stock market performance of mid to large capitalization companies from developed and emerging markets throughout the world.

The Russell 2000 Index with gross dividends is an unmanaged, market capitalization weighted index that measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. This index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The HFRI Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. dollars and have a minimum of $50 million under management or 12-month track record of active performance. The HFRI Composite Index does not include funds of hedge funds.

The S&P Global SmallCap Index is a comprehensive, rules-based index measuring global stock market performance of small capitalization companies from developed and emerging markets throughout the world.

The S&P Global <$500M Index with net dividends is a comprehensive, rules-based index measuring global stock market performance of micro and small capitalization companies. It represents all issues in the S&P Global BMI (Broad Market Index) whose market capitalization at time of index constitution is less than $500 million. The S&P Global <$500M Index includes companies from both developed and emerging nations. This index includes dividends and distributions net of withholding taxes, but does not reflect fees, brokerage commissions, or other expenses of investing.

Book to Price Ratio: Book value divided by price per share.

Past performance is not a guarantee of future results. No investment strategy can assure a profit or protect against loss.

Diversification does not assure a profit or protect against a loss in a declining market.

The information provided in this material should not be considered a recommendation to purchase or sell any particular security. It should not be assumed that any security transactions, holdings or sectors discussed were or will be profitable, or that the investment recommendations or decisions we make in the future will be profitable or will equal the investment performance discussed herein. Please note that all indices are unmanaged and are not available for direct investment. Market conditions may impact performance. The performance results presented were achieved in particular market conditions which may not be repeated. Moreover, the current market volatility and uncertain regulatory environment may have a negative impact on future performance.

THE BRANDES INSTITUTE

The Brandes Institute
11988 El Camino Real
Suite 600
P.O. Box 919048
San Diego, CA
92191-9048
858.755.0239
800.237.7119
Fax 858.755.0916