

# A quantitative approach to inefficient markets



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## GLOBAL QUANTITATIVE EQUITY APPROACH

Mackenzie's Global Quantitative Equity team believes in a core style of investing that employs fundamental ideas through a disciplined, risk-aware investment approach in seeking to generate alpha within global markets. The team, led by 30-year quantitative industry veteran, Arup Datta, uses several of the same elements that a fundamental manager uses, however his team utilizes a systematic process to analyze more factors and stocks than a traditional fundamental manager. The team defines their edge as a steadfast belief in the adherence to a core focus which produces a more consistent alpha profile through and across multiple market environments. In addition, they believe that their daily stock analysis and proprietary transaction cost estimation along with our focus on capacity management, sets them apart from their competitors. A quantitative lens, aided by computing power, sophisticated algorithms and adaptive models, provides the team with a measurable process to value securities across the broad investment universe.

## Balance of factors

Through a quantitative lens, the investment team constructs portfolios with a "core" focus, which aims to provide a balance between growth and value characteristics and seeks to outperform in various market environments. The investible universe is viewed within a region/sector/industry relative model framework. Within each of the four region stocks are measured against sector and industry peers. This model framework yields a matrix (by region, sectors and industries) in which each stock is categorized and ranked in a region-based peer group.

Each stock is adjudicated against 15-20 factors broadly grouped into four "super factors" consisting of Value, Quality, Revisions and Informed Investor. A balanced weight is assigned to these super factors at the portfolio level; however, weights vary by individual stock. Within Value, the team places emphasis weight between Quality Value (cash flow and dividend-based valuations). Pure Value (earnings, book and gross profit-based valuations) and including innovative ways at looking at valuations. The Quality factor balances management actions such as capital allocation,



operating efficiency, ESG, employee sentiment and use of accounting practices; it also includes notions of management quality. The Growth factor refers to analyst revisions to forecasts (earnings, sales and dividends), long-term growth, innovation and insights from linked companies. While the Informed Investor factor analyzes informed market participant activity, such as short interest in and option pricing on securities.

Beyond the four Super Factors, contextual variables are applied to determine the weight of factors for each stock. The contextual model incorporates a sophisticated approach to weighting, as the efficacy of factors vary based on underlying stock characteristics. A human overlay at extremes, such as a three-sigma event, is employed for factor weighting during periods of market dislocation. For instance, the team employed a value-tilt based during the early stages of the global pandemic based upon a three-sigma opportunity and unwound the tilt as the spread in valuations came in.

FIGURE 1 – BALANCED APPROACH TO FACTORS



## Expand the universe, daily trading, and a focus on capacity management and strong implementation

The investment team manages their flagship strategy, Mackenzie Emerging Markets All Cap, to the MSCI Emerging Market IMI Index, which has approximately 3,200 index constituents. The team expands upon the index constituents to include more than 10,000 securities within their investable universe. For fundamental managers, a typical analyst would be responsible for having a deep understanding of, at most, 30-50 companies. To successfully cover such a broad emerging markets universe, fundamental managers must employ a large team of analysts. The process of expanding the investable universe beyond benchmark constituents is in place for all of the investment strategies managed by the team.

The team strongly believes that there is an advantage in daily portfolio rebalancing and trading. A quantitative approach allows the investment team to be nimble and incorporate daily changes in stock alpha forecasts for the entire investment universe, which allows the team to

rapidly and efficiently trade in and out of stocks. This more frequent incorporation of new information helps generate the freshest alpha into the portfolio, but this is only possible with a strict focus on capacity management and efficient trading. The team has placed limits on the asset size of their strategies to maintain nimbleness for portfolio trades.

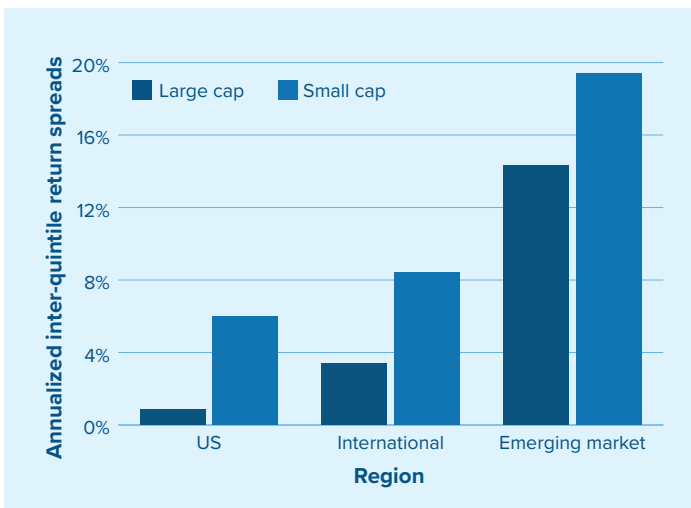
Another critical consideration when investing in emerging markets is relatively high trading costs when compared to developed markets. The same is also true in less efficient small-cap securities versus higher liquidity large-cap companies. In order to deliver alpha efficiently, the team has constructed a sophisticated transaction cost model which is used in conjunction with the alpha model as part of the investment process. The model helps the team quantify the trading impact of each security by measuring round-trip transaction costs (market impact, commissions and stamp duties). Trading volume demanded and volatility are key drivers of the team's market impact cost model.



# Fertile ground for alpha

Mackenzie’s Global Quantitative Equity team believes that as an equity asset class there is no place more ripe for alpha than emerging markets. The chart below depicts a simple factor-based analysis of portfolios that blend stocks with both value and momentum characteristics. The results of this simple analysis clearly show the potential alpha opportunity in emerging markets and the added benefit of a small cap focus. In the flagship strategy, Mackenzie Emerging Markets All Cap, the team positions the portfolio to extract alpha in mid and small-cap stocks, an area that is particularly rich in alpha.

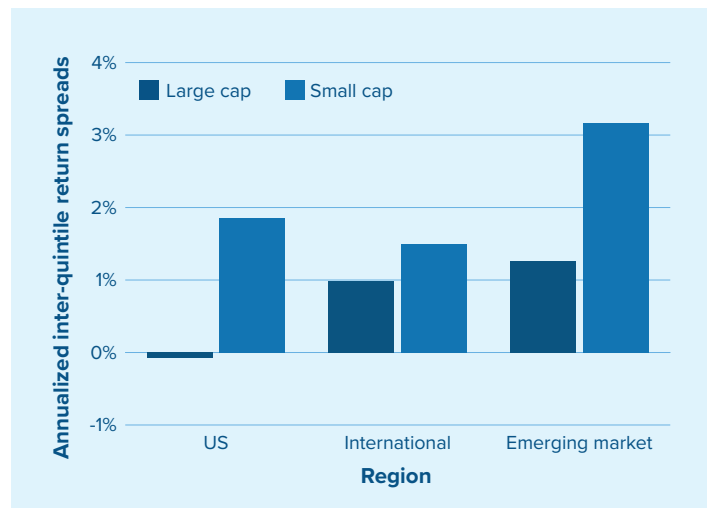
FIGURE 2 – QUANTITATIVE ALPHA EFFICACY



Represents inter-quintile return spreads using 50/50 blend of Value and Momentum from September 2002 – December 2022

The benefits of emerging markets and small cap stocks can also be seen on a realized basis. The chart below serves as evidence that emerging markets as an equity asset class, coupled with a tilt towards small-cap stocks, truly has the potential to generate alpha over the long-term. The team also sees this small-cap advantage to be evident in their international and US portfolios as well.

FIGURE 3 – MEAN BENCHMARK-RELATIVE EXCESS RETURN FOR ACTIVE MANAGERS 2012-2022



Source: eVestment Universes. Returns shown represent past performance, are not a guarantee of future performance and are not indicative of any specific investment. Please note that the benchmark for the strategies within each universe vary, excess performance of active strategies is based on managers preferred benchmark.

## Conclusion

At Mackenzie, we believe that emerging market equity, as an asset class, is often overlooked for the wrong reasons. From a total asset allocation standpoint, emerging markets continues to represent only a small portion of most plan sponsors equity allocations. We view the asset class as a critical component of the equity allocation puzzle. While emerging markets has encountered high volatility historically, we maintain a strong belief in the growth rate potential in the companies and countries within the emerging markets and the long-term return

and diversification benefits of a broad-based allocation. We believe, that the opportunities are plentiful within a broad emerging markets investment universe and through a disciplined, risk-controlled investment process, as employed by Mackenzie’s Global Quantitative Equity team, successful security selection in emerging markets can be achieved. We see similar opportunities for harvesting alpha by applying our disciplined process to more inefficient small-cap universes in emerging, international and US markets.

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