



MACKENZIE
Investments

Mackenzie Global Quantitative Equity team

A quantitative approach to emerging markets equity



Summary

Mackenzie's Global Quantitative Equity team employs fundamental ideas through a disciplined, risk-aware investment approach in seeking to generate alpha within emerging markets. The team, led by 29-year quantitative industry veteran, Arup Datta, uses several of the same elements that fundamental managers use – except that more factors and stocks are analyzed than in the case of a typical fundamental manager.

The team's edge is a steadfast belief in the adherence to a core focus which aims to produce a more consistent alpha profile through multiple market environments.

They place great value on daily stock analysis, proprietary transaction cost estimation and capacity management. A quantitative lens, aided by computing power, sophisticated algorithms and adaptive models, provides the team with a measurable process to value securities.

Balance of factors

The investment team constructs portfolios with a “core” focus, which aims to provide a balance between growth and value characteristics that could potentially perform well in various market environments.

About 7,000 stocks are viewed within a region/sector/industry relative framework. Within each of the four regions (China/Asia ex-China/EMEA/Latin America) stocks are measured against sector and industry peers. This model framework yields a 4x13 matrix (four regions, nine sectors/ four 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”: Value, Quality, Revisions and Informed Investor. A balanced weight is assigned to these super factors at the portfolio level. Weights vary by individual stock. For example, within Value, the team divides the weight between ‘Quality Value’, such as cash flow-based valuations, and ‘Pure Value’, which includes earnings-based valuations. The Quality factor balances management actions such as capital allocation, operating efficiency, ESG and the application of accounting principles. The Revisions factor refers to analyst revisions to forecasts (earnings, sales and dividends), long-term growth and insight from linked companies. While the Informed Investor factor analyzes activity, such as short interest and option pricing.

7,000

Number of stocks viewed within a region/sector/ industry relative framework.

15-20

Number of factors each stock is adjudicated against.

4

Super Factors – Balanced weight is assigned to super factors at the portfolio level. Contextual variables are applied to determine the weight of factors for each stock.



Figure 1 | Balanced approach to factors

Value	Seeks to outperform in value environment
Quality	Seeks to outperform in quality environment
Revisions	Seeks to outperform in growth environment
Informed Investor	Seeks to outperform in various environment

Beyond the four Super Factors, contextual variables are applied to determine the weight of factors for each stock. Human intervention will occur in extreme events.

Expanded universe

The investment team manages the flagship Mackenzie Emerging Markets All Cap strategy to the MSCI Emerging Market IMI Index, but expands upon the index constituents to include more than 7,000 securities, which compares to, at most, 30-50 for fundamental managers. A quantitative approach, while managing capacity, allows the investment team to be nimble and incorporate daily changes in stock alpha forecasts.

Risk management is critical

Emerging markets are less transparent and more inefficient than developed counterparts, and political uncertainty is ever present. A key aspect of the quantitative approach focuses on managing risk at the portfolio and stock level.

In doing this, the team employs a multi-factor proprietary risk model to help control portfolio tracking error, volatility and the risk contribution of each stock, sector and country. Again this differs to fundamental managers who would typically employ off-the-shelf risk models.

Portfolio construction is largely guided by a constraint-based approach, which focuses on alpha generation while neutralizing common risk factors. The ultimate objective is to maximize portfolio expected return, net of round-trip implementation cost, subject to constraints set on common risk factors, such as capitalization and beta.

The process is continually reviewed and parameters may be adjusted. While at Mackenzie the team has enhanced their stock-specific position limit model with the introduction of a liquidity/risk focused tool. In addition, the team utilizes its own fundamental and statistical risk models which are constrained at a slightly higher level compared to policy tracking error targets.

Focus on costs

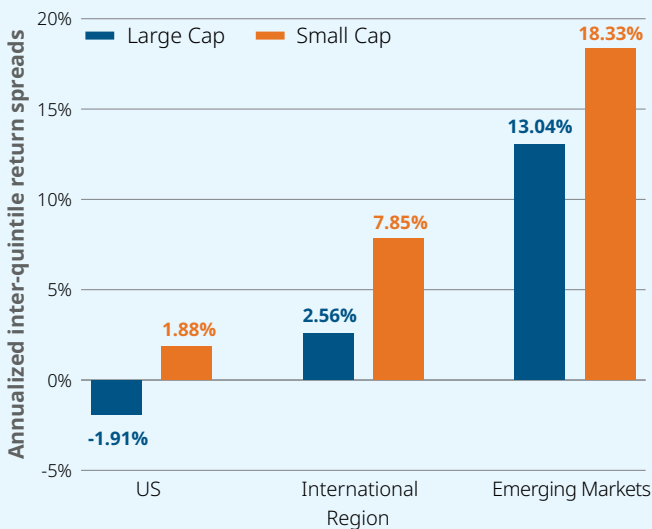
Another critical consideration when investing in emerging markets is relatively high trading costs when compared to developed markets. The team has constructed a sophisticated transaction cost model, which helps the team quantify the trading impact of each security by estimating round-trip transaction costs (market impact, commissions, stamp duties).

Fertile ground for alpha

Emerging markets are ripe for alpha, Mackenzie's Global Quantitative Equity team believes. The chart below depicts a simple factor-based analysis of portfolios that blend stocks with both value and momentum characteristics. It shows the potential alpha opportunity in emerging markets and the historical added benefit of a small-cap focus. In the flagship strategy, Mackenzie Emerging Markets All Cap, the team attempts to position the portfolio to extract alpha in mid and small-cap stocks, an area that they believe is particularly rich in potential alpha.

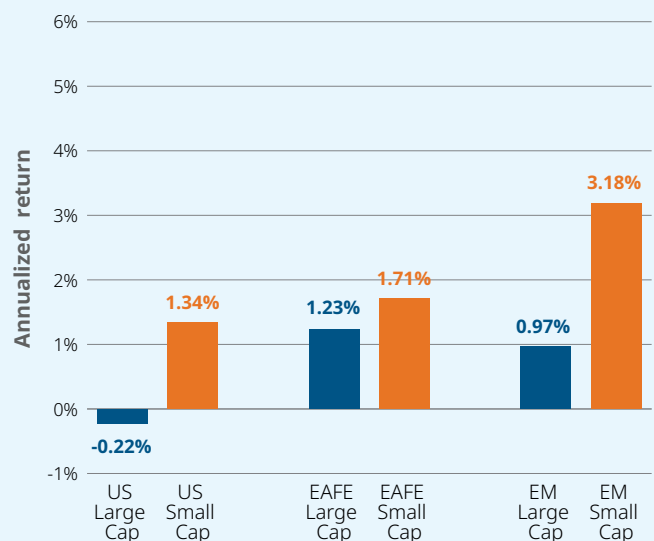
The potential benefits of emerging markets and small cap stocks can also be seen on a realized basis. The chart below serves as evidence that emerging market equities and a tilt towards small-cap stocks truly has the potential to generate alpha over the long-term. There are several reasons for potential small-cap outperformance in EM, but one major advantage for the team is having the ability cover even more names in a less efficient landscape through their quantitative process.

Figure 2 | Quantitative alpha efficacy



Provided for illustrative purposes only. Returns shown represent past performance, are not a guarantee of future performance and are not indicative of any specific investment. Represents inter-quintile return spreads using 50/50 blend of Value and Momentum from September 2002 – December 2020. Source: Mackenzie Global Quantitative Equity boutique proprietary research. Data source: Bloomberg. Source: Mackenzie Global Quantitative Equity boutique proprietary research. Data source: Bloomberg

Figure 3 | Mean benchmark-relative excess return for active managers 2011 - 2020



Source: eVestment Universes. Returns shown are in USD and 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 is based on managers preferred benchmark.



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Emerging markets equities

Plentiful opportunities

At Mackenzie, we believe that emerging market equity, as an asset class, is often over looked 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 have encountered high volatility, we maintain a strong belief in the growth rate potential in the companies and countries there, 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.