

Mackenzie Quantitative Emerging Markets All Cap

Investment philosophy

We believe in a core approach using fundamental ideas in a disciplined, risk-aware, systematic investment process. Our team's priority in executing the investment process is to remain nimble in seeking to generate alpha for clients. To retain this advantage, we use a proprietary transaction cost model and focus on capacity.

Strategy objective

Seeks to outperform the MSCI Emerging Markets IMI Index by 3% over a full market cycle on an annualized basis (gross of fees), with a targeted tracking error of 4.5%.

Approach

Bottom-up, quantitative stock selection process applied to a broad all-cap investable universe of over 10,000 securities from 24 emerging markets countries and a select number of frontier countries.

Stocks are analyzed through a region/sector and global/sector relative model framework.

Individual stock weights are assigned based upon sub-factors, which are grouped into the four super factors, Value, Growth, Quality and Informed Investor.

- **Value:** Focuses on value metrics: Quality value (cash flow and dividend based), Pure value (book, revenue, or earnings based), Neglect and Linked Firms.
- **Growth:** Emphasis on sell-side analyst revisions in forecasts (earnings, sales and dividends), long-term growth, innovation, fundamentals prediction and insight from linked companies.
- **Quality:** Focuses on management, capital allocation, operating efficiency, employee sentiment, ESG and the application of accounting principles.
- **Informed Investor:** Factor looks at informed market participant activity, such as the short interest in and option on securities.

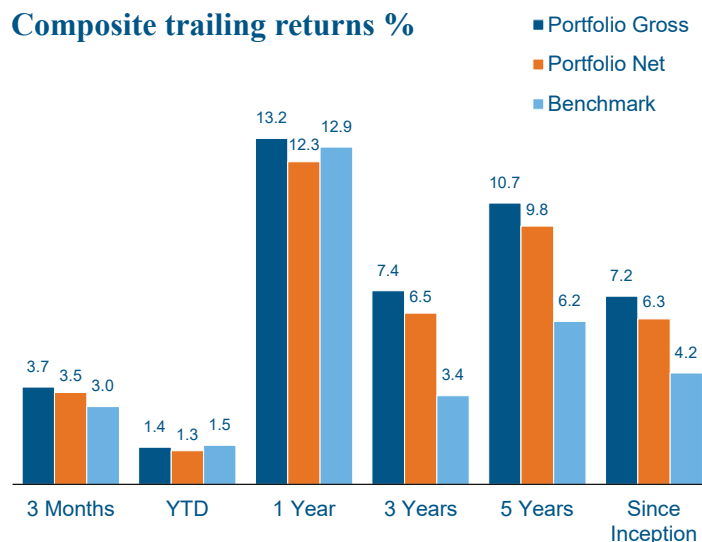
Contextual modeling is utilized to further refine the weights of factors assigned to stocks.

Key benefits of our approach

- We are alpha centric and innovation focused in constructing short- and long-term alpha factors, tailoring active portfolio positioning and minimizing transaction cost drag.
- We have a core focus that aims to deliver more consistent alpha profile across a wide array of market environments
- We are nimble in enabling efficient implementation of new research and incorporating daily rebalancing with strict capacity constraints.
- We take a risk, transaction cost and benchmark aware approach, combined with human oversight to monitor portfolio exposure.

*Firm Assets represents all assets under management of Mackenzie Financial Corporation and other Mackenzie Investments affiliates globally including Mackenzie Investments Corporation. The above information, which does not constitute formal investment guidelines/restrictions, is subject to change from time to time and over time. Past performance does not guarantee or indicate future results. The gross performance figures shown above do not reflect the deduction of investment advisory fees. The net performance figures shown above reflect the deduction of the highest investment advisory fee for the strategy. Full details of how performance is calculated, including with respect to other types of costs, fees and expenses, are shown on page 4. Fees are subject to modification and negotiation. Source: Mackenzie

Composite trailing returns %



RISK STATISTICS (3 YEAR)

Tracking Error (%)	4.1
Information Ratio	1.0
Sharpe Ratio	0.3

ASSET UNDER MANAGEMENT

Firm Assets* (B)	€147
Team Assets (B)	€9.3
Emerging Markets Assets (M)	€1,274
Strategy Assets (M)	€525

STRATEGY OVERVIEW

Inception Date	May-18
Target # of Holdings	150
Expected Turnover	200%
Expected Active Share	>70

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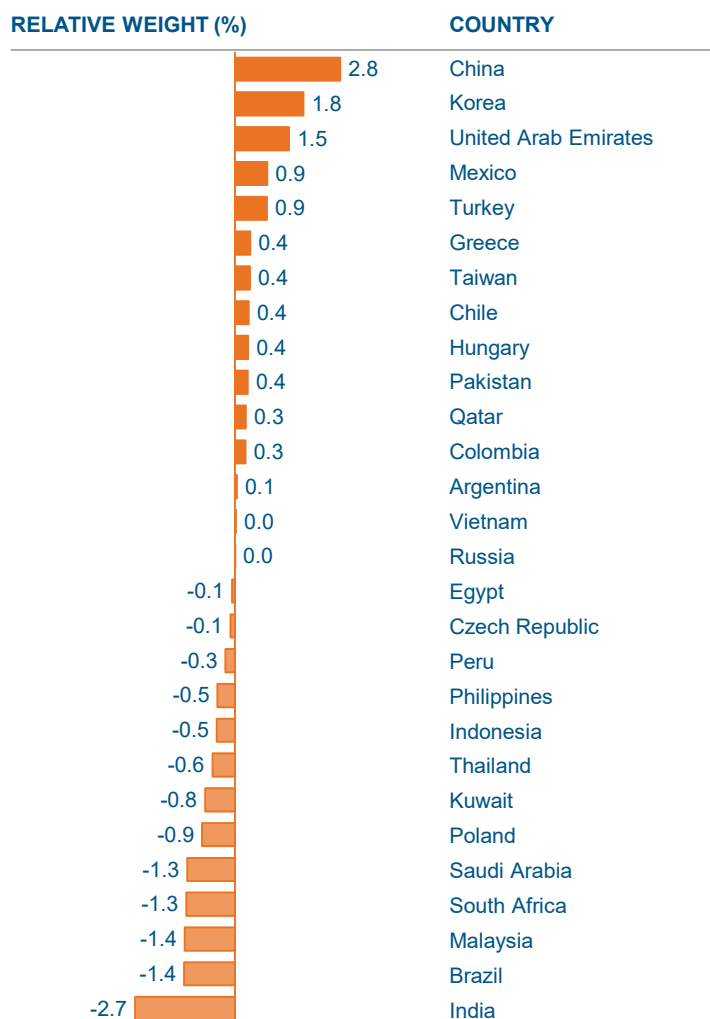


December 31, 2024 | Currency - EUR

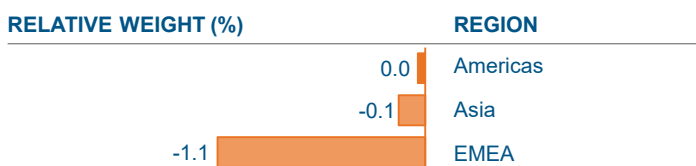
Portfolio characteristics

	PORTFOLIO	BENCHMARK
# of Holdings	145	3265
% Top 10 Holdings	30%	23%
Predicted Beta	1.0	1.0
P/E (forecast)	10.1	12.6
P/Tangible Book	1.8	2.1
P/Cash Flow	5.1	8.6
P/Sales	0.8	1.4
Dividend Yield	3%	3%
3 Month % Net Earnings Revision	33%	3%
3 Month % Net Sales Revision	20%	-2%
3 Month % Net Target Price Revision	49%	26%
Share Buy Back	0%	0%
Free Cash Flow Margin	19%	17%
Weighted Avg. Market Cap (€B)	131.3	140.2

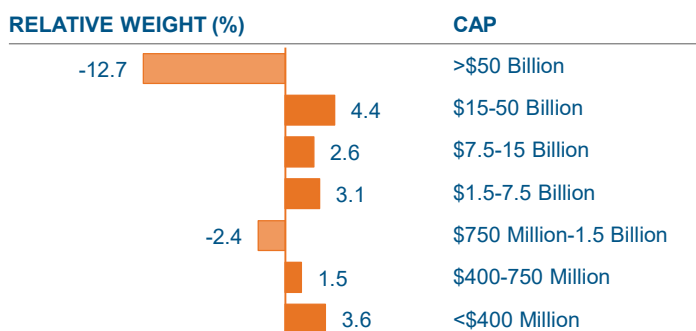
Country active weights (+/- 3.0% of benchmark)



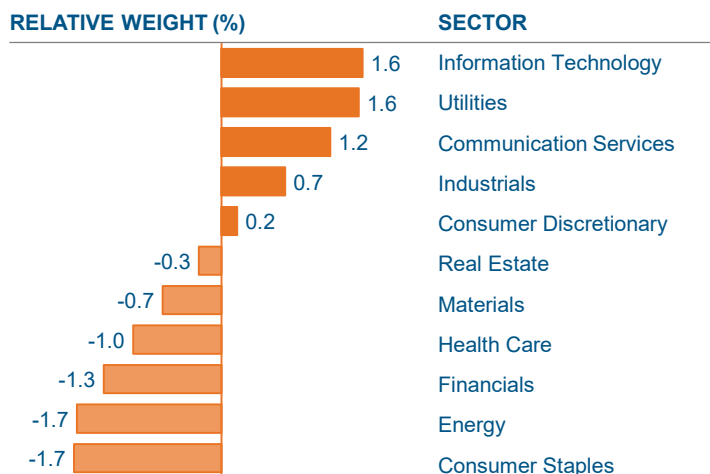
Regional breakdown



Market cap breakdown



Sector active weights (+/- 3.0% of benchmark)



The representative account information shown above is not indicative of any future results and is subject to change. Quarterly information shown above is as of December 31, 2024

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For the period June 1, 2018 to December 31, 2023

Annual composite performance (in EUR)

Year ⁽¹⁾	Gross Composite Return (%)	Net Composite Return (%)	Benchmark Return (%)	Number of Portfolios	Internal Dispersion (%)	Composite 3 Yr Std Dev (%) ⁽²⁾	Benchmark 3 Yr Std Dev (%) ⁽²⁾	Composite Assets (€ mil)	Total Firm Assets (€ mil)
2023	16.49	15.56	8.30	≤5	N/A	13.82	12.79	541	132,344
2022	-13.66	-14.35	-14.78	≤5	N/A	18.09	17.09	529	127,201
2021	14.88	13.97	7.03	≤5	N/A	17.15	16.43	590	144,280
2020	13.20	12.31	8.71	≤5	N/A	N/A	N/A	388	118,863
2019	21.05	20.03	20.20	≤5	N/A	N/A	N/A	406	93,554
2018	-15.36	-15.77	-11.08	≤5	N/A	N/A	N/A	399	76,011

⁽¹⁾ For 2018, data presented from June 1, 2018 (inception date) through December 31, 2018.

⁽²⁾ The three-year annualized standard deviation is not presented as of December 31, 2018, December 31, 2019 and December 31, 2020 because the composite does not have 36 monthly returns as of this date.

Annualized composite performance (in EUR)

Year	Gross Composite Return (%)				Net Composite Return (%)				Benchmark Return (%)			
	1 Year	3 Year	5 Year	10 Year	1 Year	3 Year	5 Year	10 Year	1 Year	3 Year	5 Year	10 Year
2023	16.49	4.93	9.63	N/A	15.56	4.10	8.74	N/A	8.30	-0.41	5.24	N/A
2022	-13.66	3.94	N/A	N/A	-14.35	3.11	N/A	N/A	-14.78	-0.29	N/A	N/A
2021	14.88	16.33	N/A	N/A	13.97	15.39	N/A	N/A	7.03	11.83	N/A	N/A
2020	13.20	N/A	N/A	N/A	12.31	N/A	N/A	N/A	8.71	N/A	N/A	N/A
2019	21.05	N/A	N/A	N/A	20.03	N/A	N/A	N/A	20.20	N/A	N/A	N/A



Firm Overview

Mackenzie Financial Corporation, Mackenzie Investments Corporation, Mackenzie Investments Europe Limited and Mackenzie Investments Asia Limited (collectively "Mackenzie Investments") provide investment management and related services through multiple distribution channels. Assets under management as at December 31, 2023 were €132.3 Billion. We provide our investment management through mutual funds, pooled funds, segregated accounts, and separate accounts for retail and institutional investors. Mackenzie Investments is dedicated to generating consistent long-term investment returns for its clients. The Firm is a member of the IGM Financial Inc. (TSX:IGM) group of companies.

On January 1, 2019, I.G. International Management Limited (now Mackenzie Investments Europe Limited) and I.G. Investment Management (Hong Kong) Limited (now Mackenzie Investments Asia Limited) became part of Mackenzie Investments. On December 22, 2020, Greenchip Financial Corp. became part of Mackenzie Investments. On December 31, 2020 GLC Asset Management Group Ltd. became part of Mackenzie Investments.

Compliance Statement

Mackenzie Investments claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Mackenzie Investments has been independently verified for the periods January 1, 2008 through December 31, 2021. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The Emerging Markets All Cap composite has had a performance examination for the periods June 1, 2018 through December 31, 2021. The verification and performance examination reports are available upon request. See "Contact Information" below.

Composite Description

The Mackenzie Quantitative Emerging Markets All Cap seeks to provide long-term capital appreciation and outperform its benchmark. The strategy applies a quantitative, bottom-up stock selection investment process, based on fundamental insights, to emerging and selected frontier markets across all-cap stocks. The investment process focuses on a succinct, high conviction set of factors, which are applied within the context of a region/sector/industry relative model. The composite inception and creation date is June 1, 2018.

Benchmark Description

The benchmark is the MSCI Emerging Markets Investable Market Index, net of withholding taxes. The MSCI Emerging Markets Investable Market Index is a free float adjusted, market capitalization weighted index that is designed to measure the large, mid and small cap equity market performance of emerging markets. It consists of 24 emerging market country indices.

Reporting Currency

Valuations and composite performance are reported in Euros. The composite includes Canadian dollar portfolios that have been converted to Euros.

Internal Dispersion

Internal dispersion is calculated using the asset-weighted standard deviation of annual gross returns of those portfolios that were included in the composite for the entire year. Internal dispersion is only calculated for those composites which have at least 6 accounts for the full year.

Ex-Post Standard Deviation

The 3-year annualized standard deviation measures the variability of the gross composite and benchmark returns over the preceding 36-month period.

Fees

The maximum fee for the strategy is 0.80% per annum.

List of Composites and Pooled Funds

A list including composite descriptions, pooled fund descriptions for limited distribution pooled funds, and broad distribution funds is available upon request. See "Contact Information" below.

Performance Calculations

Gross of fee returns are calculated before management, operating and other fees but after all trading expenses and withholding taxes. For Canadian Exchange Traded Funds, gross of fee performance is calculated by geometrically adding the pro-rated monthly percentage of the total net Management fee expense ratio to the monthly net return. This methodology applied to both Canadian Exchange Traded Funds and Mutual Fund accounts prior to April 1, 2023. Gross composite performance is calculated by asset weighting the individual account returns using beginning of period market values. Net composite performance is calculated using a model fee and reflects the deduction of the maximum fee which may include Investment management and administration fees. Net of fee performance is intended to illustrate the impact of fees on performance of the composite. Actual investment advisory fees incurred by clients are typically negotiated on an individual basis and may vary depending upon, among other things, the applicable fee schedule and portfolio size.



Valuation principles

Investments listed on a public securities exchange or traded on an over-the-counter market are valued at the closing price. Where no closing price is available, the last sale or close price is used. Unlisted or non-exchange traded investments, or investments where the last price is unavailable or investments for which market quotations are, in Mackenzie's opinion, inaccurate, unreliable, or not reflective of all available material information, are valued at their fair value as determined by Mackenzie using appropriate and accepted industry valuation techniques including valuation models. The fair value determined using valuation models requires the use of inputs and assumptions based on observable market data including volatility and other applicable rates or prices. In limited circumstances, the fair value may be determined using valuation techniques that are not supported by observable market data.

Additional information regarding policies for valuing portfolios, calculating performance, and preparing GIPS® reports are available to prospective clients upon request. See "Contact Information" below.

Trademark

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Contact information

For additional information, please contact Matt Thomson at matt.thomson@mackenzieinvestments.com.