



# Matthews Asia ESG Fund

## Methodology

Portfolio holdings are as of December 31, 2019

### Metrics We Find Particularly Relevant for Asia and Emerging Markets

#### Carbon Emissions

The factor identifies the issuer’s total (scope 1 + scope 2) carbon emissions intensity, using the most recently available data, which at the time of publication was year-end 2018. Carbon intensity represents the issuer’s total carbon emissions per US\$1 million of revenue (tCO2e divided by US\$1 million in revenue). We then calculate carbon intensity relative to one hypothetical U.S. dollar invested in the Fund using its holdings as of December 31, 2019, versus one hypothetical U.S. dollar invested in the benchmark for the same period. For those companies reporting their emissions, assurance on the reliability of reported greenhouse gas data remains challenging. The two main sources for greenhouse gas emission data are Integrated Annual Reports/ Sustainability/Corporate Social Responsibility (CSR) reports and data from the non-governmental organization CDP (Carbon Disclosure Project). ISS, the vendor for climate data, has estimated 64.9% of carbon emissions for the Matthews Asia ESG Fund and 34.5% of carbon emissions for the MSCI All Country Asia ex Japan Index. There is no modeled emissions data for three MASGX companies that held initial public offerings in 2019 (as the emission data is from 2018).

#### Metric tons of Co2 per one U.S. dollar invested

Matthews Asia ESG Fund	97.0 metric tons	= 1/5th the exposure of the index
MSCI All Country Asia ex Japan Index	428.0 metric tons	= Exposure of index

Sources: Matthews Asia and ISS.

### Sustainable Transportation

The factor identifies the issuer’s total revenue coming from sustainable transportation. Sustainable transportation revolves around efficient and effective use of resources, modification of the transport structure and making mobility more efficient. This includes things like mass transit systems, railways, components that go into electric and hybrid cars, electric vehicle charging infrastructure, batteries fuel cell cars, biofuel vehicles and other fuel efficiency technologies. It also targets bicycles. We have used the most recently available revenue or sales data coming from green transport segments and multiplied that by the security’s weight in the MSCI All Country Asia ex Japan Index.

#### Sustainable transportation revenue per one U.S. dollar invested

Matthews Asia ESG Fund	7.0 cents	= 5.8X the exposure of the index
MSCI All Country Asia ex Japan Index	1.2 cents	= Exposure of index

Sources: Matthews Asia and Bloomberg

### Financial Inclusion via Micro Loans

Matthews Asia collected the disclosed loan book segments of diversified banks, consumer finance and regional bank companies within the MSCI All Country Asia ex Japan Index. We took the latest available disclosed figures for loans going to SME, MSME or MFI. (SME represents small and medium enterprises. MSME represents micro, small and medium enterprises. MFI represents microfinance institutions.) Banks and country regulation have differing definitions of such loan segments, but disclosure was collated to the extent possible. The percent of the loan book going to these segments was then multiplied by the weight of the security in the index.

#### Cents per one U.S. dollar invested in microlending and MSME loans

Matthews Asia ESG Fund	7.9 cents	= 3.7X the exposure of the index
MSCI All Country Asia ex Japan Index	2.1 cents	= Exposure of index

Sources: Matthews Asia and Bloomberg.

## Affordable Health Care via Exposure to Generics

Matthews Asia collected the disclosed revenue segments coming from the generics or off-patent portion of the pharmaceutical companies in the MSCI All Country Asia ex Japan Index. Where generics revenue was not disclosed, we used the revenue coming from pharmaceuticals in general. The percent of revenue from these segments was then multiplied by the weight of the security in the index and compared to the equivalent weights of companies within MASGX that are involved in the manufacturing of generics.

### Cents per one U.S. dollar invested in Generics

Matthews Asia ESG Fund	4.8 cents	= 3.5X the exposure of the index
MSCI All Country Asia ex Japan Index	1.4 cents	= Exposure of index

Sources: Matthews Asia and Bloomberg.

## Affordable Housing

The factor identifies the issuer’s total exposure to affordable housing. We use the term affordable to mean any developer or real estate management company, engineering or construction firm that generates revenue from low-end or mass market housing projects. For example, in the case of countries such as Vietnam, affordable housing is usually at or below an average selling price of US\$1000sqm, whereas Hong Kong might be around US\$2000psf (HK\$15,000psf) or below. Where national definitions of affordable or mass market homes were inexistent, estimates were applied to average selling prices. We used the most recently available revenue or sales data and multiply that by the security’s weight in the MSCI All Country Asia ex Japan Index.

### Affordable Housing Exposure per one U.S. dollar invested

Matthews Asia ESG Fund	20.0 cents	= 6X the exposure of the index
MSCI All Country Asia ex Japan Index	0.33 cents	= Exposure of index

Sources: Matthews Asia and Bloomberg

## Additional Metrics That Some Investors Track Globally

### Alcohol

Matthews Asia ESG Fund owns no alcohol producers.

### Fossil Fuels

Matthews Asia ESG Fund owns no fossil fuels companies—those companies involved in the extraction, refinement or sale of oil, natural gas or coal.

### Gambling

Matthews Asia ESG Fund owns no gambling companies.

### Tobacco

Matthews Asia ESG Fund owns no tobacco companies.

### Weapons

Matthews Asia ESG Fund owns no weapons companies.

## The ESG Data Challenge

Measuring ESG data can be challenging. In our opinion, inconsistency in disclosure, definitions and frequency present some of the bigger problems in the data space especially when it comes to measuring very specific key performance indicators. As an active manager, Matthews Asia seeks appropriate disclosure on ESG issues by the entities in which we invest and engages portfolio companies to improve disclosure of ESG-related information. As less than half of our universe is covered by third party ESG ratings, we believe our proprietary research process at Matthews Asia adds significant value to our clients and shareholders in the form of more informed risk management assessments of individual companies. We believe the lack of third-party research coverage on Asian equities (both ESG related and otherwise) presents considerable alpha potential for active managers, but only for those with local market knowledge and a disciplined investment process.

Notably, there is no standard approach to measuring impact in public equities space. Increasingly, some investors view the UN’s Sustainable Development Goals (SDGs) as a touchstone for considering desirable sustainability outcomes, as the SDGs provide a framework for policymakers pursuing sustainable economic growth. The SDGs begin with basic human needs, including no poverty, zero hunger and good health and well-being. The SDGs, are designed to be a catalyst for starting larger conversations around global sustainability. However, we believe the SDGs aren’t intended to serve as a guide for active security selection. Accordingly, Matthews Asia has identified more than 20-ESG related criteria we believe are highly relevant and useful when investing in Asia. These criteria form the basis of our proprietary framework for making investment decisions within the Matthews Asia ESG Fund.

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## Definitions

**MSCI All Country Asia ex Japan Index:** The MSCI All Country Asia ex Japan Index is a free float-adjusted market capitalization-weighted index of the stock markets of China, Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan and Thailand.

## Important Information

**You should carefully consider the investment objectives, risks, charges and expenses of the Matthews Asia Funds before making an investment decision. A prospectus or summary prospectus with this and other information about the Funds may be obtained by visiting [matthewsasia.com](http://matthewsasia.com). Please read the prospectus carefully before investing as it explains the risks associated with investing in international and emerging markets.**

*Investing in international and emerging markets may involve additional risks, such as social and political instability, market illiquidity, exchange-rate fluctuations, a high level of volatility and limited regulation. Fixed income investments are subject to additional risks, including, but not limited to, interest rate, credit and inflation risks. In addition, single-country and sector strategies may be subject to a higher degree of market risk than diversified strategies because of concentration in a specific industry, sector or geographic location. Investing in small companies is more risky and more volatile than investing in large companies.*

ESG factors can vary over different periods and can evolve over time. They may also be difficult to apply consistently across regions, countries or sectors. There can be no guarantee that a company deemed to meet ESG standards will actually conduct its affairs in a manner that is less destructive to the environment, or promote positive social and economic developments.

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