MSCI JAPAN HUMAN AND PHYSICAL INVESTMENT INDEX

April 2016
CONTENTS

1 Introduction ........................................................................................................... 4

2 MSCI Japan Human and Physical Investment Index Construction 5
   2.1 Parent Index ....................................................................................................... 5
   2.2 Security Exclusion Criteria ................................................................................ 5
   2.3 Applicable Universe .......................................................................................... 6
   2.4 Eligible Universe ............................................................................................... 6
      2.4.1 Companies making A high level of physical capital investment ............... 6
      2.4.2 Companies Making A High Level of Human Capital Investments .......... 7
      2.4.3 Strong Growth In Physical Capital Investment ....................................... 7
   2.5 Security Selection ............................................................................................. 8
      2.5.1 MSCI ESG research Human Capital Assessment ..................................... 8
   2.6 Security Weighting ........................................................................................... 9
      2.6.1 Governance Quality Score ......................................................................... 9
      2.6.2 Maximum Issuer Weight Capping ............................................................ 10

3 Maintenance of the MSCI Japan Human and Physical Investment Index ........................................................................................................ 11
   3.1 Semi Annual reviews ....................................................................................... 11
   3.2 Quarterly Index Reviews .................................................................................. 11
   3.3 Buffer Rules ...................................................................................................... 12
   3.4 Ongoing Event-Related Changes ..................................................................... 12
      3.4.1 IPOs and other early inclusions ............................................................... 12
      3.4.2 Additions and Deletions due to corporate events ...................................... 12

Appendix I: Description of the Quality Score ......................................................... 13
Appendix II: Description of the Governance Quality Score ................................. 14
Appendix III: MSCI ESG Research Data ................................................................. 15
MSCI ESG Ratings .................................................................................................... 15

© 2015 MSCI Inc. All rights reserved. Please refer to the disclaimer at the end of this document.
MSCI ESG Controversies............................................................... 15
Appendix IV: Definition of Controversy Severity .................. 16
Appendix V: MSCI ESG Research Human Capital Assessment .... 17
Appendix VI: Combining the Human Capital Development Score and the Labor Management Management Score ......................... 19
Appendix VII: Corporate Events Treatment.............................. 20
1 INTRODUCTION

The MSCI Japan Human and Physical Investment Index (the “Index”) aims to represent the performance of Japanese companies that make significant investments in physical and human capital. The index aims to include companies which, relative to their sector peers, are spending a high proportion of their revenue on –

- Physical Capital Investments
- Research And Development (R&D) Investments
- Human Capital Investments.

Additionally the index targets companies that have strongly increased their investment on capital goods or R&D while maintaining sales growth. It also targets companies with policies and programs to develop social and human capital in the labor pool.

Included constituents are weighted using their MSCI Governance-Quality Score to tilt towards companies with strong governance structure and financial quality. Please refer to Appendix II for a brief description of the Governance-Quality Score. The Governance-Quality Score is higher for companies with high Return On Equity (ROE), low leverage, sustainable earnings and relatively better board and ownership structure.
2 MSCI JAPAN HUMAN AND PHYSICAL INVESTMENT INDEX CONSTRUCTION

2.1 PARENT INDEX

Index construction starts with the MSCI Japan Index (the “Parent Index”). The Index then excludes some stocks from the Parent index based on financial, non-financial and liquidity criteria as listed in section 2.2.

2.2 SECURITY EXCLUSION CRITERIA

Securities from the Parent Index which meet any of the below criteria are not considered for inclusion in the Index.

- **REITS** – Securities that belong to the Industry Group ‘REITS’ in the Global Industry Classification Standard (GICS®) (GICS codes – 40402010, 40402020, 40402030, 40402035, 40402040, 40402045, 40402050, 40402060, 40402070).

- **Negative Operating Income** – Securities of companies which are operating at a loss (as measured by the company’s annual operating income) in each of the last 3 fiscal years.

- **Net Loss** – Securities of companies that have reported a net loss (as measured by the company’s annual income before extra-ordinary items) in each of the last 3 fiscal years.

- **Negative Book Value** – Securities of companies that have reported a negative book value in any of the last 3 fiscal years.

- **Frequency of Trading** – A security that has traded on fewer than 80% of the trading days in the twelve months.

- **Annual Traded Value** – 1 year Annualized Traded Value (ATV) is greater than JPY 100,000,000,000.
  - For detailed description of ‘Frequency of Trading’ and ‘Annual Traded Value’ please refer to the MSCI Index Calculation Methodology at https://www.msci.com/index-methodology.

- **ESG Controversies** – Securities of companies with a “red flag” as defined by MSCI ESG Controversies. Please refer to Appendix III for details.

- **Labor Rights Controversy** – Securities of companies that have faced Very Severe, Severe ongoing/structural controversies related to labor rights over the past three
years (as indicated by a MSCI ESG Research Labor Rights controversy score <=2). Please refer to Appendix IV for details on the controversy score.

- Human Rights Controversy – Securities of companies that have faced very severe, severe ongoing/structural controversies related to human rights over the past three years (as indicated by a MSCI ESG Research Human Rights Controversy score <=2). Please refer to Appendix IV for details on this controversy score.

2.3 APPLICABLE UNIVERSE

Securities from the Parent Index which are not excluded due to the above criteria form the applicable universe for the Index.

2.4 ELIGIBLE UNIVERSE

Securities from the applicable universe that meet any of the following criteria form the eligible universe. These securities are eligible for inclusion in the Index.

2.4.1 COMPANIES MAKING A HIGH LEVEL OF PHYSICAL CAPITAL INVESTMENT

The level of physical capital investment is assessed using the proportion of company’s sales accounted for by making investments in physical capital. This metric is calculated as the ratio of average capex over the last 3 years to latest sales.

- Capex is the average of capital expenditure made over last 3 years. Capex includes the expenditure on physical capital investment as well as on research and development investments.

- Sales is measured as the sales reported for the most recent completed fiscal year. Certain companies do not report Sales: for such companies, Sales is substituted by the company’s operating income.

As per the MSCI Fundamental Data Methodology, MSCI does not provide sales data for certain financial sector companies (GICS Industry Group 4010 - Banks, GICS Industry Group 4020 – Diversified Financials, except sub industry group 40201030 – Multi-Sector Holdings).

For details please refer to MSCI Fundamental Data Methodology at https://www.msci.com/index-methodology.

- Companies which are ranked higher than the bottom 20th percentile by Capex to Sales ratio in their respective sectors (GICS Sector) are eligible for inclusion in the Index.

- In the applicable universe, relatively few companies may belong to the Telecom Services and Utilities sectors industries and these small sectors can cause
anomalous inclusion of securities in the Eligible Universe. Hence, securities from Telecom Services are grouped with securities from Information Technology and securities from Utilities are grouped with securities from the Energy sector for the purposes of sector comparisons on Capex-to-Sales.

- The Capex-to-Sales metric is calculated by dividing total Capex over the last three years by most recent fiscal year Sales. If the Sales for the latest fiscal year is unavailable, then the Capex-to-Sales ratio is not calculated.

- When a company changes its fiscal year, the capex and the sales numbers are considered for the truncated year.

### 2.4.2 COMPANIES MAKING A HIGH LEVEL OF HUMAN CAPITAL INVESTMENTS

The level of human capital investment is assessed by considering the proportion of a company’s sales expended on salaries. The metric is calculated as the ratio of latest total salaries to the latest company sales.

- Salary – As per the most recent reported total salaries (i.e., wage cost) for the full fiscal year. Salary represents wages paid to employees and officers of the company. It also includes all employee benefits such as health insurance and contribution to pension plans.

- Companies which are ranked higher than the bottom 20\textsuperscript{th} percentile in their respective sectors are eligible for inclusion in the index.

- Missing data – Salary data may not be available for some companies: such companies are excluded from the percentile calculation of the level of human capital investments.

### 2.4.3 STRONG GROWTH IN PHYSICAL CAPITAL INVESTMENT

Companies which demonstrate strong growth in physical capital investment as well as in their sales are eligible for selection in the index. These companies meet following conditions

- Companies with above sector average growth in capex investment and above sector average growth in sales.

- Capex growth is measured as the percentage change in capex investment over the last three years.

- Sales growth is measured as the percentage change in sales over the last three years.
• If Capex or Sales number for current year or current year – 3 are not available then capex growth and sales growth are not calculated for that company. Such companies are excluded from the calculation of sector average.

2.5 SECURITY SELECTION

From the eligible universe, securities are selected based on their MSCI ESG Research human capital assessment score. Securities in the eligible universe are sorted in ascending order of their human capital assessment score. The top 150 stocks are included in the index. In cases where two stocks have same human capital assessment score, the stock with greater market capitalization is ranked higher.

2.5.1 MSCI ESG RESEARCH HUMAN CAPITAL ASSESSMENT

MSCI ESG Research provides a human capital assessment score for companies in Japan after assessing human capital over five dimensions.
Figure 1- Five dimensions of the Human Capital score

Source: MSCI ESG Research

For more details on the human capital assessment scores, please refer to Appendix V

2.6 SECURITY WEIGHTING

At each Index Review, all the securities eligible for inclusion in Index are weighted by the product of their free float market capitalization weight in the Parent Index and Governance Quality Score. The calculated weights are then normalized to 100%.

2.6.1 GOVERNANCE QUALITY SCORE

Governance Quality Score is calculated as

Governance Quality Score = Governance Score * Quality Score
2.6.1.1 GOVERNANCE SCORE

Governance Score is calculated for each security in the Parent Index as per the standard MSCI Governance Quality Index methodology (available at https://www.msci.com/index-methodology). For a brief description of Governance Score, please see Appendix II.

2.6.1.2 QUALITY SCORE

The Quality Score for each security in the Parent Index is calculated as per the MSCI Quality Indexes methodology (available at https://www.msci.com/index-methodology). For a brief description of Quality Score, please see Appendix I.

2.6.2 MAXIMUM ISSUER WEIGHT CAPPING

The maximum issuer weight in the Index is capped at 5%.
3 MAINTENANCE OF THE MSCI JAPAN HUMAN AND PHYSICAL INVESTMENT INDEX

3.1 SEMI ANNUAL REVIEWS

The Index is rebalanced on a semi-annual basis, usually as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Reviews of the MSCI Global Investable Market Indexes. This approach aims to capture timely updates to Physical Capital Investment, Human Capital Development, Human Capital and Labor Management Controversies, Governance and Quality characteristics of the companies and coincides with the rebalancing frequency of the relevant MSCI Parent Indexes. The pro forma Index is in general announced nine business days before the effective date.

- At each Semi-Annual Index Review – Physical Capital Investment, R&D Investment, Sales, Operating Income, Net Profit and Book Value are considered as of the latest annual report from the close of the most recent fiscal year. For the majority of companies in Japan, the fiscal year ends on 31st March.
- Governance Quality Score – considered as of the last business day of the previous month. For May and November Index Reviews, the Governance and Quality Scores are considered as of last business day of April and October.
- Other MSCI ESG Research Data – Impact Monitor Score, Human Rights Controversy Score, Labor Rights Controversy Score, Human Capital Development Assessment and Labor Management Management Score are considered as of last business day of the previous month.

3.2 QUARTERLY INDEX REVIEWS

The MSCI Japan Human and Physical Investment Index is reviewed in February and August in addition to the Semi-Annual Index Reviews to coincide with the Quarterly Index Reviews of the Parent Index. During Quarterly Index Reviews, existing constituents are reviewed for involvement in very severe controversies or a substantial deterioration of their governance assessment. Existing constituents meeting following conditions are deleted from the Index during Quarterly Index Reviews –

- Company’s MSCI ESG Research Labor Rights controversy score is downgraded to 2 or below since the previous Index Review.
- Company’s MSCI ESG Research Human Rights Controversy score is downgraded to 2 or below since the previous Index Review.
• Company’s ESG Controversy score is downgraded to 0 (‘Red Flag’) since the previous Index Review.

3.3 BUFFER RULES

To reduce Index turnover and enhance Index stability, buffer rules are applied at 20% of the fixed number of securities in the Index.

For example, the Index targets 150 securities and the buffers are applied between securities ranked between 120 and 180. The securities in the MSCI Parent Index with a human capital assessment score rank at or above 120 will be added to the Index on a priority basis. The existing constituents that have a human capital assessment score rank between 121 and 180 are then successively added until the number of securities in Index reaches 150. If the number of securities is below 150 after this step, the remaining securities in the Parent Index with the lowest human capital assessment score rank are added until the number of securities in the Index reaches 150.

3.4 ONGOING EVENT-RELATED CHANGES

Ongoing event-related changes in the Parent Index are reflected in the MSCI Japan Human and Physical Investment Index as follows:

3.4.1 IPOS AND OTHER EARLY INCLUSIONS

IPOs and other newly listed securities will only be considered for inclusion in the Index at the next Semi-Annual Index Review, even if they qualify for early inclusion in the MSCI Parent Index.

3.4.2 ADDITIONS AND DELETIONS DUE TO CORPORATE EVENTS

The general treatment of additions and deletions due to corporate events aims to minimize the turnover in the Index. A constituent deleted from the MSCI Parent Index following a corporate event or during the Quarterly Index Review of the Parent Index will be simultaneously deleted from the Index.

The exceptions are any spun-off and converted securities, which are added to the Index at the time of the event.

Please refer to Appendix VII for more details on the treatment of corporate events.

For more information on the implementation of corporate events in the MSCI Global Investable Market Indexes, please refer to Section 3.3 of the MSCI Global Investable Market Indexes methodology book available at www.msci.com.
APPENDIX I: DESCRIPTION OF THE QUALITY SCORE

The quality score for each security is calculated by combining the z-scores of three fundamental descriptors: Return on Equity, Debt to Equity and Earnings Variability. A given variable z-score for a security is calculated using the mean and standard deviation of the corresponding variable computed within the MSCI Parent Index. After calculating component variable z-scores, a composite z-score for each security is computed by taking an equal-weighted average of the component z-scores. The Quality Score is then computed from the composite Z score as follows:

\[
\text{Quality Score} = \begin{cases} 
1 + Z, & Z > 0 \\
\frac{1}{(1 - Z)^{-1}}, & Z < 0 
\end{cases}
\]

where Z is the composite z-score described earlier.

For detailed description of the Quality Score please refer to the MSCI Quality Index Methodology available at [https://www.msci.com/index-methodology](https://www.msci.com/index-methodology).
APPENDIX II: DESCRIPTION OF THE GOVERNANCE QUALITY SCORE

The Governance Quality Score combines the Quality Score and the Governance Score of a security and penalizes the Quality Score with a discount factor if the company does not pass the test on all 11 of the defining MSCI governance measures. The Governance Quality Score is thus calculated as below:

Governance Quality Score = Quality Score * Governance Score

As the Governance Score ranges between 0 and 1, the Governance Score acts as a discount factor to a security’s Quality Score. For example, if a company fails the test on only one governance metric, its Quality Score is discounted by a factor of 0.9.

The Governance Score is calculated on a scale of 0 to 1, such that the scores increase with increasing standards of corporate governance. The Governance Score of a company is measured by combining company’s scores on 10 governance measures. Each Governance Measure is either directly based on a MSCI ESG Research’s Governance Key Metric score or combines more than one key metric score. Each key metric is designed as a test (or question) and company either passes the test or fails. Company’s key metrics scores are 0 or 1. The 10 governance measures are built on 17 governance key metrics.

For detailed description of Governance-Quality Score, please refer to the MSCI Governance Quality Index Methodology available at https://www.msci.com/index-methodology.
APPENDIX III: MSCI ESG RESEARCH DATA

The Index uses ESG ratings and research provided by MSCI ESG Research Inc. In particular, the indexes use the following two MSCI ESG Research products: MSCI ESG Ratings and MSCI ESG Controversies.

For details on MSCI ESG Research’s full suite of ESG products, please refer to:
http://www.msci.com/products/esg/about_msci_esg_research.html

MSCI ESG RATINGS

MSCI ESG Ratings provide research, analysis and ratings of how well companies manage their environmental, social and governance risks and opportunities.

For more details on MSCI ESG Ratings, please refer to
http://www.msci.com/resources/factsheets/MSCI_ESG_IVA.pdf

MSCI ESG CONTROVERSIES

MSCI ESG Controversies assess controversies concerning the negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact.

For more details on MSCI ESG Controversies, please refer to
APPENDIX IV: DEFINITION OF CONTROVERSY SEVERITY

Each controversy case is assessed by MSCI ESG Research for the severity of its impact on society or the environment and consequently rated Very Severe (reserved for the very worst cases), Severe, Moderate, or Minor. To reach these assessments, each case is analyzed along two dimensions: nature of impact and scale of impact. For more details on MSCI ESG Controversies, please refer to:


Figure 2 Assessment of Controversy Severity: the severity matrix

<table>
<thead>
<tr>
<th>Scale of Impact</th>
<th>Nature of Impact</th>
<th>Nature of Impact</th>
<th>Nature of Impact</th>
<th>Nature of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Widespread (1000+ people)</td>
<td>Very Severe</td>
<td>Very Severe</td>
<td>Severe</td>
<td>Moderate</td>
</tr>
<tr>
<td>Extensive (25-999 people)</td>
<td>Very Severe</td>
<td>Severe</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Limited (10-24 people)</td>
<td>Severe</td>
<td>Moderate</td>
<td>Minor</td>
<td>Minor</td>
</tr>
<tr>
<td>Low (&lt;10 people)</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Minor</td>
<td>Minor</td>
</tr>
</tbody>
</table>
APPENDIX V: MSCI ESG RESEARCH HUMAN CAPITAL ASSESSMENT

MSCI ESG Research Human Capital Assessment Score is based on MSCI ESG Ratings Human Capital Development Management Score (0-10) and Labor Management Management Score (0-10). For more details on MSCI ESG Ratings, please refer to http://www.msci.com/resources/factsheets/MSCI_ESG_IVA.pdf

MSCI ESG Ratings focus on key ESG issues that can turn into unexpected costs for companies in the medium to long term. Companies which are assessed on the key issue of Human Capital Development belong to industries with higher specialization, education, and qualification needs and with higher levels of compensation, based on MSCI ESG Research’s proprietary database compiled from multiple government sources (e.g. US Bureau of Labor Statistics). Typical sectors include Financials, IT, Utilities, etc.

For companies which are not assessed on Human Capital Development, Labor Management is used instead of the Human Capital Assessment Score to evaluate this dimension. The Labor Management score has a high degree of overlap with Human Capital Development assessment and is assessed for all companies that are constituents of the MSCI World Index.

Please refer to Appendix VI for details on how the human capital development score and labor management scores are combined.

<table>
<thead>
<tr>
<th>Category</th>
<th>Human Capital Development</th>
<th>Labor Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>This issue evaluates companies’ ability to attract, retain, and develop human capital through strong benefits and training programs, efforts to develop strong employee engagement</td>
<td>This issue evaluates the extent to which companies invest in human capital through the provision of competitive compensation, benefits, and performance incentives; efforts to develop formal engagement and communication channels for employees</td>
</tr>
</tbody>
</table>
| 1. Training & Development | • Leadership training & skills development  
• Percentage of employees receiving training*  
• Training days per employee*  
• Job-specific development training programs  
• Talent pipeline development strategy  
• Regular performance appraisals and feedback processes | • Leadership training & skills development  
• Percentage of employees receiving training*  
• Training days per employee*  
• Support for degree programs / certification |
| 2. Diversity              | • Discrimination and workforce diversity controversies  
• Percentage of women on executive | • Discrimination and workforce diversity controversies  
• Labor policy or code of conduct |

© 2015 MSCI Inc. All rights reserved. Please refer to the disclaimer at the end of this document.
### 3. External Recognition
- External recognition as employer of choice*

### 4. Compensation & Benefits
- Non-compensation benefits and work/life balance
  - Variable component to pay
  - Employee stock ownership (ESOP) or employee stock purchase plan (ESPP)

### 5. Employee Engagement
- Monitors employee satisfaction
  - Employee productivity*
  - Employee turnover
  - Formal grievance reporting & escalation procedures

### Controversies
- Labor management controversies
- Collective bargaining controversies

### Other Metrics
- Average years employed by the company for male and female workers**
  - Monthly overtime work hours per employee**
- Restructuring policies & programs*
  - Labor-related code of conduct*
  - Strikes*
  - Average years employed by the company for male and female workers**
  - Monthly overtime work hours per employee**

*Indicates that this metric is collected but may not contribute to score, e.g. due to low data availability

**Indicated that this metric is not yet collected nor scored. It is, however, now required by law for Japanese companies with more than 300 employees. Based on the assumption that the data is provided by the majority of the companies in the MSCI Japan, we will look into incorporating it into our evaluation of the Human Capital Assessment Score
APPENDIX VI: COMBINING THE HUMAN CAPITAL DEVELOPMENT SCORE AND THE LABOR MANAGEMENT MANAGEMENT SCORE

MSCI Human Capital Assessment score is computed by combining MSCI Human Capital Development score and MSCI Labor Management Management Score. The combination is calculated as follows –

- Calculate the decile score for each company with a Human Capital Development Score on a scale of 1st (<10th percentile) to 10th decile (> 90th percentile)
- Calculate the decile score for each company with only a Labor Management Score on a scale of 1st (<10th percentile) to 10th decile (> 90th percentile)
- Select companies at first in the top half (> 5th decile) based on the Human Capital Development Score and then in top half based (> 5th decile) on the Labor Management Score.
- If the number of selected stocks is fewer than 150 then iteratively first select companies from the 5th decile on Human Development Score and then from 5th decile on the Labor Management Score.
## APPENDIX VII: CORPORATE EVENTS TREATMENT

This appendix describes the treatment of the most common corporate events in the MSCI Indexes. Details regarding the treatment of all other corporate events not covered in this appendix can be found in the MSCI Corporate Events Methodology book, available at [https://www.msci.com/index-methodology](https://www.msci.com/index-methodology).

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Event details</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition</td>
<td>Index constituent acquires another Index constituent</td>
<td>Maintain acquiring company and remove acquired company</td>
</tr>
<tr>
<td></td>
<td>Index constituent acquires non Index constituent</td>
<td>Maintain acquiring company</td>
</tr>
<tr>
<td></td>
<td>Non Index constituent acquires Index constituent</td>
<td>Remove acquired company without adding acquiring company</td>
</tr>
<tr>
<td>Merger</td>
<td>Index constituent merges with Index constituent</td>
<td>Add new company with a constraint factor that is the weighted average of the two constituents</td>
</tr>
<tr>
<td></td>
<td>Index constituent merges with non-Index constituent</td>
<td>Add new company if MSCI links its price history to the Index constituent. New company not added if price history is linked to the non-Index constituent</td>
</tr>
<tr>
<td>IPO</td>
<td>IPO added to Parent Index</td>
<td>Security will be considered for inclusion in the Index at the next SAIR</td>
</tr>
<tr>
<td>Spin-off</td>
<td>Index constituent spins off security</td>
<td>Add spun-off security to the Index with the constraint factor of the spinning security, if it is included in the Parent</td>
</tr>
<tr>
<td>Event Type</td>
<td>Event details</td>
<td>Action</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Conversion</td>
<td>Security A converted to B, A deleted from Parent Index, B added</td>
<td>B inherits constraint factors from A</td>
</tr>
<tr>
<td>Country Reclassification</td>
<td>Domicile of company reviewed: Security A deleted from country A, security B added to country B</td>
<td>B inherits constraint factors from A if it is added to the Parent Index</td>
</tr>
<tr>
<td>Stock exchange reclassification</td>
<td>Stock exchange (price source) of company reviewed: Security A deleted, security B added</td>
<td>B inherits constraint factors from A if it is added to the Parent Index</td>
</tr>
<tr>
<td>Other Events Resulting in Changes in Number of Shares and FIFs</td>
<td>Changes in number of shares and subsequent FIF resulting from other events such as share placements and offerings, and debt-to-equity-swaps</td>
<td>No change in Constraint Factor</td>
</tr>
</tbody>
</table>
### CONTACT US

clientservice@msci.com

### AMERICAS

<table>
<thead>
<tr>
<th>City</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>1 888 588 4567 *</td>
</tr>
<tr>
<td>Atlanta</td>
<td>+ 1 404 551 3212</td>
</tr>
<tr>
<td>Boston</td>
<td>+ 1 617 532 0920</td>
</tr>
<tr>
<td>Chicago</td>
<td>+ 1 312 675 0545</td>
</tr>
<tr>
<td>Monterrey</td>
<td>+ 52 81 1253 4020</td>
</tr>
<tr>
<td>New York</td>
<td>+ 1 212 804 3901</td>
</tr>
<tr>
<td>San Francisco</td>
<td>+ 1 415 836 8800</td>
</tr>
<tr>
<td>Sao Paulo</td>
<td>+ 55 11 3706 1360</td>
</tr>
<tr>
<td>Toronto</td>
<td>+ 1 416 628 1007</td>
</tr>
</tbody>
</table>

### EUROPE, MIDDLE EAST & AFRICA

<table>
<thead>
<tr>
<th>City</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Town</td>
<td>+ 27 21 673 0100</td>
</tr>
<tr>
<td>Frankfurt</td>
<td>+ 49 69 133 859 00</td>
</tr>
<tr>
<td>Geneva</td>
<td>+ 41 22 817 9777</td>
</tr>
<tr>
<td>London</td>
<td>+ 44 20 7618 2222</td>
</tr>
<tr>
<td>Milan</td>
<td>+ 39 02 5849 0415</td>
</tr>
<tr>
<td>Paris</td>
<td>0800 91 59 17 *</td>
</tr>
</tbody>
</table>

### ASIA PACIFIC

<table>
<thead>
<tr>
<th>City</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>China North</td>
<td>10800 852 1032 *</td>
</tr>
<tr>
<td>China South</td>
<td>10800 152 1032 *</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>+ 852 2844 9333</td>
</tr>
<tr>
<td>Mumbai</td>
<td>+ 91 22 6784 9160</td>
</tr>
<tr>
<td>Seoul</td>
<td>00798 8521 3392 *</td>
</tr>
<tr>
<td>Singapore</td>
<td>800 852 3749 *</td>
</tr>
<tr>
<td>Sydney</td>
<td>+ 61 2 9033 9333</td>
</tr>
<tr>
<td>Taipei</td>
<td>008 0112 7513 *</td>
</tr>
<tr>
<td>Tokyo</td>
<td>+ 81 3 5290 1555</td>
</tr>
</tbody>
</table>

* = toll free

### ABOUT MSCI

For more than 40 years, MSCI’s research-based indexes and analytics have helped the world’s leading investors build and manage better portfolios. Clients rely on our offerings for deeper insights into the drivers of performance and risk in their portfolios, broad asset class coverage and innovative research.

Our line of products and services includes indexes, analytical models, data, real estate benchmarks and ESG research.

MSCI serves 98 of the top 100 largest money managers, according to the most recent P&I ranking.

For more information, visit us at [www.msci.com](http://www.msci.com).
NOTICE AND DISCLAIMER

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"). MSCI and its licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or redisseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investable assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research Inc. and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.’s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.’s company filings on the Investor Relations section of www.msci.com.

MSCI ESG Research Inc. is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD, FEA, InvestorForce, and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS®) was developed by and is the exclusive property of MSCI and Standard & Poor’s. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor’s.

© 2015 MSCI Inc. All rights reserved.

MSCI.COM | PAGE 23 OF 23