

MSCI GOVERNANCE- QUALITY INDEXES METHODOLOGY

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1 INTRODUCTION

The MSCI Governance-Quality Indexes aim to reflect the performance of a strategy that is seeking to capture both the financial and corporate governance aspects of Quality investing. Institutional investors worldwide are adopting stewardship codes and increasingly look beyond financial data to assess the quality of the companies they invest in. Many investors believe that investing in quality growth companies with good governance practices is key to generating long term sustainable investment returns and improve downside risk protection.

The financial aspects of the Quality factor are captured using the same fundamental data as used in the MSCI Quality Index – return on equity, financial leverage and earnings variability. The standard of corporate governance is measured through measures such as independence and diversity of board of directors, ownership and control structure of the company, accounting practices and auditor opinions. The measure of corporate governance is then used to discount security’s financial quality score.

2 INDEX CONSTRUCTION METHODOLOGY

2.1 APPLICABLE UNIVERSE

The applicable universe includes all the existing constituents of an underlying MSCI index (herein, a “Parent Index”). This approach aims to provide an opportunity set with sufficient liquidity and capacity. The relevant MSCI Parent Index would be any Country or Regional market cap weighted Index.

2.2 DETERMINATION OF QUALITY SCORE

The quality score for each security in the Parent Index is calculated as per the standard methodology of MSCI Quality Indexes. (Please see Appendix I for a brief description of Quality score, for detailed description please refer to MSCI Quality Indexes Methodology on <https://www.msci.com/index-methodology>)

2.3 DETERMINATION OF GOVERNANCE SCORE

A governance score for each security in the Parent Index is calculated by combining 11 governance measures.

2.3.1 GOVERNANCE MEASURES

Governance keymetric scores are published by MSCI ESG Research as part of MSCI ESG Governance Metrics research. MSCI ESG Research generates 96 Key Metrics to facilitate company assessment from a corporate governance perspective. Each keymetric reflects a simple pass/fail evaluation of the company on a particular dimension. Depending on the research evaluation, a company is assigned a score of 0(pass)/1(fail) on each of the 96 Key Metrics. The governance measures used in the construction of this index are based on a single key metric as well as combinations of Key Metrics (as detailed below and in Appendix II).

2.3.2 GOVERNANCE MEASURES INCLUDED IN THE METHODOLOGY

The Governance-Quality index methodology includes 17 of the 96 Key Metrics published by MSCI ESG Research. Six Key Metrics related to equal shareholder voting rights are combined into one measure which we label ‘One Share One Vote’ and two Key Metrics related to the independence of the board chair are combined into one measure called ‘Independent Chair’. For these two measures, if any component Key Metric has a score of one then the combined score governance measure is 1. See Appendix II for a complete list of governance measures, the Key Metrics they depend on and their full description. Measure selection was based on the following criteria:

- *Relevance* – Measures chosen should be those generally considered to be important by investors as part of an assessment of corporate governance.

- *Objective* – Measures chosen should be able to be assessed objectively, be easily understood and be directly related to corporate governance.
- *Differentiating* – Measures should differentiate companies in the global covered universe i.e., a meaningful proportion of companies have scored 1 and 0 in the universe (“qualified auditor opinion” is an exception to this because of its nature).
- *Universal* – Measures which are relevant and applicable to companies globally
- *Coverage* – Measures for which MSCI ESG global data coverage is excellent.

2.3.3 SECURITIES NOT COVERED BY MSCI ESG GOVERNANCE METRICS

When a security in the Parent Index is not covered by ESG Governance Metrics data, then all Key Metric scores of that security are updated with the relevant country mode for each Key Metric score. For example, if a UK company is not covered in the MSCI ESG Governance Metrics data then the company’s Key Metric scores are taken to be mode Key Metric scores of all other UK securities with complete data. If the only company from a country is not covered in the Governance Metrics data then the company’s keymetric scores are taken to be mode keymetric scores of all other securities in the universe with complete data.

2.3.4 CALCULATION OF THE GOVERNANCE SCORE

The governance score is calculated on a scale of 0 to 1, such that the scores increase with increasing standards of corporate governance. The metric ‘Qualified Auditor Opinion’ is used as a discount factor for the overall governance score: if there is a 1 assigned as the score for “Qualified Auditor Opinion” then the governance score of the company is halved. For each security in the Parent Index, a governance score is calculated as below.

$$\text{Governance Score} = [1 - \text{Average (10 governance measures included in methodology)}] * (1 - 0.5 * \text{Qualified Auditor Opinion score}]$$

For example, if a company failed the evaluation on six metrics

- Average of 10 Key Metrics = $(6*1)/10 = 0.6$
- Subtract from 1 to create discount factor = $1 - 0.6 = 0.4$
- Suppose “Qualified Auditor Opinion” score = 0
 - Governance score = $[1 - 0.6] * (1 - 0.5 * 0) = 0.4$
- However, if the “Qualified Auditor Opinion” score = 1
 - Governance score = $[1 - 0.6] * (1 - 0.5 * 1) = 0.2$

2.4 DETERMINATION OF COMPOSITE QUALITY SCORE

The “Composite Quality” score combines quality score and governance score and penalizes the quality score with a discount factor if the company does not pass the test on all 11 governance measures. The “Composite Quality” score is calculated as below

$$\text{Composite Quality Score} = \text{Quality Score} * \text{Governance Score}$$

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

2.5 SECURITY SELECTION

The MSCI Governance-Quality Index is constructed using a fixed number of securities approach. All the existing constituents of the relevant MSCI Parent Index are ranked based on their Composite Quality Scores. If multiple securities have the same Composite Quality Score, then the security with the higher weight in the Parent Index is given a higher rank. A fixed number of securities with the highest Composite Quality Scores are predetermined for every MSCI Governance-Quality Index at initial construction with an aim to attain a high exposure to the Composite Quality factor while maintaining sufficient index market capitalization and number of securities coverage. Rules for arriving at a fixed number of constituents at initial construction are explained in Appendix III. The fixed number for security selection determined at initial construction is evaluated at every Semi-Annual Index Review (SAIR) to ensure that the Governance-Quality universe has sufficient index market capitalization coverage. Rules for evaluating the fixed number of constituents at every SAIR are explained in Appendix III.

2.6 WEIGHTING SCHEME

At each rebalancing, all the securities eligible for inclusion in the MSCI Governance-Quality Indexes are weighted by the product of their market capitalization weight in the Parent Index and the Composite Quality Score.

$$\text{Governance-Quality Weight} = \text{Composite Quality Score} * \text{Market Capitalization Weight in the Parent Index}$$

The above weights are then normalized to 100%.

Additionally, constituent weights are capped at issuer level to mitigate concentration risk:

1. Issuers in the MSCI Governance-Quality Indexes based on broad Parent Indexes (e.g. MSCI World Index) will be capped at 5%
2. Issuers in the MSCI Governance-Quality Indexes based on narrow Parent Indexes will be capped at the maximum weight in the Parent Index.

Narrow Parent Indexes are defined as those indexes for which the maximum market capitalization weight in the Parent Index is more than 10%.

3 MAINTAINING MSCI GOVERNANCE-QUALITY INDEXES

3.1 SEMI-ANNUAL INDEX REVIEWS

The MSCI Governance-Quality Indexes are 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 Review of the MSCI Global Investable Market Indexes. Both quality scores and governance metric scores as of the end of April and October are used respectively. This approach aims to capture timely updates to Governance-Quality characteristics of the companies and coincides with the rebalancing of the relevant MSCI Parent Indexes. The pro forma MSCI Governance-Quality Indexes are in general announced nine business days before the effective date.

At each rebalancing, a constraint factor is calculated for each constituent in the MSCI Governance-Quality Index. The constraint factor is defined as the weight in the MSCI Governance-Quality Index at the time of the rebalancing divided by the weight in the Parent Index.

3.2 BUFFER RULES

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

For example, the MSCI World Governance-Quality Index targets 300 securities and the buffers are applied between rank 241 and 360. The securities in the MSCI Parent Index with a Composite Quality score rank at or above 240 will be added to the MSCI World Governance-Quality Index on a priority basis. The existing constituents that have a Composite Quality score rank between 241 and 360 are then successively added until the number of securities in the MSCI World Governance-Quality Index reaches 300. If the number of securities is below 300 after this step, the remaining securities in the Parent Index with the highest Composite Quality Score rank are added until the number of securities in the MSCI World Governance-Quality Index reaches 300.

3.3 ONGOING EVENT RELATED CHANGES

In general, the MSCI Governance-Quality Indexes follow the event maintenance of the MSCI Parent Index.

3.3.1 IPOs AND OTHER EARLY INCLUSIONS

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

3.3.2 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 MSCI Governance-Quality Indexes. 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 MSCI Governance-Quality Index.

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

3.3.3 DELETIONS BETWEEN SEMI-ANNUAL INDEX REVIEWS

In exceptional circumstances, a security may be deleted from an MSCI Composite Quality Index if there is a very substantial deterioration of their governance assessment and ratings according to MSCI ESG Research.

APPENDIX I: DESCRIPTION OF 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:

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

Where Z is the composite Z score described earlier.

APPENDIX II: GOVERNANCE MEASURES IN METHODOLOGY

#	Metric Name	Governance Metrics Pillar	Default Score* (Fail=1/ Pass =0)	Description
1	Qualified Auditor Opinion	Accounting	0	Has the company's independent auditor expresses a qualified opinion, or questioned the company's ability to remain a going concern?
2	Audit Committee Independence	Board	1	Does the company have an audit committee comprising only members who meet the criteria of independence?
3	Board Attendance Failure	Board	0	Did all members attend at least 75% of all board and committee meetings?
4	Comp Committee Independence	Board	1	Are all comp committee members' non-exec directors who meet the MSCI ESG Governance Metric criteria for independence?
5	Gender Diversity	Board	1	Does the board have at least one female director?
6	Independent Board Majority	Board	1	Do a majority of the directors meet the designated criteria for independence?
7	Independent Chair**	Board	0	Does the board have an independent chair?
8	Annual Director Elections	Ownership and Control	0	Do all directors stand for annual re-election?
9	Cross Shareholding	Ownership and Control	0	Is the company involved in a series of cross-shareholdings with other (related or unrelated) companies
10	One Share One Vote (OSOV)***	Ownership and Control	0	Do all shares have equal voting rights?
11	Poison Pill	Ownership and Control	0	Has the company adopted a shareholder rights plan ("poison pill")

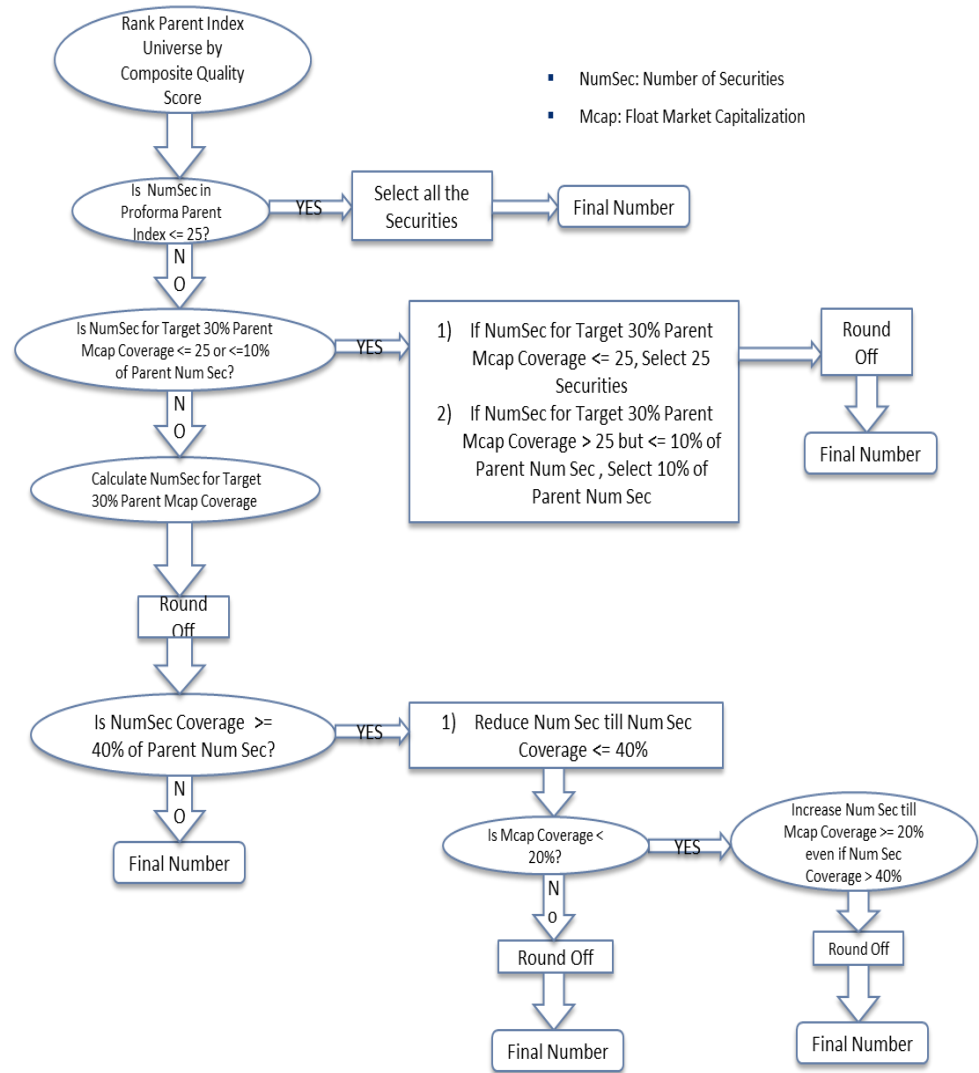
* The score implicitly assigned to a company by MSCI Governance Metrics methodology applied to Key Metrics in absence of sufficient data to conclude otherwise.

** Independent Chair: – combines 1) “Combined CEO/Chair” and 2) “Independent chair”

*** OSOV (One Share One Vote)– combines (1) Multiple equity classes with differential voting rights, (2) Golden shares, (3) Voting rights limits shares held, (4) Voting rights limits residency, (5) Voting rights limits duration, (6) Voting rights limits min holding period.

APPENDIX III: RULES TO DETERMINE FIXED NUMBER OF SECURITIES AT INITIAL CONSTRUCTION AND IN ONGOING REBALANCING

Algorithm to Determine Fixed Number of Securities at Initial Construction



Rounding Off Rules:

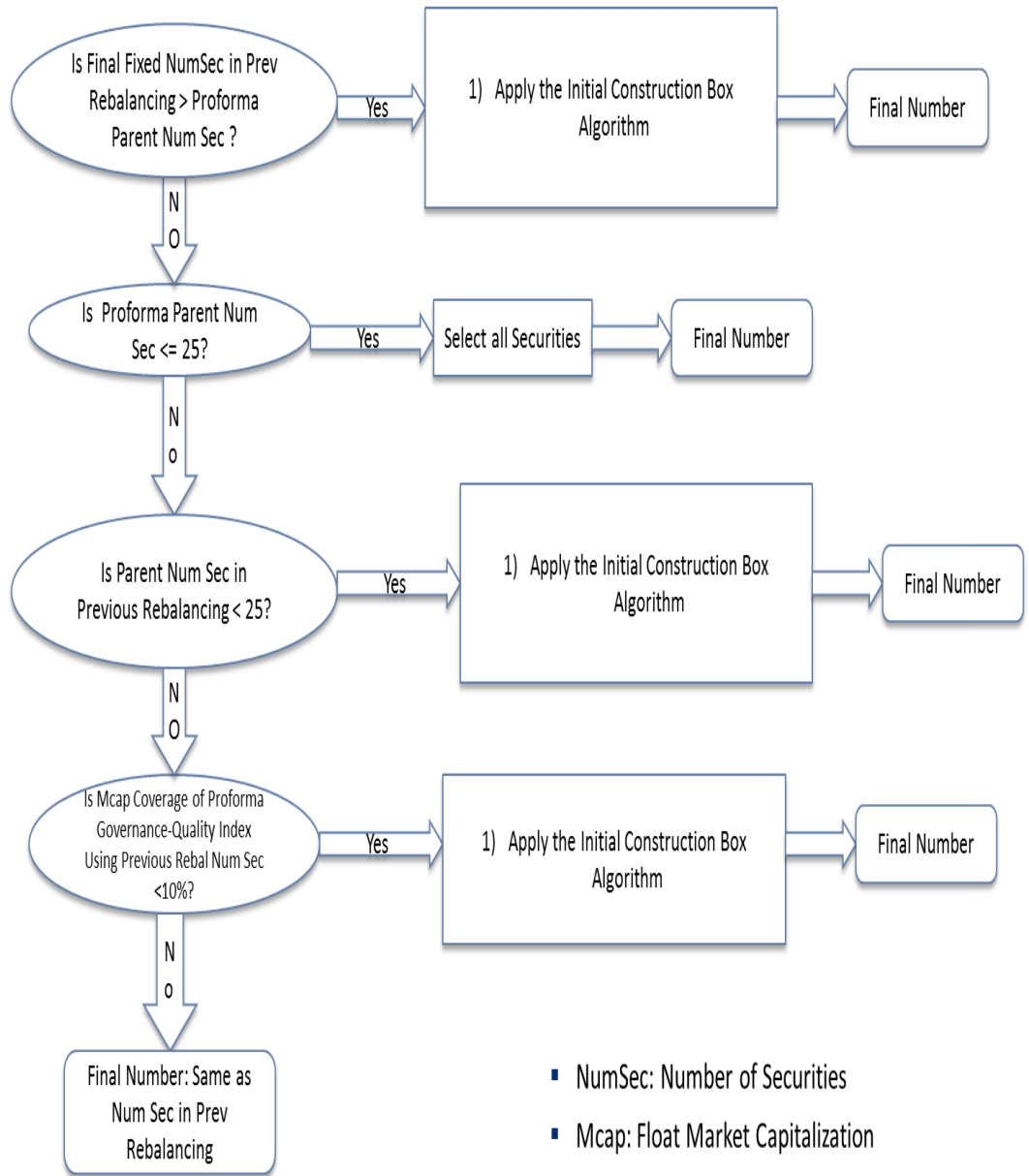
Upward rounding off is done depending on NumSec Obtained in the Previous Box Step

If NumSec in Previous Step < 100 , Nearest Rounding = 10 Securities

If NumSec in Previous Step $> = 100$ but < 300 , Nearest Rounding = 25 Securities

If NumSec in Previous Step $> = 300$, Nearest Rounding = 50 Securities

Algorithm to reevaluate Fixed Number of Securities at Semi Annual Rebalancing



- NumSec: Number of Securities
- Mcap: Float Market Capitalization

APPENDIX IV: 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>

Event Type	Event details	Action
Acquisition	Governance-Quality Index constituent acquires another Governance-Quality Index constituent	Maintain acquiring company and remove acquired company
	Governance-Quality Index constituent acquires non Governance-Quality Index constituent	Maintain acquiring company
	Non Governance-Quality Index constituent acquires Governance-Quality Index constituent	Remove acquired company without adding acquiring company
Merger	Governance-Quality Index constituent merges with Governance-Quality Index constituent	Add new company with a constraint factor that is the weighted average of the two constituents
	Governance-Quality Index constituent merges with non-Governance-Quality Index constituent	Add new company if MSCI links its price history to the Governance-Quality Index constituent. New company not added if price history is linked to the non-Governance-Quality Index constituent
IPO	IPO added to Parent Index	Security will be considered for inclusion in the Governance-Quality index at the next SAIR

Event Type	Event details	Action
Spin-off	Governance-Quality Index constituent spins off security	Add spun-off security to the Governance-Quality Index with the constraint factor of the spinning security, if it is included in the Parent Index
Conversion	Security A converted to B, A deleted from Parent Index, B added	B inherits constraint factors from A
Country Reclassification	Domicile of company reviewed: Security A deleted from country A, security B added to country B	B inherits constraint factors from A if it is added to the Parent Index
Stock exchange reclassification	Stock exchange (price source) of company reviewed: Security A deleted, security B added	B inherits constraint factors from A if it is added to the Parent Index
Other Events Resulting in Changes in Number of Shares and FIFs	Changes in number of shares and subsequent FIF resulting from other events such as share placements and offerings, and debt-to-equity-swaps	No change in Constraint Factor

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* = toll free

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