S&P Dow Jones Indices
Indices
A Division of S&P Global

S&P Quality Indices
Methodology

January 2019

Table of Contents

Introduction

Index Objective and Highlights

The S&P Quality Indices measure the performance of stocks selected on three fundamental measures: return on equity, accruals ratio, and financial leverage ratio (see *Appendix A*).

The S&P Quality Indices are constructed from the constituents of the S&P Global BMI or other headline universe indices (see *Index Construction*).

Index Family

The S&P Quality Indices currently consist of the following:

- S&P Quality Global LargeMidCap Index
- S&P Quality Developed LargeMidCap Index
- S&P Quality Developed Ex-U.S. LargeMidCap Index
- S&P Quality Developed Ex-Japan LargeMidCap Index
- S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index
- S&P Quality Emerging LargeMidCap Index
- S&P Quality Europe LargeMidCap Index
- S&P Europe 350 Quality
- S&P Quality Nordic Index
- S&P/ASX 200 Quality Index
- S&P Quality Pan Asia LargeMidCap Index
- S&P Quality Pan Asia Ex-Japan LargeMidCap Index
- S&P Quality Japan LargeMidCap Index
- S&P Quality South Africa Index
- S&P 500 Quality
- S&P 500 Quality BSA Attribution
- S&P 500 Quality Leverage Attribution
- S&P 500 Quality ROE Attribution
- S&P Quality United States LargeMidCap Index
- S&P SmallCap 600 Quality
- S&P MidCap 400 Quality
- S&P China A-Share Quality
- S&P Quality GCC Compsite Index
- S&P Quality Saudi Arabia Index
- S&P Quality Saudi Arabia Shariah Index

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology
S&P Dow Jones Indices' Float Adjustment Methodology	Float Adjustment Methodology
S&P Dow Jones Indices' Global Industry Classification Standard (GICS) Methodology	GICS Methodology

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

Eligibility Criteria

Index Universe

The S&P Quality Indices are constructed from the constituents of the S&P Global BMI or other headline universe indices as detailed below.

Index	Universe
S&P Quality Global LargeMidCap Index	S&P Global LargeMidCap Index
S&P Quality Developed LargeMidCap Index	S&P Developed LargeMidCap Index
S&P Quality Developed Ex-U.S. LargeMidCap Index	S&P Developed Ex-U.S. LargeMidCap Index
S&P Quality Developed Ex-Japan LargeMidCap Index	S&P Developed Ex-Japan LargeMidCap Index
S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index	S&P Developed Ex-Japan & South Korea LargeMidCap Index
S&P Quality Emerging LargeMidCap Index	S&P Emerging LargeMidCap Index
S&P Quality Europe LargeMidCap Index	S&P Europe LargeMidCap Index
S&P Europe 350 Quality	S&P Europe 350
S&P Quality Nordic Index	S&P Nordic BMI
S&P/ASX 200 Quality Index	S&P/ASX 200
S&P Quality Pan Asia LargeMidCap Index	S&P Pan Asia LargeMidCap Index
S&P Quality Pan Asia Ex-Japan LargeMidCap Index	S&P Pan Asia Ex-Japan LargeMidCap Index
S&P Quality Japan LargeMidCap Index	S&P Japan LargeMidCap Index
S&P Quality South Africa Index	S&P South Africa Composite
S&P 500 Quality	S&P 500
S&P 500 Quality BSA Attribution	S&P 500
S&P 500 Quality Leverage Attribution	S&P 500
S&P 500 Quality ROE Attribution	S&P 500
S&P Quality United States LargeMidCap Index	S&P U.S. LargeMidCap Index
S&P SmallCap 600 Quality	S&P SmallCap 600
S&P MidCap 400 Quality	S&P MidCap 400
S&P China A-Share Quality	S&P China A BMI + S&P China A Venture Enterprises Index
S&P Quality GCC Composite Index	S&P GCC Composite Index
S&P Quality Saudi Arabia Index	S&P Saudi Arabia Index
S&P Quality Saudi Arabia Shariah Index	S&P Saudi Arabia Shariah Index

For a security to be eligible for consideration for the S&P Quality Indices, it must, on the rebalancing reference date:

- Be an existing member of the relevant index universe;

- Meet additional liquidity criteria set out in the following table (if any).

Index	Additional Liquidity Criteria (Three-Month Average Daily Value Traded)
S&P Quality Global LargeMidCap Index	US$ 3 million
S&P Quality Developed LargeMidCap Index	
S&P Quality Developed Ex-U.S. LargeMidCap Index	
S&P Quality Developed Ex-Japan LargeMidCap Index	
S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index	
S&P Quality Emerging LargeMidCap Index	US$ 1 million
S&P Quality Europe LargeMidCap Index	US$ 3 million
S&P Europe 350 Quality	--
S&P Quality Nordic Index	US$ 1.5 million
S&P/ASX 200 Quality Index	--
S&P Quality Pan Asia LargeMidCap Index	US$ 3 million
S&P Quality Pan Asia Ex-Japan LargeMidCap Index	
S&P Quality Japan LargeMidCap Index	
S&P Quality South Africa Index	ZAR 5 million
S&P 500 Quality	--
S&P 500 Quality BSA Attribution	
S&P 500 Quality Leverage Attribution	
S&P 500 Quality ROE Attribution	
S&P Quality United States LargeMidCap Index	US$ 3 million
S&P SmallCap 600 Quality	--
S&P MidCap 400 Quality	
S&P China A-Share Quality	RMB 20 million (RMB 18 million for current constituents)

In addition, candidates of the S&P China A-Share Quality Index must not be designated as Special Treatment (ST or *ST) by the Shanghai or Shenzhen Stock Exchanges, and have at least a float market capitalization of RMB 1 billion (RMB 900 million for current constituents) as of the rebalancing reference date.

For the S&P Quality GCC Composite Index, S&P Quality Saudi Arabia Index, and S&P Quality Saudi Arabia Shariah Index, the following liquidity criteria are set:

Index	Additional Liquidity Criteria (Six-Month Median Daily Value Traded)
S&P Quality GCC Composite Index	US$ 1 million (US$ 500,000 for current constituents)
S&P Quality Saudi Arabia Index	
S&P Quality Saudi Arabia Shariah Index	

Index Construction

Constituent Selection

Depending on the index universe in question, a different number of constituents are selected for inclusion in the index.

Index	Number of Constituents in the Quality Index
S&P Quality Global LargeMidCap Index	Top quintile of eligible securities by quality scores[1]
S&P Quality Developed LargeMidCap Index	
S&P Quality Developed Ex-U.S. LargeMidCap Index	
S&P Quality Developed Ex-Japan LargeMidCap Index	
S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index	
S&P Quality Emerging LargeMidCap Index	
S&P Quality Europe LargeMidCap Index	
S&P Europe 350 Quality	Top 50 securities by quality score
S&P Quality Nordic Index	Top 30 securities by quality score
S&P/ASX 200 Quality Index	Top 40 securities by quality score
S&P Quality Pan Asia LargeMidCap Index	Top quintile of eligible securities by quality scores[1]
S&P Quality Pan Asia Ex-Japan LargeMidCap Index	
S&P Quality Japan LargeMidCap Index	
S&P Quality South Africa Index	
S&P 500 Quality	Top 100 securities by quality score
S&P 500 Quality BSA Attribution	Top 100 securities by z-score
S&P 500 Quality Leverage Attribution	
S&P 500 Quality ROE Attribution	
S&P Quality United States LargeMidCap Index	Top quintile of eligible securities by quality scores[1]
S&P SmallCap 600 Quality	Top 120 securities by z-score
S&P MidCap 400 Quality	Top 80 securities by z-score
S&P China A-Share Quality	Top 100 securities by quality score

Please refer to Appendix B for z-score and quality score calculation details.

For the S&P Quality Saudi Arabia Index and S&P Quality Saudi Arabia Shariah Index the target stock count is determined as the maximum of the following:

- 30,
- 20% of the number of constituents in the universe,
- the number of stocks (ranked by quality score) such that the sum of their free-float market capitalization is at least 50% of the free-float market capitalization of the eligible universe.

For the S&P Quality GCC Composite Index the target stock count is the minimum number of stocks (ranked by quality score) that satisfy the following conditions:

- the total number selected is at least 20% of the number of constituents in the universe,
- the sum of the free-float market capitalization of the selected stocks in each country must make up 50% of the free-float market capitalization of the eligible stocks within the country.

---

[1] The number of companies selected is rounded up if the targeted constituent set results in a fractional company amount.

Securities in the eligible universe are selected for index inclusion based on quality scores. The quality score of each stock is derived from its return-on-equity, accruals ratio and financial leverage ratio. The quality score of each stock is updated semi-annually at the June and December index rebalancings.

S&P 500 Quality BSA Attribution. Securities in the eligible universe are selected for index inclusion based on its accruals ratio z-score determined during the semi-annual rebalancing of the S&P 500 Quality index. The values for all securities are ranked in ascending order.

S&P 500 Quality Leverage Attribution. Securities in the eligible universe are selected for index inclusion based on its financial leverage ratio z-score determined during the semi-annual rebalancing of the S&P 500 Quality index. The values for all securities are ranked in ascending order.

S&P 500 Quality ROE Attribution. Securities in the eligible universe are selected for index inclusion based on its return-on-equity z-score determined during the semi-annual rebalancing of the S&P 500 Quality index. The values for all securities are ranked in ascending order.

Buffer Rule

A 20% buffer is applied to stocks already in the index in order to reduce portfolio turnover and is implemented as follows:

- **S&P Quality Indices with a Target Stock Count:**
    1. Stocks are ranked based on quality score and those ranked within the top 80% of the target stock count are automatically chosen for index inclusion.
    2. All stocks which are current constituents that fall within the top 120% of the target stock count are then chosen for index inclusion in order of their quality score.
    3. If at this point the target stock count has still not been met, the remaining stocks are chosen based on their quality score. Additionally, for the S&P Quality Saudi Arabia Index and S&P Quality Saudi Arabia Shariah Index, if a target of 50% of the free-float market capitalization of the eligible universe has not been reached, the remaining stocks are selected by order of rank until the target has been reached.

- **All Other Non-Attribution S&P Quality Indices:**
    1. Stocks are ranked based on quality score and those ranked within the top 16% of the stock count are automatically chosen for index inclusion.
    2. All stocks which are current constituents that fall within the top 24% of the stock count are then chosen for index inclusion in order of their quality score.
    3. If at this point 20% of stocks in the index universe have not been chosen, the remaining stocks are chosen based on their quality score.

- **S&P 500 Quality BSA, Leverage, and ROE Attribution.** A 20% buffer is applied to stocks as detailed above, but is based on the applicable fundamental characteristic's z-score.

S&P Dow Jones Indices believes turnover in index membership should be avoided when possible. At times a company may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to an index, not for continued membership. As a result, an index constituent that appears to violate criteria for addition to that index will not be deleted unless ongoing conditions warrant an index change.

Weights Computation

For a given rebalancing date, all the securities eligible for inclusion are weighted by the product of their market capitalization in the eligible index universe and the quality score, subject to security, sector and country constraints. This is done using an optimization procedure that chooses final weights in such a way as to minimize the sum of the squared differences of capped weight and uncapped weight, divided

by uncapped weight for each stock, subject to the following constraints: the maximum weight of each security is the lower of 5% and 20 times its market capitalization weight in the eligible index universe, the maximum weight of any given GICS sector is 40%, and the maximum weight of any given country, as defined by a stock's country of domicile, in regional indices that include multiple countries is 40%. Each stock's weight is floored at 0.05%.

Where the optimization procedure fails for a given period, the constraints are then relaxed in the following order: the maximum weight of the security, then the maximum weight of the sector and finally, the maximum weight of the country.

For the S&P Quality Nordic Index and S&P Quality South Africa Index, the maximum weight of each security is set at 10%. There is no separate capping rule based on each stock's market capitalization weight. The rest of the procedure follows the same as described above.

For the S&P Quality Saudi Arabia Index and S&P Quality Saudi Arabia Shariah Index, the maximum weight for each security is set at 8% or the stocks weight in the universe, whichever is greater. Moreover, the weight for each security is also capped at 20 times its market capitalization weight in the eligible index universe. The rest of the procedure follows the same process as described above.

For the S&P Quality GCC Composite Index the maximum weight for each security is set at 5% or the stocks weight in the universe, whichever is greater. Moreover, the weight for each security is also capped at 20 times its market capitalization weight in the eligible index universe. In addition the maximum weight for any given country is set at 60%. The rest of the procedure follows the same as described above.

Furthermore, the above optimization process includes one additional constraint; the maximum weight of each security should not exceed a multiple of 4 times its liquidity weight (see *Appendix C*). Where the optimization procedure fails for a given period, the constraints are then relaxed in the following order: the maximum weight of the security, then the maximum weight of the sector, then the maximum weight of the country (if applicable), then 20 times its market capitalization weight and finally, 4 times its liquidity weight.

S&P 500 Quality BSA, Leverage, and ROE Attribution. Each stock is weighted by its applicable fundamental characteristic z-score multiplied by its market capitalization. The z-score of each stock is updated semi-annually at the June and December rebalancings.

The following indices are not subject to country weight constraints:

- S&P/ASX 200 Quality Index
- S&P Quality Japan LargeMidCap Index
- S&P Quality South Africa Index
- S&P 500 Quality
- S&P 500 Quality BSA Attribution
- S&P 500 Quality Leverage Attribution

- S&P 500 Quality ROE Attribution
- S&P Quality United States LargeMidCap Index
- S&P SmallCap 600 Quality
- S&P MidCap 400 Quality
- S&P China A-Share Quality

Multiple Share Classes

Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Dually Listed Companies

Some companies may have more than one listing in the respective headline universe index. In the S&P Quality Indices, each company is represented once by the most liquid listing.

Index Calculations

The indices are calculated using the divisor methodology used in all S&P Dow Jones Indices' equity indices and are calculated on all days except weekends. Index calculations include price, total and net return series.

The indices are calculated using S&P Dow Jones Indices' non-market capitalization weighted methodology. A non-market capitalization weighted index is one where index constituents have a user-defined index weight. Each stock's weight is based on its quality score which can be capped as defined in *Index Construction*. Between semi-annual rebalancings, corporate actions generally have no effect on index weights. As stock prices move, the weights shift and the modified weights change.

Please refer to S&P Dow Jones Indices' Index Mathematics Methodology for further details on the non-market capitalization weighted methodology.

Each company's most liquid share line is used to calculate index levels. Some index constituents use ADRs, GDRs or foreign ordinary shares if the common stock in their local market is illiquid. Pricing for these issues are based on the ADR, GDR or foreign ordinary share in the listing market's currency. In cases of multiple share classes, only the most liquid share lines are used. All Chinese A-shares are excluded from the S&P Quality Global, Emerging, Pan Asia and Pan Asia Ex-Japan LargeMidCap Indices. However, any non-domestic listed Chinese shares included in the S&P Global BMI index family are eligible for inclusion in the corresponding S&P Quality Indices. Any changes to pricing sources are announced with as much notice as is reasonably possible.

Index Maintenance

Rebalancing

The S&P Quality Indices, with the exception of the S&P Quality GCC Composite Index, S&P Quality Saudi Arabia Index, and S&P Quality Saudi Arabia Shariah Index, are rebalanced semi-annually after the close on the third Friday of June and December.

The S&P Quality GCC Composite Index, S&P Quality Saudi Arabia Index, and S&P Quality Saudi Arabia Shariah Index are rebalanced after the close of the Sunday following the third Friday of June and December.

The fundamental data reference date is five weeks prior to the rebalancing date. As part of the rebalancing process, constituent stock weights are updated. The rebalancing reference dates are the last business day of May and November, respectively. Weights calculated as a result of the reference date data are implemented in the indices using closing prices as of the Wednesday prior to the second Friday of June and December.

Additions and Deletions

The majority of additions and deletions occur as part of the semi-annual index rebalancing in June and December. Constituents removed from an underlying headline universe index are also removed from the respective S&P Quality Index simultaneously.

Since some of these indices do not have a fixed number of constituents, additions to and deletions from the index may not be the same number.

Initial Public Offerings (IPOs). IPO additions to the index take place at the semi-annual rebalancings. To be considered eligible for index inclusion, an IPO must first be a constituent of the respective index universe.

Corporate Actions and Spin-Offs

The spun-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spun-off company is removed after at least one day of regular way trading (with a divisor adjustment).

For further information, please refer to the Treatment of Spin-offs in S&P Dow Jones Indices' Equity Indices Policies & Practices document.

For information on Corporate Actions, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Currency, Currency Hedged, and Risk Control Indices

The indices are calculated in U.S. dollars. In addition, certain indices are also available in other currencies as detailed in *Index Dissemination*.

With the exception of the S&P/ASX 200 Quality Index, WM/Reuters foreign exchange rates are taken daily at 04:00 PM London time and used in the calculation of the indices. These mid-market fixings are calculated by the WM Company based on Reuters' data and appear on Reuters pages WMRA.

For the S&P/ASX 200 Quality Index, index closing values are calculated using spot exchange rates taken daily at 4:17 PM Sydney time as supplied by Reuters.

Additional currency, currency hedged, and risk control versions of the indices may be available. For a list of available currency, currency hedged, and risk control indices, please contact Client Services at index_services@spglobal.com.

For more information on currency, currency hedged, and risk control indices, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Other Adjustments

In cases where there is no achievable market price for a stock being deleted, it can be removed at a zero or minimal price at the Index Committee's discretion, in recognition of the constraints faced by investors in trading bankrupt or suspended stocks.

Base Dates and History Availability

Index history availability, base dates and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P Quality Global LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Developed LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Developed Ex-U.S. LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Developed Ex-Japan LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index	11/30/2015	12/17/1999	12/17/1999	100
S&P Quality Emerging LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Europe LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Europe 350 Quality	07/08/2014	12/21/2001	12/21/2001	100
S&P Quality Nordic Index	01/05/2015	12/17/1999	12/17/1999	100
S&P/ASX 200 Quality Index	10/16/2015	06/15/2001	06/15/2001	100
S&P Quality Pan Asia LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Pan Asia Ex-Japan LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality Japan LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P Quality South Africa Index	12/10/2014	12/19/2003	12/19/2003	100
S&P 500 Quality	07/08/2014	12/16/1994	12/16/1994	100
S&P 500 Quality BSA Attribution	03/07/2016	12/16/1994	12/16/1994	100
S&P 500 Quality Leverage Attribution	03/07/2016	12/16/1994	12/16/1994	100
S&P 500 Quality ROE Attribution	03/07/2016	12/16/1994	12/16/1994	100
S&P Quality United States LargeMidCap Index	07/08/2014	12/17/1999	12/17/1999	100
S&P SmallCap 600 Quality	03/06/2017	12/16/1994	12/16/1994	100
S&P MidCap 400 Quality	11/13/2017	12/20/1991	12/20/1991	100
S&P China A-Share Quality	07/11/2018	6/16/2006	6/16/2006	1000
S&P Quality GCC Composite Index	01/07/2019	12/21/2008	12/21/2008	100
S&P Quality Saudi Arabia Index	01/07/2019	12/21/2008	12/21/2008	100
S&P Quality Saudi Arabia Shariah Index	01/07/2019	12/21/2008	12/21/2008	100

Index Data

Calculation Return Types

S&P Dow Jones Indices calculates multiple return types which vary based on the treatment of regular cash dividends. The classification of regular cash dividends is determined by S&P Dow Jones Indices.

- Price Return (PR) versions are calculated without adjustments for regular cash dividends.

- Gross Total Return (TR) versions reinvest regular cash dividends at the close on the ex-date without consideration for withholding taxes.

- Net Total Return (NTR) versions, if available, reinvest regular cash dividends at the close on the ex-date after the deduction of applicable withholding taxes.

In the event there are no regular cash dividends on the ex-date, the daily performance of all three indices will be identical.

For a complete list of indices available, please refer to the daily index levels file ("SDL").

For more information on the classification of regular versus special cash dividends as well as the tax rates used in the calculation of net return, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

For more information on the calculation of return types, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Index Governance

Index Committee

The S&P Quality Indices are managed by S&P Dow Jones Indices' Index Committees. The Committees meet regularly. At each meeting, the Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the indices to the market, companies that are being considered as candidates for addition to an index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

S&P Dow Jones Indices considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Index Policy

Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically in advance via the Index Corporate Events report (.SDE), delivered daily to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

For more information, please refer to the Announcements section of S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices provides constituent pro-forma files each time the index rebalances. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents and their corresponding weights and index shares effective for the upcoming rebalancing. Since index shares are assigned based on prices prior to the rebalancing, the actual weight of each stock at the rebalancing will differ from these weights due to market movements.

Please visit www.spdji.com for a complete schedule of rebalancing timelines and pro-forma delivery times.

Holiday Schedule

The S&P Quality Indices are calculated on all business days of the year with the exception of the following indices, which are calculated only on days when at least one of the underlying exchanges of the respective index is open.

- S&P Europe 350 Quality
- S&P/ASX 200 Quality Index
- S&P 500 Quality
- S&P 500 Quality BSA Attribution
- S&P MidCap 400 Quality

- S&P 500 Quality Leverage Attribution
- S&P 500 Quality ROE Attribution
- S&P Quality South Africa Index
- S&P SmallCap 600 Quality

A complete holiday schedule for the year is available at www.spdji.com.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Recalculation Policy

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Contact Information

For questions regarding an index, please contact: index_services@spglobal.com.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at *www.spdji.com,* major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

Tickers

The table below lists headline indices covered by this document. All currency, currency hedged, risk control, and return type versions of the below indices that may exist are also covered by this document. Please contact index_services@spglobal.com for a complete list of indices covered by this document.

Index (Currency)	Return Type	Bloomberg	Reuters
S&P Quality Global LargeMidCap Index (USD)	Price Return	SPQGLUP	---
	Total Return	SPQGLUT	---
	Net Total Return	SPQGLUN	---
S&P Quality Developed LargeMidCap Index (USD)	Price Return	SPQDUP	---
	Total Return	SPQDUT	---
	Net Total Return	SPQDUN	---
S&P Quality Developed Ex-U.S. LargeMidCap Index (USD)	Price Return	SPQDXUUP	---
	Total Return	SPQDXUUT	---
	Net Total Return	SPQDXUUN	---
S&P Quality Developed Ex-Japan LargeMidCap Index (USD)	Price Return	SPQDXJUP	---
	Total Return	SPQDXJUT	---
	Net Total Return	SPQDXJUN	---
S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index (JPY)	Price Return	SQDXJKJP	---
	Total Return	SQDXJKJT	---
	Net Total Return	SQDXJKJN	---
S&P Quality Developed Ex-Japan & South Korea LargeMidCap Index (USD)	Price Return	SQDXJKUP	---
	Total Return	SQDXJKUT	---
	Net Total Return	SQDXJKUN	---
S&P Quality Emerging LargeMidCap Index (USD)	Price Return	SPQEMUP	---
	Total Return	SPQEMUT	---
	Net Total Return	SPQEMUN	---
S&P Quality Europe LargeMidCap Index (EUR)	Price Return	SPQELMEP	---
	Total Return	SPQELMET	---
	Net Total Return	SPQELMEN	---
S&P Quality Europe LargeMidCap Index (USD)	Price Return	SPQEUUP	---
	Total Return	SPQEUUT	---
	Net Total Return	SPQEUUN	---
S&P Europe 350 Quality (EUR)	Price Return	SPEUQEP	---
	Total Return	SPEUQET	---
	Net Total Return	SPEUQEN	---
S&P Europe 350 Quality (USD)	Price Return	SPEUQUP	---
	Total Return	SPEUQUT	---
	Net Total Return	SPEUQUN	---
S&P Quality Nordic Index (EUR)	Price Return	SPQNEP	---
	Total Return	SPQNET	---
	Net Total Return	SPQNEN	---
S&P Quality Nordic Index (USD)	Price Return	SPQNUP	---
	Total Return	SPQNUT	---
	Net Total Return	SPQNUN	---

Index (Currency)	Return Type	Bloomberg	Reuters
S&P/ASX 200 Quality Index (AUD)	Price Return	SPASXQP	---
	Total Return	SPASXQT	---
	Net Total Return	SPASXQN	---
S&P/ASX 200 Quality Index (USD)	Price Return	SPASXQUP	---
	Total Return	SPASXQUT	---
	Net Total Return	SPASXQUN	---
S&P Quality Pan Asia LargeMidCap Index (USD)	Price Return	SPQPAUP	---
	Total Return	SPQPAUT	---
	Net Total Return	SPQPAUN	---
S&P Quality Pan Asia Ex-Japan LargeMidCap Index (USD)	Price Return	SPQRPJUP	---
	Total Return	SPQRPJUT	---
	Net Total Return	SPQRPJUN	---
S&P Quality Japan LargeMidCap Index (JPY)	Price Return	SPQJLMJP	---
	Total Return	SPQJLMJT	---
	Net Total Return	SPQJLMJN	---
S&P Quality Japan LargeMidCap Index (USD)	Price Return	SPQJPUP	---
	Total Return	SPQJPUT	---
	Net Total Return	SPQJPUN	---
S&P Quality South Africa Index (ZAR)	Price Return	SPSAQZP	---
	Total Return	SPSAQZT	---
	Net Total Return	SPSAQZN	---
S&P Quality South Africa Index (USD)	Price Return	SPSAQUP	---
	Total Return	SPSAQUT	---
	Net Total Return	SPSAQUN	---
S&P 500 Quality (USD)	Price Return	SPXQUP	---
	Total Return	SPXQUT	---
	Net Total Return	SPXQUN	---
S&P Quality United States LargeMidCap Index (USD)	Price Return	SPQULMUP	---
	Total Return	SPQULMUT	---
	Net Total Return	SPQULMUN	---
S&P SmallCap 600 Quality (USD)	Price Return	SP6QUP	.SP6QUP
	Total Return	SP6QUT	.SP6QUT
	Net Total Return	---	---
S&P MidCap 400 Quality (USD)	Price Return	SPMQUP	.SPMQUP
	Total Return	SPMQUT	.SPMQUT
	Net Total Return	---	---
S&P China A-Share Quality (CNY)	Price Return	SPCAQCP	---
	Total Return	SPCAQCT	---
	Net Total Return	SPCAQCN	---
S&P Quality GCC Composite Index (USD)	Price Return	---	---
	Total Return	SPQGCUT	---
	Net Total Return	---	---
S&P Quality Saudi Arabia Index (SAR)	Price Return	---	---
	Total Return	SPQSDST	---
	Net Total Return	---	---
S&P Quality Saudi Arabia Shariah Index (SAR)	Price Return	---	---
	Total Return	SPQSASST	---
	Net Total Return	---	---

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, www.spdji.com/contact-us.

Web site

For further information, please refer to S&P Dow Jones Indices' Web site at www.spdji.com.

Appendix A

Fundamental Ratios Calculation

The first step to determine the overall quality score is to calculate, as of the rebalancing reference date, the three fundamental ratios below for each security in the index universe. They are defined as follows:

- **Return on Equity (ROE).** This is calculated as a company's trailing 12-month earnings per share divided by its latest book value per share (BVPS):

$$\text{ROE} = \frac{EPS}{BVPS}$$

- **Accruals Ratio.** This is computed using the change of a company's net operating assets over the last year divided by its average net operating assets over the last two years:

$$\text{Accruals Ratio} = \frac{(NOA_t - NOA_{t-1})}{((NOA_t + NOA_{t-1}))/2}$$

- **Financial Leverage Ratio.** This is calculated as a company's latest total debt divided by its book value.

$$\text{Leverage} = \frac{Total\ Debt}{(BVPS\ x\ Common\ Shares\ outstanding)}$$

Outlier Handling and Winsorization. Outlier fundamental ratios are winsorized to ensure that the average values used to calculate the overall quality score are less distorted by extreme values.

- **Return on Equity and Accruals Ratio.** For a given fundamental variable, the values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable. If the underlying data points for a given stock's ROE are both negative, leading to a positive ROE, its ROE value will be excluded and the stock will be assigned an ROE Z-score set as equal to the ROE Z-score value of the 2.5 percentile ranked security.

- **Financial Leverage Ratio.** The values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable. If the underlying data point for a given stock's BVPS is negative, leading to a negative Leverage, its Leverage value will be excluded and the stock will be assigned a Leverage Z-score set as equal to the Leverage Z-score value of the 2.5 percentile ranked security.

Appendix B

Z-score & Quality Score Computation

Z-score Computation. Computing a z-score is a widely adopted method of standardizing a variable in order to combine it with other variables that may have a different scale or unit of measurement. After winsorizing all the three fundamental ratios, the z-score for each of the three ratios for each security is calculated using the mean and standard deviation of the relevant variable within each of the index universes.

- **Return on Equity.** The z-score is calculated as follows:

$$z_\alpha = \frac{(x_\alpha - \mu_\alpha)}{\sigma_\alpha}$$

- **Accruals and Financial Leverage Ratios.** The z-score is calculated as follows:

$$z_\alpha = -\frac{(x_\alpha - \mu_\alpha)}{\sigma_\alpha}$$

where:

z_α = Z-score for a given security

x_α = Winsorized variable for a given security

μ_α = Arithmetic mean of the winsorized variable in a given index universe, excluding any missing values

σ_α = Standard deviation of the winsorized variable in a given index universe

Average Z-score Computation. For each security, the average z-score is computed by taking a simple average of the three scores. Where there is a missing value, the average z-score is computed by taking a simple average of the remaining two scores. A security must have at least one z-score for it to be included in the index.

Outlier Handling and Winsorization. Outlier average z-scores are winsorized to ensure that the overall quality scores are less distorted by extreme values. To do this, for a given average z-score, the values for all securities are first ranked in ascending order. Then, for securities that lie above 4 or below -4, their value is set as equal to 4 or -4, whichever is applicable.

Quality Score Computation. Using the winsorized average z-scores, a quality score is computed for each of the securities. For a given security, if its winsorized average z-score is above 0, then its quality score will be the addition of 1 and the average z-score. On the other hand, if its winsorized average score is below 0, then its quality score will be the result of the reciprocal of 1 subtracted by its average z-score.

If average Z > 0, Quality Score = 1 + Z

If average Z < 0, Quality Score = (1 / (1 – Z))

If average Z = 0, Quality Score = 1

Appendix C

Liquidity Weight Computation

The liquidity weight of a given stock is defined as:

$$lw_i = \frac{l'_i}{\Sigma_1^N \, l'_j}$$

where:

N = number of selected stocks

l'_i = capped stock liquidity

To maintain optimization stability the liquidity of a given stock is capped as follows:

$$l'_i = MIN \, (\, l_i \, , 20 \times MinLB \,)$$

where:

l_i = stock liquidity

$MinLB$ = minimum liquidity of selected stocks

Appendix D

Methodology Changes

Methodology changes since January 1, 2015 are as follows:

Change	Effective Date (After Close)	Methodology Previous	Methodology Updated
Index Name Change: S&P/ASX Quality Index	07/21/2017	S&P/ASX Quality Index	S&P/ASX 200 Quality Index
Index Construction: Multiple Shares Classes	04/01/2017	**All Other S&P Quality Indices.** Each company is represented once by the most liquid share line, which is generally the company's primary listing.	**All Other S&P Quality Indices.** Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices document.
Outlier Handling and Winsorization: Return on Equity and Accruals Ratio	04/01/2017	For a given fundamental variable, the values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable. If the underlying data points for a given stock's ROE are both negative, leading to a positive ROE, its value will be set as equal to the value of the 2.5 percentile ranked security.	For a given fundamental variable, the values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable. If the underlying data points for a given stock's ROE are both negative, leading to a positive ROE, its ROE value will be excluded and the stock will be assigned an ROE Z-score set as equal to the ROE Z-score value of the 2.5 percentile ranked security.
Outlier Handling and Winsorization: Financial Leverage Ratio	04/01/2017	The values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable.	The values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable. If the underlying data point for a given stock's BVPS is negative, leading to a negative Leverage, its Leverage value will be excluded and the stock will be assigned a Leverage Z-score set as equal to the Leverage Z-score value of the 2.5 percentile ranked security.

Change	Effective Date (After Close)	Methodology Previous	Methodology Updated
Outlier Handling and Winsorization: Return on Equity and Accruals Ratio	06/01/2016	For a given fundamental, the values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable.	For a given fundamental variable, the values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable. If the underlying data points for a given stock's ROE are both negative, leading to a positive ROE, its value will be set as equal to the value of the 2.5 percentile ranked security.[2]
Outlier Handling and Winsorization: Financial Leverage Ratio	06/01/2016	The values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked security and for securities that lie below 0, their value is excluded.	The values for all securities are first ranked in ascending order. Then, for securities that lie above the 97.5 percentile rank or below the 2.5 percentile rank, their value is set as equal to the value of the 97.5 percentile ranked or the 2.5 percentile ranked security, whichever is applicable.
Index Construction: Dually Listed Companies	05/01/2016	--	Some companies may have more than one listing in the respective headline universe index. In the S&P Quality Indices, each company is represented once by the most liquid listing.
Buffer Rule For Index Constituents' Quality Score	02/29/2016	A 30% buffer is applied to stocks already in the index in order to reduce portfolio turnover. For a constituent to be removed from the index during a rebalancing, it must be outside of the buffer when ranked by its quality score. The buffer size is set at 1.30 times the final stock count of the index.	A 20% buffer is applied to stocks already in the index in order to reduce portfolio turnover and is implemented as follows: • **S&P Quality Indices with a Target Stock Count:** 1. Stocks are ranked based on quality score and those ranked within the top 80% of the target stock count are automatically chosen for index inclusion. 2. All stocks which are current constituents that fall within the top 120% of the target stock count are then chosen for index inclusion in order of their quality score. 3. If at this point the target stock count has still not been met, the remaining stocks are chosen based on their quality score. • **All Other Non-Attribution S&P Quality Indices:** 1. Stocks are ranked based on quality score and those ranked within the top 16% of the stock count are automatically chosen for index inclusion. 2. All stocks which are current constituents that fall within the top 24% of the stock count are then chosen for index inclusion in order of their quality score. 3. If at this point 20% of stocks in the index universe have not been chosen, the remaining stocks are chosen based on their quality score.

---

[2] For the S&P SmallCap 600 Quality, the updated rule has been applied for the index's entire history.

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Corporate Actions: Spin-offs	09/30/2015	Spin-offs are ineligible for inclusion in the indices. Any price adjustments that occur due to a spin-off are accompanied by a AWF increase on the parent stock in the index to neutralize the event.	The spun-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spun-off company is removed after at least one day of regular way trading (with a divisor adjustment). *For further information, please refer to the Treatment of Spin-offs in S&P Dow Jones Indices' Equity Indices Policies & Practices document.*

Disclaimer

liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.

The Global Industry Classification Standard (GICS®) was developed by and is the exclusive property and a trademark of S&P and MSCI. Neither MSCI, S&P nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.