CONSULTATION TO ADDRESS CONTINUOUS LISTING STANDARDS FOR US LISTED EXCHANGE TRADED PRODUCTS

July 2017



SUMMARY AND BACKGROUND

Until now, US-listed exchange traded products (ETPs) have only been required to comply with listing standards *at the time of initial listing*.

- A rule change, driven by the Securities and Exchange Commission, has now stated that "...for exchange listing standards to effectively achieve their goals, including to effectively address the potential for manipulation of a listed ETP, their application cannot be linked to only a single point in time (i.e., the time of initial listing)."
- As a result, effective October 1, 2017, US exchanges (which include NYSE/ARCA, CBOE/BATS and NASDAQ) will introduce rules that require ETP portfolios to meet the same initial listing standards on a continual and ongoing basis as well.
- MSCI opens a consultation on a proposal to address compliance with the continuous listing standards for US ETPs through a new index methodology.
- The methodology can be implemented as an 'overlay' to a pre-existing parent or capped index underlying an ETP, and would aim to remediate any non-compliance of the underlying index on a daily basis.
- MSCI welcomes feedback on the consultation and will announce the results of the consultation on or before August 4, 2017.
- This consultation may or may not lead to the adoption of any or all proposals contained in this presentation.



OVERVIEW OF CONTINUOUS LISTING STANDARDS

Listing Standard	International/Global **	Domestic *	
Minimum market cap of component stocks that account for at least 90% of index weight	\$100M	\$75M	
Minimum liquidity of component stocks that account for at least 70% of index weight	Minimum monthly trading volume of 250,000 shares or minimum notional volume traded per month of \$25,000,000 averaged over the last six months		
Maximum weight of top component stock	25%	30%	
Maximum aggregate weight of top 5 component stocks	60%	65%	
Minimum number of component stocks	20	13	

^{*}A domestic ETF is an ETF that includes only "U.S. Component Stocks", which are equity securities that are registered under Sections 12(b) or 12(g) of the 1934 Act or American Depositary Receipts, the underlying equity security of which is registered under Sections 12(b) or 12(g) of the 1934 Act.

^{**}A global or international ETF is an ETF that consists of either (a) only Non-U.S. Component Stocks or (b) both U.S. Component Stocks and Non-U.S. Component Stocks. A "Non-U.S. Component Stock" is an equity security that is not registered under Sections 12(b) or 12(g) of the 1934 Act and that is issued by an entity that (a) is not organized, domiciled or incorporated in the United States, and (b) is an operating company (including REITS and income trusts, but excluding investment trusts, unit trusts, mutual funds, and derivatives).



ENFORCEMENT OF LISTING STANDARDS

- ➤ While the SEC was the impetus to suggest, and then later approve the changes in listing standard enforcement, the implementation and oversight of the standards will be owned and defined at the respective US exchange level.
- ➤ The exchanges are generally aligned on how they will enforce compliance with the standards and have stated explicitly that the onus is on the ETP issuer to comply. In addition to reliance on issuer notification, the exchanges will employ a system of monitoring for potential non-compliance.
- If a product is deemed to be non-compliant post October 1, 2017, the product will be given a 'BC' (Below Compliance) designation within a few days after notification to the issuer. This timing may vary across exchanges and the designation, once given, will be made public.
- After a time period allowed for the issuer to submit a proposal to address the non-compliance (45 days), remediation of the non-compliance can be executed during a respective 'cure' period (usually 180 days), before a delisting process would commence.
- There is a slight differentiation between the continuous listing standards present for global/international ETFs and for domestic ETFs.



US CONTINUOUS LISTING STANDARDS: MSCI INDEX METHODOLOGY PROPOSAL

Underlying Indexes	Any MSCI Index and/or MSCI Capped Index Methodology
Index Construction Method	Optimization (constraints are listing standards)
Rebalance Frequency	Daily/EOD check for non-compliance
Index Compliance Priority (QIR)	Prioritization given to regulation driven ('Listing Standards'; Capped (i.e. 25/50)) index methodologies
Index Compliance Priority (non-QIR)	Prioritization given to 'Listing Standards' Methodology
Tracking Error (QIR/non-QIR)	At QIR, TE minimized to underlying index At non-QIR, TE minimized to index itself
Turnover Budget	10%
Minimum Constituent Weight	Smallest constituent weight in underlying index post optimization equal to smallest weight pre optimization.
Constraint Rebalance Buffers	10% relative to constraints (listing standards)
Constraint non-compliance remediation	Weighting Adjustments or ad-hoc rebalance to parent index if constituents fall below minimum number. If an additional constituent is needed for index compliance during a non-QIR rebalance, that security will only be added to the 'overlay' version of the index; not the underlying MSCI capped or parent index.



INDEX SIMULATIONS

An historical month-end (July 2015-April 2017) stress test was run on the indexes noted below to gauge the frequency of compliance breaches and to test the efficacy of the methodological framework for ongoing remediation of any index non-compliance.

- MSCI Taiwan 25/50 Index
- MSCI US Investable Market Telecom Services 25/50 Index
- MSCI USA IMI Telecom Services 25/50 Index
- MSCI South Africa Index
- MSCI Korea 25/50 Index

Summary of Findings

- Over the time period examined for all indexes, the number of non-compliance incidents was relatively small (11). The Korea and Taiwan Indexes had no occurrences of non-compliance during the time period that was reviewed.
- The breaches occurred within the concentration related listing standards. The market cap, liquidity related, and minimum constituency standards were never breached.
- Ex-ante Turnover and Tracking error varied depending on the extent of the breach, but never exceeded 3.0% and 0.33% respectively during the re-optimization to bring the index back into compliance with the listing standards.

NOTE: The stress tests were executed with some exceptions to the proposed methodology. Most notably monthly data was used for liquidity rather than trailing 6 month averages, and global/international standards were used universally across all indexes.



INDEX SIMULATION-MSCI SOUTH AFRICA INDEX

Listing Standard	# of breach occurrences (Jul 2015-Apr2017)	Date (s) of breach occurrence(s)	Index Turnover (%) to regain full compliance	Tracking Error (to non-compliant portfolio)
Minimum market cap	0			
Max weight-top stock	5	June 2016 Sept 2016 Oct 2016 Nov 2016 April 2017	.89% .88% .99% .39% .97%	.22% .22% .25% .09% .21%
Max weight- top 5 stocks	0			
Min number of stocks	0			
Min Liquidity	0			



INDEX SIMULATION-MSCI US INVESTABLE MARKET TELECOM SERVICES 25/50 INDEX

Listing Standard	# of breach occurrences (Jul 2015-Apr2017)	Date (s) of breach occurrence(s)	Index Turnover (%) to regain full compliance	Tracking Error (to non-compliant portfolio)
Minimum market cap	0			
Max weight-top stock	1	August 2015	1.36%	.19%
Max weight- top 5 stocks	3	August 2015 January 2016 February 2016	1.36% .72% 3.01%	.19% .08% .33%
Min number of stocks	0			
Min Liquidity	0			



INDEX SIMULATION-MSCI USA IMI TELECOM SERVICES 25/50 INDEX

Listing Standard	# of breach occurrences (Jul 2015-Apr2017)	Date (s) of breach occurrence(s)	Index Turnover (%) to regain full compliance	Tracking Error (to non-compliant portfolio)
Minimum market cap	0			
Max weight-top stock	1	August 2015	1.01%	.14%
Max weight- top 5 stocks	1	February 2016	1.62%	.18%
Min number of stocks	0			
Min Liquidity	0			



DISCUSSION POINTS

- ➤ Does the proposed index methodology present a sufficient solution to facilitate compliance to the continuous listing standards?
- ➤ Would you consider the methodology 'overlay' a material change in the underlying index for the ETP? What level of change constitutes materiality?
- ➤ Would you look to employ the index methodology selectively as an ETP approached non-compliance of one or more of the listing standards?

-or-

- ➤ Would this be proactively implemented across all indexes underlying ETPs prior to the effective date (October 1, 2017) of continuous listing standard enforcement?
- ➤ Would you look to have the methodology as a part of any indexes that were the basis of US listed ETPs at launch?



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.



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"), or MSCI's 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 PROVIDERS WITH RESPECT TO ANY OF THE INFORMATION.

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 investible 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.

