

# **MSCI AGRICULTURE & FOOD CHAIN INDEXES METHODOLOGY**

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## 1 INTRODUCTION

The MSCI Agriculture & Food Chain Indexes are free float-adjusted market capitalization indexes designed to track the performance of listed companies which are producers of agricultural products, fertilizers & agricultural chemicals, packaged foods and meat and food distributors. The indexes aim to serve as a relevant benchmark and research tool for investment in companies operating in the agriculture food chain.

## 2 CONSTRUCTING MSCI AGRICULTURE & FOOD CHAIN INDEXES

The MSCI Agriculture & Food Chain Indexes are constructed from the applicable MSCI country and composite indexes (“Parent Index”). Parent Indexes can be MSCI Global Standard Indexes or any other size segment index built under the MSCI Global Investable Market Indexes Methodology. Securities of companies that belong to a specific set of eligible sub-industries derived from the Global Industry Classification Standard (GICS®) are selected to create the MSCI Agriculture & Food Chain Indexes.

### 2.1 AGRICULTURE & FOOD CHAIN GICS® SUB-INDUSTRIES:

The MSCI Agriculture & Food Chain Indexes consist of four GICS® sub-industries along the food chain of the agriculture industry. The table below lists the GICS® sub-industries included:

GICS® Code	GICS® Sub-Industry	Description
30202010	Agricultural Products	Producers of agricultural products. Includes crop growers, owners of plantations and companies that produce and process foods but do not package and market them. Excludes companies classified in the Forest Products Sub-Industry and those that package and market the food products classified in the Packaged Foods Sub-Industry.
15101030	Fertilizers & Agricultural Chemicals	Producers of fertilizers, pesticides, potash or other agriculture-related chemicals not classified elsewhere.
30202030	Packaged Foods & Meats	Producers of packaged foods including dairy products, fruit juices, meats, poultry, fish and pet foods.
30101020	Food Distributors	Distributors of food products to other companies and not directly to the consumer.

### **3 MAINTAINING MSCI AGRICULTURE & FOOD CHAIN INDEXES**

#### **3.1 QUARTERLY AND SEMI-ANNUAL INDEX REVIEWS**

Coinciding with the quarterly and semi-annual index reviews of the Parent Index, the MSCI Agriculture & Food Chain Indexes are rebalanced on the last business day of February, May, August and November.

#### **3.2 ONGOING EVENT RELATED AND GICS® CHANGES**

In general, the MSCI Agriculture & Food Chain Indexes follow the event maintenance of the corresponding Parent Indexes. Changes in the Parent Index affecting securities in the relevant sub-industries are reflected simultaneously in the MSCI Agriculture & Food Chain Indexes. The only exceptions are highlighted below.

##### **3.2.1 CORPORATE EVENTS**

There will be no early inclusion of new securities to the index, except when the new security results from an event affecting an existing constituent (e.g., spin off, merger). Otherwise, a new addition to the Parent Index outside the regular index reviews will be added to the MSCI Agriculture & Food Chain Indexes at the next regularly scheduled index review. For example, an early inclusion to the Parent Index following an IPO in September would only be considered for inclusion to the MSCI Agriculture & Food Chain Indexes at the following November semi-annual index review.

Likewise, if a security experiences a GICS® change into the infrastructure sectors due to a corporate event, it will only be considered for inclusion to the MSCI Agriculture & Food Chain Indexes during the next regularly scheduled index review.

If a security is deleted from the Parent Index due to a corporate event, it will be removed from the MSCI Agriculture & Food Chain Indexes at the effective date of the event. Similarly, if a security experiences a GICS® change out of the infrastructure sectors following a corporate event, it will be removed from the MSCI Agriculture & Food Chain Indexes at the effective date of the event.

### 3.2.2 GICS® CHANGES

Regular monthly and annual GICS® reviews may result in the migration of a security's GICS® subindustry into or out of the Agriculture & Food Chain sectors. Newly eligible securities after such a GICS® change will only be considered for inclusion in the MSCI Agriculture & Food Chain Indexes during the following regularly scheduled index review. Any existing constituent moving out of the Agriculture & Food Chain sectors will be deleted from the MSCI Agriculture & Food Chain Indexes at the effective date of the GICS® change (which is the close of the last business day of the given month).

## APPENDIX I: MSCI AGRICULTURE & FOOD CHAIN SECTOR CAPPED INDEXES

For investors who desire a more balanced sector distribution, a sector capped version of the MSCI Agriculture & Food Chain Indexes is also available.

The MSCI Agriculture & Food Chain Sector Capped Indexes follow similar index construction rules as the market capitalization weighted indexes except that the weights of the Agricultural Products and of the Fertilizers & Agricultural Chemicals sectors are each fixed at one-third of the index, and that the Food Distributors and Packaged Foods & Meats Sectors have a combined weight of the remaining one-third<sup>1</sup>. Constituent weights within the respective sector are based on free float adjusted market capitalization.

Agriculture & Food Chain Sector	Weight
Agricultural Products	1/3
Fertilizers & Agricultural Chemicals	1/3
Packaged Foods & Meats & Food Distributors (Combined)	1/3

During the regularly scheduled index review, the individual sector weights within the sector capped indexes will be recapped to one-third. The remaining maintenance rules are similar to the market capitalization weighted indexes.

Exhibit 1 provides the sector weight of the MSCI ACWI Agriculture & Food Chain Index, MSCI ACWI Agriculture & Food Chain Sector Capped Index and MSCI Agriculture & Food Chain Sector Capped Index following the May 2008 semi-annual index review of the Parent Index.

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<sup>1</sup> In the case where a MSCI Agriculture & Food Chain Index contains only constituents from two out of the three Agriculture & Food Chain sectors, the sector capped weights will be set at one-half each instead of one-third. If an Index contains only constituents from one out of the three sectors, the sector capped version will not be calculated.

**Exhibit 1: Sector Weight of MSCI ACWI Agriculture & Food Chain Index and MSCI ACWI Agriculture & Food Chain Sector Capped Equity Index**

Sectors	Weight in MSCI ACWI Agriculture & Food Chain Index	Weight in MSCI ACWI Agriculture & Food Chain Sector Capped Index
Agricultural Products	6.98%	33.33%
Fertilizers & Agricultural Chemicals	29.27%	33.33%
Food Distributors	2.52%	1.32%
Packaged Foods & Meats	61.24%	32.02%
Total	100.00%	100.00%

*Data as of June 2, 2008*

## APPENDIX II: MSCI AGRICULTURE & FOOD CHAIN 10/40 INDEXES

In addition to the free float-adjusted and sector capped market capitalization weighting scheme, a 10/40 version is also made available for investors who are subject to investment constraints imposed by the UCITS III (Undertakings for Collective Investment in Transferable Securities). The UCITS III constrains the weight of any single group entity at 10% of a fund’s total assets and the sum of the weights of all group entities representing more than 5% of the fund at 40% of the fund’s total assets.

The MSCI Agriculture & Food Chain 10/40 Equity Index follows a systematic approach using an iterative process which minimizes the index turnover and the tracking error to the Parent MSCI Agriculture & Food Chain Index. During the regular scheduled index review, the MSCI Agriculture & Food Chain 10/40 Equity Indexes are rebalanced to the Parent Index. The process is run based on the Parent Index’s constituent weights to minimize tracking error. The MSCI Agriculture & Food Chain 10/40 Equity Index is also rebalanced on an “as needed” basis in case the constraints specified are breached at the end of any given day. A more detailed MSCI 10/40 Equity Indexes Methodology is available on the MSCI Barra Web site at:

[http://www.msccibarra.com/products/indexes/thematic\\_and\\_strategy/ten\\_forty/methodology.html](http://www.msccibarra.com/products/indexes/thematic_and_strategy/ten_forty/methodology.html)

Exhibit 2 provides the sector weight comparison of the MSCI ACWI Agriculture & Food Chain Index and MSCI Agriculture & Food Chain Sector Capped Index.

### Exhibit 2: Sector Weight of MSCI ACWI Agriculture & Food Chain Index and MSCI ACWI Agriculture & Food Chain 10/40 Equity Index

Sectors	Weight in MSCI ACWI Agriculture & Food Chain Index	Weight in MSCI ACWI Agriculture & Food Chain 10/40 Index
Agricultural Products	6.98%	8.34%
Fertilizers & Agricultural Chemicals	29.27%	34.98%
Food Distributors	2.52%	3.01%
Packaged Foods & Meats	61.24%	53.67%
Total	100.00%	100.00%

Data as of June 2, 2008



### APPENDIX III: INDEX PERFORMANCE

Exhibit 3 provides the annualized index risk and return for the four indexes.

**Exhibit 3: Annualized Risk and Return: December 2002 to December 2007**

	Return	Risk <sup>2</sup>
MSCI Agriculture & Food Chain Index	17.0%	9.2%
MSCI Agriculture & Food Chain 10/40 Index	17.5%	9.3%
MSCI Agriculture & Food Chain Sector Capped Index	31.4%	12.4%
MSCI ACWI Index	16.1%	9.5%

<sup>2</sup> Risk is measured as annualized standard deviation of monthly returns

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