

# MSCI ACWI IMI Blockchain Economy Index

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## 1 Introduction

The MSCI ACWI IMI Blockchain Economy Index (the 'Index'), developed in collaboration with ARK Invest, aims to represent the performance of a set of companies associated with the development of new products and services for servicing digital asset markets, decentralized finance, providing payments services for cryptocurrencies as well as enabling other solutions for the blockchain economy.

## 2 Constructing the Index

The Index is constructed by selecting stocks from a 'Parent Index'<sup>1</sup> based on rules explained in the following sections.

The Index selects companies which are assessed to have high exposure to the following business activities:

- Hardware and software used for adding and verifying digital asset transactions to a blockchain ledger
- Products and services for servicing digital asset markets, e.g., cryptocurrency exchanges and trading platforms, payment gateways, digital wallets
- Providers of technology and protocols for decentralized finance, e.g., smart contracts
- Providers of other solutions and services for blockchain technology, e.g., blockchain-as-a-service
- Providers of payments services using cryptocurrencies

MSCI may seek input from ARK Invest on the ongoing evolution of the themes underlying the index. However, such input is advisory only in nature. MSCI alone decides whether to use such input at all or to what extent. Receipt of such input, like any other feedback on MSCI indexes, may or may not lead to a change to the index or index methodology.

### 2.1 The set of relevant words and phrases<sup>2</sup> used for constituent selection

MSCI uses a broad set of relevant words and phrases derived from the Index objective which are important to describe the products and services of companies in the blockchain industry.

### 2.2 Company level data used for assessing company exposure

The following data is used at the company level:

<sup>1</sup> Please refer to Appendix 1 of the methodology document for the MSCI ACWI IMI Genomic Innovation Index for the details of the methodology of the Parent Index. The methodology document can be found here - <https://www.msci.com/index-methodology>.

<sup>2</sup> For more details on the steps followed to generate the set of relevant words and phrases, please refer to <https://www.msci.com/www/research-paper/indexing-change-understanding/01647260939>

- Business segment information from company annual reports and vendor data sources: business segment names, assigned SIC codes<sup>3</sup> and related revenue
- English language summary description of the company's business activities from public sources.

## 2.3 Eligible Universe 1

All stocks from the Parent Index which satisfy any of the following criteria are included in Eligible Universe 1.

### 2.3.1 Selection on business segments

The identified business segment names are compared against the set of relevant words. Companies which include at least one relevant word in their business segment names are included in the Eligible Universe 1.

### 2.3.2 Selection on company's summary description

Each company's summary business description is compared against the set of relevant words. Companies which include at least two distinct relevant words in their summary description are included in the Eligible Universe 1.

## 2.4 Selected business segments

'Selected business segments' are business segments which include at least one relevant word. These are the business segments based on which stocks are selected in section 2.3.1.

## 2.5 SIC code selection

Company business segments are mapped to a SIC code. The SIC code selection is a set of all the SIC codes which satisfy the following criteria:

- The SIC code is mapped to at least one of the 'selected business segments' as described in section 2.4.
- The SIC code is assigned to the business segments of at least two different stocks from the Eligible Universe 1. The SIC code 9999 is not selected.

<sup>3</sup> Companies' business segments are assigned with a specific Standard Industry Classification (SIC) description for products and services, used by official agencies within the US government. These descriptions provide additional information on the nature of the segment.

## 2.6 Calculating the stock relevance score

A relevance score for all stocks in the Eligible Universe 1 is calculated. The relevance score for a company is calculated by taking into account the portion of company's revenue which is derived from the selected business segments (as described in section 2.4) and business segments mapped to any SIC Code selected in the SIC Code selection step (as described in section 2.5).

The relevance score is not an explicit measurement or estimate of the proportion of revenue that the company derives from business activities exposed to the theme.

### 2.6.1 Relevance score discount factor

A security level relevance score discount factor is calculated by normalizing the cumulative frequency of relevant words in the company's summary description relative to all companies selected on summary business descriptions as described in section 2.3.2.

At a company's business segment level, the revenue discount factor is applied on revenue from each selected SIC code as described in section 2.5. The revenue discount factor is 1 for revenue derived from 'selected business segment'.

#### 2.6.1.1 Treatment for securities with relevance score discount factor =0

Some companies, particularly financial exchanges or banks, which provide services including trading and clearing of cryptocurrency related products, but which may not discuss these businesses in great detail in their company description or which may not have separate reportable segments for these activities, will be assessed to have zero discount factor, in accordance with section 2.6.1.

In order to accurately reflect this economic linkage, a security level fallback discount factor is calculated for all companies in the Parent Index which include at least one distinct relevant word in their summary description. This is calculated by normalizing the cumulative frequency of relevant words in the company's summary description relative to all such companies.

### 2.6.2 Relevance score

Relevance score for securities in the Eligible Universe 1 is calculated as follows:

Relevance score = [revenue from the selected business segments (as described in section 2.4) + relevance score discount factor \* revenue from the selected SIC code (as described in section 2.5)] / Total company revenue.

For securities whose discount factor is calculated in accordance with section 2.6.1.1, relevance score is calculated as follows:

- For securities mapped to these two GICS<sup>®4</sup> industries - Banks and Capital Markets,
  1. Relevance Score = 0, if discount factor calculated in accordance with section 2.6.1.1 < 0.75
  2. Otherwise, Relevance Score = discount factor calculated as described in section 2.6.1.1

Relevance Score = 0 for securities mapped to all other GICS<sup>®</sup> industries.

### 2.6.3 Selected Universe 1

All securities in Eligible Universe 1 with relevance score of 25% or more are included in Selected Universe 1.

## 2.7 Eligible Universe 2

All securities from the Parent Index which have business segments mapped to any of the SIC codes below are included in Eligible Universe 2.

1. 3674
2. 3571
3. 6231
4. 7372
5. 7374

For each security in Eligible Universe 2, a SIC code-based relevance score is calculated as follows:

SIC code-based relevance score = [revenue from business segments mapped to the above mentioned SIC codes\* relevance score discount factor (as described in section 2.6.1) - revenue from the selected business segments (as described in section 2.4)] / Total company revenue.

### 2.7.1 Selected Universe 2

All securities from Eligible Universe 2 with SIC code-based relevance score of 25% or more are included in the Selected Universe 2.

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<sup>4</sup> GICS, the global industry classification standard jointly developed by MSCI and S&P Global.

## 2.8 Selected Universe

The Selected Universe is constructed by combining securities from Selected Universe 1 and Selected Universe 2.

A combined relevance score for each security in the Selected Universe is calculated as follows:

Combined Relevance Score = max (relevance score as calculated in section 2.6.2, SIC-code based relevance score as calculated in section 2.7).

## 2.9 Weighting scheme

Securities included in the Index are weighted by the product of their combined relevance score and their float adjusted market capitalization. The weights are then normalized to sum to 100%. Additionally, constituent weights are capped at the issuer level to mitigate concentration risk in the Index. The issuer weight in the Index is capped at 5%<sup>5</sup>.

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<sup>5</sup> For historical rebalances where number of constituents < 20, the issuer capping is relaxed at rebalance.

## 3 Maintaining the Index

### 3.1 Semi-Annual Index Review

The Index is reviewed on a Semi-Annual basis in May and November to coincide with the May and November Semi-Annual Index Reviews of the Parent Index, and the changes are implemented at the end of May and November. In general, the pro forma Index is announced nine business days before the effective date.

During the Semi-Annual Index Review, the Eligible Universe and Selected Universe are updated.

In general, MSCI uses the latest available company business segment names, business description and revenue as of rebalancing date of the Semi-Annual Index Review.

### 3.2 Annual Index Review

The set of relevant words (as described in section 2.1) are reviewed annually by MSCI during the May Semi-Annual Index Review. In general, MSCI completes this review of relevant words nine business days before the effective date of the May Semi-Annual Index Review.

### 3.3 Ongoing event-related maintenance

The general treatment of corporate events in the Index aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the Index constituents that are involved. Further, changes in Index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

The following section briefly describes the treatment of common corporate events within the Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

## EVENT TYPE

## EVENT DETAILS

### New additions to the Parent Index

A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the Index.

### Spin-Offs

All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation if the spin-off security is also added to the Parent Index. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

### Merger/Acquisition

For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index.

If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.

### Changes in Security Characteristics

A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.) Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology.

The MSCI Corporate Events methodology book is available at:  
<https://www.msci.com/index-methodology>.

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\* = toll free

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