

Indxx Global Internet of Things Thematic Index

Index Description

The Indxx Global Internet of Things Thematic Index is designed to track the performance of companies listed in developed markets that are expected to benefit from the increased adoption of the Internet of Things (IoT).

Creation of Master list

Investable Universe

In order to be considered for inclusion in the universe,

- The security should be listed in a Developed Market country, as defined in our 'Country Classification and Investability Requirements' document (link [here](#)).
- The security must have a minimum market capitalization of \$100 million and a minimum average daily turnover greater than or equal to \$2 million over the last 6 months.
- The security must have traded on 90% of the eligible trading days in the last 6 months. In case a security does not have a trading history of 6 months (e.g., IPOs), such a security must have started trading at least 3 months before the start of the Reconstitution/Rebalancing Process, and should have traded on 90% of the eligible trading days for the past 3 months.

Free Float

All constituents must have a minimum free float equivalent to 10% of shares outstanding.

Maximum Price

Securities trading at a price of \$10,000 or above are excluded from the universe. This rule is not applicable for existing constituents. Existing constituents would remain in the universe irrespective of their stock price.

Security Type

If multiple share classes exist for a company, the following preference order is followed:

- If an ADR of the company exists, it is given preference over all other share classes.
- In all other cases, the most liquid share class is considered for inclusion in the portfolio

Security Selection

Extensive research is undertaken to identify the industries and business segments that are expected to benefit from the increased adoption of IoT. As of July 2017, Indxx has identified the following industries and business segments to be the most relevant to the Internet of Things theme:

Sub-theme	Description
Semiconductors and Sensors	Includes developers and manufacturers of semiconductors and sensors with primary IoT applications.
Networking Infrastructure/Software	For industrial and governmental applications but not limited to smart grids and does not include companies which are primarily consumers of industrial IoT products and services.
Equipment, Vehicle and Infrastructure/Building Technology	Consumer applications but not limited to smart security, smart home solutions and wearable connected devices and does not include companies which incorporate IoT solutions as a minor component or value-added feature in their products.
Consumer IoT Technology	Companies that are involved in developing and providing innovative solutions but not limited to smart security, smart home solutions and wearable connected devices excluding minor component or value-added feature in their products.

The above sub-themes are subject to change at every annual reconstitution.

In order to identify companies related to the above sub-themes, companies belonging to the below list of Factset Industries are included in the Selection List:

Aerospace & Defense	Miscellaneous Commercial Services	Engineering & Construction
Auto Parts: OEM	Miscellaneous Manufacturing	Industrial Conglomerates
Building Products	Motor Vehicles	Industrial Machinery
Catalog/Specialty Distribution	Movies/Entertainment	Industrial Specialties
Computer Communications	Other Consumer Specialties	Information Technology Services
Computer Peripherals	Packaged Software	Insurance Brokers/Services
Computer Processing Hardware	Personnel Services	Internet Software/Services
Data Processing Services	Pulp & Paper	Medical Specialties
Electrical Products	Semiconductors	Miscellaneous
Electronic Components	Specialty Telecommunications	Wireless Telecommunications
Electronic Equipment/Instruments	Telecommunications Equipment	Electronics/Appliances
Electronic Production Equipment	Trucks/Construction/Farm Machinery	
Electronics Distributors	Wholesale Distributors	

Final Composition

- Companies that derive revenue greater than 50% from the above sub-themes are considered as 'pure-play' IOT companies. These are eligible for inclusion in the index
- Companies with diversified revenue streams that generate at least 10% (but less than 50%) of their revenues from the above sub-themes are considered as 'quasi-play' IOT companies. These companies are also considered for inclusion in the index.
- The top 100 'pure-play' IoT companies by market capitalization will form the final portfolio.

- If fewer than 100 pure-play companies are eligible for inclusion, the index includes quasi-play companies (based on market capitalization) till the total index component count reaches 100.

Weighting

- Security-level market capitalization is considered for calculating weights.
- Initially, weights are assigned to each component based on their market capitalization.
- A single security weight cap of 2% and an aggregate weight cap of 30% is applied to all the quasi-play companies.
- A single security weight cap of 6% is assigned to pure-play companies. Excess weights are redistributed to non-capped companies.
- A single security weight floor of 0.3% is assigned to pure-play companies. Weights are proportionately reduced from non-capped companies.
- The aggregate weight of the securities with weight greater than 5% is capped at 45%. All remaining securities are capped at 4.75%.
- A sub-industry weighting cap of 50% is also applied to the index.

Buffer Rules

Buffer Rules are employed to reduce Portfolio Turnover. If an existing index constituent fulfils all the other criteria for universe creation, except market capitalization or liquidity, the following buffer rules apply:

Market Capitalization

The constituent shall continue to be included in the universe, if its market capitalization is greater than or equal to 80% of the previously defined market capitalization limit.

Liquidity

The constituent shall continue to be included in the universe if its 6-month ADTV is greater than or equal to 70% of the previously defined liquidity limit.

Continued Representation in the Portfolio

Additionally, an existing index constituent shall continue to remain in the index if it is part of top 120 companies by market cap, even if it isn't a part of the top 100 constituents.

Reconstitution and Rebalancing Rules

- The index follows an annual reconstitution and rebalancing schedule. The new portfolio becomes effective at the close of last trading day of June each year. This day is called the 'Effective Day.'

- The security selection and portfolio creation process start at the close of the nearest Friday falling at least one month before the effective day, called the 'Selection Day'. The selection list is created using the data as of the Selection Day.
- Weights are calculated at the close of the seventh trading day prior to the Effective Day. Index Shares are frozen using weights as of this day.

Mid-term review

- The index follows a mid-term review for inclusion of IPOs. The effective day for addition of IPOs during the mid-term review would be the last trading day of December.
- The IPO identification process starts at the close of the nearest Friday falling at least one month before the effective day. Potential inclusions in the mid-term review must meet tradability, liquidity and market capitalization criteria as of this day.
- Any new addition to the portfolio at the time of review will be added at its market capitalization weight, calculated at the close of seventh trading day prior to the Effective Day. The new addition's Index Shares will be frozen using weights as of this day.

Corporate Actions

Indxx standard Corporate Actions for market cap weighted indices apply. The corporate action guidebook is present in the Announcements section of our website, under 'Index Documents'

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