

September 2018

# INDXX DISRUPTIVE TECHNOLOGIES INDEX METHODOLOGY



# **CONTENTS**

1.	INDXX DISRUPTIVE TECHNOLOGIES INDEX	2
	1.1 INDEX DESCRIPTION	2
	1.2 CREATION OF MASTER LIST	2
	1.2.1 Initial Universe	2
	1.2.2 Free Float	2
	1.2.3 Maximum Price	2
	1.2.4 Security Type	2
	1.2.5 Share Classes	3
	1.3 SECURITY SELECTION PROCESS	3
	1.4 FINAL COMPOSITION	4
	1.5 WEIGHTING	4
	1.6 BUFFER RULES	4
	1.6.1 Market Capitalization	4
	1.6.2 Liquidity	4
	1.7 RECONSTITUTION AND REBALANCING RULES	5
	1.8 ANNUAL THEME REVIEW	5
	1.9 CORPORATE ACTIONS	5
2.	DISCLAIMER	e



# 1. INDXX DISRUPTIVE TECHNOLOGIES INDEX

#### 1.1 INDEX DESCRIPTION

The Indxx Disruptive Technologies Index is designed to track the performance of companies that are likely to disrupt an existing market and value network, displace established market leading firms, products and alliances and increasingly gain market share.

The index has a base date of September 20, 2013 with an initial value of 1,000.

The index is currently available in the following version:

- Price Return (Bloomberg Ticker: IDTECP)
- Total Return (Bloomberg Ticker: IDTEC)

### 1.2 CREATION OF MASTER LIST

#### 1.2.1 Initial Universe

To be eligible for inclusion in the Initial Universe, securities must have:

- Their primary listing in Developed or Emerging Market. Developed and Emerging Markets are defined by Indxx in its 'Country Classification and Investability Requirements' document.
- A minimum market capitalization of \$500 million.
- A 6-month average daily turnover greater than or equal to \$2 million.
- Traded for at least 90% of the total trading days over the last 6 months on their respective stock exchanges, and at least 90% of the total trading days over the last 3 months for an Initial Public Offering ("IPO") security.

#### 1.2.2 Free Float

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

#### 1.2.3 Maximum Price

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

#### 1.2.4 Security Type

The following security types are eligible for inclusion:

- Common Stock
- ADR
- GDR



#### 1.2.5 Share Classes

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 case of companies domiciled in China, their HK listings are considered for inclusion. If a relevant HK listing is not available, the company is ignored.
- In all other cases, the most liquid share class is considered for inclusion in the portfolio.

#### 1.3 SECURITY SELECTION PROCESS

Based on extensive research, Indxx has defined disruptive technologies as being comprised of the following themes:

3D Printing	Companies that are primarily engaged in 3D printing hardware, CAD and 3D printing software, 3D printing materials and centers, 3D scanning and measurements
Clean Energy and Smart Grid	Companies that are either Clean (carbon free – solar, wind, hydro, geothermal and waste to energy) Energy producers, clean energy equipment providers (e.g. solar panels components, wind turbines and related components), electric grid, electric meters and devices (electric infrastructure), networks, energy or other grid-related activities
Cloud Computing	Companies that are either Cloud service providers (SaaS, PaaS, IaaS, XaaS) or provide products and services that uses cloud computing technology
Cybersecurity	Companies primarily involved in the development and administration of security protocols applied to private - public networks, computers, and mobile devices for protection of the data integration and network operations
Data and Analytics	Companies that generate their revenues by providing data analytics tools and services, decision making software and market intelligence services to third parties
FinTech	Companies that utilize transformational and innovative software solutions within the financial services industry that focus on at least one of the following business areas:  Enterprise Solutions, P2P and Marketplace Lending, Crowd-Funding, Personal Finance Software, Automated Wealth Management and Trading, Blockchain and Alternative Currencies
Healthcare Innovation	Companies that are primarily engaged in Robotic Assistance, 3D solutions, Digital Healthcare, Artificial intelligence related to healthcare are included
Internet of Things	Companies that have business segments as Semiconductors and Sensors, Networking Infrastructure/Software, Equipment, Vehicle and Infrastructure/Building Technology or Consumer IoT Technology are found to be the most relevant to the Internet of Things theme
Mobile Payments	Companies that are providers of payments solutions, payment processing services, credit card network or payment industry infrastructure and software services
Robotics & Artificial Intelligence	Companies that are primarily engaged in Industrial Robotics and Automation, Unmanned Vehicles and Drones, Non-Industrial Robotics and Artificial Intelligence

These themes are comprised of companies in the following FactSet Industries:

Packaged Software	Miscellaneous Manufacturing	Insurance Brokers/Services
Electronic	Chamicala, Major Divaraified	Dublishing Pooks/Magazines
Equipment/Instruments	Chemicals: Major Diversified	Publishing: Books/Magazines

September 2018



Industrial Machinery	Aluminum	Other Consumer Specialties
Medical Specialties	Telecommunications Equipment	Financial Conglomerates
Biotechnology	Steel	Regional Banks
Industrial Conglomerates	Metal Fabrication	Other Consumer Services
Air Freight/Couriers	Finance/Rental/Leasing	Marine Shipping
Chemicals: Specialty	Electronic Production Equipment	Aerospace & Defense
Computer Processing Hardware	Investment Trusts/Mutual Funds	Computer Communications
Information Technology Services	Electrical Products	Data Processing Services
Textiles	Electric Utilities	Services to the Health Industry
Alternative Power Generation	Internet Software/Services	Trucks/Construction/Farm Machinery
Environmental Services	Internet Retail	Investment Managers
Electronic Components	Cable/Satellite TV	Hospital/Nursing Management
Industrial Specialties	Recreational Products	Auto Parts: OEM
Semiconductors	Real Estate Investment Trusts	Financial Publishing/Services
Miscellaneous Commercial Services	Computer Peripherals	Advertising/Marketing Services
Electronics/Appliances	Investment Banks/Brokers	Wholesale Distributors
Engineering & Construction		

Companies from the Master List that derive revenue greater than or equal to 50% from the above themes are considered as 'pure-play' companies. These companies are included in the 'Selection List' for the index.

#### 1.4 FINAL COMPOSITION

From the Selection List:

• The top ten 'pure-play' companies by market capitalization from each theme will form the final portfolio. If fewer than 10 companies qualify to be eligible for inclusion from a theme, all the eligible companies will be part of the final index.

#### 1.5 WEIGHTING

The index is equally weighted at the time of reconstitution and rebalancing.

#### 1.6 BUFFER RULES

Buffer Rules are employed to reduce Portfolio Turnover. The following buffer rules apply:

#### 1.6.1 Market Capitalization

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

#### 1.6.2 Liquidity

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



#### 1.7 RECONSTITUTION AND REBALANCING RULES

- The index follows an annual reconstitution and quarterly rebalancing schedule. The reconstituted portfolio becomes effective at the close of third Friday of September each year. This day is called the 'Reconstitution Effective Day'. The rebalanced portfolio becomes effective at the close of third Friday of March, June and December each year, called the 'Rebalance Effective Day'.
- The security selection and portfolio creation process start on the close of the nearest Friday falling at least one month before the Reconstitution Effective Day, called the 'Selection Day.' The selection list is created based on the data as of the Selection Day.
- Weights are calculated at the close of the seventh trading day prior to the Reconstitution Effective Day (or the Rebalance Effective Day). Index Shares are frozen using weights as of this day.

#### 1.8 ANNUAL THEME REVIEW

- To keep the identified Disruptive Themes relevant and to capture new disruptions, the list of themes is reviewed and updated on an annual basis, while performing the annual index reconstitution.
- As a result, the list of themes is subject to change each year. However, any theme identified as a
  disruptive theme shall continue to remain in the index for a minimum duration of 3 years.

#### 1.9 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'.



# 2. DISCLAIMER

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