BlueStar Artificial Intelligence Index

Index Methodology Guide 1.0

Issue Date:

March 5, 2018

Produced by:

BlueStar Global Investors, LLC d/b/a BlueStar Indexes
1350 Avenue of the Americas, Fourth Floor, New York, NY 1009
www.bluestarindexes.com

Contents

Chapter 1: Introduction and Index Description

This document summarizes the methodology and rules used to construct, calculate, and maintain the BlueStar Artificial Intelligence Index ("BAI").

BAI is a rules-based index that tracks the performance of a group of globally-listed common equity securities of companies that, according to BlueStar Indexes, are involved in or benefitting from the adoption of Artificial Intelligence ("A.I."). Index components are reviewed semi-annually for eligibility, and the weights are re-set accordingly.

Companies may not apply and may not be nominated for inclusion in the Index. Companies are added or removed by BlueStar based on the methodology described herein. The BlueStar Index Advisory Committee advises on index methodology and ensures that decisions related to the definition of which companies shall be considered Artificial Intelligence companies adheres to the methodology described herein. Whenever possible, BlueStar will publicly announce changes to the index on its website at least five trading days in advance of the actual change. The Index is calculated and maintained by Standard & Poor's based on a methodology developed by BlueStar.

BAI is calculated on a price, total return and net total return basis in real-time. The net total return index is disseminated in real-time via the CME Group, Inc (CME) and market data vendors every day the exchange of at least one index component is open. Real-time index values for the net total return index are available on Bloomberg by entering "BAINTR INDEX <GO>", and end-of-day values are freely available on BlueStar's website, www.bluestarindexes.com, and/or through market data vendors.

Chapter 2: Index Construction

This chapter outlines and defines the key steps in constructing and calculating the index, including: eligibility requirements, formulas, initial component selection, and special adjustments

2.1 Base Date and Value

BAI has the following variants, base dates and values:

Name	Index Symbol	Base Date	Base Value
BlueStar Artificial Intelligence Index (Price Index)	BAI	Dec. 28, 2012	100
BlueStar Artificial Intelligence Index Total Return	BAITR	Dec. 28, 2012	100
BlueStar Artificial Intelligence Index Net Total Return	BAINTR	Dec. 28, 2012	100

2.2 Component Eligibility Requirements

All the following requirements must be met for a company's security to be included in BAI:

1. BlueStar screens a universe of roughly 10,000 global securities for companies whose primary business activity is related to Artificial Intelligence based on the following basic framework for A.I. Traditional human-like analysis typically occurs in a five-step process: 1- Sense; 2- Reason; 3- Act; 4- Adapt; 5- Remember. A.I. processes seek to mimic this human-like analysis within two systems: 1- Machine learning; and 2- Reasoning systems. Securities selected for inclusion in the BAI will be participating in the development of or benefitting from the adoption of hardware and software related to machine learning and/or reasoning systems in one or more of the five sub-categories described in the table below. Collectively, companies involved in those industries are referred to as Artificial Intelligence companies. BlueStar screens company descriptions on bona-fide sources such as Bloomberg LP, as well as company annual filings and websites to identify the global universe of Artificial Intelligence companies.

Compute and Process Data	Semiconductor and electronics manufacturers seeing increased demand or positive selling price trends for the technology needed to implement A.I., specifically machine learning and neural networks.
Sense	Technology related to sensing inputs for machine learning or reasoning systems including: machine vision, natural language processing, location recognition, touch recognition, and automated inspection systems. Companies may not apply if the accuracy of input recognition is not based on a machine learning process.
Semiconductor Manufacturing	Companies innovating in and tied to the increased demand for specialized and advanced semiconductor manufacturing equipment and processes.
Reason/ Interpret	Typically, software companies which provide big data analytics and cloud-based systems in A.I. settings. Companies in this category typically serve end clients or service providers to end clients in multiple verticals such as content delivery, media, security or autonomous driving.
Act/Respond	Companies developing hardware or software that utilizes output from the reason/interpret function to deliver a unique output.

2. Companies included in the global universe of Artificial Intelligence companies are then screened to meet Index market capitalization and liquidity criteria. Only those companies included in the global universe of Artificial Intelligence companies that have a free-float percentage greater than 10%, market capitalization of at least $75 million USD equivalent and a six-month average daily value traded of at last $250,000 USD equivalent will be selected for inclusion in the index. For securities that do not have six months of average daily value traded data available, three months of data will be used and their eligibility for inclusion will be reviewed by the BlueStar Index Advisory Committee, which will consider factors such as liquidity over the time frame for which data is available and market capitalization.

3. Securities denominated only in the following currencies may be included in the index:

Currencies			
US Dollar	Australian Dollar	Israeli Shekel	Japanese Yen
Euro	Canadian Dollar	British Pound	Swiss Franc

BlueStar will, in most cases, use the quantitative ranking and screening system described herein. However, subjective screening based on fundamental analysis or other factors may be used if, in the opinion of BlueStar Indexes, certain components should be included or excluded.

2.3 Initial Component Selection

The following steps are taken to select the initial components for BAI at each semi-annual rebalance period:

1. Establish the list of index components according to Chapter 2.2

2. Determine the index weight of each security in the list of index components:
   a. If the number of non-US-listed securities is 25% or less of the total number of components in the index, then the individual security weights we be determined as follows. Otherwise the individual security weights will be determined as described in Chapter 3.b, below

$$W_i = \frac{1}{N}$$

Where:
W $_i$ = Weight for component $_i$
N = Total number of index components

   b. If the number of non-US-listed securities is greater than 25% of the total number of components in the index, then the individual security weights we be determined as follows.

$$WUS_i = 0.75 * \left(\frac{1}{N_{US}}\right) \quad AND \quad WXUS_i = 0.25 * \left(\frac{1}{N_{XUS}}\right)$$

Where:
WUS $_i$ = Weight for US-listed component $_i$
WXUS $_i$ = Weight for non-US-listed component $_i$
N $_{US}$ = Total number of US-listed index components
N $_{XUS}$ = Total number of non-US-listed index components

2.4 Dividend Treatment

The price index does not take normal dividend payments into account. Dividends are accounted for by reinvesting them daily. BAI uses the ex-dividend date to determine the total daily dividends for each day. Special dividends require an index advisor adjustment, as described in Chapter 3, to prevent such distributions from distorting the price index.

2.5 Index Equations

1. The price index is calculated using the following basic equations:

$$I_{(t)} = \frac{\sum_{i=1}^{n} P_{i(t)} * S_{i(t)}}{D_{(t)}}$$

Where:

$I_{(t)}$ = Index value at time $_{(t)}$
$D_{(t)}$ = Divisor at time $_{(t)}$
n = Number of stocks in the index
t = The time that the index is calculated
$P_{i(t)}$ = Price of stock $_i$ at time $_t$ in USD terms
$S_{i(t)}$ = Number of assigned shares of stock $_i$ at time $_t$

Where:

$$D_{(t)} = \frac{\sum_{i=1}^{n} P_{i(t-1)} * S_{i(t-1)}}{I_{(t-1)}}$$

Where:

$I_{(t-1)}$ = Index value at time $_{t-1}$
$D_{(t)}$ = Divisor at time $_t$
n = Number of stocks in the index
$P_{i(t-1)}$ = Closing price of stock $_i$ at time $_{t-1}$ in USD terms
$S_{i(t-1)}$ = Number of assigned shares of stock $_i$ at time $_{t-1}$

Where:

$$D_{(0)} = \frac{\sum_{i=1}^{n} P_{i(0)} * S_{i(0)}}{I_{(0)}}$$

Where:

$I_{(0)}$ = Index value at time $_0$ 100
$D_{(0)}$ = Divisor at time $_0$
n = Number of stocks in the index
$P_{i(t-1)}$ = Closing price of stock $_i$ at time $_0$ in USD terms
$S_{i(t-1)}$ = Number of assigned shares of stock $_i$ at time $_0$

2. Assigned shares are the number of shares needed for each component such that the component conforms to the weighting distribution outlined in Chapter 2.3.2

3. Changes to the index composition require divisor adjustments to retain index continuity before and after specific events, as outlined in Chapter 3. Divisor changes are made according to the following equation:

$$D_{(t+1)} = D_{(t)} * \frac{\sum_{i=1}^{n} P_{i(t+1)} * S_{i(t+1)}}{\sum_{i=1}^{n} P_{i(t)} * S_{i(t)}}$$

Where:

$D_{(t+1)}$ = Initial Divisor after changes are made to the index

Chapter 3: Index Maintenance

This chapter describes the circumstances that require index changes, as well as the details on performing those changes

3.1 Divisor Changes

Changes to the index composition due to corporate actions or component eligibility changes will require adjustments to the index divisor, as follows:

Spinoff*
1. Subtract the following from the price of the parent company:

$$\frac{\text{Spinoff stock price}}{\text{Share exchange ratio}}$$

2. Adjust the component's assigned shares such that its weighting is not changed because of the spinoff

Special Cash Dividend
1. Subtract special dividend from share price

Rights Offering
1. Subtract the following from the price of the parent company:

$$\frac{\text{Price of rights}}{\text{Rights ratio}}$$

2. Adjust the component's assigned shares such that its weighting is not changed because of the rights offering

Divisor changes are usually make on the date the corporate action becomes effective. For example, BAI uses the ex-dividend date rather than the payment date to determine when making divisor adjustments.

*If a company being spun-off is only trading on a "when-issued" basis, the "when-issued" price will be used to adjust the parent company's closing price.

3.2 Details of Share Changes

Stock splits and reverse splits do not require index divisor adjustments because the corresponding change to the stock price equally offsets the number of assigned shares, therefore not affecting the component's influence in the index.

3.3 Scheduled Component Changes and Review

BAI has a semi-annual review in June and December of each year. Fundamental data, prices and trading volumes are captured on the Tuesday before the second Friday of June and December. The new number of assigned shares for each component is determined based on the component's weight as determined

in 2.3 and the closing price of that component on the Tuesday before the second Friday of June and December. Component changes are announced and made available after the close on the second Friday of June and December. Component changes are made after the close on the third Friday of June and December and are effective at the opening on the Monday following the third Friday of June and December.

3.4 Interim Component Changes

1. Component changes may occur between regularly-scheduled review periods if a specific corporate event makes an existing component ineligible. The following events may require a component's removal or replacement:

    Merger or Acquisition
    If a merger or acquisition results in one component absorbing another, the resulting company will remain a component and the absorbed company will be removed or replaced. If a non-component company absorbs a component company, the original component will be removed, unless the non-component company, after absorbing the assets of the component company, would be considered a Artificial Intelligence company as described in Chapter 2.2. If a component is the target of an acquisition BlueStar may decide to remove or reduce the weight of that component after the "go-shop" period concludes in order to reduce potential volatility or liquidity risk in the index.

    Spin-Off
    If a company splits or spins off a portion of its business to form one or more new companies, the resulting company with the highest market value will remain a component if it meets the eligibility requirement. The remaining companies will be evaluated for eligibility and possible addition to the index.

    Bankruptcy
    A component company will be removed and replaced immediately after bankruptcy filing. Exceptions are made on a case-by-case basis. For example, a security may not be removed immediately if bankruptcy filing is not the result of operating or financial difficulties.

    Delisting
    A component company will be removed or replaced immediately after being delisted from its primary market.

Whenever possible, interim component changes are announced on BlueStar's publicly-available website at least three trading days prior to component changes becoming effective.

3.5 Unscheduled Component Weight Adjustments

Unscheduled component weight adjustments may occur between review periods if any component's weight increases by more than 300% from the components weight at the most recent Index rebalance date. The weight of any such component will be reduced to the weight of the next-highest-weighted component. The absolute weight limit for any component between rebalance periods shall be 25%

If the aggregate weight of non-US-listed securities rises above 29% between regularly-scheduled rebalance periods, the index components will be rebalanced such that the aggregate weight of all non-US-listed securities will be 25% or less of the total index.

Whenever possible, unscheduled component weight adjustments are announced on BlueStar's publicly available website at least three trading days prior to the adjustments becoming effective.

Chapter 4: Index Calculation and Dissemination

This chapter summarizes calculation and dissemination practices, quality assurance practices, and the circumstances requiring calculation corrections.

4.1 Price Calculation

Price, total return, and net total return indexes for BAI are calculated by Standard & Poor's on both an end-of-day and real-time basis. The BAI is calculated using the last traded price for each company in the Index from the relevant exchanges and markets.

Index values are rounded to two decimal places and divisors are rounded to 14 decimal places.

4.2 Calculation Frequency and Dissemination

BAI is calculated on a real-time basis beginning when the first traded price of any of the Index components is received by Standard & Poor's. Prices are delivered to CME every 15 seconds and subsequently published at that frequency. Net total return index values are available on a real-time basis through the Bloomberg information system under the index symbol "BAINTR INDEX". End-of-day net total return index values are posted on BlueStar's publicly available website, www.ise.com.

If the exchange a stock is listed on is closed or if trading in a stock is suspended prior to the market opening, the stock's adjusted closing price from the previous day will be used in the Index calculation until trading commences. If trading in a stock is suspended while the relevant market is open, the last traded price for that stock will be used for all subsequent Index calculations until trading resumes.

4.3 Input Data

Standard & Poor's uses various quality assurance tools to audit, monitor, and maintain the accuracy of its input data. While every reasonable effort is taken to ensure high standards of data integrity, there is no guarantee against errors. Please refer to the Data Correction section for more detail.

The index closing price is calculated using the closing prices issued by the primary exchange for each component stock in the index. If the primary exchange changes the closing price of a component stock, the new price will be used to calculate the index closing price. A final check of closing prices is done between one hour and one and one-half hours after the close of markets. This timeframe may be expanded at S&P's discretion on days where trading volume is unusually large at the close. For example, futures and options expiration dates, and large index rebalancing dates often result in unusually large volume. Only changes received prior to this final check are used in the closing price calculation.

Real time index prices are calculated using spot prices for foreign exchange rates throughout each trading day. Official end-of-day index values are calculated using spot rates captured at 12:00 GMT.

4.4 Data Corrections

Incorrect index component data, corporate action data, or Index Divisors will be corrected upon detection. If such errors are discovered within five days of occurrence, they will be corrected that same day. If discovered after five days, adjustments will be handled on a case-by-case basis depending on the significance of the error and the feasibility of a correction.

Incorrect intraday index tick data will not be corrected. However, incorrect opening and closing values will be corrected as soon as possible after detection.

Appendices

This section provides additional information related to BAI as well as changes to this document.

Appendix A. BlueStar Artificial Intelligence Index Constituents

As of Dec. 15, 2017

Company Name	Ticker	Exchange	Weight
ACCENTURE PLC-CL A	ACN	NYSE	1.50%
AUTODESK INC	ADSK	Nasdaq	1.50%
APPLIED MATERIALS INC	AMAT	Nasdaq	1.50%
AMBARELLA INC	AMBA	Nasdaq	1.50%
ADVANCED MICRO DEVICES	AMD	Nasdaq	1.50%
ANSYS INC	ANSS	Nasdaq	1.50%
ALTERYX INC - CLASS A	AYX	NYSE	1.50%
BAIDU INC - SPON ADR	BIDU	Nasdaq	1.50%
CADENCE DESIGN SYS INC	CDNS	Nasdaq	1.50%
COGNEX CORP	CGNX	Nasdaq	1.50%
CLOUDERA INC	CLDR	NYSE	1.50%
SALESFORCE.COM INC	CRM	NYSE	1.50%
CYPRESS SEMICONDUCTOR CORP	CY	Nasdaq	1.50%
FACEBOOK INC-A	FB	Nasdaq	1.50%
FLIR SYSTEMS INC	FLIR	Nasdaq	1.50%
ALPHABET INC-CL A	GOOGL	Nasdaq	1.50%
GSI TECHNOLOGY INC	GSIT	Nasdaq	1.50%
GRIDSUM HOLDING INC-ADR	GSUM	Nasdaq	1.50%
HP INC	HPQ	NYSE	1.50%
INTL BUSINESS MACHINES CORP	IBM	NYSE	1.50%
INTEGRATED DEVICE TECH INC	IDTI	Nasdaq	1.50%
IMMERSION CORPORATION	IMMR	Nasdaq	1.50%
INTEL CORP	INTC	Nasdaq	1.50%
LOCKHEED MARTIN CORP	LMT	NYSE	1.50%
LAM RESEARCH CORP	LRCX	Nasdaq	1.50%
LATTICE SEMICONDUCTOR CORP	LSCC	Nasdaq	1.50%
MANHATTAN ASSOCIATES INC	MANH	Nasdaq	1.50%
MICROCHIP TECHNOLOGY INC	MCHP	Nasdaq	1.50%
MICROSOFT CORP	MSFT	Nasdaq	1.50%
MICRON TECHNOLOGY INC	MU	Nasdaq	1.50%
NANOMETRICS INC	NANO	Nasdaq	1.50%
NATIONAL INSTRUMENTS CORP	NATI	Nasdaq	1.50%
NICE LTD - SPON ADR	NICE	Nasdaq	1.50%
NORTHROP GRUMMAN CORP	NOC	NYSE	1.50%
NOKIA CORP-SPON ADR	NOK	NYSE	1.50%
NUANCE COMMUNICATIONS INC	NUAN	Nasdaq	1.50%
NVIDIA CORP	NVDA	Nasdaq	1.50%
QUALCOMM INC	QCOM	Nasdaq	1.50%
QIAGEN N.V.	QGEN	NYSE	1.50%
RAYTHEON COMPANY	RTN	NYSE	1.50%
SAMSUNG ELECTR-GDR	SMSN	London Intl	1.50%
SPLUNK INC	SPLK	Nasdaq	1.50%
TERADYNE INC	TER	NYSE	1.50%
TAIWAN SEMICONDUCTOR-SP ADR	TSM	NYSE	1.50%
VARIAN MEDICAL SYSTEMS INC	VAR	NYSE	1.50%
VERITONE INC	VERI	Nasdaq	1.50%
VERINT SYSTEMS INC	VRNT	Nasdaq	1.50%
WIX.COM LTD	WIX	Nasdaq	1.50%
XILINX INC	XLNX	Nasdaq	1.50%
YEXT INC	YEXT	NYSE	1.50%
DATASECTION INC	3905	Tokyo	1.25%
DAIFUKU CO LTD	6383	Tokyo	1.25%
TOSHIBA CORP	6502	Tokyo	1.25%
RENESAS ELECTRONICS CORP	6723	Tokyo	1.25%
KEYENCE CORP	6861	Tokyo	1.25%
NIPPON TELEGRAPH & TELEPHONE	9432	Tokyo	1.25%
SOFTBANK GROUP CORP	9984	Tokyo	1.25%
AIXTRON SE	AIXA	Xetra	1.25%
AMS AG	AMS	SIX Swiss Ex	1.25%
BLACKBERRY LTD	BB	Toronto	1.25%
CARGOTEC OYJ-B SHARE	CGCBV	Helsinki	1.25%
IQE PLC	IQE	London	1.25%
ISRA VISION AG	ISR	Xetra	1.25%
JENOPTIK AG	JEN	Xetra	1.25%
KARDEX AG-REG	KARN	SIX Swiss Ex	1.25%
MAXAR TECHNOLOGIES LTD	MAXR	Toronto	1.25%
PARROT SA	PARRO	EN Paris	1.25%
QINETIQ GROUP PLC	QQ/	London	1.25%
RIBER SA	RIB	EN Paris	1.25%
SIEMENS AG-REG	SIE	Xetra	1.25%

Appendix B. Index Stats and Allocations

As of Dec. 15, 2017

Currency Exposure		
Currency	Number	Weight
USD	50	75.00%
JPY	7	8.75%
EUR	7	8.75%
GBp	2	2.50%
CAD	2	2.50%
CHF	2	2.50%
Sector Exposure		
Sector	Number	Weight
Info. Tech.	56	81.25%
Industrials	10	13.25%
Health Care	2	3.00%
Telecom. Services	2	2.50%
Totals		
Totals	Number	Weight
Total	68	100%

Appendix C. Document Change History

A history of significant changes to this document is shown in the table below

Issue	Date	Change
1.0	March 5, 2018	Initial publication