

BlueStar China Internet Software Index

Index Methodology Guide v1.0

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Chapter 1: Introduction and Index Description

This document summarizes the methodology and rules used to construct, calculate, and maintain the BlueStar China Internet Software Index (“BCHNQ”).

BCHNQ is a rules-based index that tracks the performance of a group of globally-listed stocks of companies that are domiciled in China or Hong Kong and involved in one of the following industries: e-Commerce, internet software, data processing and application software for e-commerce business clients or online entertainment providers, and home entertainment software. 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 construction. 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.

BCHNQ is calculated on a price, total return and net total return basis in real-time. The index is denominated in US Dollars (USD). 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 “BCHNQNTR INDEX <GO>”, and end-of-day values are freely available on BlueStar’s website, www.bluestarindexes.com, and/or through market data vendors.

The index is denominated in USD. 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 Reuters spot rates which are captured at 12:00 GMT.

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

BCHNQ has the following variants, base dates and values:

Name	Index Symbol	Base Date	Base Value
BlueStar China Internet Software Index (Price Index)	BCHNQ	June 29, 2013	100
BlueStar China Internet Software Index Total Return	BCHNQTR	June 29, 2013	100
BlueStar China Internet Software Index Net Total Return	BCHNQNTR	June 29, 2013	100

2.2 Component Eligibility Requirements

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

1. BlueStar screens a universe of global securities for companies domiciled in China or Hong Kong involved in one of the following industries: e-Commerce, internet software, data processing and application software for e-commerce business clients or online entertainment providers, and home entertainment software. Collectively, companies involved in those fields are referred to as Chinese Internet and Software companies.
2. Companies included in the global universe of Chinese Internet and Software companies are then screened to meet Index market capitalization and liquidity criteria. Only those companies included in the global universe of Chinese Internet and Software companies which have a free-float percentage greater than 10%, market capitalization of at least \$500 million USD equivalent, a six-month average daily value traded of at least \$1 million USD equivalent, and 20-day average bid-ask spread less than 1% 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	Hong Kong Dollar
Euro	Canadian Dollar	British Pound	Swiss Franc	Singapore Dollar

2.3 Initial Component Selection

The following steps are taken to select the initial components for BCHNQ 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. Determine each security in the Inclusion List's "Initial Weight" according to the following set of equations where:

$$IW_i = \frac{\text{Market Cap in USD of Component } i}{\sum_{i=1}^N \text{Market Cap in USD of Component } i}$$

Where:

IW_i = Initial Weight of component i

3. Set weight threshold to 6%
4. If any component's IW, as determined in step 2.a, above, is greater than the weight threshold, set that component's Modified Weight, MW, to 6%
5. Take the aggregate difference between the IW and MW of those components whose IW was modified in step 4, above, and distribute evenly among stocks whose IW was not modified in step 4, above, to arrive at each component's Second Modified Weight, MW'
6. Repeat steps 4 and 5, above, until all components' FW is less than or equal to 6%
7. If the aggregate Initial Weight of securities denominated in US Dollars (USD) is greater than or equal to 75% then the weights as determined in step 6, above, will be each component's Final Weight
8. If the aggregate MW' of securities denominated in US Dollars (USD), as determined in step 6, above, is less than 75% then find each component's Final Weight, FW, by redistributing the weight of non-USD-denominated (NUSD) such that the aggregate weight of USD-denominated securities is equal to 75% as follows:

$$W_{USDi} = W'_{USDi} + DIST_{USD} \quad \text{AND} \quad W_{NUSDi} = W'_{NUSDi} - DIST_{NUSD}$$

Where:

$$DIST_{USD} = \frac{.75 - AW_{USD}}{N_{USD}} \quad \text{AND} \quad DIST_{NUSD} = \frac{.75 - AW_{USD}}{N_{NUSD}}$$

And:

W_{USD} = Final Weight of USD-denominated index components
 W_{NUSD} = Final Weight of non-USD-denominated index components
 W'_{USDi} = Initial Weight of USD-denominated index components
 W'_{NUSDi} = Initial Weight of non-USD-denominated index components
 $DIST_{USD}$ = Weight to be added to each USD-denominated index component
 $DIST_{NUSD}$ = Weight to be subtracted from each non-USD-denominated index component
 AW_{USD} = Aggregate Initial Weight of USD-denominated index components
 N_{USD} = Total number of USD-denominated index components
 N_{NUSD} = Total number of non-USD-denominated 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. BCHNQ 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

- 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
- 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 made on the date the corporate action becomes effective. For example, BCHNQ 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

BCHNQ 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 Robotics 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 component's 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 BCHNQ are calculated by Standard & Poor's on both an end-of-day and real-time basis. The BCHNQ 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

BCHNQ 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 "BCHNQNTR INDEX". End-of-day net total return index values are posted on BlueStar's publicly available website, www.bluestarindexes.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 Reuters spot rates which are 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 BCHNQ as well as changes to this document.

Appendix A. BlueStar China Internet Software Index Constituents

As of June 15, 2018

Company Name	Ticker	Exchange	Weight
ALIBABA GROUP HOLDING-SP ADR	BABA	New York	6.00%
TENCENT HOLDINGS LTD	700	Hong Kong	6.00%
BAIDU INC - SPON ADR	BIDU	NASDAQ GS	6.00%
JD.COM INC-ADR	JD	NASDAQ GS	6.00%
NETEASE INC-ADR	NTES	NASDAQ GS	4.30%
CTRIP.COM INTERNATIONAL-ADR	CTRP	NASDAQ GS	3.88%
WEIBO CORP-SPON ADR	WB	NASDAQ GS	3.76%
IQIYI INC-ADR	IQ	NASDAQ GS	3.56%
AUTOHOME INC-ADR	ATHM	New York	3.05%
58.COM INC-ADR	WUBA	New York	2.94%
MOMO INC-SPON ADR	MOMO	NASDAQ GS	2.78%
TRAVELSKY TECHNOLOGY LTD-H	696	Hong Kong	2.69%
VIPSHOP HOLDINGS LTD - ADR	VIPS	New York	2.63%
YY INC-ADR	YY	NASDAQ GS	2.60%
SINA CORP	SINA	NASDAQ GS	2.54%
BILIBILI INC-SPONSORED ADR	BILI	NASDAQ GS	2.39%
KINGDEE INTERNATIONAL SFTWR	268	Hong Kong	2.33%
BAOZUN INC-SPN ADR	BZUN	NASDAQ GS	2.31%
FANG HOLDINGS LTD - ADR	SFUN	New York	2.22%
BITAUTO HOLDINGS LTD-ADR	BITA	New York	2.19%
CHEETAH MOBILE INC - ADR	CMCM	New York	2.17%
SOHU.COM LTD-ADR	SOHU	NASDAQ GS	2.17%
SKYWORTH DIGITAL HLDGS LTD	751	Hong Kong	2.16%
NETDRAGON WEBSOFT HOLDINGS L	777	Hong Kong	2.15%
TIAN GE INTERACTIVE HOLDINGS	1980	Hong Kong	2.14%
TCL MULTIMEDIA TECHNOLOGY	1070	Hong Kong	2.14%
LEYOU TECHNOLOGIES HOLDINGS	1089	Hong Kong	2.13%
CHANGYOU.COM LTD-ADR	CYOU	NASDAQ GS	2.12%
Q TECHNOLOGY GROUP CO LTD	1478	Hong Kong	2.12%
21VIANET GROUP INC-ADR	VNET	NASDAQ GS	2.12%
XUNLEI LTD-ADR	XNET	NASDAQ GS	2.11%
COGOBUY GROUP	400	Hong Kong	2.11%
HC INTERNATIONAL INC	2280	Hong Kong	2.10%
RENREN INC-ADR	RENN	New York	2.10%

Appendix C. Document Change History

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

Issue	Date	Change
1.0	June 15, 2018	Initial publication