

S&P Pan Asia Bond Index

Methodology

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Introduction

Highlights

The S&P Pan Asia Bond Index is comprised of a universe of bonds denominated in local currency from the following 10 countries within the Pan Asia region:

- China
- Hong Kong
- India
- Indonesia
- Korea
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand

This index excludes bonds from the following three countries within the Pan Asia region:

- Australia
- Japan
- New Zealand

The index will facilitate extensive use by institutional investment managers, mutual fund managers, ETF providers and professional advisors.

Index Family

The S&P Pan Asia Bond Index is the flagship bond index. The index tracks the performance of local currency-denominated government and corporate bonds from 10 countries within the Pan Asia region. The index is a broad, transparent and independent benchmark.

Sector level indices include:

- S&P Pan Asia Government Bond Index
- S&P Pan Asia Corporate Bond Index

Country level indices include:

- S&P China Bond Index
- S&P Hong Kong Bond Index
- S&P BSE India Bond Index
- S&P Indonesia Bond Index
- S&P Korea Bond Index
- S&P Malaysia Bond Index
- S&P Philippines Bond Index
- S&P Singapore Bond Index
- S&P Taiwan Bond Index
- S&P Thailand Bond Index

The four main government categories are:

- Sovereign Bond
- Government Bill
- Agency Bond
- Provincial Bond

The four main corporate categories are:

- Financials
- Services
- Utilities
- Industrials

The index hierarchy is as follows:



This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

Eligibility Criteria

Eligibility Factors

Currency. Securities must be issued in local currency in the respective country. Please refer to Table 1 on the following page.

Maturity. Each bond must have a maturity greater than or equal to one month from the rebalancing date. No bond matures in the index.

Country of Issue. Securities must be government or corporate debt issued from one of the 10 countries specified below:

- China
- Hong Kong
- India
- Indonesia
- Korea
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand

Coupon Type. The following coupon types are included:

- Fixed
- Zero
- Step-Up (with a predetermined schedule)
- Fixed-to-Float (provided they are fixed and one-month prior to their float date)

Exclusions. The following bond types are specifically excluded from the index:

- STRIPS
- Inflation-linked
- Floating-rate issues
- Puttable bonds
- Sukuk bonds

Size. Criteria regarding par amount outstanding differ for each country and bond type. Please refer to Table 1 on the following page.

Table 1:

Country	Currency	Sovereign Bond	Government Bill	Agency Bond	Provincial Bond	Corporate Bond
China	CNY	10 billion	5 billion	5 billion	1 billion	1 billion
Hong Kong	HKD	300 million	300 million	100 million	100 million	300 million
India	INR	30 billion	30 billion	15 billion	15 billion	3 billion
Indonesia	IDR	2 trillion	2 trillion	1.5 trillion	1.5 trillion	1 trillion
Korea	KRW	1 trillion	10 billion	1 trillion	20 billion	100 billion
Malaysia	MYR	1 billion	100 million	250 million	250 million	500 million
Philippines	PHP	3 billion	3 billion	5 billion	5 billion	3 billion
Singapore	SGD	1.5 billion	1.5 billion	500 million	500 million	100 million
Taiwan	TWD	30 billion	10 billion	2 billion	2 billion	3 billion
Thailand	THB	20 billion	20 billion	1 billion	1 billion	3 billion

Optionality. Bullets, callable, and callable-perpetual (provided they are at least one month from the first call) are included. Fixed-to-floating rate securities also qualify provided they are callable within the fixed rate period and are at least one month from the last call prior to the date the bond transitions from a fixed to a floating rate security.

Settlement. Bonds that are issued but not settled prior to the month-end rebalancing are included in the index.

Weighting. The index is market-value-weighted.

Pricing. Bid Price- Thomson Reuters.

Data Source. Thomson Reuters.

Monthly Rebalancing

Based on new issuance, size and maturity, the bonds in the index are subject to change every month, effective after the close of the last calendar day of the month.

Additions, deletions and other changes to the index arising from the monthly rebalancing are published on a best efforts basis, after the close of business, three business days prior to the last business day of the month (the announcement date). Any market events after this date that affect the constituent membership are made on the next rebalancing date. Changes to the index that are published in the announcement are not normally subject to revision and are effective after the close on the last business day of the month (the rebalancing date).

Index Construction

Index Calculations

The S&P Pan Asia Bond Index and related sub-indices are market-value-weighted.

The total return is calculated by aggregating the interest return, reflecting the return due to paid and accrued interest, and price return, reflecting the gains or losses due to changes in the end-of-day price and principal repayments.

For further details regarding Index Calculations please refer to the Appendix.

Index Maintenance

Rebalancing

The S&P Pan Asia Bond Index and related sub-indices are normally reviewed and rebalanced on a monthly basis.

The Index Committee, nevertheless, reserves the right to make adjustments to an index at any time that it believes appropriate.

Pro-forma additions, deletions and other changes to an index arising from the monthly rebalancing are published, after the close of business, no earlier than three business days prior to the last business day of the month. These may be subject to change. Final additions, deletions and other changes to an index arising from the monthly rebalancing are published one business day prior to the last business day of the month (the announcement dates).

Changes are effective after the close on the last business day of the month (the rebalancing date).

Currency of Calculation

The indices are calculated in U.S. dollars. In addition, country level indices are also calculated in local currency.

Exchange Rate

Spot foreign exchange rates, as supplied by Reuters, are used in the end-of-day calculation of the indices.

Base Dates and History Availability

Index history availability, base dates and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P Pan Asia Bond Index and related sub-indices	03/12/2014	02/28/2014	02/28/2014	100

Index Governance

Index Committee

The S&P Dow Jones Indices' Fixed Income Index Committee maintains the indices. All committee members are full-time professionals at S&P Dow Jones Indices. Meetings are held quarterly and whenever deemed appropriate.

The Committee oversees the day-to-day management of the indices, including the monthly rebalancing, determinations of intra-rebalancing changes to the indices, and maintenance and inclusion policies, including additions or deletions of bonds and other matters affecting the maintenance and calculation of the indices.

In fulfilling its responsibilities, the Committee has full and complete discretion to (i) amend, apply, or exempt the application of index rules and policies as circumstances may require and (ii) add, remove, or by-pass any bond in determining the composition of an index.

The Committee may rely on any information or documentation submitted to it or gathered by it that the Committee believes to be accurate. The Committee reserves the right to reinterpret publicly available information and to make changes to an index based on a new interpretation of that information at its sole discretion. All Index Committee discussions are confidential.

For information on [Quality Assurance and Internal Reviews of Methodology](#), please refer to [S&P Dow Jones Indices' Fixed Income Policies & Practices](#) document located on our Web site, www.spdji.com.

Index Policy

Announcements

Announcements of any relevant information pertaining to the S&P Pan Asia Bond Index and related sub-indices are made at approximately 09:00 PM China Standard Time (CST). Press releases are posted on the S&P Dow Jones Indices' Web site at www.spdji.com.

Holiday Schedule

The S&P Pan Asia Bond Index and related sub-indices are calculated daily, throughout the calendar year. The only days an index is not calculated are on days when all exchanges where an index's constituents are listed are officially closed.

End-of-Day Calculation

Index levels are calculated at the end of each business day, at approximately 08:00 PM CST, via S&P Dow Jones Indices' Web site. This may be subject to change.

Index Releases

Releases are issued by S&P Dow Jones Indices at the end of the business day. The release time is generally 09:00 PM CST.

Recalculation Policy

S&P Dow Jones Indices reserves the right to recalculate an index under certain limited circumstances. S&P Dow Jones Indices may choose to recalculate and republish an index if it is found to be incorrect or inconsistent within two trading days of the publication of the index level in question for one of the following reasons:

1. Index methodology event
2. Late announcement
3. Revised source data

Any other restatement or recalculation of an index is only done under extraordinary circumstances to reduce or avoid possible market impact or disruption as solely determined by the Index Committee.

For more information on the recalculation policy please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices document located on our Web site, www.spdji.com.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices document located on our Web site, www.spdji.com.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spdji.com, major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

Tickers

Index (Total Return Index)	Ticker
<i>Pan Asia:</i>	
S&P Pan Asia Bond Index	SPBASCOT
S&P Pan Asia Government Bond Index	SPBASGOT
S&P Pan Asia Sovereign Bond Index	SPBASSOT
S&P Pan Asia Government Bill Index	SPBASGBT
S&P Pan Asia Agency Bond Index	SPBASAGT
S&P Pan Asia Provincial Bond Index	SPBASGPT
S&P Pan Asia Corporate Bond Index	SPBASCPT
S&P Pan Asia Financials Bond Index	SPBASCFT
S&P Pan Asia Services Bond Index	SPBASCST
S&P Pan Asia Utilities Bond Index	SPBASCUT
S&P Pan Asia Industrials Bond Index	SPBASCIT
<i>Pan Asia Ex China and India:</i>	
S&P Pan Asia Ex China and India Bond Index	SPBAECOT
S&P Pan Asia Ex China and India Government Bond Index	SPBAEGOT
S&P Pan Asia Ex China and India Sovereign Bond Index	SPBAESOT
S&P Pan Asia Ex China and India Government Bill Index	SPBAEGBT
S&P Pan Asia Ex China and India Agency Bond Index	SPBAEAGT
S&P Pan Asia Ex China and India Provincial Bond Index	SPBAEGPT
S&P Pan Asia Ex China and India Corporate Bond Index	SPBAECPT
S&P Pan Asia Ex China and India Financials Bond Index	SPBAECFT
S&P Pan Asia Ex China and India Services Bond Index	SPBAECST
S&P Pan Asia Ex China and India Utilities Bond Index	SPBAECUT
S&P Pan Asia Ex China and India Industrials Bond Index	SPBAECIT

Index (Total Return Index)	Ticker
<i>China:</i>	
S&P China Bond Index	SPBCNCOT
S&P China Government Bond Index	SPBCNGOT
S&P China Sovereign Bond Index	SPBCNSOT
S&P China Government Bill Index	SPBCNGBT
S&P China Agency Bond Index	SPBCNAGT
S&P China Provincial Bond Index	SPBCNGPT
S&P China Corporate Bond Index	SPBCNCPT
S&P China Financials Bond Index	SPBCNCFT
S&P China Services Bond Index	SPBCNCST
S&P China Utilities Bond Index	SPBCNCUT
S&P China Industrials Bond Index	SPBCNCIT
<i>Hong Kong:</i>	
S&P Hong Kong Bond Index	SPBHKCOT
S&P Hong Kong Government Bond Index	SPBHKGOT
S&P Hong Kong Sovereign Bond Index	SPBHKSOT
S&P Hong Kong Government Bill Index	SPBHKGBT
S&P Hong Kong Agency Bond Index	SPBHKAGT
S&P Hong Kong Corporate Bond Index	SPBHKCPT
S&P Hong Kong Financials Bond Index	SPBHKCFT
S&P Hong Kong Services Bond Index	SPBHKCST
<i>India:</i>	
S&P BSE India Bond Index	SPBINCOT
S&P BSE India Government Bond Index	SPBINGOT
S&P BSE India Sovereign Bond Index	SPBINSOT
S&P BSE India Government Bill Index	SPBINGBT
S&P BSE India Agency Bond Index	SPBINAGT
S&P BSE India Provincial Bond Index	SPBINGPT
S&P BSE India Corporate Bond Index	SPBINCPT
S&P BSE India Financials Bond Index	SPBINCFT
S&P BSE India Services Bond Index	SPBINCST
S&P BSE India Utilities Bond Index	SPBINCUT
S&P BSE India Industrials Bond Index	SPBINCIT
<i>Indonesia:</i>	
S&P Indonesia Bond Index	SPBIDCOT
S&P Indonesia Government Bond Index	SPBIDGOT
S&P Indonesia Sovereign Bond Index	SPBIDSOT
S&P Indonesia Government Bill Index	SPBIDGBT
S&P Indonesia Agency Bond Index	SPBIDAGT
S&P Indonesia Corporate Bond Index	SPBIDCPT
S&P Indonesia Financials Bond Index	SPBIDCFT
S&P Indonesia Services Bond Index	SPBIDCST
S&P Indonesia Utilities Bond Index	SPBIDCUT
S&P Indonesia Industrials Bond Index	SPBIDCIT

Index (Total Return Index)	Ticker
<i>Korea:</i>	
S&P Korea Bond Index	SPBKRCOT
S&P Korea Government Bond Index	SPBKRGOT
S&P Korea Sovereign Bond Index	SPBKRSOT
S&P Korea Government Bill Index	SPBKRGBT
S&P Korea Agency Bond Index	SPBKRAGT
S&P Korea Provincial Bond Index	SPBKRGPT
S&P Korea Corporate Bond Index	SPBKRCPT
S&P Korea Financials Bond Index	SPBKRCFT
S&P Korea Services Bond Index	SPBKRCST
S&P Korea Utilities Bond Index	SPBKRCUT
S&P Korea Industrials Bond Index	SPBKRCIT
<i>Malaysia:</i>	
S&P Malaysia Bond Index	SPBMYCOT
S&P Malaysia Government Bond Index	SPBMYGOT
S&P Malaysia Sovereign Bond Index	SPBMYST
S&P Malaysia Government Bill Index	SPBMYGBT
S&P Malaysia Agency Bond Index	SPBMYAGT
S&P Malaysia Provincial Bond Index	SPBMYGPT
S&P Malaysia Corporate Bond Index	SPBMYCPT
S&P Malaysia Financials Bond Index	SPBMYCFT
S&P Malaysia Services Bond Index	SPBMYCST
S&P Malaysia Utilities Bond Index	SPBMYCUT
S&P Malaysia Industrials Bond Index	SPBMYCIT
<i>Philippines:</i>	
S&P Philippines Bond Index	SPBPHCOT
S&P Philippines Government Bond Index	SPBPHGOT
S&P Philippines Sovereign Bond Index	SPBPHSOT
S&P Philippines Government Bill Index	SPBPHGBT
S&P Philippines Agency Bond Index	SPBPHAGT
S&P Philippines Corporate Bond Index	SPBPHCPT
S&P Philippines Financials Bond Index	SPBPHCFT
S&P Philippines Services Bond Index	SPBPHCST
S&P Philippines Utilities Bond Index	SPBPHCUT
S&P Philippines Industrials Bond Index	SPBPHCIT
<i>Singapore:</i>	
S&P Singapore Bond Index	SPBSGCOT
S&P Singapore Government Bond Index	SPBSGGOT
S&P Singapore Sovereign Bond Index	SPBSGSOT
S&P Singapore Government Bill Index	SPBSGGBT
S&P Singapore Agency Bond Index	SPBSGAGT
S&P Singapore Corporate Bond Index	SPBSGCPT
S&P Singapore Financials Bond Index	SPBSGCFT
S&P Singapore Services Bond Index	SPBSGCST
S&P Singapore Utilities Bond Index	SPBSGCUT
S&P Singapore Industrials Bond Index	SPBSGCIT

Index (Total Return Index)	Ticker
<i>Taiwan:</i>	
S&P Taiwan Bond Index	SPBTCOT
S&P Taiwan Government Bond Index	SPBTWGOT
S&P Taiwan Sovereign Bond Index	SPBTWSOT
S&P Taiwan Government Bill Index	SPBTWGBT
S&P Taiwan Agency Bond Index	SPBTWAGT
S&P Taiwan Provincial Bond Index	SPBTWGPT
S&P Taiwan Corporate Bond Index	SPBTCPT
S&P Taiwan Financials Bond Index	SPBTCFT
S&P Taiwan Utilities Bond Index	SPBTCUT
S&P Taiwan Industrials Bond Index	SPBTCIT
<i>Thailand:</i>	
S&P Thailand Bond Index	SPBTHCOT
S&P Thailand Government Bond Index	SPBTHGOT
S&P Thailand Sovereign Bond Index	SPBTHSOT
S&P Thailand Government Bill Index	SPBTHGBT
S&P Thailand Agency Bond Index	SPBTHAGT
S&P Thailand Corporate Bond Index	SPBTHCPT
S&P Thailand Financials Bond Index	SPBTHCFT
S&P Thailand Services Bond Index	SPBTHCST
S&P Thailand Utilities Bond Index	SPBTHCUT
S&P Thailand Industrials Bond Index	SPBTHCIT

FTP

Daily index levels and index data are available via FTP subscription.

*For product information, please contact S&P Dow Jones Indices,
www.spdji.com/contact-us.*

Web site

*For further information, please refer to S&P Dow Jones Indices' Web site at
www.spdji.com.*

Appendix

Calculation of Market Values and Relative Weights

A market value is calculated for each security in the index as of the close on each day, as follows:

$$MV_t = PAR_t * \frac{(P_t + AI_t)}{100} \quad (1)$$

where:

- MV_t = Market value of the security on day t .
- PAR_t = Par Amount of the security on day t .
- P_t = Price of the security on day t .
- AI_t = Accrued interest¹ on the security up to and including day t .

If the valuation date is not a trading day, the market value will be based on the price as of the immediate prior trading day, plus interest accrued up to the valuation date. As VRDO securities are generally always priced at par except in rare circumstances, the market value of the security will generally be based on the par value plus interest accrued up to the valuation date.

The relative weight of a security i is defined as the market value of that security expressed as a percentage of the aggregate market value of all securities in the index, as follows:

$$weight_i = \frac{MV_i}{\sum_i MV_i} \quad (2)$$

¹ AI_t in (1) is calculated on a calendar date basis and uses the conventions for settlement date appropriate to the asset class. Accordingly, accrued interest will be zero on a coupon payment date.

Calculation of Total Returns

Returns are calculated for all securities, on every calendar day.

Total Return

The total return (TR) of a security on day t is the sum of the market price return and the interest return on day t :

$$TR_t = IR_t + PR_t \quad (3)$$

where:

IR_t = Interest return on day t .

PR_t = Market price return on day t .

Price return measures the return due to the change in the market price of the security. Interest return (or coupon return) includes the return due to the interest earned on that security.

Interest Return

The formula for the interest return on an individual security on day t is as follows:

$$IR_t = \frac{\left(PAR_t * \frac{AI_t}{100} - PAR_t * \frac{AI_{t-1}}{100} \right) + Int_t}{MV_{Beg}} \quad (4)$$

where:

IR_t = Interest return at time t .

AI_t = Accrued interest, up to and including day t .

AI_{t-1} = Accrued interest, up to and including day $t-1$.

PAR_t = Par amount on day t .

Int_t = Interest payment on day t .

MV_{Beg} = Market value at the beginning of day t .

Price Return

The formula for the price return for a security at time t is as follows:

$$PR_t = \frac{PAR_t * \left(\frac{P_t - P_{t-1}}{100} \right)}{MV_{Beg}} \quad (5)$$

where:

PR_t = Price return on day t .

PAR_t = Par amount on day t .

P_t = Price of the bond on day t .

P_{t-1} = Price of the bond on day $t-1$.

MV_{Beg} = Market value at the beginning of day t .

Daily Index Returns

Individual security returns are aggregated to calculate returns for the index. Specifically, the total return for the index on a given day is equal to a weighted average of the returns of the securities that constitute the index. The weight of each security return is equal to the relative weight of that security in the index, as of the previous calendar day. The index return is as follows:

$$IndexTR_t = \frac{\sum_i MV_{i, Beg} * TR_{i, t}}{\sum_i MV_{i, Beg}} \quad (6)$$

where:

$TR_{i, t}$ = Total return of security i on day t .

$MV_{i, Beg}$ = Market value of security i at the beginning of day t .

Daily Index Values

Index values are calculated each day by applying the current day's month-to-date index return to the index value on the previous monthly rebalancing date, as follows:

$$TRIV_t = TRIV_{t-1} * (1 + IndexTR_t) \quad (7)$$

where:

$TRIV_t$ = Total Return Index Value on day t .

$TRIV_{t-1}$ = Total Return Index Value on day $t-1$.

$IndexTR_t$ = Daily index return on day t , as described above.

Reinvestment Returns from Monthly Cash Flows

The S&P Pan Asia Bond Index and related sub-indices are rebalanced on a monthly basis. All cash, including interest payments and principal prepayments, are kept in cash until the next rebalance date.

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