NYSE 25 Year Plus Treasury Bond Index
(AXTWFV)

Version 1.0
Valid from
October 1, 2015

Table of contents

1. Index summary

Factsheet	
Full name	NYSE 25 Year Plus Treasury Bond Index
Index Description	The NYSE 25 Year Plus Treasury Bond Index (AXTWFV) is a multiple-security fixed income index that aims to track the total returns of the long-term 25 year and greater maturity range of the U.S. Treasury bond market.
Index Type	Total Return
Eligible securities	Treasury bonds issued by the U.S. Treasury Department with time to maturity of 25 years or greater
Number of constituents	Variable
Weighting	Amount Outstanding Adjusted for Federal Reserve Holdings
Review of composition	Announced monthly on the second to last business day of each month
Effective date of the rebalance	Effective after the close of the last business day of each month
Calculation frequency	15 seconds between 19:45 ET (Asia open) & 19:00 ET (U.S. close)
Base date	September 30, 2015
Base level	2000.00
Historic data available since	September 30, 2015
Bloomberg code	AXTWFV INDEX
Reuters code	.AXTWFV
Launch date	October 8, 2015

2. Governance and disclaimer

Index sponsor and Index calculation agent

NYSE® Group, Inc. is the index sponsor. NYSE® Arca® is the index calculation agent on behalf of NYSE® Group, Inc.

The NYSE® Arca® Index Committee is responsible for the day-to-day management of the index and is also responsible for decisions regarding the interpretation of these rules. The Index Committee reviews all rule book modifications and index constituent changes to ensure that they are made objectively and without bias. NYSE® Arca® believes that information regarding rule book modifications and index constituent changes is material and can have an impact on the market. Consequently, all Index Committee discussions and decisions are confidential.

Cases not covered in rules

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the index. Operational adjustments may also take place if, in the opinion of the index calculation agent, it is desirable to do so to maintain a fair and orderly market in derivatives on this index and/or this is in the best interests of the investors in products based on the index and/or the proper functioning of the markets.

Rule book changes

The Index Committee reviews all rule book modifications and index constituent changes to ensure that they are made objectively and without bias. These rules may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the index is compiled or calculated or affect the index in another way.

Liability

NYSE® Arca® is not liable for any losses resulting from supplementing, amending, revising or withdrawing the Rules for the index.

The index calculation agent will do everything within its power to ensure the accuracy of the composition, calculation, publication and adjustment of the index in accordance with relevant rules. However, NYSE® Arca® is not liable for any inaccuracy in share prices, calculations and the publication of the index, the information used for making adjustments to the index and the actual adjustments. Furthermore, NYSE® Arca® does not guarantee nor the continuity of the composition of the index, nor the continuity of the calculation of the index, nor the continuity of the dissemination of the index levels, nor the continuity of the calculation of the index.

Ownership and trademarks

Intercontinental Exchange, Inc. (ICE) owns all intellectual and other property rights to the index, including the name, the composition and the calculation of the index. NYSE®, NYSE Arca® and NYSE® Group, Inc. are registered trademarks of ICE's subsidiaries.

3. Publication

3.1 The opening, intraday and closing or daily publication of index values.

Opening

The first index level is calculated and published around 19:45 ET. The calculation of that level utilizes the most updated prices available at that moment. In the case of bonds that have a non-traded, halted or suspended status, or have not opened for the current day, the previous day's reference prices or estimated prices are used.

Dissemination frequency

The level of the index is in principle published every 15 seconds to the NYSE Global Index Feed (NYSE GIF). The calculated index levels incorporate the latest midpoint prices representing the average of the bonds' bid and ask of each bond.

The index is published from 19:45 ET until 19:00 ET (next-day) on those days specified as index business days. Index business days will be classified as days on which the U.S. bond markets are open for a full or partial day of trading.

Closing level

At the end of each trading day, a closing price is derived for each U.S. Treasury bond contained in the index. This price represents the fair value bid of each bond as of 4 PM EST. On days when the U.S. equity markets close early, the bond prices are derived at the closing time of the New York Stock Exchange, or 1 PM EST. On days when the U.S. bond market has a suggested early close as determined by SIFMA, the bond prices are derived at the suggested close of 2 PM EST. The index is not calculated or published on days on which the U.S. bond market is closed for trading as per SIFMA's recommendations. An official index close is calculated and published each trading day that utilizes these fair value bond prices. In the case of exceptional market conditions, the index calculation agent reserves the right to utilize other prices in the calculation of the official closing level, as indicated below in Section 3.2.

3.2 Exceptional market conditions and corrections

The index calculation agent retains the right to delay the publication of the opening level of the index. Furthermore, the index calculation agent retains the right to suspend the publication of the level of the index if it believes that circumstances prevent the proper calculation of the index.

If index bond prices are cancelled, the index will not be recalculated unless the index calculation agent decides otherwise.

Commercially reasonable efforts are made to ensure the correctness and validity of data used in real-time index calculations. If incorrect price or corporate action data affects index daily highs, lows, or closes, it is corrected retroactively as soon as possible.

There is the possibility of an exchange or market-wide event resulting in the normal closing auction not going off or official closing prices not being available. In those situations, the index will take guidance from the respective exchange(s) and address on an event-by-event basis. Exchange or market-wide events include, but are not limited to, the following:

- Volatility Halts
  - LULD (Limit Up / Limit Down)
  - Circuit Breaker
- Technological Problems / Failures
- Natural Disaster or Other BCP-Related Event

3.3 Announcement policy

Announcement policy

Changes to the index methodology will be announced by an index announcement which will be distributed via www.nyxdata.com and ftp2.nyxdata.com.

As a general rule the announcement periods that are mentioned below will be applied. However, urgently required corporate action treatments, often resulting from late notices from the relevant company or exchange, may require the index calculation agent to deviate from the standard timing.

Rule changes

For the future, barring exceptional circumstances, a period of at least two months should pass between the date a proposed change is published and the date it goes into effect. Exceptions can be made if the change is not in conflict with the interests of an affected party, which specifically includes external parties that license the index for a tracking product.

Reviews: publication of new selection

The new composition of the index, including the bonds to be a part of the index and their corresponding index shares will be announced at least two trading days before the effective date on www.nyxdata.com and ftp2.nyxdata.com. For example, for the rebalance effective for November 2, 2015, the announcement would occur on October 29, 2015.

4. Calculation

4.1 Calculation of the index

The index is calculated on a Total Return basis. The current index level would be calculated by dividing the current modified index market capitalization by the index divisor. The divisor was determined off of the initial capitalization base of the index and the base level. The divisor is updated as a result of composition changes.

Accrued interest and coupon payments that are earned or received during the month from all of the bonds are accounted for within the index through separate cash components. If any coupon payments are paid by the index bonds during the month, they are held in the index until the next rebalance date, at which time they will be reinvested back into the new index composition. The coupon payments that are received for the index's constituent bonds are not reinvested at any short term cash rate.

4.2 Currency Conversion

The index is calculated and published in USD. The index calculation agent reserves the right to create, calculate, and publish the index in other currencies as required.

5. Index reviews

5.1 General aim of reviews and frequency

<u>General aim of the periodical review</u>

The general aim of the monthly review of the index is to ensure that the selection of the bonds continues to reflect the underlying market.

<u>Frequency</u>

The reviews become effective after the close of the last business day of each month.

The announcement will be made two trading day before the effective date of the rebalance.

5.2 Index eligibility

In order to be eligible for inclusion in the index, a bond must meet the following requirements:

- Must be issued by the U.S. Treasury Department
- Must have a maturity of 25 years or greater at the time of rebalancing

- Must be U.S.-dollar denominated
- Must be either a callable or non-callable (bullet) issue
- Must have a fixed, non-zero coupon
- Must not be classified as belonging to the TIPS or STRIPS universes (Treasury Inflation-Protected Securities / Separate Trading of Registered Interest and Principal Securities)

5.3 Index Annual Adjustment Process

Upon completion of the index selection process, the list of new bonds and their corresponding float-adjusted amounts outstanding will be announced on the second to last business day of each month. The weighting of the bonds within the index is reset during the rebalance to represent each issue's market value based off of its float-adjusted amount outstanding. These float adjustments accounted for any purchases and sales of the relevant bond within Federal Reserve open market operations, as of the latest System Open Market Account (SOMA) Holdings Report released by the Federal Reserve Bank of New York on the rebalance determination date. The adjustments also took into account any issuance or reissuance of a bond that was bought by the Federal Reserve in an auction. In addition, any coupons for existing issues in the index paid out during the month ended will be reinvested back into the index. Any changes in market capitalization between the pre-rebalance and post-rebalance composition are accounted for via a divisor adjustment.

6. Index Formula

6.1 Index calculation formula

The calculation of the current index level including the official closing price is derived as follows:

$$Index\,Value = \frac{\sum_{Bond=1}^{X}\left[(P_{Bond} \times O_{Bond}) + AI_{Bond} + CR_{Bond}\right]}{Index\ Divisor}$$

where:

P_{Bond}	= Price of the bond ["Clean price"; quoted without accrued interest]
O_{Bond}	= Amount outstanding of the bond as of the last rebalance date
AI_{Bond}	= Total accrued interest on the index bond since last coupon payment
CR_{Bond}	= Coupon payments received for the index bond since the last rebalancing
Bond=1	= Calculation performed for first bond in the index
X	= Number of bonds in the index; Calculation is performed for each bond in the index

Accrued interest and coupon payments that are earned or received during the month from all of the bonds are accounted for within the index through separate cash components. Accrued interest is calculated for the bonds within the index using the standard U.S. Treasury actual/actual day count method. In addition, the accrued interest for the bonds reflects the accepted convention of calculating accrued interest up to and including the settlement date (T+1 business days for U.S. Treasuries, where T is the current day of index calculation):

$$Accrued\ \ Interest = \left(\frac{CPN}{P_{Freq}}\right) \times \left[\frac{\left(ST_{Date} - PD_{\Pr ev}\right)}{\left(PD_{Next} - PD_{\Pr ev}\right)}\right] \times \left(FVAL_{Bond}\right)$$

where:

CPN	= Coupon of the bond
P_{Freq}	= Frequency of coupon payments on the bond per year
ST_{Date}	= Settlement date of the calculation [T+1 business days; T = Current day of index calculation]
PD_{Prev}	= Previous payment date of the bond coupon
PD_{Next}	= Next payment date of the bond coupon
$FVAL_{Bond}$	= Face value of the bond

All index constituent changes use standard settlement conventions. As a result, any issues being deleted are removed at a “dirty price” equal to its quoted “clean price” plus accrued interest up to the T+1 settlement date, where T is equal to the current index calculation day. Similarly, a new bond issue is added into the index at a “dirty price” equal to its quoted “clean price” plus accrued interest up to the T+1 settlement date. In the post-rebalance index composition, each new bond’s “clean price” is utilized along with its determined bond amount outstanding in the calculation of its index market value. All of the accrued interest for the new bond issues is added into the index as cash.