

(Reference Translation)

Tokyo Stock Exchange Leveraged and Inverse Index Guidebook

July 3, 2023
JPX Market Innovation & Research, Inc.

Published July 3, 2023

Table of Contents

1 . Introduction.....	3
2 . Outline	4
(1) Outline	4
(2) Leveraged and Inverse Base Indices.....	4
3 . Calculation Method	5
(1) TSE Leveraged Indices.....	5
(2) TSE Inverse Indices	5
4 . Others.....	7
(1) Publication	7
(2) License agreement.....	7
(3) Contact	7

Record of Changes

DATE	Changes
2023/2/13	* Added revisions with regard to the business transfer to JPXI (applied on April 1, 2022 retroactively)
2023/7/3	* Added Tokyo Stock Exchange REIT Leveraged (2x) Index, Tokyo Stock Exchange REIT Inverse (-1x) Index and Tokyo Stock Exchange REIT Double Inverse (-2x) Index

1 . Introduction

- Based on the stock indices calculated by JPX Market Innovation & Research, Inc. (hereinafter the “JPXI”), JPXI calculates indices that apply leverage effects to the base indices (hereafter “TSE Leveraged Indices ”) and indices that reflect the opposite trend of the base indices (hereafter “TSE Inverse Indices ”) in accordance with, as a rule, the methods described in this document. When an event that is not specified in this document occurs, or if JPXI decides it is impossible to use the methods described in this document, the TSE may use an alternative method of index calculation as it deems appropriate.
- Copyright to this document is owned by JPXI, and any copies, reprints and reproductions of this document or any part of this document are prohibited without the prior approval of JPXI. This document is prepared solely for the understanding of indices calculated and published by JPXI, and is not to be construed as a solicitation or offer to buy or sell any securities or related financial instruments. Information expressed in this document is subject to change without notice and in those cases JPXI undertakes no obligation to update any recipients of this document. JPXI shall accept no liability or responsibility for any loss or damage arising from errors, delays, or termination of the calculation or publication of TSE Inverse Indices, changes to its calculation or publication method, the use of TSE Inverse Indices or all or any part of this document or other similar events.
- This translation may be used only for reference purposes. This English version is not an official translation of the original Japanese document. In cases where any differences occur between the English version and the original Japanese version, the Japanese version shall prevail. JPXI shall individually or jointly accept no responsibility or liability for damage or loss caused by any error, inaccuracy, or misunderstanding with regard to this translation.

2. Outline

(1) Outline

- TSE Leveraged Indices apply a positive multiple to the daily rate of return of the base index, and are designed to act as indicators for leveraged investment in each base index.
- TSE Inverse Indices apply a negative multiple to the daily rate of return of the base index, and are designed to act as indicators for investments that move inversely (or a multiple of inverse movement) to the base index.

(2) Leveraged and Inverse Base Indices

Base Indices are as below:

- Tokyo Stock Price Index (TOPIX)
- Tokyo Stock Exchange REIT Index

3. Calculation Method

For the changes of the Number of shares for index calculation and Base Market Value, the “Index Calculation Guidebook” is applied and uses the same data for Base Indices. The same is also applied to the prices for index calculation.

(1) TSE Leveraged Indices

- TSE Leveraged Indices apply a positive multiple to the daily rate of return*** of the base index using the below formula.

Current Day Index Value = Previous Day Index Value * (1 + N * % Base Index return from previous day)

- Base Indices, leverage rates, base dates and base values are as below:

Index Name	Base Index	Leverage Rate (N)	Base Date	Base Value
TOPIX Leveraged (2x) Index	Tokyo Stock Price Index (TOPIX)	2	December 30, 2011	10000 points
Tokyo Stock Exchange REIT Leveraged (2x) Index	Tokyo Stock Exchange REIT Index	2	December 7, 2018	10000 points

*** round off to two decimal places

(2) TSE Inverse Indices

- TSE Inverse Indices apply a negative multiple to the daily rate of return*** of the base index using the below formula.

Current Day Index Value = Previous Day Index Value * (1 - N * % Base Index return from previous day)

- Base Indices, leverage rates, base dates and base values are as below:

Index Name	Base Index	Leverage Rate (N)	Base Date	Base Value
TOPIX Inverse (-1x) Index	Tokyo Stock Price Index (TOPIX)	1	December 30, 2011	10000 points
TOPIX Double Inverse (-2x) Index	Tokyo Stock Price Index (TOPIX)	2	December 30, 2011	10000 points
Tokyo Stock Exchange REIT Inverse (-1x) Index	Tokyo Stock Exchange REIT Index	1	December 7, 2018	10000 points

Index Name	Base Index	Leverage Rate (N)	Base Date	Base Value
Tokyo Stock Exchange REIT Double Inverse (-2x) Index	Tokyo Stock Exchange REIT Index	2	December 7, 2018	10000 points

*** round off to two decimal places

4. Others

(1) Publication

- TSE Leveraged and TSE Inverse Indices are calculated by JPXI and are scheduled to be distributed to securities companies, media outlets, etc. throughout the country in real time (i.e. every 15 seconds) through the Market Information System.

(2) License agreement

- The TSE Leveraged and TSE Inverse Indices calculated and published by JPXI are the intellectual property of JPXI and/or its affiliates. All rights regarding such indices including but not limited to calculation, publication, dissemination, and use of the TSE Leveraged and TSE Inverse Indices are reserved by JPXI.
- A license agreement is required when using the indices to create or sell financial products such as funds and linked bonds (including OTC derivatives such as options, swaps, warrants, etc.). Such agreement is also required when using the indices for commercial purposes such as dissemination to third parties.

(3) Contact

JPX Market Innovation & Research, Inc.
Index Business Department
E-mail: index@jpx.co.jp