



The Stock Exchange of Thailand

Ground Rules for SET Index Series

Fixed Income and Other Product Department

The Stock Exchange of Thailand

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1. Overview

1.1. Index created by The Stock Exchange of Thailand (SET)

The Stock Exchange of Thailand has created Index Series to correspond with capital market development that has been happening at various periods of time and respond to various investors' needs. The index series can be used for many purposes, i.e. to reflect the price movements of securities traded on SET, to be the benchmark for investment performance, or to use as underlying index of such financial instruments as derivatives, mutual funds and exchange-traded fund (ETF), etc. In any case, the Index Series created by SET is a proprietary SET's trademark, owned by SET.

1.2. Index Operation Framework

SET Index Operation Framework comprises of index calculation and dissemination, index information service, and selection of index constituents according to the pre-defined criteria. SET clearly specifies operational criteria and guidelines, with internal audit function to ensure accurate and continuous index dissemination.

In case of any major adjustment, amendment or addition of SET Index Series' Ground Rules which have significant impact on the SET's stakeholders such as listed companies, brokerage firms, asset management companies, etc., SET may ask for comments from such stakeholders. SET will announce the changes to its index rules in advance of implementation.

1.3. Groups of Index created by SET

The index created by SET can be divided into 3 main groups as follows:

1. SET Index Series, consisting of

1.1 SET Index is the composite index that reflects the movement of securities on SET.

1.2 SET Industry Group Index and SET Sector Index are indices that reflect the movement of securities in the same industry group or business sector as categorized by SET. Please see details via [SET's Industry Group and Sector classification](#).

1.3 SET50 Index and SET100 Index are indices to be used as underlying index by selecting the top 50 and 100 listed companies' securities respectively, in terms of large market capitalization and high liquidity. Please see details of the criteria in section 4 of this document.

1.4 SET High Dividend 30 (SETHD) Index is an index that reflects the movement of securities with large market capitalization, high liquidity and continuously high dividend yields. Please see details of selection criteria in section 4 of this document.

2. mai Index Series, consisting of:

2.1 mai Index, the composite index reflecting the movement of securities on mai.

2.2 mai Industry Group Index, an index reflecting the movement of securities in the same industry group. mai's classification is the same as SET's: [SET's Industry Group and Sector classification](#).

3. Total Return Index (TRI) is an index that measures all kinds of returns from securities investment, consisting of:

3.1 SET TRI

3.2 SET50 TRI

3.3 SET100 TRI

3.4 SETHD TRI

3.5 mai TRI

3.6 Industry TRI

3.7 Sector TRI

2. SET Index Committee

SET has established the SET Index Committee to set policy on index development so as to respond to the need of users and making it comparable to the common practice used internationally. In addition, the SET Index Committee is responsible for approving the result of index constituent selection according to the criteria as well as any change to the selection criteria, using its judgment as specified in the criteria, and giving any advice related to index operation. All these are carried out to ensure that the operations are in line with SET's objectives.

3. Index Calculation

Index created by SET is calculated as Price Index and Total Return Index.

3.1. Price Index

Price Index is an index that reflects price movement of securities which are constituents of the index. The index created by SET is weighted average market capitalization index. The price index consists of SET Index Series and mai Index Series.

Price Index formula:

$$Index = \frac{Current\ Market\ Value}{Base\ Market\ Value} \times Base\ Value$$

Where:

Current Market Value (CMV)	=	total market value of constituents at current date
Base Market Value (BMV)	=	total market value of constituents at base date
Base Value	=	Base point of the index

SET High Dividend 30 Index is also weighted by dividend yield.

SETHD Index formula:

$$Index = \frac{CMV\ adjusted\ by\ Dividend\ Yield}{BMV\ adjusted\ by\ Dividend\ Yield} \times Base\ Value$$

$$= \frac{\sum_{i=1}^n (Dividend\ Yield_i \times Price_{it} \times Listed\ Share_{it})}{BMV\ adjusted\ by\ Dividend\ Yield}$$

Where:

CMV adjusted by Dividend Yield = total market value of the index at current date weighted by dividend yield

BMV adjusted by Dividend Yield = total market value of the index at base date weighted by dividend yield

Base Value = Base point of the index

- Dividend Yield_i = Dividend yield of each constituent of the index, capped at 15%.
- Price_{it} = Market price of each constituent at time t
- Listed Share_{it} = Number of listed shares of each constituent at time t

Summary of base date and base point of Price Index is as follows:

Name of Price Index	Base Date	Base Points
SET Index	April 30, 1975	100 points
mai Index	September 2, 2002	100 points
SET Industry Group Index	December 31, 2003*	100 points
SET Sector Index	April 30, 1975*	100 points
mai Industry Group Index	December 30, 2014*	100 points
SET50 Index	August 16, 1995	1,000 points
SET100 Index	April 30, 2005	1,000 points
SETHD Index	June 30, 2011	1,000 points

*Please see details via [SET's Industry Group and Sector classification](#).

3.2 Total Return Index (TRI)

Total Return Index (TRI) is an index that measures all kinds of return on securities investment including capital gain/loss and dividends. It is based on the additional assumption that dividends are reinvested in securities.

TRI formula:

$$TRI_t = TRI_{t-1} * (1 + \text{Daily Total Return}_t)$$

Where:

- TRI_t = Total return index at current date
- TRI_{t-1} = Total return index at previous date
- Daily Total Return_t = Daily total return at current date

Daily total return is calculated by using the following formula:

$$\text{Daily Total Return}_t = \frac{\text{Index Value}_t + \left(\frac{\text{Total Dividend Payment}_t}{\text{BMV}_t} \right)}{\text{Index Value}_{t-1}} - 1$$

Where:

Index Value _t	=	Price index value at current date
Index Value _{t-1}	=	Price index value at previous date
BMV _t	=	Base market value of total securities at base date
Total Dividend Payment _t	=	Total dividend payment of all constituents of the index at current date

Dividends are the gross amount (before tax) that the company announced to pay. The types of dividends used are as follows:

- Normal Cash Dividend is paid from net profit of a firm's current performance or from retained earnings.
- Special / Extra Dividend is paid apart from normal cash dividend. Extra dividend occurs when a firm has income from special events.
- Capital Repayment is an event where a firm pays capital back to shareholders.

Remark: Stock Dividend is not included because it is not in the form of cash that can be reinvested.

Timing of reinvestment is based on the assumption that the dividends will be reinvested on the day the constituent is posted XD (ex-dividend date). If a constituent has no trading on the XD-date, SET will take dividends into TRI calculation on the first day that the constituent is traded.

Summary of base date and base point of Total Return Index is as follows:

Name of Total Return Index	Base Date	Base Point
SET TRI	January 2, 2002	1,000 points
mai TRI	September 2, 2002	1,000 points
SET Industry Group TRI	December 31, 2003*	1,000 points
SET Sector TRI	January 5, 2004*	1,000 points
mai Industry Group TRI	December 30, 2014*	1,000 points
SET50 TRI	January 2, 2003	1,000 points
SET100 TRI	April 29, 2005	1,000 points
SETHD Index	July 4, 2011	1,000 points

* Please see details via [SET's Industry Group and Sector classification](#) .

3.3 Adjustment of Index Base Value

In order to make the index truly reflect the movement of the Index constituents, SET will adjust index base value based on the following principle:

Index after adjustment = Index before adjustment

$$\frac{CMV_n}{BMV_n} = \frac{CMV_0}{BMV_0}$$

$$BMV_n = BMV_0 \times \frac{CMV_n}{CMV_0}$$

Where:

- CMV_n = Current market value after adjustment
- BMV_n = Base market value after adjustment
- CMV₀ = Current market value before adjustment
- BMV₀ = Base market value before adjustment

SET will make adjustments in index calculation according to the following events:

1) When a new index constituent is added as a result of:

- New Issue
- Resuming of trading of securities which have been suspended for more than 1 year
- Change of market
- New constituent at periodic review or between periodic review for SET50 Index or SET100 Index or SETHD
- Change of Industry group or Sector for only Industry group Index or Sector Index, etc.

2) When an existing index constituent is removed as a result of:

- Delisting
- Securities which are suspended for more than 1 year
- Change of market
- Constituent removed at periodic review or between periodic review for SET50 Index or SET100 Index or SETHD
- Change of Industry group or sector for only Industry group Index or Sector Index, etc.

3) When there are changes in number of shares of index constituents due to capital increase, capital decrease, conversion of debentures to common stocks, exercise of warrants, etc. Exceptional cases are as follows:

- Split: no adjustment is made to the base market value, due to the fact that the stock split increases number of listed shares and makes stock price decrease in the same proportion. Thus, market value of such security is unchanged.
- Stock dividend: no adjustment is made to the base market value since it is just a transfer of retained earnings to paid-up capital.

Examples of index calculation are in Appendix A.

4. Criteria for Constituents Selection for SET50 Index, SET100 Index and SET High Dividend 30 Index

4.1. Index Review Period

The index review is conducted every 6 months: in June (for index calculation during the second half of each year) by using data from June 1 of the previous year until May 31 of the year in review, and in December (for index calculation during the first half of the following year) by using data from December 1 of previous year until November 30 of the year in review.

4.2. Constituents of SET50 Index and SET100 Index

4.2.1. The eligible securities must be stocks which listed and traded on SET for a minimum of 6 months.

This criteria do not apply for securities according to Criteria for Changing of Constituent between the Periodic Review in section 4.4.1.1.

4.2.2. The eligible stocks must not be any of the followings:

- Likely to be delisted according to SET regulations
- Undergoing delisting process
- Being currently suspended (SP) from trading for a long period
- Having tendency to be suspended for an extended period of time (such as 3 months due to not being able to submit financial statement, etc.)

4.2.3. The eligible stocks must be in the top 200 stocks in terms of average daily market capitalization for the past 3 months. For the stocks selected according to Criteria for Changing of Constituent between the Periodic Review and traded for less than 3 months, the average daily market capitalization from the first trading day will be considered.

4.2.4. The eligible stocks must maintain their free-float of no less than 20% of the listed company's paid-up capital, by considering the latest data in the index review period.

4.2.5. Trading of eligible stocks under normal circumstances is continuous for a certain period of time. Stock's monthly trading value must be at least 50% of the average monthly trading value per common stock in the same month for at least 9 out of the 12 months during the evaluation period, or at least three-fourths of the trading period but not less than 6 months for stocks traded less than 12 months. Trading of new stock being added between the periodic review should meet at least three-fourths of its trading period.

4.2.6. The eligible stocks must have trading shares of at least 5% of the listed shares of that stock in the same month that trading value complies with the condition in section 4.2.5.

4.2.7. If the number of eligible stocks is less than 105, SET will take the following criteria:

- 4.2.7.1. Reduce the percentage of trading value from 50% by 5% at a time. However, the limit will not be less than 20%.
- 4.2.7.2. Reduce the number of months by 1 month at a time, but not less than 6 months. There is an exception for the new stock being added between the periodic review.
- 4.2.7.3. Reduce the percentage of trading shares from 5% by 0.5% at a time, but not less than 1%. However, in order to get 105 stocks, SET may reduce the percentage of trading value, the number of months or the percentage of trading shares according to the consideration of the SET Index Committee.

The top 50 stocks ranked by average daily market capitalization will be chosen for the calculation of the SET50 Index. The top 100 stocks, which include all those in the SET50 Index together with the next 50 stocks, will be used in calculating the SET100 Index.

Reserve List

- Securities ranked # 51 - 55 will be the reserve stocks for the SET 50 Index.
- Securities ranked # 101 - 105 will be the reserve stocks for the SET 100 Index.

4.3. Constituents of SET High Dividend 30 Index

4.3.1 The eligible securities must be the constituents of the SET 100 Index in the same period.

4.3.2 The eligible securities must be stocks that have paid dividends continuously, by taking into consideration their financial data of 3 accounting periods, as follows:

4.3.2.1 As a listed company, cash dividends are paid continuously for at least during the last three years.

4.3.2.2 Dividend payout ratios are no more than 85% in each of the last three years.

4.3.3 If the number of eligible stocks is less than 35, the following steps will be taken:

4.3.3.1 To increase the dividend payout ratio from 85% by 5% at a time but not exceed 100%.

4.3.3.2 To decrease the number of years from 3 years by 1 year at a time. However, the minimum year must not be less than 1 year.

In order to get 35 stocks, SET may implement any other criteria that the SET Index Committee deems appropriate.

The eligible stocks that have passed the above criteria will be ranked in descending order by the average daily dividend yield for the past 3 months during the periodic review. The top 20 constituents will be included in the calculation of the SET High Dividend 30 Index. The next 10 constituents are then selected from rankings # 21-40. The existing constituents of SET High Dividend 30 Index will get the first priority. After that the rest in ranking will be considered until there are 30 constituents.

Reserve lists are securities ranked # 31 – 35.

4.4 Criteria for Changing of Constituents between the Periodic Review

4.4.1 New Issue

4.4.1.1 A new listed company will be included in SET50 Index or SET 100 Index calculation between the periodic review, if the new listed company is large in size, for example, its market capitalization is expected to be greater than 1% of SET Index's total market capitalization, or it is expected to be as large as one of the top 20 of the SET50 or SET100 constituents.

4.4.1.2 The New Issue does not include the new listed company which results from restructuring, merger & acquisition with the existing listed company as shown in section 4.4.2.

4.4.1.3 The new company will be included in the index at the end of its first trading day. In this process, the stock with lowest ranking by market capitalization will be removed to the reserve list.

4.4.1.4 There is no adjustment for SET High Dividend 30 Index.

4.4.2 Mergers & Acquisitions, Takeovers, and Complex Corporate Restructurings

4.4.2.1 If the above corporate events are carried out between the stocks in the SET50 Index or SET100 Index or SET High Dividend 30 Index, the company resulting from the events will remain in the same index. The reserve list will be selected to maintain the number of constituents in the index.

4.4.2.2 In case the above corporate events are carried out between the SET50 Index or SET100 Index or SET High Dividend 30 Index and non-constituents:

4.4.2.2.1 If the existing constituent of the SET50 Index or SET100 Index or SET High Dividend 30 Index is still a listed stock, it can still be in the SET50 Index or SET100 Index or SET High Dividend 30 Index as before.

4.4.2.2.2 If the existing constituent of the SET50 Index or SET100 Index or SET High Dividend 30 Index is not a listed stock anymore, the resulting company that applies for listing will replace such constituent in the SET50 Index or SET100 Index or SET High Dividend 30 Index at the end of its first trading day.

4.4.2.3 If the restructuring of the SET50 Index or SET100 Index or SET High Dividend 30 Index constituent has caused split or spin off into two or more companies and the constituent of the SET50 Index or SET100 Index or SET High Dividend 30 Index is still a listed stock, it can still be in the SET50 Index or SET100 Index or SET High Dividend 30 Index as before.

4.4.2.4 If any constituent resulting from 4.4.2 has free float less than 20%, it will be removed from the index calculations and be replaced by the reserve list so as to maintain the number of constituents in the index.

4.4.2.5 Any other cases will be considered by the SET Index Committee.

4.4.3 Trading Suspension for Long Period

If a constituent of the SET50 Index or SET100 Index or SET High Dividend 30 Index is suspended from trading for 20 business days or more, SET may remove that constituent from the index calculation.

4.5 Undertaking due to Changing of Constituent between the Period Review

4.5.1 When the stock is added as a constituent in SET50 index or SET100 index or SET High Dividend 30 Index, causing the removal of constituent from such index to the reserve list, SET will take out the constituent with the smallest market capitalization at closing price of the third day before the day of removing the constituent from the calculations.

4.5.2 Selection from the reserve list to replace the removed constituent to maintain the number of constituents in the index.

4.5.2.1 SET will choose the reserve stock of SET50 index or SET100 index with highest market capitalization at the closing date 3 days before removing the constituent from the calculations.

- 4.5.2.2 SET will choose the reserve stock of SET High Dividend 30 with highest dividend yield calculated at the latest periodic review.
- 4.5.2.3 If reserve stocks are not enough, it will be under the consideration of the SET Index Committee in order to maintain the number of constituents in the index.
- 4.5.3 SET will announce the change in the constituents of the SET50 Index or SET100 Index or SET High Dividend 30 Index calculations in advance of implementation.

In any event that the selection of SET50 index or SET100 index or SET High Dividend 30 Index needs interpretation of the pre-defined criteria or that the criteria is not completely specified or do not cover. SET Index Committee will consider such event and the decision of SET Index Committee is final.

5 Definition of Key Terms

SET defines the definition of Key Terms in Key Statistics and Financial Ratio Manual Guide so that investors can use for making investment decision.

6 Disclaimer

This document is provided for giving an information to investors. It is not for investment advice or legal opinion. SET shall not be responsible for authentication of information, including for damage caused by using or referring or disseminating a part or all of information. Moreover, SET has the rights to change or amend the contents of this document as appropriate.

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Appendix A – Examples of Index Calculation

Day 1. Base date

Assumption: There are 3 listed companies.

Stock A: 100,000 shares, par value = THB100, market price = THB110

Stock B: 300,000 shares, par value = THB100, market price = THB160

Stock C: 200,000 shares, par value = THB100, market price = THB120

$$\begin{aligned}
 \text{Base Index} &= \frac{CMV}{BMV} \times 100 \\
 &= \frac{\sum_{i=1}^n P_{it} Q_{it}}{\sum P_{io} Q_{io}} \times 100 \\
 &= \frac{(110 \times 100,000) + (160 \times 300,000) + (120 \times 200,000)}{(110 \times 100,000) + (160 \times 300,000) + (120 \times 200,000)} \times 100 \\
 &= \frac{83,000,000}{83,000,000} \times 100 \\
 &= 100
 \end{aligned}$$

Day 2. Change in market prices

The market prices of A, B and C change to THB 120, THB 170 and THB 110, respectively. The Index then becomes:

$$\begin{aligned}
 \text{Index (2)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(120 \times 100,000) + (170 \times 300,000) + (110 \times 200,000)}{83,000,000} \times 100 \\
 &= \frac{85,000,000}{83,000,000} \times 100 \\
 &= 102.41
 \end{aligned}$$

Day 3. New listing of stock D

The market prices of A, B and C change to THB 110, THB 170 and THB 120, respectively. In addition, stock D is a newly listed stock today, with 150,000 shares and closing price of THB 140.

When a new stock is listed or any stock is added in the Index, the number of listed stocks and the market value will be affected. SET will adjust the Base Market Value (BMV) by using the closing price of that stock on the first trading day. However, the price movement of stock D is not included in the index during the first trading day. At the end of Day 3, the Index then becomes:

$$\begin{aligned}
 \text{Index (3)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(110 \times 100,000) + (170 \times 300,000) + (120 \times 200,000)}{83,000,000} \times 100
 \end{aligned}$$

$$= \frac{86,000,000}{83,000,000} \times 100$$

$$= 103.61$$

Then, the BMV for Index on Day 4 will be:

$$\begin{aligned} BMV_n &= BMV_0 \times \frac{CMV_n}{BMV_n} \\ &= 83,000,000 \times \frac{(110 \times 100,000) + (170 \times 300,000) + (120 \times 200,000) + (140 \times 150,000)}{(110 \times 100,000) + (170 \times 300,000) + (120 \times 200,000)} \\ &= 83,000,000 \times \frac{107,000,000}{86,000,000} \\ &= 103,267,441 \end{aligned}$$

The comparison of Index between before and after the adjustment is as follows:

$$\frac{CMV_n}{BMV_n} = \frac{CMV_0}{BMV_0}$$

$$\frac{107,000,000}{103,267,441} = \frac{86,000,000}{83,000,000}$$

$$103.61 = 103.61$$

Day 4. Change in market prices

The market prices of A, B, C and D change to THB120, THB180, THB120 and THB130, respectively. The Index then becomes:

$$\begin{aligned}
 \text{Index (4)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(120 \times 100,000) + (180 \times 300,000) + (120 \times 200,000) + (130 \times 150,000)}{103,267,441} \times 100 \\
 &= \frac{109,500,000}{103,267,441} \times 100 \\
 &= 106.04
 \end{aligned}$$

Effective on Day 5, company C will be delisted. When any stock is delisted or listed shares of a stock decreases, the number of listed shares and the market value will be affected. SET will adjust the Base Market Value (BMV) on the day prior to the effective date by using the closing price of the stock on that day.

The BMV for Index on Day 5 will then be:

$$\begin{aligned}
 BMV_n &= BMV_0 \times \frac{CMV_n}{BMV_n} \\
 &= 103,267,441 \times \frac{(120 \times 100,000) + (180 \times 300,000) + (130 \times 150,000)}{(120 \times 100,000) + (180 \times 300,000) + (120 \times 200,000) + (130 \times 150,000)}
 \end{aligned}$$

$$= 103,267,441 \times \frac{85,500,000}{109,500,000}$$

$$= 80,633,481$$

Day 5. Delisting of Stock C

Stock C is delisted on Day 5.

The market prices of A, B and D change to THB130, THB180 and THB140, respectively.

So, the Index value in Day 5 is:

$$\begin{aligned} \text{Index (5)} &= \frac{CMV_n}{BMV_n} \times 100 \\ &= \frac{(130 \times 100,000) + (180 \times 300,000) + (140 \times 150,000)}{80,633,481} \times 100 \\ &= \frac{88,000,000}{80,633,481} \times 100 \\ &= 109.14 \end{aligned}$$

Day 6. Par splitting

Effective on Day 6, Stock A will split its par value from THB100 to THB 50. Such event increases the number of shares but the price decreases in the same proportion. Therefore, the base value of index will not be adjusted.

The market prices of A, B and D change to THB75, THB180 and THB150, respectively. The Index on Day 6 is:

$$\begin{aligned}
 \text{Index (6)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(75 \times 200,000) + (180 \times 300,000) + (150 \times 150,000)}{80,633,481} \times 100 \\
 &= \frac{91,500,000}{80,633,481} \times 100 \\
 &= 113.48
 \end{aligned}$$

Day 7. Capital increase by rights offering to existing shareholders (Ex-right day)

Company D will raise its capital by 150,000 shares through the rights offering to the existing shareholders, where the Ex-right day is set on Day 7. Shareholders are offered the rights to buy a new share at an exercise price of THB100 for each share they hold. (XR 1:1 @ THB100)

On Day7, closing prices of A, B and D change to THB80, THB170 and THB130, respectively.

When any stock increases its capital through a rights offering, the BMV adjustment will depend on the value of rights. In case where the rights is in-the-money (subscription price is lower than prior closing price), shareholders will exercise the rights. Then, SET will adjust the Base Market Value (BMV) at end of day (EOD) on the ex-rights date by using the Subscription Price and the new issued shares. The formula is as follow:

$$BMV_n = BMV_0 \times \frac{CMV_n}{CMV_n - (\text{Subscription Price} \times \text{New Shares Issued})}$$

On the other hand, when the rights are at-the-money (subscription price is equal to prior closing price) or out-of-the money (subscription price is higher than prior closing price), shareholders will not exercise the rights because they can purchase shares at the current market price which is lower than subscription price. SET will take no adjustment to BMV on the ex-rights (XR) date. However, the Base Market Value (BMV) will be adjusted when the additional shares are listed by using the same adjustment as Public Offerings (PO).

For this case, the rights is considered as in-the-money (THB100 < THB150). The BMV for index calculation will then be:

$$\begin{aligned} BMV_n &= BMV_0 \times \frac{CMV_n}{CMV_n - (\text{Subscription Price} \times \text{New Shares Issued})} \\ &= 80,633,481 \times \frac{(80 \times 200,000) + (170 \times 300,000) + (130 \times 300,000)}{[(80 \times 200,000) + (170 \times 300,000) + (130 \times 300,000)] - (100 \times 150,000)} \\ &= 80,633,481 \times \frac{106,000,000}{91,000,000} \\ &= 93,924,714 \end{aligned}$$

The Index value in Day 7 is

$$\begin{aligned}
 \text{Index (7)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(80 \times 200,000) + (170 \times 300,000) + (130 \times 300,000)}{93,924,714} \times 100 \\
 &= \frac{106,000,000}{93,924,714} \times 100 \\
 &= 112.86
 \end{aligned}$$

Day 8. Public Offerings (PO) and Private Placements (PP)

Company B raises its capital by 100,000 shares through Private Placement (PP). The share allotment is carried out as follows: 50,000 shares for company's customers and at THB150 and other 50,000 shares for directors and employees at THB100.

Closing prices of A, B and D change to THB80, THB160 and THB140, respectively.

When company increases its shares through the public offering or private placement, SET will adjust the Base Market Value (BMV) when additional shares are firstly traded by using the prior price of that stock and applying the following formula.

$$BMV_n = BMV_0 \times \frac{CMV_n}{CMV_n - (\text{Prior Price} \times \text{New Shares Issued})}$$

BMV for Index calculation on Day 8 is as follows:

$$\begin{aligned} BMV_n &= BMV_0 \times \frac{CMV_n}{CMV_n - (\text{Prior Price} \times \text{New Shares Issued})} \\ &= 93,924,714 \times \frac{(80 \times 200,000) + (160 \times 400,000) + (140 \times 300,000)}{[(80 \times 200,000) + (160 \times 400,000) + (140 \times 300,000)] - (170 \times 100,000)} \\ &= 93,924,714 \times \frac{122,000,000}{105,000,000} \\ &= 109,131,572 \end{aligned}$$

The Index value in Day 8 is:

$$\begin{aligned} \text{Index (8)} &= \frac{CMV_n}{BMV_n} \times 100 \\ &= \frac{(80 \times 200,000) + (160 \times 400,000) + (140 \times 300,000)}{109,131,572} \times 100 \\ &= \frac{122,000,000}{109,131,572} \times 100 \\ &= 111.79 \end{aligned}$$

Day 9. Change in market prices

Closing prices of A, B and D change to THB 85, THB 150 and THB 135, respectively. The Index value then becomes:

$$\begin{aligned}
 \text{Index (9)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(85 \times 200,000) + (150 \times 400,000) + (135 \times 300,000)}{109,131,572} \times 100 \\
 &= \frac{117,500,000}{109,131,572} \times 100 \\
 &= 107.67
 \end{aligned}$$

Effective on Day 10, Company D will reduce its capital by decreasing its number of listed shares by 100,000 shares. In this case, SET will adjust the Base Market Value (BMV) on the day prior to the effective date by using the closing price of that stock on that day (the last day of trading such listed shares).

In case of rights offering, when the newly enlarged capitalization of the company is not fully paid, it is necessary to adjust the Base Market Value (BMV) by reducing the number of shares which is not subscribed. Such case has the same practice as the case of reducing capital. The Base Market Value (BMV) will be adjusted at the end of the day prior to the first trading day of additional shares by using the last closing price.

BMV for index calculation on Day10:

$$BMV_n = BMV_0 \times \frac{CMV_n}{CMV_0}$$

$$\begin{aligned}
 &= 109,131,572 \times \frac{(85 \times 200,000) + (150 \times 400,000) + (135 \times 300,000) - (135 \times 100,000)}{(85 \times 200,000) + (150 \times 400,000) + (135 \times 300,000)} \\
 &= 109,131,572 \times \frac{104,000,000}{117,500,000} \\
 &= 96,593,050
 \end{aligned}$$

Day 10. Capital decrease

Market prices of A, B and D change to THB 80, THB 160 and THB 100, respectively. Company D reduces its capital by decreasing its number of listed shares by 100,000 shares. The Index value then becomes:

$$\begin{aligned}
 \text{Index (10)} &= \frac{CMV_n}{BMV_n} \times 100 \\
 &= \frac{(80 \times 200,000) + (160 \times 400,000) + (100 \times 200,000)}{96,593,050} \times 100 \\
 &= \frac{100,000,000}{96,593,050} \times 100 \\
 &= 103.53
 \end{aligned}$$

Effective on Day 11, Company M will upgrade its listing status from mai to SET. Stock M is traded on mai on Day 10 for the last day with 150,000 listed shares at a closing price of THB 50.

When a stock moves from mai to SET on Day 11, SET will instantly include that stock into the SET Index from its first trading day on SET onward. Accordingly, SET will adjust the Base Market Value (BMV) for the SET Index at end of day (EOD) on the last day it traded on mai by using the closing price as adjusted price. For mai Index, that stock will be treated as delisted stock.

Likewise, the change of stock from one industry group or sector to another also uses the same method but the adjustment will be taken to the relevant industry group or sector only.

BMV for index calculation on Day11:

$$\begin{aligned}
 BMV_n &= BMV_0 \times \frac{CMV_n}{CMV_0} \\
 &= 96,593,050 \times \frac{(80 \times 200,000) + (160 \times 400,000) + (100 \times 200,000) + (50 \times 150,000)}{(80 \times 200,000) + (160 \times 400,000) + (100 \times 200,000)} \\
 &= 96,593,050 \times \frac{107,500,000}{100,000,000} \\
 &= 103,837,528
 \end{aligned}$$

Day 11. Change market

Market prices of A, B and D change to THB 85, THB 150 and THB 120, respectively.

Market price of M which moves from mai to SET changes to THB 65.

The Index value then becomes:

$$\begin{aligned}\text{Index (11)} &= \frac{CMV_n}{BMV_n} \times 100 \\ &= \frac{(85 \times 200,000) + (150 \times 400,000) + (120 \times 200,000) + (65 \times 150,000)}{103,837,528} \times 100 \\ &= \frac{110,750,000}{103,837,528} \times 100 \\ &= 106.66\end{aligned}$$
