



คู่มือ (Manual Guides)



- **Key Statistics**
- **Financial Ratios**

Version 3.1
Last Update: 5 April 2021

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Key Statistics

The Stock Exchange of Thailand has determined the basic statistics for security, sector, industry and market for investors as information supporting their investment decision whereby at present there are 15 statistics disseminated by the Stock Exchange of Thailand through securities information system as follows:

- Price-Earning Ratio: P/E
- Price/Earnings to Growth Ratio
- Price-Book Value: P/BV
- Book Value Per Share: BVPS
- Price-Net Asset Value: P/NAV
- Net Asset Value : NAV
- Dividend Yield: DIY
- 12M Dividend Yield
- Market Capitalization
- Turnover Ratio
- Total Return Index: TRI/Return on investment: ROI
- Beta
- Dividend Payout Ratio
- Enterprise Value: EV
- EV / EBITDA

In this regard, the Stock Exchange of Thailand has stipulated conditions for calculating key statistics as follows:

1. In calculating statistics for sector, industry and market, the Stock Exchange of Thailand shall resort to weighted average according to market capitalization.
2. The statistics of the Stock Exchange of Thailand shall be calculated based on the operating results during the previous year with reference to the figures announced in the latest financial statements.

1. Price-Earning Ratio: P/E

Definition	<ul style="list-style-type: none"> Ratio of the market price of common share to net profit per common share (EPS) of the company within a period of 12 months or during the last one year.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only except property funds) ✓ Sector ✓ Industry ✓ Market (SET, mai), SET50, SET100, SETHD, sSET, SETCLMV, SETTHSI
Security value calculation formula	<ul style="list-style-type: none"> For information up until 30 June 2004: $\frac{\text{closing price of common shares} \times (\text{no. of common shares} - \text{no. of repurchased shares})}{\text{net profit within the last 12 months}}$ For information from 2 July 2004 onwards: $\frac{\text{closing price of common shares} \times [(\text{no. of common shares} + \text{no. of preferred shares}) - \text{no. of repurchased shares}]}{\text{net profit within the last 12 months}}$
Remark	<ul style="list-style-type: none"> In calculating P/E, the SET will not use "Earnings per Share" but will resort to "net profit of the company within the last 12 months" instead. <p>Calculation of P/E for market (SET, mai), SET50, SET100, SETHD and industry group/sector</p> <ul style="list-style-type: none"> <u>For information up until 31 December 2002</u> The SET will only select securities with the profit in the last 12 months of more than 0 in calculating P/E for sector, industry and market. <u>For information from 1 January 2002 onwards</u> The SET will only select securities used in calculating index and <u>include</u> the operating results within the last 12 months of all securities in calculating P/E for sector, industry and market. <u>Remark</u> The SET has revised the new method for the calculation of statistics for market taking effect from 2 May 2008 and has prepared the statistics for market using the new calculation method taking effect 5 years back (from 1 January 2003 to 30 April 2008) in lieu of the old statistics. On this basis, the statistics for market which use the former calculation method can be accessed at "Help Menu > Download". <u>For property funds from 31 March 2009 onwards</u> The SET will cancel the calculation of P/E whereby N.A. will be displayed and will not include it for calculating P/E for market, industry group and sector.

2. Price/Earnings to Growth Ratio: PEG

Definition	<ul style="list-style-type: none"> ▪ The price-to-earnings (P/E) ratio compared to the growth rate of net earnings
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only except property funds) × Sector × Industry × Market
Security value calculation formula	$\frac{P/E}{\text{total previous 12 months profit/loss growth (exclude items to non-controlling interest)}}$
Remark	<ul style="list-style-type: none"> ▪ Growth rate of net earnings was calculated from annualized net profit of current quarter and annualized net profit of the same quarter of the previous year

3. Price/Book Value Ratio: P/BV

Definition	<ul style="list-style-type: none"> Ratio of the market price of common share to book value of common share according to the latest financial statements of the issuer of common shares indicating the price of shares at that moment as a multiple of book value.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only) ✓ Sector ✓ Industry ✓ Market (SET, mai), SET50, SET100, SETHD, sSET, SETCLMV, SETTHSI
Security value calculation formula	<ul style="list-style-type: none"> For information up until 30 June 2004: $\frac{\text{closing price of common shares} \times (\text{no. of common shares} - \text{no. of repurchased shares})}{\text{shareholder's equity}}$ For information from 2 July 2004 onwards: $\frac{\text{closing price of common shares} \times [(\text{no. of common shares} + \text{no. of preferred shares}) - \text{no. of repurchased shares}]}{\text{shareholder's equity including the equity in a subsidiary}}$
Remark	<p>Calculation of P/BV for market (SET, mai), SET50, SET100, SETHD and industry group/sector</p> <ul style="list-style-type: none"> <u>For information up until 31 December 2002</u> The SET will only select securities with the shareholders' equity of the company (including value of shares held by subsidiaries) of more than 0 in calculating P/BV for sector, industry and market. <u>For information from 1 January 2002 onwards</u> The SET will only select securities used in calculating index and <u>include</u> the shareholders' equity including shares held by subsidiaries of all securities in calculating P/BV for sector, industry and market. <u>Remark</u> The SET has revised the new method for the calculation of statistics for market taking effect from 2 May 2008 and has prepared the statistics for market using the new calculation method taking effect 5 years back (from 1 January 2003 to 30 April 2008) in lieu of the old statistics. On this basis, the statistics for market which use the former calculation method can be accessed at "Help Menu > Download". <u>For property funds from 31 March 2009 onwards</u> The SET will calculate P/NAV and report it in lieu of P/BV for property funds and will include it for calculating P/BV for market, industry group and sector.

4. Book Value per Share: BVPS

Definition	<ul style="list-style-type: none"> Value of the issuer of common shares per share according to the latest financial statements similar to the reporting of book value of the business in accounting term from the appraisal of net asset value at a specific point in time which may be repaid to the holders of ordinary share in an event of dissolution and which constitutes an estimate of share value.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only except property funds) ✗ Sector ✗ Industry ✗ Market (SET, mai), SET50, SET100, SETHD, sSET, SETCLMV, SETTHSI
Security value calculation formula	<ul style="list-style-type: none"> For information up until 30 June 2004: <u>Total Shareholder's Equity</u> <u>number of common shares</u> For information from 2 July 2004 onwards: <u>Total Shareholder's Equity including the equity in a subsidiary (including value of shares held by subsidiaries)</u> <u>(no. of ordinary shares + no. of preferred shares) – no. of repurchased shares</u>
Remark	<ul style="list-style-type: none"> <u>For property funds from 31 March 2009 onwards</u> The SET will calculate NAV and report it in lieu of BVPS for property funds and will not use it to calculate BVPS for market, industry group and sector.

5. Price/Net Asset Value: P/NAV

Definition	<ul style="list-style-type: none"> Ratio of the closing price of securities classified as property fund to net asset value per unit disclosed in the financial statements at the end of the fiscal period.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (securities classified as property funds and unit trusts only) ✗ Sector ✗ Industry ✗ Market
Security value calculation formula	<ul style="list-style-type: none"> For information from 31 March 2009 onwards: <u>(closing price of shares X number of balance units)</u> <u>net asset value</u>
Remark	<ul style="list-style-type: none"> <u>For property funds from 31 March 2009 onwards</u> The SET will calculate P/NAV and report it in lieu of P/BV for property funds and will include it for calculating P/BV for market, industry group and sector. <u>For unit trusts from 31 March 2009 onwards</u> The SET will calculate P/NAV for unit trusts and will <u>not</u> use it to calculate P/BV for market, industry group and sector.

6. Net Asset Value: NAV

Definition	<ul style="list-style-type: none"> ▪ Net asset value per unit (disclosed in the financial statements)
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares classified as property funds and unit trusts only) × Sector × Industry × Market
Security value calculation formula	<ul style="list-style-type: none"> ▪ From information from 31 March 2009 onwards: $\frac{\text{net asset}}{\text{(fund received from unit holders / par value as of the end of fiscal period)}}$
Remark	<ul style="list-style-type: none"> ▪ <u>Calculation from 31 March 2009 onwards:</u> The SET will calculate NAV with respect to securities of property funds and unit trusts and will not calculate NAV for market, industry group and sector.

7. Dividend Yield: DIY

Definition	<ul style="list-style-type: none"> Ratio of dividend per common share to market price of common shares in order to ascertain the percentage of dividend in an event shares are purchased at the current market price
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares, ETFs and unit trust) ✓ Sector ✓ Industry ✓ Market (SET, mai), SET50, SET100, SETHD, sSET, SETCLMV, SETTHSI
Security value calculation formula	<ul style="list-style-type: none"> For information up until 30 June 2004: $\frac{\text{total dividend amount declared in the last 12 months}}{\text{closing price of common shares X (no. of common shares - no. of repurchased shares)}}$ For information from 2 July 2004 onwards: $\frac{\text{total dividend amount of the latest fiscal year}}{\text{closing price of common shares X (no. of common shares - no. of repurchased shares)}}$
Remark	<ul style="list-style-type: none"> In calculating dividend yield, the SET will not use "dividend per share" but will use "total dividend amount of the latest fiscal year" for calculation instead. In calculating dividend yield, the SET will not use stock dividend in the calculation. <p>Calculation of dividend yield for market (SET, mai), SET50, SET100, SETHD and industry group/sector</p> <ul style="list-style-type: none"> <u>For information up until 31 December 2002</u> The SET will include the dividend from all securities in the form of ordinary shares (whether or not that company pays dividend) in calculating dividend yield for market, industry and sector. <u>For information from 1 January 2002 onwards:</u> The SET will include the dividend from all securities in the form of common shares used in calculating index (whether or not that company pays dividend) in calculating dividend yield for market, industry and sector. Remark The SET has revised the new method for the calculation of statistics for market taking effect from 2 May 2008 and has prepared the statistics for market using the new calculation method taking effect 5 years back (from 1 January 2003 to 30 April 2008) in lieu of the old statistics. On this basis, the statistics for market which use the former calculation method can be accessed at "Help Menu > Download". <u>For dividend yield of SETHD, information from 4 July 2011 onwards:</u> The SET will include dividend yield weight in calculating dividend yield of SETHD.

8. 12M Dividend Yield

Definition	<ul style="list-style-type: none"> A Stock dividend as a percentage of the stock price during the latest 12-month period
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares, ETFs and unit trust) × Sector × Industry × Market
Security value calculation formula	<p><u>total dividend amount declared in the last 12 months</u> closing price of common shares X (no. of common shares - no. of repurchased shares)</p>
Remark	<ul style="list-style-type: none"> In calculating dividend yield, the SET will not use "dividend per share" but will use "total dividend amount declared in the last 12 months" for calculation instead. In calculating dividend yield, the SET will not use stock dividend in the calculation.

9. Market Capitalization

Definition	<ul style="list-style-type: none"> Overall market value of listed securities calculated from the closing price of listed securities multiplied by the current number of listed shares
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares, preferred shares, warrant and investment units only) ✓ Sector ✓ Industry ✓ Market (SET, mai), SET50, SET100, SETHD, sSET, SETCLMV, SETTHSI
Security value calculation formula	<p>closing price of shares X number of listed shares</p>
Remark	<p>Calculation of market capitalization for market (SET, mai) The SET will select securities in the form of common shares, preferred shares and warrant for use in calculation.</p> <p>Calculation of market capitalization for SET50, SET100, SETHD and industry group/sector The SET will only select securities in the form of common shares for use in calculation.</p>

10. Volume Turnover (Turnover Ratio)

Definition	<ul style="list-style-type: none"> Trading turnover ratio used to measure the volume of security trading compared with the volume of listed shares calculated in percentage. 	
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only) ✓ Sector ✓ Industry ✓ Market (SET, mai) 	
Security value calculation formula	Daily	$\frac{\text{trading volume on that day} \times 100}{\text{number of listed shares on that day}}$
	Monthly Quarterly Annually	$\frac{\text{total trading volume during that period} \times 100}{\text{average number of listed shares during that period}}$
Remark	Security trading volume will include the sum of all trading methods i.e. Auto Matching, Odd Lot and Trade Report.	

11. Total Return Index/Return on investment

Definition	<ul style="list-style-type: none"> Total Return Index is a tool used to measure return of all types of security investment i.e. capital gain/loss, rights and dividends. 																	
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only) ✓ Sector ✓ Industry ✓ Market (SET, mai), SET50, SET100, SETHD, sSET, SETCLMV, SETTHSI 																	
Calculation formula	Please see the calculation formula at: https://www.set.or.th/en/products/index/setindex_p1.html																	
Remark	<p>Initial index: 1,000 points</p> <p>Base date:</p> <table style="margin-left: 20px;"> <tr> <td>SET TRI and SET50 TRI</td> <td>: 2 January 2002</td> </tr> <tr> <td>SET100 TRI</td> <td>: 29 April 2005</td> </tr> <tr> <td>mai TRI</td> <td>: 2 September 2002</td> </tr> <tr> <td>Industry TRI</td> <td>: 31 December 2003</td> </tr> <tr> <td>SETHD TRI</td> <td>: 4 July 2011</td> </tr> <tr> <td>sSET TRI</td> <td>: 30 December 2016</td> </tr> <tr> <td>SETCLMV TRI</td> <td>: 29 June 2018</td> </tr> <tr> <td>SETTHSI TRI</td> <td>: 29 June 2018</td> </tr> </table> <p><u>Calculation of Total Return Index of SETHD</u> The SET will include dividend yield weight in calculating TRI of SETHD.</p> <p>The calculation method for total return can be studied from "Total Return Index Calculation Methodology" in the Download menu of SETSMART program.</p>		SET TRI and SET50 TRI	: 2 January 2002	SET100 TRI	: 29 April 2005	mai TRI	: 2 September 2002	Industry TRI	: 31 December 2003	SETHD TRI	: 4 July 2011	sSET TRI	: 30 December 2016	SETCLMV TRI	: 29 June 2018	SETTHSI TRI	: 29 June 2018
SET TRI and SET50 TRI	: 2 January 2002																	
SET100 TRI	: 29 April 2005																	
mai TRI	: 2 September 2002																	
Industry TRI	: 31 December 2003																	
SETHD TRI	: 4 July 2011																	
sSET TRI	: 30 December 2016																	
SETCLMV TRI	: 29 June 2018																	
SETTHSI TRI	: 29 June 2018																	

12. Beta

<p>Definition</p>	<ul style="list-style-type: none"> ▪ Beta is a measure of systematic risk arising from the comparison of movement between the rate of return of shares, industry group or a particular sector and the rate of total return of the SET. Moreover, Beta can be used to interpret the movement of share price or the SET index such as: <ol style="list-style-type: none"> 1. Beta of shares which is equal to 1 means that the share price will move in the same direction as the SET index. 2. Beta of shares which is more than 1 means that the share price will move in the same direction as the SET index but will fluctuate more strongly than the SET index for which there is change. 3. Beta of shares which is less than 1 means that the share price will move in the same direction as the SET index but will fluctuate less strongly than the SET index for which there is change. 4. Beta of shares which is negative means that the share price will move in the opposite direction to the SET index i.e. if the SET index increases, the share price will decrease etc.
<p>Type of security used in calculation</p>	<ul style="list-style-type: none"> ✓ Beta of the security compared to the market (common shares only) ✓ Beta of sector compared to the market ✓ Beta of industry compared to the market ✓ Beta of SET50/SET 100 compared to the market
<p>Calculation formula</p>	<p>Market Model formula shall be used:</p> <p style="text-align: center;">return of security_i = Alpha_i + Beta_i x return of market</p>
<p>Remark</p>	<ul style="list-style-type: none"> ▪ Beta is to be calculated from 1 April 2002 onwards. ▪ Calculation is to be done only for ordinary securities within the SET index or mai index which has been traded for at least 3 months. ▪ The change in the industry group/sector of the securities shall not affect the calculation of Beta. ▪ The calculation shall be done 1 year back counting from the present date.

13. Dividend Payout Ratio

Definition	<ul style="list-style-type: none"> ▪ Ratio of value of total dividend amount of the latest 12 months to net profit of the company within the last 12 months or 1 year.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only) × Sector × Industry × Market (SET, mai), SET50, SET100 and SETHD
Calculation formula	$\frac{\text{Total dividend amount of the latest 12 Months}}{\text{Total Previous 12 months profit/loss}}$
Remark	<ul style="list-style-type: none"> ▪ In calculating Dividend Payout Ratio, the SET will not use "dividend per share" but will use "total dividend amount of the latest 12 Months" for calculation instead. ▪ In calculating Dividend Payout Ratio, the SET will not use stock dividend in the calculation.

14. Enterprise Value: EV

Definition	<ul style="list-style-type: none"> Enterprise value is used to measure the value of the company calculated from the overall market value of securities, liabilities, cash, minority interest and preferred share capital.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (common shares only) ✗ Sector ✗ Industry ✗ Market (SET, mai), SET50, SET100 and SETHD
Calculation formula	<ul style="list-style-type: none"> For information up until 2 April 2021: enterprise value = market cap. + liabilities – cash and cash equivalents + non-Controlling Interests + issued and fully paid-up share capital of preferred share For information from 5 April 2021 onwards: <ul style="list-style-type: none"> In case there are preferred shares listed in SET enterprise value = market cap. + liabilities – cash and cash equivalents + non-Controlling Interests + market cap. of preferred share In case there is no preferred share listed in SET enterprise value = market cap. + liabilities – cash and cash equivalents + non-Controlling Interests + issued and fully paid-up share capital of preferred share
Remark	<ul style="list-style-type: none"> Only securities in the form of common shares utilizing accounting form 7 (industry and service business) shall be calculated. The information from the financial statements used in the calculation shall be from the latest financial statements.

15. EV / EBITDA

Definition	<ul style="list-style-type: none"> Ratio of enterprise value to earnings before interest, corporate income tax, depreciation and amortization.
Type of security used in calculation	<ul style="list-style-type: none"> ✓ Security (ordinary shares only) ✗ Sector ✗ Industry ✗ Market (SET, mai), SET50, SET100 and SETHD
Calculation formula	$\frac{\text{enterprise value}}{\text{Profit (Loss) Before Finance Costs And Income Tax Expenses} + \text{Depreciation And Amortisation}}$
Remark	<ul style="list-style-type: none"> Only securities in the form of ordinary shares utilizing accounting form 7 (industry and service business) shall be calculated.

Financial Ratios

The SET has prescribed the financial ratios for listed companies according to the categories of accounting form which at present is divided into 7 business types as follows:

Form	ประเภทธุรกิจ
Form 1	Bank and Finance
Form 2	Finance (cancelled since quarter 2 of 2009)
Form 3	Securities
Form 4	Finance & Securities
Form 5	Insurance
Form 6	Life Assurance
Form 7	Industrials & Services
Form 8	Unit Trusts

You can examine the financial ratios in SETSMART according to the accounting form as follows:

Financial Ratio		Form							
		1	3	4	5	6	7	8	
อัตราส่วนสภาพคล่อง (Liquidity Ratios)									
1. อัตราส่วนสภาพคล่อง	Current Ratio	-	-	-	-	-	✓	-	
2. อัตราส่วนสภาพคล่องหมุนเร็ว	Quick Ratio	-	-	-	-	-	✓	-	
อัตราส่วนแสดงประสิทธิภาพในการใช้สินทรัพย์ (Activity Ratios)									
3. อัตราส่วนหมุนเวียน ลูกหนี้การค้า	Account Receivable Turnover	-	-	-	-	-	✓	-	
4. ระยะเวลาเก็บหนี้เฉลี่ย	Average Collection Period	-	-	-	-	-	✓	-	
5. อัตราการหมุนเวียนของสินทรัพย์ถาวร	Fixed Asset Turnover	✓	✓	✓	✓	✓	✓	-	
6. อัตราส่วนหมุนเวียนเจ้าหนี้การค้า	Account Payable Turnover	-	-	-	-	-	✓	-	
7. ระยะเวลาชำระหนี้เฉลี่ย	Average Payment Period	-	-	-	-	-	✓	-	
8. วงจรเงินสด	Cash Cycle	-	-	-	-	-	✓	-	
9. อัตราส่วนหมุนเวียนสินค้าคงเหลือ	Inventory Turnover	-	-	-	-	-	✓	-	
10. ระยะเวลาขายสินค้าเฉลี่ย	Average Sale (Inventory) Period	-	-	-	-	-	✓	-	
11. อัตราการหมุนเวียนของสินทรัพย์	Total Asset Turnover	✓	✓	✓	✓	✓	✓	-	
อัตราส่วนที่แสดงถึงความเสี่ยงจากการกู้ยืม (Leverage Ratios)									
12. อัตราส่วนหนี้สินต่อส่วนของผู้ถือหุ้น	D/E Ratio	✓	✓	✓	✓	✓	✓	✓	
13. ความสามารถในการชำระดอกเบี้ย	Interest Coverage Ratio	-	-	-	-	-	✓	-	
อัตราส่วนแสดงความสามารถในการทำกำไร (Profitability Ratios)									
14. อัตรากำไรขั้นต้น	Gross Profit Margin	-	-	-	-	-	✓	-	
15. อัตรากำไรสุทธิ	Net Profit Margin	✓	✓	✓	✓	✓	✓	✓	
16. อัตราผลตอบแทนสินทรัพย์	Return on Asset	✓	✓	✓	✓	✓	✓	✓	
17. อัตราผลตอบแทนผู้ถือหุ้น	Return on Equity	✓	✓	✓	✓	✓	✓	✓	

1. Current Ratio

Definition	<ul style="list-style-type: none"> Current ratio is a ratio that measures the ability of the company to repay short-term debt when it falls due. This ratio measures the short-term financial position of the business. The higher the ratio means the higher the company's liquidity. However, other factors should also be considered when making decision such as the nature and type of the business, industry average etc.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	$\frac{\text{total current asset}}{\text{total current liabilities}}$
Remark	<ul style="list-style-type: none"> In calculating the current ratio, the SET will use the information of current asset, which is asset easily convertible into cash, as numerator, and current liabilities, which are urgent debts payable within that fiscal year, as denominator whereby the information on current asset and current liabilities used is that which actually occurred at the end of such period. The figure obtained will be times and always positive.

2. Quick Ratio

Definition	<ul style="list-style-type: none"> Quick ratio is a ratio that measures the company's ability to repay current liabilities from current asset that is easily convertible into cash such as cash, cash equivalent, account receivable etc. The higher the ratio means the higher the business' liquidity.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	$\frac{[\text{cash and cash equivalent} + \text{short-term investment} + \text{trade accounts and other receivable}]}{\text{total current liabilities}}$
Remark	<ul style="list-style-type: none"> In calculating the quick ratio, the SET will use the information of current asset, which can be urgently converted into cash without considering the inventory, as numerator and current liabilities, which are urgent debts payable within that fiscal year, as denominator whereby the information on current asset, inventory and current liabilities used is that which actually occurred at the end of such period. The figure obtained will be times and always positive.

3. Account Receivable Turnover

Definition	<ul style="list-style-type: none"> Account receivable turnover is a ratio that measures the ability to collect commercial debts whereby this ratio will indicate the frequency (on average) within a fiscal year during which the company has collected debts from the account receivables. In general if this ratio is high, it may indicate the ability to convert account receivables into cash or the credit policy that is too strict.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<p style="text-align: center;"><u>revenues from sale of goods and rendering of services</u> <u>trade accounts and other receivable (average)</u></p>
Remark	<ul style="list-style-type: none"> In calculating account receivable turnover, the SET will use the information of trade accounts and other receivable as denominator. The information of revenues from sale of goods and rendering of services, which is a figure obtained from the income statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters in the calculation. Trade accounts and other receivable (average) shall be calculated using the following formulae: <u>Annual average</u> [total amount at the end of the previous year + total amount at the end of the present year] / 2 <u>Quarterly average</u> [total amount at the end of the previous year's quarter + total amount at the end of the present year's quarter] / 2 The figure obtained will have the unit in times.

4. Average Collection Period

Definition	<ul style="list-style-type: none"> Average collection period is a ratio that measures the ability to collect commercial debts similar to account receivable turnover. However, this ratio will indicate the number of days within a fiscal year during which the company has collected debts from the account receivables.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<p>365 / account receivable turnover</p> <p>or</p> <p>365 / [revenues from sale of goods and rendering of services / trade accounts and other receivable (average)]</p>
Remark	<ul style="list-style-type: none"> The figure obtained will have the unit in day.

5. Fixed Asset Turnover

Definition	<ul style="list-style-type: none"> Fixed asset turnover is a figure used to measure the company's ability to generate revenues from the assets invested in.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> All types of business except Unit Trusts (Form 8)
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<ul style="list-style-type: none"> Industrials & Services (Form 7) $\frac{\text{total revenues}}{[\text{net property, plant and equipment} + \text{assets under concession agreements}] \text{ (average)}}$ Securities (Form 3) and Life Assurance (Form 6) $\frac{\text{total revenues}}{\text{net property, plant and equipment (average)}}$ Insurance (Form 5) $\frac{[\text{net investment income} + \text{net premium earned} + \text{other income}]}{\text{net property, plant and equipment (average)}}$ Bank and Finance (Form 1) and Finance & Securities (Form 4) $\frac{\text{interest} + \text{other operating income}}{\text{net property, plant and equipment (average)}}$
Remark	<ul style="list-style-type: none"> Information of numerator related to earnings, which is a figure obtained from the income statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters. Net property, plant and equipment (average) shall be calculated using the following formulae: <u>Annual average</u> $[\text{total amount at the end of the previous year} + \text{total amount at the end of the present year}] / 2$ <u>Quarterly average</u> $[\text{total amount at the end of the previous year's quarter} + \text{total amount at the end of the present year's quarter}] / 2$ The figure obtained will have the unit in times.

6. Account Payable Turnover

Definition	<ul style="list-style-type: none"> Account payable is a ratio that measures the ability to repay commercial debts whereby this ratio will indicate the frequency (on average) within a fiscal year during which the company has repaid debts to account payables. In general if this ratio is high, it may indicate the ability to manage the money for repayment to account payables.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<p style="text-align: center;"><u>cost of sale of goods and rendering of services</u> <u>trade accounts and other payable (average)</u></p>
Remark	<ul style="list-style-type: none"> In calculating account payable turnover, the SET will use the information of cost of sale of goods and rendering of services as numerator and trade accounts and other payable as denominator. The information of net cost of sale of goods and rendering of services, which is a figure obtained from the income statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters in the calculation. Trade accounts and other payable (average) shall be calculated using the following formulae: <u>Annual Average</u> $\frac{[\text{total amount at the end of the previous year} + \text{total amount at the end of the present year}]}{2}$ <u>Quarterly average</u> $\frac{[\text{total amount at the end of the previous year's quarter} + \text{total amount at the end of the present year's quarter}]}{2}$ The figure obtained will have the unit in times.

7. Average Payment Period

Definition	<ul style="list-style-type: none"> Average payment period is a ratio used to measure the ability to pay commercial debts similar to account payable turnover. However, this ratio will indicate the number of days within a fiscal year during which the company has repaid the debts to the account payables.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	365 / account payable turnover or 365 / [cost of sale of goods and rendering of services / trade accounts and other payable (average)]
Remark	<ul style="list-style-type: none"> The figure obtained will have the unit in day.

8. Cash Cycle

Definition	<ul style="list-style-type: none"> Cycle of cash of the business from the period during which payment is made until cash is received indicates the number of days during which the business must wait to receive back the cash invested in i.e. the amount of cash required by the business in invest in account receivable and inventory. In general if this ratio is low, it may indicate the ability to manage working capital.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	average collection period + average sale (inventory) period – average payment period
Remark	<ul style="list-style-type: none"> The figure obtained will have the unit in day.

9. Inventory Turnover

Definition	<ul style="list-style-type: none"> Inventory turnover is a ratio used to measure the ratio of inventory turnover in order to ascertain the company's liquidity indicating how quickly the company is able to dispose of its goods. The higher this ratio means that the company's goods can be quickly disposed of indicating the efficiency of the company's sale management.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<p><u>cost of sale of goods and rendering of services</u> inventory (average)</p>
Remark	<ul style="list-style-type: none"> The information of cost of sale of goods and rendering of services, which is a figure obtained from the income statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters. Inventory (average) shall be calculated using the following formulae: <u>Annual Average</u> $\frac{[\text{total amount at the end of the previous year} + \text{total amount at the end of the present year}]}{2}$ <u>Quarterly average</u> $\frac{[\text{total amount at the end of the previous year's quarter} + \text{total amount at the end of the present year's quarter}]}{2}$ The figure obtained will have the unit in times.

10. Average Sale (Inventory) Period

Definition	<ul style="list-style-type: none"> Average sale (inventory) period is a ratio used to measure the ability to sell the goods similar to inventory turnover. However, this ratio will indicate the number of days within a fiscal year during which the company has sold the goods.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<p>365 / inventory turnover or 365 / [cost of sale of goods and rendering of services / inventory (average)]</p>
Remark	<ul style="list-style-type: none"> The figure obtained will have the unit in day.

11. Total Asset Turnover

Definition	<ul style="list-style-type: none"> Total asset turnover is used to measure the company's ability to generate earnings from all the assets invested in. In general, any business with high total asset turnover will be able to use an even lower amount of capital to generate additional profit. In an event the company's total asset turnover is lower than average in that industry or lower than in the past, it indicates that such company may have invested too much in assets or has low earning (decline) or perhaps the company may have invested in the development of factory so as to be more modern.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> All types of business except Unit Trusts (Form 8)
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<ul style="list-style-type: none"> Securities (Form 3), Life Assurance (Form 6) and Industrials & Services (Form 7) <ul style="list-style-type: none"> $\frac{\text{total revenues}}{\text{total assets (average)}}$ Bank and Finance (Form 1) and Finance & Securities (Form 4) <ul style="list-style-type: none"> $\frac{\text{interest + other operating income}}{\text{total assets (average)}}$ Insurance (Form 5) <ul style="list-style-type: none"> $\frac{[\text{net investment income + net premium earned + other income}]}{\text{total assets (average)}}$
Remark	<ul style="list-style-type: none"> Information of numerator related to earnings, which is a figure obtained from the profit or loss statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters. Total assets (average) shall be calculated using the following formulae: <ul style="list-style-type: none"> <u>Annual Average</u> $\frac{[\text{total amount at the end of the previous year} + \text{total amount at the end of the present year}]}{2}$ <u>Quarterly average</u> $\frac{[\text{total amount at the end of the previous year's quarter} + \text{total amount at the end of the present year's quarter}]}{2}$ The figure obtained will have the unit in times.

12. Debt/Equity Ratio

Definition	<ul style="list-style-type: none"> ▪ Debt-to-equity ratio will reveal the capital structure of the company and the proportion of its total liabilities when compared with the equity or owner's equity. ▪ Measure the proportion of the business' use of capital from external source (from loan) when compared with equity within the business. On this basis, debts are a source of capital for which the company has interest burden regardless of its operating results. The high debt ratio may indicate that the company is also under high risk because loan is a source of capital with interest burden.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> ▪ All business types
Calculation period in the financial statements	<ul style="list-style-type: none"> ▪ Calculation done both in the annual and quarterly financial statements
Security value calculation formula	$\frac{\text{Total liabilities}}{\text{Total equity}}$
Remark	<ul style="list-style-type: none"> ▪ The figure obtained will have the unit in times. ▪ In an event the "Total equity" is negative, the SET will not calculate debt/equity ratio of such company. ▪ In calculating debt/equity ratio of sector, industry and market, the SET will include "Total equity" of all companies in sector, industry and market in the calculation even if the "Total equity" of those companies is negative.

13. Interest Coverage Ratio

Definition	<ul style="list-style-type: none"> Interest coverage ratio indicates the ability to repay loan interest of the business through the analysis of operating profit per interest earned. The higher the ratio means the higher the creditor's confidence in receiving interest payment. The decrease in this ratio may stem from one or several reasons such as too high an interest, an increase in the loan, or a decrease in profit.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	$\frac{\text{earnings before interest and taxes}}{\text{finance costs}}$
Remark	<ul style="list-style-type: none"> The figure obtained will have the unit in times.

14. Gross Profit Margin

Definition	<ul style="list-style-type: none"> Gross profit margin is a comparison of sales profit as a percentage of sales volume used to measure the company's ability to control the cost of inventory and to include additional cost into the price of goods sold. The better the company's ability to control cost compared with sales earnings, the better its ability to generate earnings.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Industrials & Services (Form 7) only
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	$\frac{(\text{revenue from sale of goods} - \text{cost of goods sold})}{\text{revenue from sale of goods}} * 100$
Remark	<ul style="list-style-type: none"> The figure obtained will have the unit in percentage (%).

15. Net Profit Margin

Definition	<ul style="list-style-type: none"> ▪ Net profit margin is used to measure the company's ability to generate profit after considering all types of earnings and expenses (including interest paid, special transactions in addition to the normal operation, and income tax). ▪ Measure the company's ability to control cost and expenses in order to generate net profit.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> ▪ All business types
Calculation period in the financial statements	<ul style="list-style-type: none"> ▪ Calculation done both in the annual and quarterly financial statements
Security value calculation formula	$\frac{\text{Net profit (Loss)} * 100}{\text{total revenues}}$
Remark	The figure obtained will have the unit in percentage (%).

16. Return on Asset

Definition	<ul style="list-style-type: none"> Return on asset is a ratio which indicates the company's ability to use its asset for investment in a way that generates earnings whereby the ratio shows the company's profit obtained from all the assets used in its operation.
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> All business types
Calculation period in the financial statements	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Security value calculation formula	<ul style="list-style-type: none"> Industrials & Services (Form 7) $\frac{\text{profit (loss) before finance costs and income tax expenses} * 100}{\text{total assets (average)}}$ Other business types (Form 1-6 and Form 8) $\frac{\text{profit (loss) before income tax expenses} * 100}{\text{total assets (average)}}$
Remark	<ul style="list-style-type: none"> Information of numerator related to profit (loss), which is a figure obtained from the income statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters. Total assets (average) shall be calculated using the following formulae: <u>Annual Average</u> $\frac{[\text{total amount at the end of the previous year} + \text{total amount at the end of the present year}]}{2}$ <u>Quarterly average</u> $\frac{[\text{total amount at the end of the previous year's quarter} + \text{total amount at the end of the present year's quarter}]}{2}$ The figure obtained will have the unit in percentage (%).

17. Return on Equity

Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Return on equity is a ratio used to analyze return per shareholders' equity that reflect the management ability that will generate return for shareholders who are the business owners.
Calculation period in the financial statements	<ul style="list-style-type: none"> All business types
Security value calculation formula	<ul style="list-style-type: none"> Calculation done both in the annual and quarterly financial statements
Remark	<p style="text-align: center;"><u>profit (loss) attributable to equity holders of parent</u> * 100 <u>equity attributable to equity holders of parent (average)</u></p>
Type of business for which there is ratio calculation	<ul style="list-style-type: none"> Information of numerator related to profit (loss), which is a figure obtained from the income statement, must be annualized using the figure of the current quarter plus the figures of the previous 3 quarters. Shareholders' equity (average) shall be calculated using the following formulae: <u>Annual Average</u> $\frac{[\text{total amount at the end of the previous year} + \text{total amount at the end of the present year}]}{2}$ <u>Quarterly average</u> $\frac{[\text{total amount at the end of the previous year's quarter} + \text{total amount at the end of the present year's quarter}]}{2}$ The figure obtained will have the unit in percentage (%). In an event the "total equity of parent company's shareholders" is negative, the SET will not calculate the return on equity of such company. In calculating the return on equity of sector, industry and market, the SET will include "total equity of parent company's shareholders" of all companies in sector, industry and market in the calculation even if the "total equity of parent company's shareholders" of those companies is negative.

