วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January-April 2023

1

Factors Affecting the Rate of Return on Ordinary Shares of Listed Banking and Insurance Businesses on Thai Stock Exchange
ปัจจัยที่มีผลกระทบต่ออัตราผลตอบแทนของหุ้นสามัญของบริษัทจดทะเบียนใน กลุ่มธนาคารและบริษัทประกัน ในตลาดหลักทรัพย์แห่งประเทศไทย

วรรณุดาว์ เพ็ชรไพโรจน์

Wannuda Petpairote

บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาปัจจัยที่มีผลกระทบต่ออัตราผลตอบแทนของหุ้นสามัญของบริษัทจดทะเบียน ในกลุ่มธนาคารและบริษัทประกัน ในตลาดหลักทรัพย์แห่งประเทศไทย จำนวน 23 บริษัท โดยอาศัยกระบวนการทางสถิติ เชิงพรรณนาและสถิติเชิงอนุมานเพื่อทำการวิเคราะห์ข้อมูลอนุกรมเวลารายปีในช่วงปี พ.ศ.2555-2564 ผลการวิเคราะห์ ผลกระทบของตัวแปรอิสระที่ส่งผลต่อตัวแปรตามโดยวิเคราะห์การถดถอย พบว่า อัตราส่วนเงินทุนหมุนเวียน อัตราผลตอบแทนจากส่วนของเจ้าของ มูลค่าการซื้อสุทธิของนักลงทุนต่างชาติ มีความสัมพันธ์เชิงบวกกับอัตราผลตอบแทน ของหุ้นสามัญอย่างมีนัยสำคัญทางสถิติ ส่วนอัตราส่วนเงินปันผลตอบแทน และการแพร่ระบาดของเชื้อไวรัสโควิด (Covid-19) มีความสัมพันธ์เชิงลบกับอัตราผลตอบแทนของหุ้นสามัญอย่างมีนัยสำคัญทางสถิติ ดังนั้นจากผลการศึกษาสามารถนำไปใช้เป็น ข้อมูลให้แก่บริษัทจดทะเบียนนำไปประยุกต์ใช้และกำหนดกลยุทธ์การดำเนินงานของบริษัทจดทะเบียนในกลุ่มธนาคาร และ บริษัทประกันที่ยั่งยืนและช่วยพัฒนาแนวทางป้องกันความเสี่ยงของบริษัท นอกจากนี้ผู้มีเงินออมและนักลงทุนที่ประสงค์จะ ลงทุนในหุ้นสามัญกลุ่มธนาคารและบริษัทประกัน สามารถนำข้อมูลนี้ไปใช้ประโยชน์ด้านการวิเคราะห์และตัดสินใจก่อนการ ลงทุนอย่างมีเหตุมีผลในสภาวะเศรษฐกิจยุคปัจจุบันได้

คำสำคัญ : อัตราผลตอบแทนของหุ้น ; ธนาคาร ; บริษัทประกัน ; หุ้นสามัญ ; สถานการณ์โควิด

อาจารย์ คณะบริหารธุรกิจ มหาวิทยาลัยเทคโนโลยีราชมงคลอีสาน, Lecturer, Faculty of Business Administration, Rajamangala University of Technology Isan

2

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January - April 2023

ABSTRACT

The purpose of this research was to evaluate the factors affecting the rate of return on the ordinary shares of listed businesses in banking and insurance companies. Twenty-three companies listed on the Thai Stock Exchange were evaluated based on the descriptive and inferential statistical processes of their annual time series data from 2012 to 2021. This evaluation involved analyzing multiple regression models to determine the related factors affecting the rates of return of ordinary shares of banking and insurance companies on the Thai Stock Exchange. The findings revealed that the current ratio, return on equity, price-to-earnings ratio, and nonresident net fund flows impacted the rate of return, with a statistical significance of positive correlation. Other factors, including the dividend yield ratio and the COVID-19 pandemic, affected the rate of return, with a statistically significant negative correlation. This study's results are applicable to the sustainable operating strategies of listed banking and insurance businesses and to the development of a company's risk prevention strategies. Those wishing to invest in ordinary shares in banks and insurance companies can also use these results to make rational investment decisions in the current economic situation.

Keywords : Rate of Return ; Banking ; Insurance ; Ordinary Shares ; COVID-19 Situation

Introduction

The spread of coronavirus disease 2019 (COVID-19) has caused world economic disruption, business closures, and increasing unemployment (WHO Thailand, 2019). The weak economic conditions affect the set of financial institutions, which includes banking and insurance groups that have commitments to depositors, borrowers, and creditors. When debt settlements are suddenly reduced, the bank group and insurers may fail (Tai, 2020). Banking failures can affect the economy, disrupt financial systems, and cause bankruptcies (Perkins et al., 2020).

The COVID-19 pandemic has had a severe and sudden impact on all sectors and people at all levels (Akhtaruzzaman, Boubaker, and Sensoy, 2021) based on the international monetary fund (IMF) forecast being approximately -3.5% (IMF, 2020) for economic and people in all economic situations. The part of the Thai capital market with which most people are familiar is the Stock Exchange of Thailand (SET). The SET index was highly volatile between February and March 2020; trading was temporarily suspended, or a circuit breaker was used, three times (The Stock Exchange of Thailand, 2021). Moreover, the stock index fell 173.62 points (approximately -11.47%), and in March, it dropped another 214.86 points (approximately -16.01%) before gradually recovering from April until the beginning of June (Investing.com, 2021).

The Covid-19 pandemic has greatly affected the operations of insurance companies and banks as a major risk factor for businesses. For insurance businesses, it is found that the pandemic or covid-19 infection is an emerging risk to business stability up to 79%. There is no norm for calculating the loss rate before. From the fact that the insurance business issued a COVID-19 protection policy product; as meet, pay, finish, with insurance claims numbers up to 40 billion baht, while insurance premiums are only 8,000 million baht, despite the cancellation conditions specified in the contract and the company is actually losing but the Office of Insurance Commission to protect the people has ordered a ban on termination of covid insurance since the beginning of 2021. As a result, the number of insurance claims has continued to rise and as of February 2022, four insurance companies have filed to close their businesses with losses from one year contract claims for COVID-19 (Office of Insurance Commission, 2021). While the group of banks has been affected by both entrepreneurs and the general public who have lost their income from the Covid-19

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January-April 2023

3

pandemic, causing delays in debt repayment with banks and also affecting operating results of banks decreased (Bank of Thailand, 2021), lower interest income, lower credit growth direction due to lower demand for business expansion and consumption, and also including the burden of asset risk management. As a result of this impact, each financial institution has issued various measures to help customers affected by COVID-19, such as debt moratorium, reduction of the minimum installment rate according to the ability to repay debt, postponement of installment payments, etc. The implementation of these measures will affect the banking sector (Manprasert, 2020).

In Thailand's current economic situation, the SET is regarded as an important source of funding and an institution that regulates securities trading in compliance with regulations and fairness principles (Kumar and Kumara, 2021) to build confidence for investors and cause people's savings to be increased so they may invest in various businesses that are beneficial to economic and social development. Investing in the stock market is also important to drive the country's economy and is an investment option with high returns. However, it also has a high risk. Therefore, investors must have criteria for considering various factors that affect market prices. Investing in the capital market is an ideal option for those with savings, especially those who want a variety of investments (Fathmaningrum and Utami, 2022), because they will have the opportunity to be part of many great business owners' growth prospects and receive benefit returns from investments in various forms (Bustani, 2020), (e.g., dividends or profits from securities trading). Performance is measured based on the rate of return of assets, which affects the value of businesses.

Given the importance of banking and insurance companies, this research aims to study the factors affecting the rate of return of 23 companies' ordinary shares during the COVID-19 pandemic. The 23 companies are in the banking and insurance sectors and were listed on the SET from 2012–2021. The expectation is to present the appropriate factors that should be used as criteria for considering investments in the common stocks of listed companies in the banking and insurance sectors. This research has been supported an opportunity to pursue the research objective successfully from faculty of business administration at Rajamangala University of Technology Isan in Thailand.

Objective

The research objective is to study the factors that affect the rate of return of ordinary shares (RROS) of companies in the banking and insurance sectors listed on the SET during the COVID-19 situation. These are various factors; consisting of current ratio (CR), debt-to-equity ratio (DE), return on equity (ROE), price-to-book value ratio (P/BV), dividend yield ratio (DY), price-to-earnings ratio (P/E), nonresident net fund flows (FF), and the COVID-19 situation (Covid).

Literature Review

The literature is reviewed under the related works that studied and considered about factors affecting banking and insurance businesses as follows.

According to the Capital Asset Pricing Model (CAPM), a security's rate of return is based on the risk-free asset return, market rate of return, and systematic risk as measured by Beta (Investopedia, 2016). However, in practice, a security's rate of return also depends on several factors. (Panuvisitsang and Chansarn, 2018). The study of the factors that determine the rate of return of the company's ordinary shares in the stock exchange is a topic of extensive research in Thailand and abroad. However, in the case of the countries studied, the focus was on banks and insurance groups. There are still few, especially during the ongoing impact from the Covid-19 situation.

4

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January - April 2023

The Rate of Return on Ordinary Shares (RROS)

RROS is a management tool to measure the rate of return that can be shared with shareholders. This ratio compares the revenue generated (Net Profit) and the number of current shares (Muazaroh and Septiarini, 2021). For earnings per share (EPS) is the result of calculating net income divided by the number of current shares. If the company's EPS growth increases (Sulfiani and Mais, 2019), there will also be an increase in investor interest in the company's stock. The profit used as a measure is the profit for the owner earned after taxes (EAT). In this study, the statistic of the share price per company and the rate of return of the common stock were calculated by calculating the rate of return that is one hundred times of the difference of stock market closing price for the current year and last year per stock market closing price for the last year. Once the calculation is done, it will be analyzed by descriptive statistics to reflect the rate of return of the ordinary shares of each company listed on the Stock Exchange of Thailand.

Factors Affecting RROS of Listed Banking and Insurance Businesses on Thai Stock Exchange

Current Ratio (CR)

CR is a ratio that measures a company's ability to pay its short-term debts or debts due within one year by comparing current assets with the fastest current liabilities. Investors and analysts can use CR to determine how a company can increase its current assets on its balance sheet to meet current liabilities and payables (Fernando, 2021). A company with a low CR indicates that it has few current assets to pay off short-term liabilities but companies with high CR are not always good because high CR can occur due to a lack of effective cash and inventory management. Therefore, to say whether a company is liquid or not, it is necessary to compare with the same business group (Husna and Satria, 2019).

H_1 : Current ratio (CR) has a positive impact on the RROS.

Debt-to-equity ratio (DE)

DE is a capital structure ratio that assesses a company's long-term financial stability using balance sheet information (Nasution, Putri and Dungga, 2018). The company will be able to solve financial problems until it can meet its obligations such as paying interest, daily expenses, salaries, taxes, loan installments, etc. Therefore, the meaning and interpretation of this financial ratio differs depending on the purpose for which it is considered (Fathmaningrum and Utami, 2022) to indicate whether the debt is protected by the owner's equity or not. If more than one of these ratios indicates that the company has more liabilities than equity, there are some liabilities that are not protected by equity. Also, if this ratio is high, it means that the company has so much debt that there is a high risk of default. It is a comparison of total debt to equity.

H_2 : Debt-to-equity ratio (DE) has a negative impact on the RROS.

Return on equity (ROE)

ROE is a measure of a company's annual return (net income) divided by its total equity value expressed as a percentage, or ROE can be found by dividing the company's dividend growth rate by its revenue growth rate (Rosikah et al., 2018). ROE represents the rate of return on total equity and shows the company's ability to turn equity investments into profits (Ozen, Ozdemir, and Grima, 2020). ROE is derived from a measure of the return that is generated by an entity's operations, with the higher the ratio the better and the higher the profitability. It was calculated from one hundred times of net profit per equity.

H_3 : Return on equity (ROE) has a positive impact on the rate of return on ordinary shares.

Price-to-book value ratio (P/BV)

P/BV is the fair valuation ratio of a stock based on the latest share price based on the latest company's book value (Latief, 2018). PBV is a calculation or comparison between the market value and the book value of a stock. With this P/BV, investors can know directly how much a stock's market value is based

on its book value. This ratio can represent about the stock price movement, so the P/BV ratio indirectly influences the stock price (Basuki, Pulungan and Udin, 2020). P/BV are used to value stocks, whether cheap or expensive, commonly known as stock valuations. Generally, companies with a P/BV of less than one is considered cheap stocks. While a P/BV ratio above one is an expensive stock.

H_4 : Price-to-book value ratio (P/BV) has a positive impact on the rate of return on ordinary shares.

Dividend yield ratio (DY)

DY is a financial ratio that compares the dividend per share to the price of the stock at the time of computation. This DY represents about the sum that investors will receive from the organization (Bustani, 2020). DY has a significant impact on the share price and has a significant impact on the share price (Singh and Tandon, 2019; Ermiati et al., 2019) which contradict the dividend preference theory (Koh, Keng, and Brigham, 2014 ; Tanushev, 2016). The theory states that when a company pays a higher rate of dividends because the returns received in the form of dividends are certain to be received but the return on future stock prices increases is more uncertain. In addition, DY was also found to be negatively correlated with RROS, where investors think that dividends are less risky than future profits Therefore, investors prefer high dividend yields and are willing to accept lower RROS (Brigham, Houston, Ming, Kee and Ariffin, 2 0 1 9). However, there was Bustani's (2020) research to mention that DY has no significant impact on stock prices.

H_5 : Dividend yield ratio (DY) has a negative impact on the rate of return on ordinary shares.

Price-to-earnings ratio (P/E)

P/E is used as an indicator of past performance and future growth of companies. The companies with low P/E generate higher earnings than high P/E companies (Dutta, Saha and Das, 2018). Many studies use the annualized earnings per share rate instead of the dividend growth rate to predict stock values (Rahman and Shaamsuddin, 2019). In other words, the P/E is positively correlated with the rate of revenue growth (Freihat, 2019).

H_6 : Price-to-earnings ratio (P/E) has a positive impact on the RROS.

Nonresident net fund flows (FF)

Many studies have shown that foreign direct investment has a significant positive impact on economic growth in the host country (Grigorian, 2019) and has a strong positive impact on economic growth, human capital, exports, and employment (Lu and Yakovlev, 2018).

H_7 : Nonresident net fund flows (FF) has a positive impact on the rate of return on ordinary shares.

COVID-19 (Covid)

As for the COVID-19 epidemic, Thailand's capital market has also been affected by the crisis (Caferra, and Vidal-Tomás, 2021). The Covid situation has affected both household and industrial spending (Latief and Niu, 2020; Ngwakwe, 2020), as reflected through the world's Gross Domestic Product (GDP) in 2020 (Wang and Wu, 2020). In Thailand, a study was conducted to analyze the financial ratios of financial sector companies listed on the Stock Exchange of Thailand during the COVID-19 pandemic. It was found that the results of the study of insurance and life insurance groups had the greatest impact. As for companies, the financial ratio has decreased., only the profitability from the asset turnover ratio, but the operability ratio and the monetary policy. There is no difference in performance. It was concluded that it was not affected by the COVID-19 pandemic (Na Nirot et. al., 2022) that studied from financial source during 2019-2020 as a year has not been affected by the ongoing Covid-19 epidemic. The researcher therefore proposed to study the impact of both the insurance business and the bank, continuing to collect data in 2021 to study the impact of the Covid-19 situation on the rate of return of ordinary shares of listed companies.

H_8 : Covid has a negative impact on the rate of return on ordinary shares.

Conceptual Framework

According to the above literature review, the researcher determined the research conceptual framework consisting of two variable types that are Independent and dependent variables, as shown in Figure 1. The first variable type is independent variables that consist of many factors as follows: 1) CR; 2) DE; 3) ROE; 4) P/BV; 5) DY; 6) P/E; 7) FF; and 8) Covid. Other second variable type is dependent variables that was the RROS of companies in the banking and insurance sectors listed on the SET are the dependent variables in this research.
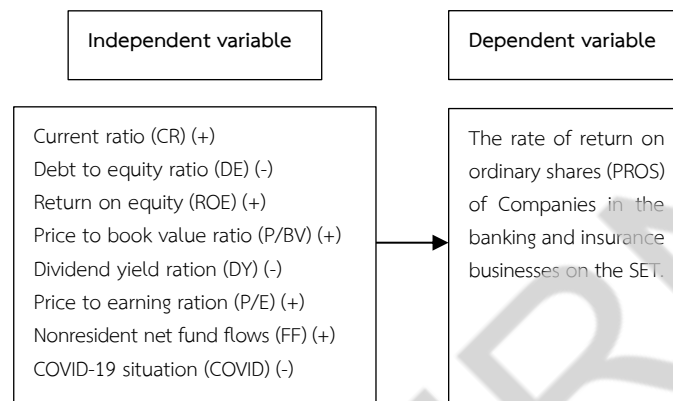
Independent variable	Dependent variable
Current ratio (CR) (+) Debt to equity ratio (DE) (-) Return on equity (ROE) (+) Price to book value ratio (P/BV) (+) Dividend yield ration (DY) (-) Price to earning ration (P/E) (+) Nonresident net fund flows (FF) (+) COVID-19 situation (COVID) (-)	The rate of return on ordinary shares (PROS) of Companies in the banking and insurance businesses on the SET.

Figure 1 Research Conceptual Framework

Research Methodology

The research involves collecting data for the companies were from various information sources during 2012 to 2021 as the details shown in Table 1. These data were used for data analysis processes as follows.

The Thai economy in 2012 expanded well as domestic demand and private consumption increased in line with favorable employment, income, and consumer confidence, as well as boosted by government measures. While the investment of the business sector has continued to repair the damage from the flood, to expand production capacity to support domestic demand and to adjust the production process to reduce dependence on labor. Therefore, the Thai economy in 2012 was a condition in which domestic expenditure expanded well and industrial production for domestic sales was also able to expand well (Bank of Thailand, 2012). So, this research proposes to use financial statement information as the starting year of 2012.

Population and Samples

This research was based on the financial information of 23 listed companies' yearly cross- sectional data obtained from secondary SET sources such as financial statements. The financial information is from statements of the annual financial situation of each company, including statements of the financial position, statements of income, total income, asset summaries, and debt according to the notes on the statements of financial and annual registration (Form 56-1) for the companies of interest.

Data Collection

This research employed quantitative research technique to collect the information of the financial statements of 23 listed businesses in banking and insurance companies on the SET based on descriptive and inferential statistical processes for 10 years period time. These data were analyzed to find the related

factors affecting the rate of return of ordinary shares by using the correlation coefficient approach between the study factors as following the Pearson's method, and employing the multiple regression analysis techniques, consisting of fixed and random-effects regression analysis to investigate the research hypotheses. Therefore, the instrument is accurate, reliable and can be used to conduct this research.

Table 1 Companies in The Banking and Insurance Sectors on the SET

No.	Stock	Company	Stock Market Year	Study Period	Study Years
1	BAY	Bank of Ayudhya Public Company Limited	1977	2012–2021	10
2	BBL	Bangkok Bank Public Company Limited	1975	2012–2021	10
3	CIMBT	CIMB Thai Bank Public Company Limited	1978	2012–2021	10
4	KBANK	Kasikorn Bank Public Company Limited	1976	2012–2021	10
5	KKP	Kiatnakin Bank Public Company Limited	1988	2012–2021	10
6	KTB	Krung Thai Bank Public Company Limited	1989	2012–2021	10
7	LHFG	LH Financial Group Public Company Limited	2011	2012–2021	10
8	SCB	Siam Commercial Bank Public Company Limited	1976	2012–2021	10
9	TISCO	TISCO Financial Group Public Company Limited	2009	2012–2021	10
10	BKI	Bangkok Insurance Public Company Limited	1978	2012–2021	10
11	BLA	Bangkok Life Assurance Public Company Limited	2007	2012–2021	10
12	BUI	Bangkok Union Insurance Public Company Limited	1988	2012–2021	10
13	CHARAN	Charan Insurance Public Company Limited	1992	2012–2021	10
14	INSURE	Indara Insurance Public Company Limited	1994	2012–2021	10
15	MTI	Muang Thai Insurance Public Company Limited	2008	2012–2021	10
16	NKI	Navakij Insurance Public Company Limited	1993	2012–2021	10
17	NSI	Nam Sin Insurance Public Company Limited	1991	2012–2021	10
18	SMK	Syn Munkong Insurance Public Company Limited	1991	2012–2021	10
19	THRE	Thai Reinsurance Public Company Limited	2013	2013–2021	9
20	THREL	Thai Re Life Insurance Public Company Limited	2011	2012–2021	10
21	TIP	Dhipaya Insurance Public Company Limited	1995	2012–2021	10
22	TSI	Thai Setthakit Insurance Public Company Limited	1991	2012–2021	10
23	TVI	Thaivivat Insurance Public Company Limited	1989	2012–2021	10

Source : SET, 2021

The descriptive statistics are represented by mean value, maximum value, minimum value, and standard deviation of the financial data of companies listed in banks and insurances on the Stock Exchange of Thailand for 23 companies during the year 2012-2021, the results of the calculation can be summarized as in Table 2 as follows. The descriptive statistics provide a general overview of the data and characteristics of the distribution of the preliminary statistical value.

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January - April 2023

8

Table 2 Financial Ratio and RROS of Companies Listed in Banks and Insurances

Company	CR (times)	DE (times)	ROE (%)	P/BV (times)	DY (%)	P/E (times)	RROS (%)
BAY	1.12	8.10	10.24	0.65	2.35	13.27	2.35
BBL	1.14	7.10	8.96	0.98	3.81	10.19	3.81
CIMBT	1.10	9.59	3.19	1.53	0.28	42.88	0.56
KBANK	1.14	7.88	12.28	1.56	2.27	11.42	2.27
KKP	1.17	5.91	11.88	1.14	6.44	9.76	6.44
KTB	1.11	9.56	10.43	1.07	4.27	9.04	4.27
LHFG	1.16	6.44	7.29	1.05	2.49	16.80	3.86
SCB	1.13	7.79	13.59	1.70	3.86	11.14	5.57
TISCO	1.11	8.95	17.44	1.76	5.57	9.69	3.93
BKI	2.04	0.96	6.73	1.09	3.93	14.48	1.77
BLA	1.14	7.03	12.15	2.65	1.77	20.83	3.65
BUI	1.56	1.80	1.92	0.30	1.09	22.46	3.71
CHARAN	3.26	0.44	2.06	0.62	3.34	22.56	4.71
INSURE	1.16	6.22	-7.18	3.18	-	95.00	3.71
MTI	1.30	3.34	9.69	1.43	3.34	10.95	3.18
NKI	1.22	4.45	3.55	0.81	3.55	16.11	6.30
NSI	1.57	1.74	9.94	0.79	5.67	8.59	4.01
SMK	1.53	1.90	16.36	1.89	4.01	10.51	8.32
THRE	1.28	3.65	23.92	2.60	3.33	14.34	5.96
THREL	2.50	0.67	23.42	2.75	4.17	17.68	5.31
TIP	1.13	7.66	21.15	2.01	5.31	9.07	8.12
TSI	1.09	10.41	-40.57	2.79	-	9.97	3.39
TVI	1.27	3.66	7.95	1.20	3.39	18.04	4.25
Mean	1.16	6.22	9.69	1.43	3.34	13.27	4.32
S.D.	0.53	3.17	13.99	0.80	1.77	18.28	1.83
Max	3.26	10.41	23.42	3.18	6.44	95.00	8.32
Min	1.09	0.44	-40.57	0.30	-	8.59	0.56

Source: SET, 2021

Moreover, the descriptive statistical analysis was divided into two parts, as follows:

1. Financial information analysis of companies listed on the SET using descriptive statistics of financial information as follows: 1) Items showing the company's financial position (e.g., total assets, total debts, and total shareholders' equity); 2) Items showing the company's operating results, including total income and net profits.

2. Financial ratio analysis of companies listed on the SET using descriptive statistics of financial ratios and research-related information as follows: 1) CR; 2) DE; 3) ROE; 4) P/BV; 5) DY; 6) P/E; 7) Nonresident net FF; and 8) Covid. Covid is a dummy variable with a value of 1 during the pandemic. Otherwise, the dummy variable is equal to 0 when it is not during the pandemic.

Data Analysis

This section will analyze the factors to determine the rate of return on ordinary shares (RROS) of listed companies in the banking and insurance by using multiple regression analysis to prove the hypotheses presented. The multiple regression equation used in the analysis has the following normal equation (1):

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January-April 2023

9

$$Z = \beta_0 + \beta_1 x_1 + ... + \beta_n x_n + a + \mu \tag{1}$$

Where **Z** is defined as the relationship between various independent variables and the dependent variable—x_1 through x_n. β_0 is the regression coefficient value of **Z** when all of the independent variables are 0. In addition, β_1 through β_n are the values of the regression coefficients. The **a** variable means the other variable, and μ is defined as the mean of the error value.

The multiple regression analysis examined potential statistical problems. The details are as follows.

1. This research investigates the problem of linear relationships between independent variables (multicollinearity) by calculating the correlation coefficient between each pair of independent variables and check for multicollinearity caused by the independent variables in the equation having a linear relationship based on the analysis of Pearson's correlation coefficient at a significance level of 0.05. If Pearson's correlation coefficient was statistically higher than 0.7 or lower than -0.7 (Mela and Kopalle, 2002), it was considered a problem of multicollinearity.

2. An analysis of factors determining the RROS of companies was undertaken using fixed-and random-effects regression analysis as follows.

2.1 Fixed-effects regression analysis in this research is defined as a fixed-effects regression model using equation (2), which was derived from equation (1).

$$RROS = \beta_0 + \beta_1 CR - \beta_2 DE + \beta_3 ROE + \beta_4 P/BV - \beta_5 DY + \beta_6 P/E + \beta_7 FF - \beta_8 Covid + a + \mu \tag{2}$$

Where **RROS** is defined as the rate of return on ordinary shares of companies in the banking and insurance sectors. $\beta_{k\ (k\ =\ 0,1,...,n)}$ is the mean regression coefficient and **a** is the other variable in this study. μ is defined as the mean of the error value.

From equation (2), a new average equation for RROS was derived for companies in the banking and insurance sectors using $RROS_i$, as in equation (3), by removing the mean values from the total. $\beta_{ki\ (k\ =\ 0,1,...,n)}$ is the mean regression coefficient, and a_i is the other variable in this study.

$$RROS_i = \beta_{0i} + \beta_{1i} CR - \beta_{2i} DE + \beta_{3i} ROE + \beta_{4i} P/BV - \beta_{5i} DY + \beta_{6i} P/E + \beta_{7i} FF - \beta_{8i} Covid + a_i + \mu \tag{3}$$

The fixed-effects regression analysis is appropriate for the analysis of the studied data at this time due to the unobserved effect, that is, the a_i variable in the equation is correlated with at least one independent variable in the equation.

If the effect is not noticeable (i.e., unpredictable behavior or culture of each company), there is no correlation between the independent variables. Therefore, the random-effects regression analysis model is more appropriate than the fixed-effects regression analysis model (Wooldridge, 2019)

2.2 Random-effects regression analysis would be appropriate for data analysis for an unobservable effect where the **a** variable in the model does not correlate with the independent variables. In this case, $Cov(x_{it}, a_i)$ is defined as 0, t is 1, 2, ..., 10, and i is defined as 1, 2, ..., 39. From equation (4), the **a** variable is a part of the residual value, called the composite error term, which is $a_{it} + \mu$. Therefore, the random-effects regression model is reflected in equation (4).

$$RROS_{it} = \beta_{0it} + \beta_{1it} CR - \beta_{2it} DE + \beta_{3it} ROE + \beta_{4it} P/BV - \beta_{5it} DY + \beta_{6it} P/E + \beta_{7it} FF - \beta_{8it} Covid + a_{it} + \mu \tag{4}$$

Results and Discussion

The results of this research were divided into t h r e e parts; consists of results of the data analysis with descriptive statistics, analysis of the RROS of companies in the banking and insurance sectors, and analysis of the factors that determine the RROS of companies in the banking and insurance sectors.

The results of data analysis with descriptive statistics calculation revealed that the total assets of the 23 companies had an average value of 627,455.42 million baht and a standard deviation of 1,041,783.92 million baht.

The results of the descriptive statistics indicate that BBL has assets of approximately 2,889,499.34 million baht, which was the maximum of all the companies. The company with the lowest total assets was CHARAN, at approximately 818.49 million baht. The total debts of the 23 companies averaged 554,186.98 million baht, with a standard deviation of 923,728.17 million baht. The company with the most total debt was BBL with 2,532,219.22 million baht, and the company with the lowest total debt was CHARAN with 250.80 million baht of debt.

For the shareholders of the 23 companies, the average equity was 69,783.76 million baht, and the standard deviation was 115,611.13 million baht. The company with the largest shareholder equity was BBL, at approximately 356,893.59 million baht. The company with the least shareholders' equity was INSURE at 173.47 million baht.

As for the total income, the average of the 23 companies was 37,531.72 million baht, with a standard deviation of 58,508.08 million baht. The company with the highest total income was KBANK at 172,120.51 million baht, and the company with the lowest total income was CHARAN at 185.64 million baht. The average net profit for all the companies was 7,719.97 million baht, with a standard deviation of 13,113.60 million baht. The company with the largest net profit was SCB at 42,572.80 million baht, and the company with the lowest net profit was THRE at 860.52 million baht.

As for the net trading value of nonresident investors in the SET, the average monthly value was -979.41 million baht, with a standard deviation of 2,520.84 million baht. The greatest net trading value of non-resident investors was 18,958.37 million baht, and the lowest was -8,901.22 million baht.

For the result of analysis for the RROS of companies in the banking and insurance, the average price of ordinary shares was determined by calculating descriptive statistics and was found to be 61.88 baht with a standard deviation of 77.05 baht. The company with the greatest average price of ordinary shares was BKI at 321.00 baht, and the company with the lowest average price was CIMBT at 1.45 baht.

The company with the highest RROS was THRE, at 8.32%, but the THRE company has had less information for 10 years comparing with other studied companies. The company with the lowest RROS was CIMBT, at 0.56%.

The analysis results for the factors that determine the RROS of companies in the banking and insurance begin with the investigation of a linear relationship between the variables (multicollinearity) by analyzing the correlation coefficient between independent variables, as shown in Table 3.

Table 3 Correlation Coefficient Between Independent Variables

Independent Variables		CR	DE	ROE	P/BV	DY	P/E	FF
CR	Pearson correlation	1						
DE	Pearson correlation	-.74**	1					
ROE	Pearson correlation	.11	-.16	1				
P/BV	Pearson correlation	-.16	.22	-.30	1			
DY	Pearson correlation	.15	-.24	.57**	-.26	1		
P/E	Pearson correlation	-.01	.03	-.22	.38	-.58**	1	
FF	Pearson correlation	.24	.20	.21	.34	.17	.12	1

** Correlation is significant at the 0.01 level (2-tailed).

The results of the multiple regression analysis using fixed-and random-effects regression methods to present relationships between the dependent variable and the independent variables are described in Table 4.

Table 4 Results of Multiple Regression Analysis Using Fixed-and Random-Effects Regression Methods

Variable	Fixed-effects model Coefficient Std. error P-value			Random-effects model Coefficient Std. error P-value		
CR	2.65*	1.54	0.08	2.63***	1.07	0.01
DE	-6.47	6.53	0.44	-2.98	3.55	0.41
ROE	1.31***	0.39	0.00	0.96***	0.31	0.00
P/BV	3.65	3.13	0.26	1.17	2.50	0.68
DY	-4.59***	1.30	0.00	-5.35***	0.92	0.00
P/E	0.33*	0.30	0.07	0.57***	0.14	0.00
Covid	-3.76*	2.60	0.10	-3.99*	2.32	0.10
FF	1.02*	5.09	0.08	1.35*	5.44	0.08
CONSTANT	-34.71	116.35	0.70	40.38	38.08	0.37
R^2	57.75			52.31		
Adjust R^2	55.32					

1. *, **, *** were statistically significant at the levels of 0.10, 0.05, and 0.01, respectively.
2. The Hausman test statistic is 20.75, and the p-value is 0.006.

The results of the analysis of the relationship between dependent variables and independent variables by statistical methods and fixed-and random-effects regression determined that the Hausman test statistic was 20.750 and the p-value was 0.006. A p-value less than 0.01 indicates that it is significant at 0.01. From the result in Table 4, it was shown that the fixed-effects regression model is suitable to study factors affecting the rate of return on ordinary for this research because the random-effects regression model is seen to be biased and inconsistent. The fixed-effects regression model is shown in equation (5).

$$RROS_y = -34.71 +2.65CR -6.47DE +1.31ROE +3.65P/BV -4.59DY +0.33P/E +1.02FF -3.76Covid +a_{it} +\mu \qquad (5)$$

From Table 4, the R-squared value is 0.5775, which explains how the independent variables included in the equation describe the factors affecting the RROS. Moreover, the adjusted R-squared value is 0.5532, which explains approximately 55.32% of the variation after adjusting for the independent variables of the RROS.

12

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January - April 2023

The analysis of the factors that determine the RROS of companies in the banking and insurance sectors was described as follows.

1. Current Ratio (CR)

The CR was statistically significant at the 0.10 level because the p-value was 0.08, which is less than the significance level. Therefore, it can be considered that the CR has a significant influence on the RROS. It has a positive correlation with ROE of listed companies, and the regression coefficient of the working capital ratio is 2.65. If the CR, as measured by the current assets to current debt ratio, increases one time, it would increase the RROS of listed companies by 2.65%.

2. Debt to Equity Ratio (DE)

DE was not statistically significant at 0.1 because the p-value was 0.44, which was greater than the significance level of 0.1. So, it can be concluded that DE does not have a significant influence on the RROS.

3. Return on Equity (ROE)

ROE was statistically significant at the 0.01 level because the ROE's p-value was 0.00, which is less than the significance level of 0.01. So, it can be concluded that ROE has a significant positive influence on the RROS. In addition, the regression coefficient for ROE was 1.31, which shows that if the rate of ROE, as measured by the net profit-to-equity ratio, increases by 1%, the ROE of listed companies will increase by 1.31%.

4. Price to Book Value Ratio (P/BV)

The P/BV was not statistically significant at the 0.10 level because the p-value was 0.26, which was greater than the 0.10 significance level. Therefore, it was shown that the P/BV does not have a significant influence on the RROS.

5. Dividend Yield Ratio (DY)

The DY was statistically significant at 0.01, since the p-value was 0.00, which is less than the 0.01 significance level. Therefore, the DY has a significant negative influence on the RROS. In addition, the regression coefficient of the DY was 4.59, which shows that if the DY, as measured by the dividend-per-share ratio, increases by 1%, the RROS of listed companies will decrease by 4.59%.

6. Price to Earning Ratio (P/E)

The P/E was statistically significant at 0.10 because the p-value was 0.07, which was less than the significance level. Therefore, it can be concluded that the P/E has a significant positive influence on the RROS. Moreover, the regression coefficient of the P/E is 0.33, which means that if the market price-to-earnings per share, as measured by the market price to net earnings, increases one time, the RROS will increase by 0.33%.

7. Nonresident Net Fund Flows (FF)

The nonresident net FF had a statistically significant positive effect on the RROS. The regression coefficient of nonresident net FF was 1.02, which means that if the nonresident net FF increases one time, the RROS will increase by 10.20%.

8. Covid Situation (Covid)

Covid had a negative impact on the RROS.

From the result, CR was statistically significant with a positive correlation to the RROS, consistent with studies by Ozen, Ozdemir, and Grima (2020), and Kumar, and Kumara (2021). When the CR increases by one time, the RROS will increase by 2.65%. The ROE was also found to be statistically significant, with a positive correlation to the RROS. If ROE, which is measured by the net profit increased by 1%, it would increase the RROS by 1.31%, which is consistent with studies by Lu, and Yakovlev (2018); Camilleri, Grima,

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January-April 2023

13

and Grima (2019). Moreover, the P/E ratio was statistically significant with a positive correlation to the RROS, consistent with a study by Dutta et al (2018); Solihati (2019); Ermiati et al., 2019; Rahman and Shaamsuddin, 2019) but it is different from (Bustani, 2020). When the P/E ratio increases by 1%, the RROS will increase by 0.33%. Additionally, the DY was statistically significant, with a negative correlation to the RROS, which is consistent with Muazaroh and Septiarini (2021) findings. When the DY, as measured by the dividend-per-share to share price ratio, increases by 1%, the RROS will drop by 4.59%, according to studies by Singh and Tandon (2019); Husna and Satria (2019); Kumar, and Kumara (2021). These findings are consistent with the study by Freihat (2019); Basuki, Pulungan and Udin (2020) who examined the relationship between financial ratios and securities prices of 10 companies listed on the SET in the real estate and construction sectors. As for the nonresident net FF, it had a statistically similar effect on the RROS, consistent with studies by Murwatiningsih, Abiprayu, and Wijayanto (2018) and Ozen, Ozdemir, and Grima (2020).

The most statistically significant external impact on the RROS this decade was Covid, consistent with studies by Latief and Niu (2020); Ngwakwe (2020); Caferra, and Vidal-Tomás (2021) and Wang et al. (2021), that studied COVID-19's effect on financial markets in China based on micro evidence and possible mechanisms.

Conclusion

This research studied the factors affecting the RROS of 23 companies in the banking and insurance sectors listed on the SET using descriptive and inferential statistical processes for time-series data analysis during 2012–2021. The relationship analysis of the dependent variable and independent variables using multiple regressions analysis to study the factors affecting the RROS found that CR, P/E, ROE, and nonresident net FF were a statistically significant positive correlation. Other factors including DY and Covid were a statical significance with negative correlation. In addition, the DE and P/BV factors were hypothetical but were not statistically significant. These factors can be applied and help to formulate the sustainable operating strategies of listed banking and insurance businesses, as well as developing the company's risk prevention approach.

Contribution

This research has contributed to present significant factors affecting the RROS that are CR, P/E, ROE, DY, nonresident net FF, and Covid factors by analyzing multiple regressions models. Liquidity, as measured by CR, was statistically positively correlated with RROS. This reflects that investor tends to choose to invest in companies with high liquidity and low risk due to the high probability of obtaining the highest rate of return in the future (Fernando, 2021). It was also discovered that profitability, as measured by ROE, had a statistically significant positive influence on RROS. The findings reflect that if companies could generate more net profits compared to their equity investments, they would be more profitable. It will give shareholders the opportunity to receive returns from the operation of that business at a higher rate. It reflects the profitability of the investing company, making it easier for investors to make investment decisions (Ozen, Ozdemir, and Grima, 2020). In contrast, this study found that DY, a measure of dividend payout, had a statistically significant negative influence on RROS. The findings reflect that in years when companies have a high DY, they tend to be years when their RROS is low. A possible explanation is that dividend decisions are generally related to management policies and the net profits made that year. This is usually not related to the price of the ordinary shares, as DY is calculated as the dividend per share divided by the price per share. It would imply that the year of high DY may be due to the share price decline, not from the higher dividends per share. It could also be caused by the behavior of investors who often sell stocks after the

14

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January - April 2023

company's earnings are announced, resulting in lower share prices and RROS. Furthermore, DE was found no impact on RROS, which could be attributed to the fact that the amount of debt was a determining factor in profitability (Nasution, Putri and Dungga, 2018). Thus, there was no significant relationship between the amount of debt and the rate of return. This reflects those investors do not pay much attention to these factors when considering ordinary shares in the industry due to operational efficiency is not showing and the company's performance is concrete, investors choose not to consider such factors. While P/BV is based on the market price, which is quite subjective or personal factor, investors also do not consider taking advantage as well (Lebo and Tasik, 2017 ; Karakus and Bozkurt, 2017). For Covid-19, there was a statistically significant negative influence on RROS because initially from the situation, banking and insurance performance improved from the sale of policies, but as the pandemic continued and the severity declined after Initiating effective vaccination results in the claim amount being higher than the value of the insurance premium received. As a result, the performance of insurance companies has decreased and resulted in a decrease in RROS.

Suggestion and Future Research Direction

For general investors who are interested in investing in banking and insurance companies, the results of this research can be used to make investment decisions. In addition to the CR, ROE, and DY related to the rate of return, investors should also focus on other factors both inside and outside the company to ensure an accurate analysis of stock price trends in banks and insurance companies. In the future, other correlation-testing methods should be adopted for greater accuracy and reliability. Further studies of comparative financial statements should be studied, and quarterly financial statements should be studied to make the analysis clearer and more detailed. This study used quantitative data mainly to analyze financial statements. Therefore, in the next study, more qualitative data should be considered in order to make the analysis more reliable.

Limitation

There was some limitation to this research, which the samples consist of only listed banking and insurance business on Thai stock exchange information but there are also unregistered groups of companies that do not disclose the information to the public. Therefore, this research cannot collect data such as financial statements from the unregistered companies, which may introduce other factors affecting the rate of return on ordinary shares.

References

Akhtaruzzaman, M., Boubaker, S. and Sensoy, A. (2021). Financial Contagion During Covid- 19 Crisis. *Finance Research Letters.* 38. https://doi.org/10.1016/j.frl.2020.101604

Bank of Thailand. (2012). *Economic Issues of 2012.* Retrieved September 2022, from https://www.bot.or.th/ Thai/MonetaryPolicy/EconomicConditions/AnnualReport/AnnualReport/annual_Y55_T.pdf

Bank of Thailand. (2021). Measures to Help Debtors and Financial Institutions Information During the COVID-19 Epidemic. Retrieved September 2022, from https://www.bot.or.th/Thai/FinancialInstitutions/ COVID19/ Pages/default.aspx

Basuki, B., Pulungan, N. A. F. and Udin, U. (2020). The Effect of Innovation on Price to Book Value: The Role of Managerial Ownership in Indonesian Companies. *The journal of Asian Finance, Economics and Business.* 7(5),249-258. https://doi.org/10.13106/jafeb.2020.vol7.no5.249

วารสารมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยนครพนม ; ปีที่ 13 ฉบับที่ 1 มกราคม - เมษายน 2566
Journal of Humanities and Social Sciences Nakhon Phanom University ; Vol.13 No.1 January-April 2023

15

Brigham, E. E., Houston, J. F., Ming, H. J., Kee, K. U. and Ariffin, A. N. B. (2019). *Essentials of financial management.* (4th ed). Singapore : Cengage Learning Asia Pte Ltd.

Bustani, B. (2020). The Effect of Return on Assets (ROA), Net Profit Margin (NPM), Dividend Payout Ratio (DPR) And Dividend Yield (DY) On Stock Prices In The Subsectors Insurance Company Listed In Indonesia Stock Exchange Period 2015-2018. *Ilomata International Journal of Tax and Accounting.* 1(3),170-178. https://doi.org/10.52728/ijtc.v1i3.113

Caferra, R. and Vidal-Tomás, D. (2021). Who Raised from the Abyss? a Comparison Between Cryptocurrency and Stock Market Dynamics During the Covid-19 Pandemic. *Finance Research Letters.* 43,101954. https://doi.org/10.1016/j.frl.2021.101954

Camilleri, S. J., Grima, L. and Grima, S. (2019). The Effect of Dividend Policy on Share Price Volatility: An Analysis of Mediterranean Banks' Stocks. *Managerial Finance.* 45(2),348-364. https://doi.org/10.1108/MF-11-2017-0451

Dutta, K. D., Saha, M. and Das, D. C. (2018). Determinants of P/E Ratio: An empirical study on listed manufacturing companies in DSE. *International Journal of Scientific and Research Publications.* 8(4),167-174. https://doi.org/10.29322/IJSRP.8.4.2018.p7624

Ermiati, et al. (2019). Pengaruh Kebijakan Dividen Terhadap Harga Saham Perusahaan Sub Sektor Otomotif Dan Komponen Yang Terdaftar Di Bursa Efek Indonesia Periode 2008-2017. *Niagawan.* 8(2),131-139. https://doi.org/10.24114/niaga.v8i2.14366

Fathmaningrum, E. S. and Utami, T. P. (2022). Determinants of Investment Decicions in the Capital Market During the COVID-19 Pandemic. *Journal of Accounting and Investment.* 23(1),147-169. https://doi.org/10.18196/jai.v23i1.13408

Fernando, J. (2021). *What is the Current Ratio? Guide to Financial Ratios, Corporate Finance & Accounting.* Retrieved September 2022, from https://www.investopedia.com/terms/c/currentratio.asp

Freihat, F. A. R. (2019). Factors Affecting Price to Earnings Ratio (P/E): Evidence from The Emerging Market. *Risk Governance & Control: Financial & Institutions.* 9(2),47-56. https://doi.org/10.22495/rgcv9i2p4

Grigorian, D. (2019). Nonresident Capital Flows and Volatility: Evidence from Malaysia 's Local Currency Bond Market. *IMF Working Paper.* 2019(23). https://doi.org/10.5089/9781484393161.001

Husna, A. and Satria, I. (2019). Effects of Return on Asset, Debt to Asset Ratio, Current Ratio, Firm Size, and Dividend Payout Ratio on Firm Value. *Int. Journal of Economics and Financial Issues.* 9(5),50-54. https://doi.org/10.32479/ijefi.8595

IMF. (2020). *World Economic Outlook, October 2020: A Long and Difficult Ascent.* Retrieved March 2021, from https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/worldeconomic-outlook-october-2020

Investing.com. (2021). *What is an Economic Crisis Article?.* Retrieved May 2021, from https://greedisgoods.com/category/economics/

Investopedia. (2016). *Capital Asset Pricing Model-CAPM.* Retrieved September 2022, from https://www.investopedia.com/terms/c/capm.asp

Karakus, R. and Bozkurt, I. (2017). The Effect of Financial Ratios and Macroeconomic Factors on Firm Value: An Empirical Analysis in Borsa Istanbul. *RSEP International Conferences on Social Issues and Economic Studies.* 4th Multidisciplinary Conference, Prague, Czechia, 29-30 June, 2017

Koh, M. C., Keng Ang, S. and Brigham, E. F. (2014). *Financial Management: Theory and Practice, An Asia Edition, Theory and Practice aims to provide readers with insights into the key issues and cases that are related to the corporate scene in Asia.* Malaysia : Cengage Learning Asia Pte Ltd.

Kumar, M. P. and Kumara, N. V. M. (2021). Market Capitalization: Pre and post COVID- 19 Analysis. *Elsevier Public Health Emergency Collection.* 37,2553-2557. https://doi.org/10.1016/j.matpr.2020.08.493

Latief, N. F. and Niu, F. A. L. (2020). Accounting Information and Psychological Factors in Capital Market : Do these Affect the Investors' Decisions to Invest? *Jurnal Reviu Akuntansi dan Keuangan*. 10(2),335-348. https://doi.org/10.22219/jrak.v10i2.12931

Latief, Z. (2018). *Price to Book Value.* Retrieved May 2021, from https://analis.co.id/pbv-price-to-book-value.html

Lebo, T. C. and Tasik, H. H. D. (2017). *The Impact Of Financial Ratios On Price To Book Value (P/BV) In Automotive And Component Sub Sector Listed In Idx Within 2007-2016 Periods.* Retrieved October 2022, from https://ejournal. unsrat.ac.id/ index.php/emba/article/viewFile/17463/17018

Lu, Y. and Yakovlev, D. (2018). Instruments, Investor Base, and Recent Developments in the Malaysian Government Bond Market. *IMF Working Papers*. 18(95),1-34. https://doi.org/10.5089/9781484353073.001

Manprasert, S. (2020). *The Impact of the Covid-19 Epidemic. to the Thai Economy.* Retrieved May 2021, from https://www.krungsri.com/th/plearn-plearn/economic-covid-impact

Mela, F. and Kopalle, P. K. (2002). The Impact of Collinearity on Regression Aalysis: the Asymmetric Effect of Negative and Positive Correlations. *Applied Economics*. 34(6),667-677. https://doi.org/10.1080/00036840110058482

Muazaroh, A. and Septiarini, D. F. (2021). Factors Affecting The Rate Of Return Of Mudharabah Deposits In Islamic Banking In Indonesia During 2015-2020 Period. *Jurnal Ekonomi Syariah Teori dan Terapan*. 8(1),64-75. doi:10.20473/vol8iss20211pp64-75

Murwatiningsih, A. Y., Abiprayu, K. B. and Wijayanto, A. (2018). The Impact of Conservation on Average Abnormal Return: Time Series Analysis. *Jurnal Bisnis & Manajemen.* 19(1),30-36.

Na Nirot, T. et. al. (2022). Analysis Of Financial Ratios Of Companies In The Financial Sector Listed In The Stock Exchange Of Thailand During The Covid-19. *Journal of MCU Nakhondhat*. 9(7),103-118.

Nasution, A. E., Putri, L. P. and Dungga, S. (2018). The Effect of Debt to Equity Ratio and Total Asset Turnover on Return on Equity in Automotive Companies and Components in Indonesia. *Advances in Economics, Business and Management Research (AEBMR)*. 92(3),182-188. doi:10.2991/icame-18.2019.20

Ngwakwe, C. (2020). Effect of COVID-19 pandemic on global stock market values: a differential analysis. Œconomica. 16(2),255–269.

Office of Insurance Commission. (2021). *Situational Impact Analysis The spread of the covid-19 virus to the insurance business*. Retrieved September 2022, from https://www.oic.or.th/th/consumer/90774

Ozen, E., Ozdemir, L. and Grima, S. (2020). The Relationship Between the Exchange Rate, Interest Rate and Inflation: The Case of Turkey. *Scientific Annals of Economics and Business*. 67(2),259-275. https://doi.org/10.47743/saeb-2020-0014

Panuvisitsang, W. and Chansarn, S. (2018). Factors Influencing Rate of Return from Common Stocks of Listed Companoes on Food and Beverage Industry on the Stock Exchange of Thailand. *Journal of Business, Economics and Communications*. 13(1),137-149.

Perkins, D. W. et al., (2020). COVID-19 and the Banking Industry: Risks and Policy Responses. *Congressional Research Service.* R46422.

Rahman, M. L. and Shamsuddin, A. (2019). Investor Sentiment and the Price-Earnings Ratio in the G7 Stock Markets. *Pacific-Basin Finance Journal*. 55(2019),46-62. https://doi.org/10.1016/j.pacfin.2019.03.003

Rosikah, et. al. (2018). Effects of Return on Asset, Return on Equity, Earning Per Share on Corporate Value. *The International Journal of Engineering and Science (IJES)*. 7(3),6-14. doi:10.9790/1813-0703010614.

Singh, N. P. and Tandon, A. (2019). The Effect of Dividend Policy on Stock Price: Evidence from the Indian Market. *Asia-Pacific Journal of Management Research and Innovation*. 15(1-2),7-15. doi: 10.1177/2319510X19825729

Solihati, G. P. (2019). Analysis of Factors Affecting Abnormal Return Stock in Private Banking Sector Registered in Indonesia Stock Exchange 2015-2017. *International Journal of Academic Research in Accounting, Finance and Management Sciences*. 9(2),164-171. doi: 10.6007/IJARAFMS/v9-i2/6108

Sulfiani, N. and Mais, R. G. (2019). Analisis pengaruh kinerja keuangan terhadap tingkat bagi hasil deposito mudharabah pada bank umum syariah di Indonesia tahun 2012–2018. *Jurnal STEI Ekonomi*. 28(1),263. https://doi.org/10.36406/jemi.v28i01.263

Tai, C. (2020). Time-Varying Market, Interest Rate, and Exchange Rate Risk Premia in the US Commercial Bank Stock Returns. *Journal of Multinational Financial Management*. 10(3-4),397-420. https://doi.org/10.1016/S1042-444X(00)00031-1

Tanushev, C. (2016). Theoretical Models of Dividend Policy. *Economic Alternatives, Sofia, UNWE Publishing Complex*, 3,299-316. Retrieved October 2022, from https://www.researchgate.net/publication/309732173_ Theoretical_Models_of_Dividend_Policy

The Stock Exchange of Thailand. (2021). Temporary Cessation of Trading in Case of Circuit Breaker. Retrieved September 2022, from https://classic.set.or.th/th/products/trading/equity/tradingsystem_p8.html

Wang, F. and Wu, M. (2020). The Impacts of COVID-19 on China's Economy and Energy in the Context of Trade Protectionism. *Int J Environ Res Public Health*. 18(23),12768. doi:10.3390/ijerph182312768

Wang, Z. et al. (2021). Covid-19 and Financial Market Response in China: Micro Evidence and Possible Mechanisms. *Plos One*. 16(9),e0256879. https://doi.org/10.1371/journal.pone.0256879

WHO Thailand. (2019). *Article What is Covid Disease?*. Retrieved June 2021, from https://www.who.int/docs/default-source/searo/Thailand/update-28-covid-19-what-we-know---june2020---thai.pdf?sfvrsn=724d2ce3_0

Wooldridge, J. M. (2019). Correlated Random Effects Models with Unbalanced Panels. *Journal of Econometrics*. 211(1),137-150. https://doi.org/10.1016/j.jeconom.2018.12.010