Stock Performance of Tourism Business in Thailand
ผลตอบแทนหุ้นของธุรกิจท่องเที่ยวในประเทศไทย

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Abstract

This paper aims to investigate the stock performance of tourism business in Thailand, the regression analysis is employed to study the relationship for prediction the stock performance by macroeconomic factors. This study consists of secondary data since January 2012 to August 2016, the tourism price index considered as the regressand variable while consumer price index, diesel price, exchange rate, and occupancy rate in terms of monthly data consisted as the regressors variables. The result indicates only the exchange rate can be estimated the stock performance of tourism business in Thailand significantly, and the predictor variables described 15.29% of variance. The future study should considered the other determinants, especially in tourism sector and seasonality should be determined.

Keywords: Stock Performance, Tourism Business, Thailand

บทคัดย่อ

วัตถุประสงค์ของการวิจัยครั้งนี้เพื่อศึกษาผลตอบแทนของบริษัทในกลุ่มท่องเที่ยวในประเทศไทยโดยการวิเคราะห์สมการถดถอยเพื่อทำการศึกษาถึงความสามารถของปัจจัยด้านเศรษฐศาสตร์มหาภาคในการพยากรณ์ผลตอบแทนหุ้น การศึกษาครั้งนี้ได้ใช้ข้อมูลทุติยภูมิแบบรายเดือนของบริษัทในกลุ่มท่องเที่ยวในประเทศตั้งแต่ช่วงเดือน มกราคม พ.ศ.2555 ถึงเดือน สิงหาคม 2559 ผลตอบแทนหุ้นของบริษัทในกลุ่มท่องเที่ยวในประเทศไทยเป็นตัวแปรตามในขณะที่ดัชนีราคาผู้บริโภค ราคาน้ำมันดีเซล อัตราแลกเปลี่ยน และอัตราการเข้าพักถูกพิจารณาเป็นตัวแปรที่ใช้ในการคาดการณ์ จากการศึกษาพบว่าอัตราแลกเปลี่ยนเป็นเพียงปัจจัยเดียวที่สามารถพยากรณ์ผลตอบแทนของธุรกิจท่องเที่ยวในประเทศไทยได้อย่างมีนัยสำคัญ และปัจจัยที่

ใช้ในการพยากรณ์ทั้งหมดนั้นสามารถคาดการณ์ผลตอบแทนของธุรกิจท่องเที่ยวในประเทศไทยได้ร้อยละ 15.29 สำหรับการศึกษาครั้งต่อไปควรพิจารณาปัจจัยอื่น ๆ ที่เหมาะสมกับกลุ่มท่องเที่ยว และควรทำการศึกษาความเป็นฤดูกาลของบริษัทในกลุ่มท่องเที่ยวในประเทศ

คำสำคัญ : ผลตอบแทนหุ้น บริษัทกลุ่มท่องเที่ยว ประเทศไทย

Introduction

Several scholars employed the macroeconomic determinants to describe several of economic phenomena, for instance, the unemployment rate, gross domestic product, interest rates, consumer price index, exchange rate, policies as well as the factors which related to the economic performance (Clare & Thomas, 1994; Fischer, 1993; Mankiw, 2010). Nevertheless, few researchers tended to investigate the macroeconomic determinants only one sector specifically rather than in general perspective because all variables might not be appropriated for all circumstances or unique characteristics of sectors in the present time.

This study concerned the four macroeconomic determinants to describe the stock performance of tourism industry. Consumer price index (CPI) used to measure the price level of goods and services brought by consumers. Diesel retail prices as regressor to reflect the price of diesel oil which determined by Energy Policy and Planning Office Ministry of Energy. Exchange rate as determinants to indicate the money rate between Bath and US dollar. Occupancy rate employed to represent number of room nights booked which divided by number of rooms. The scopes of this paper including; the related literature about macroeconomic factors and stock performance of tourism business, methodology and data, result, and conclusion of this investigation.
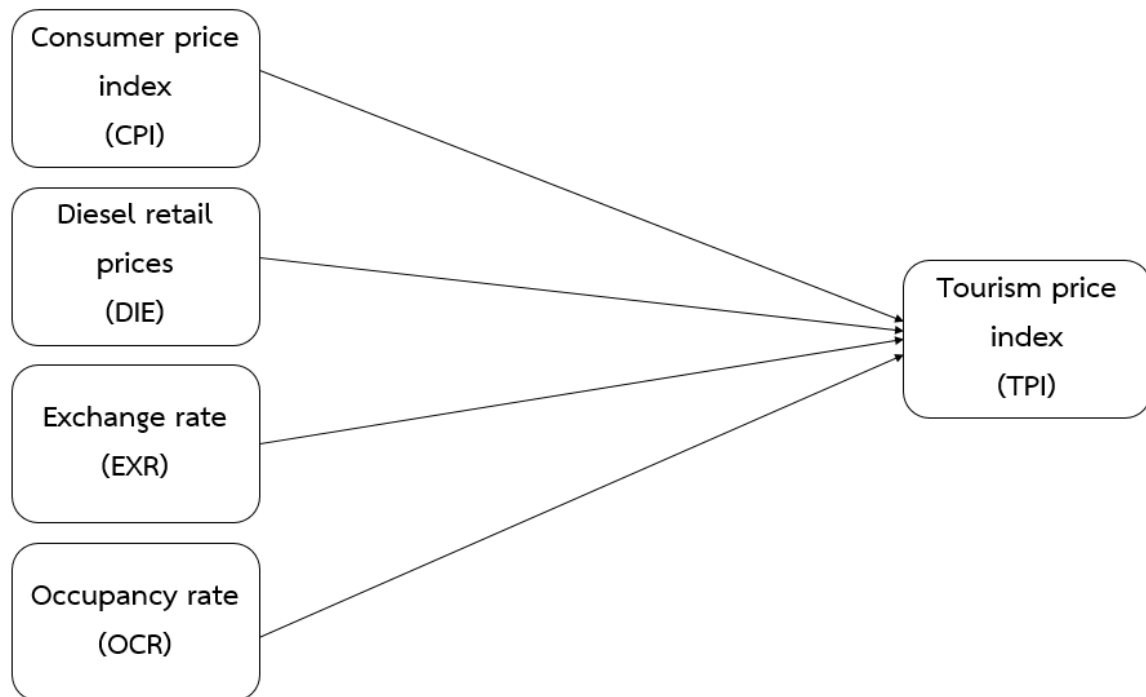
Objective

This paper aims to investigate the stock performance of tourism business in Thailand, the regression analysis is employed to study the relationship for prediction the stock performance by macroeconomic factors.

Conceptual framework

This investigation considered the tourism price index considered as regressand variable while diesel price, exchange rate, and occupancy rate as regressors variables which indicated in Figure 1.

Figure 1 Conceptual framework

Literature review

Majority of investigations has been demonstrated the relationship between macroeconomic factor and stock performance in terms of stock return and stock price because these factors can be described the changing of stock performance not only in the whole stock market but also in the specific industry in various context for instance, the investigating the impact of macroeconomic factors on stock performance of UK, India, and Thailand , and affecting of macroeconomic determinants toward stock price of tourism, bank, food and beverages, and commerce sectors (Clare & Thomas, 1994; Danwantanakul & Banchenvijitara; 2013, Pramod Kumar & Puja, 2012; Rojanawuthitikun, 2011; Pungrang, 2010; Tangjitprom, 2011). Hence, the determinants of macroeconomic can be predicted the changing of stock performance in several sector.

Nevertheless, the previous researcher investigated the changing of stock performance in different context from different factors. For instance, Tangjitprom (2011) investigated the macroeconomic factor that affected toward the stock return by unemployment rate, interest rate, consumer price index, and exchange rate in Thailand context , the result found that the interest rate and exchange rate can be estimated the stock return significantly, while,

Pramod Kumar and Puja (2012) and Clare and Thomas (1994) predicted the India's stock price and UK's stock return by five and eighteen factor respectively. Besides, the examination the macroeconomic factor on different sector might not be required the identical determinants, or using the identical determinants to explain in the identical sector, but the result might be demonstrated differently, for instance, Rojanawuthitikun (2011) employed OLS technique to describe the determinants that affected toward stock performance of banking sector in fifteen quarters, the result found that only real GDP factor can be predicted the price index of banking sector significantly and positively, while Jitnawasan and Konhsawatdikerti (2012) considered the exchange rate, interest rate, set index, exporting, consumer price index and private investment index to estimate the stock price of food and beverages on the Stock exchange of Thailand based on sixty month, the result found that all factors can be predicted the stock price index significantly. Furthermore, Pungrang (2010) investigated the macroeconomic determinants on stock price of commerce sector in Thailand which included food and beverage sector based on sixty-six month, the result found that the stock exchange Thailand index and the regressand can be estimated by retail price index significantly.

Previous researchers considered the macroeconomic factor on the stock or price performance of the tourism sectors considered at least four regressors to explain the stock performance of tourism business, furthermore, the four causal variables that previous scholars found can be predicted regressand significantly in terms of monthly data included the consumer price index, exchange rate, occupancy rate, and diesel price obviously. Firstly, the consumer price index can be represented as core inflation or the prices of goods and services which consumed by consumers, this factor can be predicted the tourism price index significantly and negatively based on the service industry which included the tourism price index significantly based on data year 2004 to 2010 or eighty-four months (Danwantanakul, 2013; Luxariyatham , 2011; Saengwerasiiri, 2005). Secondly, the exchange rate can be predicted the tourism price index as well because this factors related to the monetary policy in the country, besides, most of scholars indicated the exchange rate can be estimated the tourism price index significantly and negatively (Boonrueng & Chaithip, 2011; Danwantanakul, 2013; Ruxariyatham, 2011; Saengwerasiiri, 2005). Thirdly, Rohaphon (2010) investigated ninety months and found that the occupancy rate can be estimated the stock price of tourism and leisure of Dusit Thani public company limited (DTC) and Shangri-La hotel public company limited (SHANG). Fourthly, the oil price can be described the changing of tourism price index especially,

the diesel price in Thailand which announced and sells in the identical price, Boonrueng and Chaithip (2011), and Ruxariyatham (2011) demonstrated that the diesel price can be predicted the performance of tourism sector significantly and positively. Accordingly, the stock performance of tourism business can be estimated by four determinants of macroeconomic included the consumer price index, exchange rate, occupancy rate, and diesel price in terms of monthly data.

Research method/research methodology

This study consists of the secondary data since January 2012 to August 2016, the tourism price index considered as regressand variable while diesel price, exchange rate, and occupancy rate in terms of monthly data consisted as regressors variables.

Table 1 The Variables and Sources of Data

Variables	Sources
Tourism price index (TPI)	SET Market Analysis and Reporting Tool
Consumer price index (CPI)	Bureau of Trade and Economic Indices
Diesel retail prices (DIE)	Energy Policy and Planning Office Ministry of Energy
Exchange rate (EXR)	Bank of Thailand
Occupancy rate (OCR)	Bank of Thailand

According to TPI, CPI, DIE, and EXR did not form in terms of percentage, hence, among the variables will be transformed to the percent change identical as occupancy rate. TPI is the log difference of monthly tourism price index to represent the average stock performance per month. CPI is the log difference of consumer price index per month that indicated the monthly inflation rate. DIE is the log difference of diesel retail prices to demonstrate the percentage change diesel price. EXR is the log difference of exchange rate of Baht per Dollar. OCR is employed to represent number of room nights booked which divided by number of rooms in terms of percentage. Besides, twelve firms in Stock Exchange Thailand (SET) in Tourism sector are determined to represent the tourism price index which implied in table 2.

Table 2. Twelve Firms in Tourism Sector

Symbol	Company
ASIA	Asia Hotel Public Company Limited
CENTEL	Central Plaza Hotel Public Company Limited
CSR	City Sports And Recreation Public Company Limited
DTC	Dusit Thani Public Company Limited
ERW	The Erawan Group Public Company Limited
GRAND	Grande Asset Hotels And Property Public Company Limited
GREEN	Green Resources Public Company Limited
LHR	Laguna Resorts & Hotels Public Company Limited
MANRIN	The Mandarin Hotel Public Company Limited
OHTL	Ohtl Public Company Limited
ROH	Royal Orchid Hotel (Thailand) Public Company Limited
SHANG	Shangri-La Hotel Public Company Limited

Conclusion

Table 3 indicated the result of the full model where TPI is regressand variable, while CPI, DIE, EXR, and OCR as regressors variables. Exchange rate is the only one determinant predicted the tourism price index significantly and negatively, when the tourism price index changed by 2.299 percent in the monthly in exchange rate or the tourism price index will increase when Thai Baht appreciated, or the tourism price index will increase when US dollar depreciated. Consumer price index is also demonstrated the negative impact but not significant, the tourism price index will increase when inflation rate decrease but it is insignificant. Occupancy rate indicated the negative relationship with tourism price index as well but still insignificant, the tourism price index will increase when occupancy rate decrease but it is not significant. Nevertheless, the diesel retail prices demonstrated the positive relationship with tourism price index as well but still insignificant, the tourism price index will increase when diesel retail prices increase but it is insignificant. Therefore, the consumer price index, diesel retail prices, exchange rate, and occupancy rate has the negative impact on tourism price index, and the only

exchange rate has a significant impact on dependent variables, on the other hands, the diesel retail prices have positive impact on tourism price index but still insignificant.

Table 3. Regression Result of Macroeconomic Determinants and Tourism Price Index

	Coefficient	VIF
	(t-stat)	
Constant	0.120	
	(1.558)	
CPI	-2.068	1.4363
	(-0.563)	
DIE	0.153	1.4627
	(0.551)	
EXR	-2.299**	1.0985
	(-3.484)	
OCR	-0.001	1.0831
	(-1.305)	
Adjusted R-Squared	0.1529	
White	0.7331	
DW	1.9067	
BG	0.4630	

** significance at 5%

Table 3 is also implied the White's test for heteroscedasticity, Durbin-Watson's test, and the result demonstrated that White's test for heteroscedasticity is insignificant, Durbin-Watson's statistic is around 2, and Breusch-Godfrey' test is also insignificant. Furthermore, the variance inflation factors and correlation are around 1 and the determinants within the model have not high correlation. Although, this regression equation indicated the relationship for prediction the stock performance by macroeconomic factors only 15.29 percent, nevertheless, this regression equation does not imply the heteroscedasticity, autocorrelation, and multicollinearity problem, in the other word, this regression equation does not imply the biased estimate.

$$TPI_t = .120 - (2.068CPI_t) + (.153DIE_t) - (2.299EXR_t) - (.001OCR_t)$$

Discussion

The regression equation is investigated the macroeconomic determinants which affected on tourism price index in Thailand. The factors in the model included the consumer price index, diesel price, exchange rate, and occupancy rate to describe the performance of tourism price index in Thailand. The result based on the secondary data since January 2012 to August 2016 indicated the exchange rate is significant, this result is related to previous scholars has been confirmed the impact of exchange rate on stock performance though investigated through difference sectors and different period of time (Boonrueng & Chaithip, 2011; Jitnawasan and Konhsawatdikerti, 2012; Tangjitprom, 2011). Because of the exchange rate factor is directly related to the money issue or tourism expenditure, hence this determinants is significantly related to the tourism price index.

However, the consumer price index, diesel price, and occupancy rate are insignificant to explain the performance of tourism price index. Consumer price index is insignificant because this factor is calculated by Ministry of Commerce of Thailand which represented the prices of only the goods and services bought by consumers in Thailand or exclude the foreigner index it might not be affected on tourism price index sufficiently, and the previous researchers claimed that claimed the economy or government policy in that period might not be encouraged or stimulated enough on the commerce or tourism sector to change the price index (Danwantanakul & Banchenvijitara, 2013; Pungrang (2010). Diesel retail prices is insignificant perhaps the policy of Ministry of Energy in 2012 – 2016 might different when compare in the past, and Boonrueng and Chaithip (2011) diesel price has significantly impact only ASIA, MANRIN, and SHANG, while CENTEL, DTC, ROH were insignificant based on secondary data from 2007 - 2012. Occupancy rate is not significant because the hotel occupancy rate is presented the overall of country but secondary data that determined to investigate come from only twelve firms in SET within service sector, and Rohaphon (2010) claimed that the economic factor and size of hotel might effect on occupancy rate but secondary data does not imply separately. Consequently, although the result indicates only the exchange rate can be estimated the stock performance of tourism business in Thailand significantly, nevertheless, this regression equation is an unbiased estimate of the population mean. The future study should considered the other determinants, especially in tourism sector and seasonality

technique should be determined. Last but not least, this model can be changed the way to investigate in terms of path analysis to estimate the causal connections among the variables.

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