Evan Lau · Lee-Ming Tan
Jing Hee Tan *Editors*

# Selected Papers from the Asia-Pacific Conference on Economics & Finance (APEF 2016)

Springer

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# Preface

The 2016 Asia-Pacific Conference on Economics & Finance (APEF 2016), jointly organized by East Asia Research and East Asia Institute of Management and supported by BEFfore from Universiti Malaysia Sarawak, was held on the 27th and 28th July 2016 in Singapore at the EASB campus.

The special theme for APEF 2016 was "Will the current oil crisis and China market slowdown result in a global recession more brutal than 2008? What are the current top global economic challenges?"

APEF 2016 achieved the objective of bringing together leading scholars, students, and practitioners from overseas to Singapore for an academic exchange. The programme consisted of an opening speech by Dr. Andrew Chua, Principal of East Asia Institute of Management, and two plenary lectures by Dr. Evan Lau, Associate Professor, Director of Centre for Business Economics and Finance Forecasting (BEFfore), UNIMAS, and Dr. HUSZAR, Zsuzsa Reka, Department of Finance at National University of Singapore (NUS) Business School.

A total of 60 registered delegates from the following countries attended APEF 2016: Australia, Bangladesh, Canada, China, Columbia, Egypt, France, India, Indonesia, Israel, Japan, South Korea, Latvia, Malaysia, Russian Federation, Slovak Republic, Sri Lanka, Singapore, Taiwan, Thailand, UK, and USA. Participants were invited to submit papers to the present volume. We thank APEF 2016 conference chair Dr. Evan Lau, Associate Professor, Director of Centre for Business Economics and Finance Forecasting (BEFfore), UNIMAS, for coordinating the review of the submitted papers.

## East Asia Research (EAR)

Established in Singapore in 2015, East Asia Research (EAR) envisions being the gateway to improving lives and enhancing productivity in Asia through promoting the cross-geographical exchange of ideas and knowledge in various faculties. This will be achieved through the dissemination of knowledge from the Asia-focused research conferences and publications by EAR.

EAR academic conferences provide a meaningful platform for researchers, post-graduates, academicians, and industry practitioners to share unique insights and drive innovation. This is a great opportunity for expanding contact networks beyond a singular field and kick-starting a strategic collaboration. Such partnership can bridge the resources and expertise of multiple disciplines to spearhead pioneer movements, thus giving rise to breakthroughs in long-standing issues.

Kota Samarahan, Malaysia — Evan Lau
Singapore — Lee-Ming Tan
Singapore — Jing Hee Tan

# Acknowledgements

This book is dedicated to the memory of my beloved mother, Mdm Pang Soon Kwee, 冯春桂 (1944–2016). You will always live on in our hearts—Lee-Ming Tan, 陈礼铭.

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# About the Editors

**Dr. Evan Lau** is a well-trained University Putra Malaysia graduate with vast experience and research excellence covering the areas of International Economics with numerous applications of econometrics techniques. Recently he ventured into socioeconomic discipline including Economics of Crime and Suicide. He joined Faculty of Economics and Business University Malaysia Sarawak (UNIMAS) in 2005 soon after completing his Ph.D. in 2004. He has served as Associate Professor since June 2014 and is the current Managing Editor of International Journal of Business and Society (IJBS), an internationally refereed journal indexed in the SCOPUS bibliographic database, Emerging Sources of Citation Index (ESCI), Malaysian Citation Centre (MCC), ProQuest publisher, Ulrich's Periodicals Directory, Cabell's Directories (Economics, Finance and Management), and EBSCO Host Publishing. He is the director of Centre of Excellence for Business, Economics and Finance Forecasting (BEFfore) as well as UNIMAS, which—among other—serves as a platform and reference point for business, economic, and finance forecasting. He was the Visiting Scholar in Faculty of Economics at the University of Cambridge from October 2013 to April 2014.

**Mr. Lee-Ming Tan** is the founder of East Asia Research, and he obtained his Masters Degree in Applied Finance from the University of Adelaide. He is deeply interested in how humans function and react with each other. Insight into how people's minds work and how they people together is invaluable in just about every field. Outside of work, he enjoys outdoor activities and occasional computer games.

**Dr. Jing Hee Tan** is an Executive Director of East Asia Institute of Management as well as the Chairman of its Academic Board. He has worked as a Retail Manager, a Senior Science Master of a government secondary school, and as a Merchandising Manager of Robinsons Departmental Store with responsibilities in its Menswear Division. In 1973, he joined the Singapore Institute of Management and eventually became its Chief Operating Officer. In 1994, he wrote his doctoral thesis on Developing a Factor Model of Management Work in Singapore, for which he was awarded his Ph.D. from Henley Management College/Brunel University.

# Evaluation of Cluster-Development Strategic Outlooks Using Book Value and Revenue Multiples

Egor Koshelev, Sergey Yashin and Nadezhda Yashina

**Abstract** This paper suggests an approach making it possible to recognize a core company of a future innovative and industrial cluster in order to subsequently expand this type of business up to a pilot cluster of the region. For that end, it is proposed to use book value multiples, Tobin's $Q$ multiple, and revenue multiples, which allow to determine whether the company in question will be able to become a core of a potential cluster in the very near future. The multiples can also help verify whether a large company meets its current position of the "cluster core." With this end in view, the company's book value multiple is compared with the profitability spread, and the revenue multiples are compared with the profit margin. If the values of the multiples are low, and the profitability spread and the profit margin are high, and if Tobin's $Q$ multiple is >1, the company is underestimated in the stock market and will be developing in years to come more rapidly than other companies in the industry or cluster.

**Keywords** Cluster · Cluster core · Book value multiple · Revenue multiple · Brand value

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# Disposition Effect on Investment Decision Making: Explanation of Regulatory-Focus Theory

I Made Surya Negara Sudirman, Andry Irwanto and Basuki

**Abstract** The disposition effect is the tendency of investors to sell stocks early when the price increases and hold stocks longer when this price decreases. As a consequence, investors may lose opportunities to gain greater profits from a stock winner whose price continues to rise; in contrast, they can suffer greater loss when the stocks continue to decline. The disposition effect is a phenomenon widely studied in behavioral finance. There are two main competing theories attempting to explain this phenomenon: the prospect theory and the regret theory. Although both theories give a fairly comprehensive explanation, they fail to take into account the motivation of investors in making investment decisions. This paper seeks to make a critical review of both of the main theories as well as provide a new explanation related to the motivation of investors from the perspective of the regulatory-focus theory. Regulatory-focus theory explains that individuals can be categorized into two groups, i.e. the prevention group and the promotion group. Regulatory-focus theory adds a more specific explanation that the disposition effect is more likely to occur in the prevention rather than the promotion group. The explanation of the disposition effect based on regulatory-focus -is a novelty in this paper.

**Keywords** Disposition effect · Regulatory focus theory · Prospect theory · Regret theory

## 1 Introduction

The disposition effect is the tendency of investors to sell stocks early when the price increases and hold stocks longer when the price decreases (Shefrin and Statman 1985). As a consequence, investors may lose opportunities to gain greater profits

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# Prospects for the Mutual-Fund Industry in India: A Comparative Study with Respect to the US

Iftaqar Ahmad and Jyotsna Sinha

**Abstract** It has been a difficult time for mutual-fund investors since the beginning of 2016. Retail investors are watching the values of their equity holdings erode. Mutual-fund investors, as well as the fund houses themselves, are dismayed regarding the future scope of investment in the mutual-fund industry. They are suffering from the consequences that occurred when FIIs started pulling money from the Indian share market. However, as investors we should remind ourselves of the old adage "every coin has two sides." The market will revive soon: It is a matter of boom and depression. Sooner or later this phase will be over. In addition, the drawbacks that the financial market brings for us—the mutual-fund industry in India—are growing on yearly basis but not growing that much if we compare it with that of US market where the contribution of US household to the mutual-fund industry is almost 40% (World Bank 2012). The study is descriptive in nature. It is based on secondary data that were collected from books, journals, reports, and Web sites.

**Keywords** Mutual-fund industry · US · Growth · Prospects

## 1 Introduction

The Indian mutual-fund industry has gained much exposure and continues to reinvent itself gradually, exhibiting steady growth over the last three decade. Mutual funds need to be pushed. In today's volatile market environment, mutual funds are looked upon as a transparent and low-cost investment vehicle, thus attracting a substantial amount of investor attention. The market participants are in a vigilant mood waiting to see how the industry adapts to these changes. Asset-management companies are restructuring their business models in order to sustain the growth momentum of the industry and provide for increased levels of operating efficiency and investor satisfaction. The industry continues to battle with

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# Social-Marketing Activities to Augment Brands of Faith in Diversified Marketing in India

Perbettan Baba Gnanakumar

**Abstract** The spiritual foundations in India have entered into retail marketing of Fast Moving Consumer Goods (FMCG). They are competing with multi-brand companies such as Unilever, Colgate Palmolive, Dabur and Glaxosmithkline. In this context, this research sought to determine the following: (1) the social-marketing activities needed for diversity marketing and (2) the basis for segmenting customers in these markets to create "brands of faith." The research was conducted among the customers of Isha products. The research concludes that cause-related marketing strategies are suitable for diversity marketing and that demographic segmentation should be done on the basis of occupation of the customers in emerging markets.

**Keywords** Brands of faith · Diversified market · Social-marketing deeds

## 1 The Challenging Factor

Indian retail markets are highly fragmented (Sengupta 2008). These fragmented markets in the retailing sector are dominated by regional unorganised marketers, community-based marketers, cooperative marketers, and diverse marketers. India's diversity marketing involves acknowledging marketing activities toward diversified groups in the form of religion and a regional community-development centre for a social cause. India's diversity markets are influenced by spiritual gurus. The spiritual leaders of Patanjali products, Sri Sri Ayurveda products, Bochanwasi Shri Akshar Purushottam Swaminarayan Sanstha products, Sri Aurobindo Ashram products, and Isha Arogya products are aggressively expanding their existing businesses (Edelweiss Securities Report 2015). Indian diversity markets are no

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# Determinant Factors for the Formation and Development of a Smart Territory

Andra Zvirbule, Baiba Rivza and Zane Bulderberga

**Abstract** At present, the concept of regional development is based on the principles of planning, which involve smart growth and sustainable development. In most cases, a smart territory is understood as a sustainable and efficient territory that provides a high quality of life to its inhabitants through optimal management of its resources. In addition, this approach may be employed in identifying a smart territory and in the strategic planning of it as well as in the efficient use of resources in the territory. Most research studies focus on smart growth, which involves the sustainable use of resources, the development of the e-environment, solutions to urbanisation problems, waste management, environmental management, etc. However, few research studies are available on the factors determining a smart territory and their influence on territorial development. For this reason, research studies contributing to examining the groups of influencing factors in the aspect of formation of smart territories are important. In addition, the spectrum (i.e., types) of the factors is assumed to be very diverse. If it is assumed that smart growth and the formation of a smart territory is based on systems and subsystems that shape a complex perspective on the formation of a territory, such groups may involve not only the economic aspect but also the social, life quality, and sustainable community and business development aspects. The research aim is to identify the factors that influence the formation of a smart territory and to assess their effects on territorial development. The specific research tasks are as follows: (1) select the factors that influence the formation of a smart territory; and (2) assess the selected factors in terms of their influence on the development of a smart territory. Research methods employed include logical construction, monographic, focus-group analysis, and analytic hierarchy process.

**Keywords** Smart territory · Regional development · Smart growth · Knowledge economy

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# Replacing Formal Authority in the Workplace with Employee Self-governing Authority

Juan Nicolás Montoya Monsalve, Álvaro Fernando Moncada Niño and Juan Daniel Montoya Naranjo

**Abstract** A number of authors throughout organizational history have raised the importance of establishing authority—addition to top management—in an organization, thus creating a flow domain as well as a responsibility to sort through the different resources with the sole intention to make the organization efficient and highly profitable. This has been done from the praxis, epistemology, ontology, and a number of other points of view; however, the concept of leadership has been distorted by confusing authority with the command, obligation, and strength needed for resource management and jurisdiction. Meanwhile, formal authority has suffered serious transformations in organizations, although the discussion of its components is widely supported by the bureaucratic theory, its integration into the administrative process, and proactive business development. This transformation has been defined and made manifest by the decline in the exercise of authority, which contributes to the formulation of generosity, commitment, and engagement, thus promoting the development of high-performance practices in human-resource management and turns people into its strategic and competitive components. From the experience gained in different companies in Latin America, which has been categorized as a "great place to work," through modeling based on effectiveness and devoid of the concept of authority, the system has allowed research to determine the effect of formal authority as nonrecurring businesses gain a more flexible and adaptive element in terms of recognizing the ability of individuals, their knowledge, and their willingness to belong to a particular organization. The nonhierarchical design, the effects of structural position in organizations, the impact of leadership, the relationship of structures and charges in connection with the successes and achievements of the organization, the impact on relationships and communication, authoritarian imposition, noncooperation along with the lack of consistency with

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# A Study of the Human-Resource Practices and Challenges Confronted by Human-Resource Experts in an Indian IT Firm, Bangalore

Palaniappan Saravanan and Arumugam Vasumathi

**Abstract** The human-resource management function plays a critical role in partnering with business and external stakeholders and generates values and credibility to the organisation in terms of attaining their goals and objective for the organisation. The HR expert acts a change enabler by promoting change within the company. Changes within business functions must be addressed through guiding and generating policies and strategies to fulfill the business needs of the company. The HR function is anticipated to generate a value-enhanced amenity to the workers in order to meet upcoming business requirements. Major challenges occur due to increasing stress levels in the work environment. These issues that must be ameliorated through certain engagement initiatives systemetised by the employer and will have an impact manifested by lower attrition rates and the retaining of high-performers workers within the organisation. HR experts partner with business to counter various issues with respect to pre-onboarding requirements, formulating effective strategies and policies that address issues regarding employee performance and grievances, developing leadership skills, and retaining talented and high-performance workers, etc. This study helps identify and address the challenges confronted by HR experts during their day-to-day events at in Indian IT firm at Bangalore. The study determines that female employees are more satisfied with their job in its current role compared with male respondents.

**Keywords** Human-resource management · Change enabler · Performance engagement · Stress management · Strategic partner

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# Current Issues of the Labor Market in the Slovak Republic with an Emphasis on the Trends in Migration Policy

Eva Rievajova and Andrej Privara

**Abstract** The financial and economic crisis had very negative impacts on the Slovak labour market. Adverse effects of the crisis mainly affected the category of disadvantaged persons. A persistent problem is, however, also structural and regional unemployment. Trends in the Slovak labour market are also influenced by the migration of Slovaks for work abroad. On one hand, this helps to reduce the unemployment rate. In contrast, it has many disadvantages: mostly the labour shortage in some sectors and professions. Slovak migration policy should focus primarily on those sectors that are the most affected by labour migration (in particular the health sector).

**Keywords** Labour market · Employment · Migration policy · Highly qualified migrants

## 1 Introduction

The labor market is a sensitive and vulnerable sector of the Slovak economy. The recent years of the crisis in Slovakia since 2009 has taken a significant toll compared with most EU economies, which resulted in deepening structural problems in

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# Portion of Foreign Ownership and Efficiency of Banks in Indonesia

Sparta

**Abstract** This study aimed to accomplish the following: (1) determine the foreign ownership in a private national bank and a non-foreign exchange bank; (2) determine the impact of foreign ownership on the efficiency of the national private banking and non-foreign exchange; and (3) determine if there are differences in the impact of the percentage of foreign ownership of a bank on the efficiency of national private groups and non-foreign exchange. The samples are comprised of banks in the group of Foreign-Exchange National Private Bank (BUSND) and the National Private Bank Non-Foreign Exchange (BUSNND). The number of banks that became the subject of research include as many as 54 banks from the period 2001–2013 with the total number of observations being 702; however, the number of observations included in the data processing is 648. This is due to the use of variable BOPO in the previous year, so the data BOPO was 1 year before starting 2002. Research variables used are BOPO, share of foreign ownership, bank size, and group dummy variables. The equation used is OLS research using panel data. The results of this study prove the following: (1) Foreign ownership has a positive influence on inefficiencies for a particular group of BUSND and BUSNND; (2) the greater the bank's assets, the more efficient the bank tends to be; and (3) there is no difference in the impact of foreign ownership on bank-efficiency levels among the BUSND and BUSNN groups. The results of this study have implications for the policy to restrict foreign ownership in national banks. Revisions of the Banking Act, one of which is to limit foreign ownership in national banks, are being processed in the Commission XI. The results of this study can be considered in the revision of the Banking Law. Foreign ownership is a particular point because increased foreign ownership tends to decrease banking system efficiency.

**Keywords** Foreign ownership · The bank's assets · BUSND · BUSNND · Banking law

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## 1 Introduction

Since the banking regulations on foreign ownership issued by Bank Indonesia through Act 29 of 1999, foreign investors have been allowed to own national banks (≥ 99% ownership), has become a trigger mastered by the foreign banking industry. This condition would not be healthy and would affect the development of the national banking system.

The regulation of foreign ownership in Indonesian banks is considered less strict compared with that in other countries. China have 30% foreign ownership in their banking sector (http://www.ibpa.co.id/News/) according to the research of Hawes and Chiu (2007; in Rusdi; November 2014 [http://kinerjabank.com/kepemilikan-asing-di-perbankan-indonesia/]). Foreign ownership in Chinese banks from 2005 until 2006 reached 19.9%. This foreign ownership portion describes is the ownership of HSBC in Bank of Communication. Likewise, Saudi Arabia has a 40% maximum limit for foreign ownership in their banking sector. In Malaysia, for example, Bank Negara Malaysia (BNM) limits collective ownership to ≤ 30%. Compositions include a single foreign company with a maximum of 20% foreign ownership, whereas foreign individuals can have ≤ 10% ownership. Thailand and the Philippines have also implemented similar policies. In Thailand, foreigners can own shares of a bank ≤ 100%. However, in 10 years the investor must divest its stake to the remaining 49%. In the Philippines, foreigners are also allowed to hold shares up to 100%, but after 7 years they should be lowered to 40% (http://fokus.kontan.co.id/news/menanti-pagar-pembatas-asing-di-industri-perbankan).

What is the proportion foreign ownership in national banks in Indonesia since the crisis up until now? Some current data on foreign bank ownership include the following: (a) Bank CIMB Niaga is 97% owned by CIMB Malaysia; (b) Bank Danamond is 67% owned by Temasek of Singapore; (c) Bank BII is 80% owned by Malaysia's Maybank; (d) Bank OCBC NISP is 81.1% owned by OCBC Singapore; and (e) Bank UOB Buana is 98.9% owned by UOB Singapore (DER 2014).

The entry of foreign investors into the Indonesia banking industry can not be separated from the impact of the global crisis during 1997–1998. During the crisis, the majority of capital injection into banking sector was from foreign investors, whereas local investors were afraid to invest their capital even though Bank Indonesia has offered them to be shareholders.

What does the increase in the percentage of foreign ownership actually contribute to the national banking system, especially in terms of improving the efficiency and financial performance of bank and vice versa?

Previous research linking the portion of foreign ownership to the financial performance of banks, performed by Bonin et al. (2003), found evidence that a significant relationship exists between foreign ownership and bank performance in the transition countries of the Soviet Union. Research addressing the effect of foreign ownership on bank performance was performed by Rahman and Reza (2015) in Malaysia during 2000–2011 and concluded that there [illegible] Another study was performed by Swai and Mbogela (2014) in Tanzania during 2000–2009, and the results showed that foreign ownership has not significantly influenced k performance.

Foreign ownership in national banks has an influence on the efficiency of the national banking system. Research performed by Berger et al. (2008) shows that the Big Four banks in China showed lower levels of efficiency compared with foreign banks. A low level of foreign ownership in major China banks can improve the efficiency of the banks as well as their financial performance. These results are similar to those of study performed by Laurenceson and Qin (2008), which proved that foreign ownership of banks in China has an influence on their efficiency, particularly significant in terms of cost. Mardanugraha (2005) concluded that during 1993–2003, joint-venture banks (foreign and national ownership) were more efficient than locally owned banks in Indonesia. The different results in Beck's research, compared with those from Beck and Hesse (2006) on banking in Uganda in 1999–2005, show that an increase in foreign ownership of banks does not increase banking efficiency in the country. DeYoung and Nolle (1996) showed that foreign-bank branches in the USA from 1985 to 1990 had a less-efficient profit compared with a local bank owned by a citizen of USA. This is because foreign owned banks use more expensive input than locally owned banks. This evidence suggests that foreign-owned banks are less likely to draw and maintain local customers than locally owned banks due to the expensive cost of funds. The results of research by DeYoung and Nolle (1996), together with the results of research performed by Sans et al. (2011) in Malaysia, shows that foreign banks are less efficient than local banks.

Based on the previous results, it is necessary to perform research to prove the impact of the percentage of foreign ownership on the efficiency of national private banks of the foreign and non-foreign exchanges. The study was performed in this particular bank group because foreign ownership has its greatest variation in this bank group. State-owned, joint-venture, foreign, and regional development banks lacked variation as to high share of foreign ownership. For example, regional-development banks, are in majority owned by local government, whereas foreign ownership in the banks "*persero*" have relatively little foreign ownership.

This study examined annual data period from 2001 to 2013. This was due to the availability of existing data and the time constraint.

Based on the notes, research problems included the following:

1. What is the image of foreign ownership in national private banks of the foreign exchange and the non-foreign exchange?
2. What is the impact of the change in foreign-ownership percentage on the efficiency of national private banks of the foreign exchange and non-foreign exchange when bank size is he controlled variable?
3. Is there any difference in the percentage of foreign influence on national private banks of the foreign exchange and non-foreign exchange regarding bank efficiency?

# 2 Literature Review

## 2.1 *Efficiency Bank*

Banking efficiency is measured by calculating the difference between the minimum cost of banking with cost that should be issued by the bank to produce the same output (Mardanugraha 2005). The minimum fee is obtained from the estimated minimum cost of banking functions. Bank efficiency can be divided into two types: technical efficiency and allocative efficiency (Farel 1957). Pindyck and Rubinfeld (1995) divides the efficiency in terms of economic efficiency into two: technical efficiency and price efficiency. Allocative efficiency is the efficiency of the economy related to the efficiency of the price-related cost function. Economic efficiency is achieved in the event of technical efficiency and the efficiency of the price (or allocative efficiency).

There are several methods of measuring the efficiency of banking, namely,

- The traditional approach uses index or ratios such as return on assets (ROA), capital adequacy ratio (CAR), profitability ratio, and the ratio of operating expenses to operating income (BOPO).
- The frontier approach is based on the optimal behavior of the company in order to maximize output or minimize costs as a way to achieve the goal of economic unit (Hartono 2009). The frontier approach consists of: (a) deterministic approach (non-parametric approach), which uses TEKHNICAL Mathematic Programming or with popular data-envelopment analysis (DEA).
- The stochastic approach is classified as a parametric approach using an econometric frontier.

In this study, the ratio used for bank efficiency measurement is the BOPO ratio. There are several reasons why the BOPO ratio is used: First, the ratio is widely used by the banking industry and the institutions banking authority (FSA) in assessing the efficiency of a bank. Second, the ratio is provided in the annual financial statements of banks. Third, determination of the ratio is much simpler. Weaknesses in using the BOPO ratio is that this ratio illustrates the level of efficiency of banks individually without considering the average costs and revenues of the other banks.

## 2.2 *Influence of Foreign Ownership Structure on Bank Efficiency*

In recent years, the relationship between ownership and performance in the industrial non-banking industry has been developed in the literature (Altunbas et al. 2001). The performance of the banking industry is seen from the level of efficiency achieved by the bank. There are two messages from the literature review: The nature bank ownership is very important, and the study of the theory helps to look at the issues in the context of the framework of principal-agent theory and public-choice theory.

In the agency theory, which was first disclosed by Jensen and Meckling (1976), the owner has turned over the management of economic resources to the manager. Company performance, however, did not cause problem of any agency; it depends not on the owner or the manager of the corporate-ownership structure (Jensen and Meckling 1976). Empirical results show inconsistencies with agency theory, in which a company's performance can be affected by the ownership structure of the company. Efficiency is included in the company's performance. Here we present some empirical results regarding the relationship between ownership structure and bank efficiency.

The ownership structure of different banks will provide a different level of efficiency for each bank (Awdeh and El Moussawi 2009; Shaher et al. 2011). The research results on banks in the State of Lebanon from 1996 to 2005 showed that the majority of foreign-owned banks have greater improvement in efficiency levels compared with the majority of locally owned banks In other words, locally owned banks have a weaker performance than foreign-owned banks

Research on foreign ownership and bank efficiency was also performed by Rajput and Gupta (2011) in India. Of 32 foreign banks surveyed in India during 2005–2010, there was an increase in the efficiency of foreign-owned banks. The ease and opportunities given by central bank authorities to foreign banks led to a growing expansion of foreign banks. Four years after the space given in April 2009 by India's central bank, there was rapid growth in the performance of foreign banks. These results are consistent with research performed by Berger et al. (2008) on the structure of foreign ownership of major banks in China. The results showed that the efficiency of foreign-owned banks are better than those of state owned banks. The same thing also happened in Indonesia in 1993–2003, which was investigated by Mardanugraha (2005) and by Abidin (2007) for the period 2002–2005. The same study performed by Bonin et al. (2003) in former countries Yugoslavia and the Soviet Union found that foreign-owned banks more efficient than state- and private-owned banks.

The results of different ongoing studies of Uganda's foreign-owned banks show that foreign ownership of banks in the country does not improve banking efficiency (Beck and Hesse 2006). Furthermore, Beck and Hesse found that the increase in foreign ownership of banks in Uganda did not increase the spread or margin of banks in the country such that the performance of foreign-owned banks did not increase. The results of the research in Uganda are similar to the results of research on foreign banks in the USA for different reasons, which shows the level of efficiency of foreign-owned banks in the USA to be lower than those of banks owned by local residents (DeYoung and Nolle 1996). Foreign banks in the United States were not able to obtain cheaper funds for their input. The more expensive inputs led to decreasing financial performance, or no better than locally owned banks, of foreign-owned banks.

Studies on the effect of government ownership on bank efficiency, performed by Altunbas et al. (2001) on 1195 private commercial banks (2858 public saving banks and 3486 mutual co-operative banks) contained observations in Germany. The result showed that banks owned by the private sector are more efficient than government-owned banks. Further research is also inconsistent with the Agency Theory, in which the performance of the company is not determined by the ownership structure but rather depends on the company manager (Hadad et al. 2003). Results of research by Hadad et al. (2003) show no link between structure of ownership in Indonesian banks with the bank's performance. In this condition, the Agency Theory can be applied.

Based on the results of the study of theory and previous research results, the hypothesis are as follows:

**Ha1: Foreign Ownership Affects Bank Efficiency**

## 2.3 *The Influence of Bank Size on Bank Efficiency*

McAllister and McManus (1993; in Iannotta et al. [2006]) showed that the major banks have an opportunity to diversify risk; thus, major banks have lower cost of funds compared with small banks. Large banks tend to earn higher net interest income compared with smaller banks. This fact is associated with high economies of scale in large banks compared with small banks because cheaper funds are more easily obtained in the money market. In addition, the level of market and the public confidence to entrust their funds to large banks is higher than for small banks. Despite that cost of funds is lower for large banks than small banks, more people tend to save their money in large banks. Thus, the economies of scale or size in banking are positively correlated with efficiency.

In terms of credit management, large banks tend to have lower levels of efficiency than smaller banks. There is no large difference in costs between large credit-management firms and small loan-management firms (Ramli 2005). Large banks have greater credit amount than small banks. Thus, the efficiency level of large banks tends to be greater compared with smaller banks.

According to economic theory, the relationship between input and output changes is described in terms of increasing returns to scale, decreasing returns to scale, and constant returns to scale (Pindyck and Rubinfield 1995). Large banks with increasing returns to scale have higher levels of efficiency than smaller banks. In contrast, large banks with decreasing returns to scale have lower levels level of efficiency than smaller banks. In conditions of constant return to scale, large banks and small banks have the same the level of inefficiency.

With the theory study as well as the previous study, the research hypothesis proposed are as follows:

**Ha2: Bank Size Affects Bank Efficiency**

### 2.4 Differences Regarding the Influence of Bank Eficiency

The size of the group of national private non-foreign exchange banks is less than the group of national private foreign-exchange banks (Mardanugraha 2005). In advance, first, the capital and asset requirement are greater in foreign-exchange national private banks than in non-foreign exchange national private banks (Hadad et al. 2003). Second, the operational activities of foreign-exchange national private banks are broader than those of non-foreign exchange national private banks. Thus, the research hypothesis related to differences in the efficiency of two private bank groups is as follows:

**Ha3: Differences Exist in the Effect of Foreign Ownership on Efficiency of the BUSND Group Versus the BUSNND Group**

## 3 Methodology

This research use samples of foreign-exchange and non-foreign exchange national private banks derived from the commercial bank population. The sample used in this research are all existing banks in the group of non-foreign exchange and foreign-exchange national private sector during 2001–2013. The number of commercial banks in Indonesia that participated in this the study (13 years) includes 914 observations (Table 1).

The number of banks presented in the table were banks with a complete set of financial statements during the study period. Bank mergers, conventional banks that

**Table 1** Number of sample research 2001–2013

| Years | Commercial bank | | Sample (*n*) |
|---|---|---|---|
| | BUSNND | BUSND | |
| 2001 | 38 | 42 | 80 |
| 2002 | 36 | 40 | 76 |
| 2003 | 36 | 40 | 76 |
| 2004 | 35 | 38 | 73 |
| 2005 | 34 | 37 | 71 |
| 2006 | 35 | 36 | 71 |
| 2007 | 35 | 36 | 71 |
| 2008 | 35 | 33 | 68 |
| 2009 | 34 | 31 | 65 |
| 2010 | 36 | 31 | 67 |
| 2011 | 36 | 30 | 66 |
| 2012 | 35 | 30 | 65 |
| 2013 | 35 | 30 | 65 |

*Source* Data of Indonesia Banking Statistics (Bank Indonesia) were converted into Islamic banks, and banks that had their license revoked were not included in this study. The data used are balance panel data. Twenty-five foreign-exchange national private banks group had complete financial statements banks. Twenty-nine non-foreign exchange national private banks had complete financial statements. The 2 groups total 54 banks. Seven hundred two observations were studied (54 banks × 13 years).

The data used in this study were derived from the annual financial statements of banks in the Indonesia Bank Directory from January 2001 to December 2013. The data in the financial statements are required to determine the share of foreign ownership, bank efficiency, and bank size. The data were taken from the Indonesian banking directory the period 2001–2013 and were grouped into (1) Foreign exchange national private banks (BUSND) and (2) non-foreign exchange national private banks (BUSNND). Definitions of variables used in this study are briefly presented in Table 2. Equation study are as follows:

In the panel data, it is important to distinguish whether the panel-data regression model is fitted using a common-effect model (CEM), fixed-effect model (FEM), or random-effect model (REM). A Chow test and Housman test on the panel-data regression equation were required (Gujarati 2003). Several classic tests include (1) residual normality test by Kolmogorov–Smirnof, (2) multicollinearity test, (3) autocorrelation test and (4) heteroscedasticity test.

Hypothesis testing was performed using Student *t* test (partial test). Analysis of the explanatory power of the independent variables explains the variation of the dependent variable and was performed by looking at the amount of adjusted $R^2$ models. The significance level of the Student *t* test is in the alpha at 1, 5, or 10%.

**Table 2** Definition and variable operational research

| No | Variable | Definition | Indicator | Scale |
|---|---|---|---|---|
| 1 | Bank efficiency | Ratio of operating expenses to operating income (BOPO) | =Operating expense/operating income | Ratio |
| 2 | Foreign ownership | Percentage of foreign ownership of total outstanding shares of the banks (POWNFR) | =(Number of foreign shares)/total outstanding shares of the bank ×100% | Ratio |
| 3 | Bank size | Total Bank assets at the reporting date (LNASSET) | =Natural logarithm of total asset | Ratio |
| 4 | Dummy-bank group | Two groups of foreign-exchange private banks and non-foreign exchange private banks (DBank) | The dummy number is 1 when entering the national private banks, and the foreign-exchange dummy number is 0 when in the group of non-foreign national private banks | |

*Source* Adapted own

# 4 Results and Discussion

## 4.1 *Overview of Research Sample*

The research sample consisted of 54 banks from 2001 to 2013 (i.e., 13-year period) so that the total number of observations is 702. The number of observations included in the data processing was 648 for their variable POWNFR at 1 year before being used so that the data POWNFR at 1 year before begins in 2002. The number of banks surveyed were from two groups of banks: national private foreign-exchange banks ($n = 25$) and national private non-foreign exchange banks ($n = 29$). This was done because both groups have a share of foreign ownership that is quite high compared with state-owned banks and regional-development banks. Foreign banks and joint-venture banks were not included in the sample because of foreign ownership: Especially foreign banks are stagnant and the average foreign ownership is close to 100%.

From Table 3, the average efficiency of the banks using BOPO is 87.67%. On average during the last 12 years, private foreign-exchange and non-foreign exchange banks have not been efficient. This is because the average BOPO is still above the average BOPO of banks in ASEAN. From the research data, the most efficient banks by BOPO is a group of private bank-foreign exchange banks, namely, PT Alfindo Sejahtera Bank with BOPO = 0.4082, whereas the most inefficient is a private non-foreign exchange bank, namely, PT Bank Sri Partha with BOPO = 1.9070.

The average percentage of foreign ownership in national private banks, both foreign-exchange and non-foreign exchange, was 18.7%. The portion of foreign

**Table 3** Statistic descriptive research (2011–2013)

| | BOPO | POWNFR | TASSET | LNASSET | DSTATUS | RESID |
|---|---|---|---|---|---|---|
| Mean | 0.876729 | 0.186960 | 16,927,388 | 14.63834 | 0.495370 | 1.22E−18 |
| Median | 0.873600 | 0.000000 | 1693092. | 14.34207 | 0.000000 | −0.003519 |
| Maximum | 1.907000 | 0.990000 | 4.88E+08 | 20.00685 | 1.000000 | 0.637363 |
| Minimum | 0.408200 | 0.000000 | 19,443.00 | 9.875242 | 0.000000 | −0.569227 |
| SD | 0.147045 | 0.323639 | 46,439,459 | 2.008170 | 0.500365 | 0.101607 |
| Skewness | 1.817139 | 1.418435 | 5.595881 | 0.441181 | 0.018519 | 1.141574 |
| Kurtosis | 12.43637 | 3.406273 | 43.28595 | 2.491382 | 1.000343 | 12.45823 |
| Sum | 568.1207 | 121.1500 | 1.10E+10 | 9485.647 | 321.0000 | 6.45E−16 |
| Sum SD | 13.98953 | 67.76803 | 1.40E+18 | 2609.187 | 161.9861 | 6.679625 |
| Observations ($n$) | 648 | 648 | 648 | 648 | 648 | 648 |
| Cross-sections | 54 | 54 | 54 | 54 | 54 | 54 |

*Resource* Result of statitstic process

ownership in one national private bank, namely PT Bank Buana Indonesia, is 99%. The lowest portion of foreign ownership is 0% at several banks in the two groups (BUSND and BUSNND).

Banks with the largest assets are those of a national private foreign-exchange commercial banks, namely, Bank Central Asia with total assets of Rp. 488.5 trillion in 2013, whereas banks with the fewest assets is a national private non-foreign exchange commercial bank, namely, PT Bank Alfindo Sejahtera with total assets of Rp. 19.4 billion.

Bank status is a dummy variable for the bank group, and equals 1 for BUSND or 0 for the BUSNND bank group. The first group of banks (BUSND) consists of 25 banks, and the second group (BUSNND) consists of 29 banks. Thus, the obtained the average value of this dummy variable is 0.4954. The result is closer to 0 than to 1 because the number of banks that have 0 dummy value are greater than the banks with a dummy value of 1.

## 4.2 *Overview of the Portion of Foreign Ownership in Private Foreign-Exchange and Non-foreign Exchange Banks in 2001–2013*

The average share of foreign ownership per year in the group of BUSND and BUSNDD banks increased during 2001–2013 (see Fig. 1). It was not separate from the improvement of the Indonesian economy during that period, and the regulation of foreign ownership in commercial banks in Indonesia is not as strict compared with other countries in ASEAN. Foreign ownership in BUSND and BUSNND banks in 2013 reached 28.57%. This portion is well above the average share of foreign ownership in the State of Malaysia, which has a 30% maximum limit of foreign ownership as does China. China's proportion of foreign ownership in 2006 reached 19.9%

## 4.3 *Overview of Bank Efficiency in Private Foreign-Exchange and Non-foreign Exchange Banks in 2001–2013*

How are the conditions of banking efficiency of BUSND and BUSNND-group banks? By using BOPO as of banking efficiency measurement, the BOPO ratio of banks in the two groups per year on average showed a tendency to decrease (Fig. 2). In other words, the level of banking efficiency has a positive trend. Both aggregated and separated data of the two groups show equal results. BUSNND group banks on average appear to have better levels of efficiency compared with

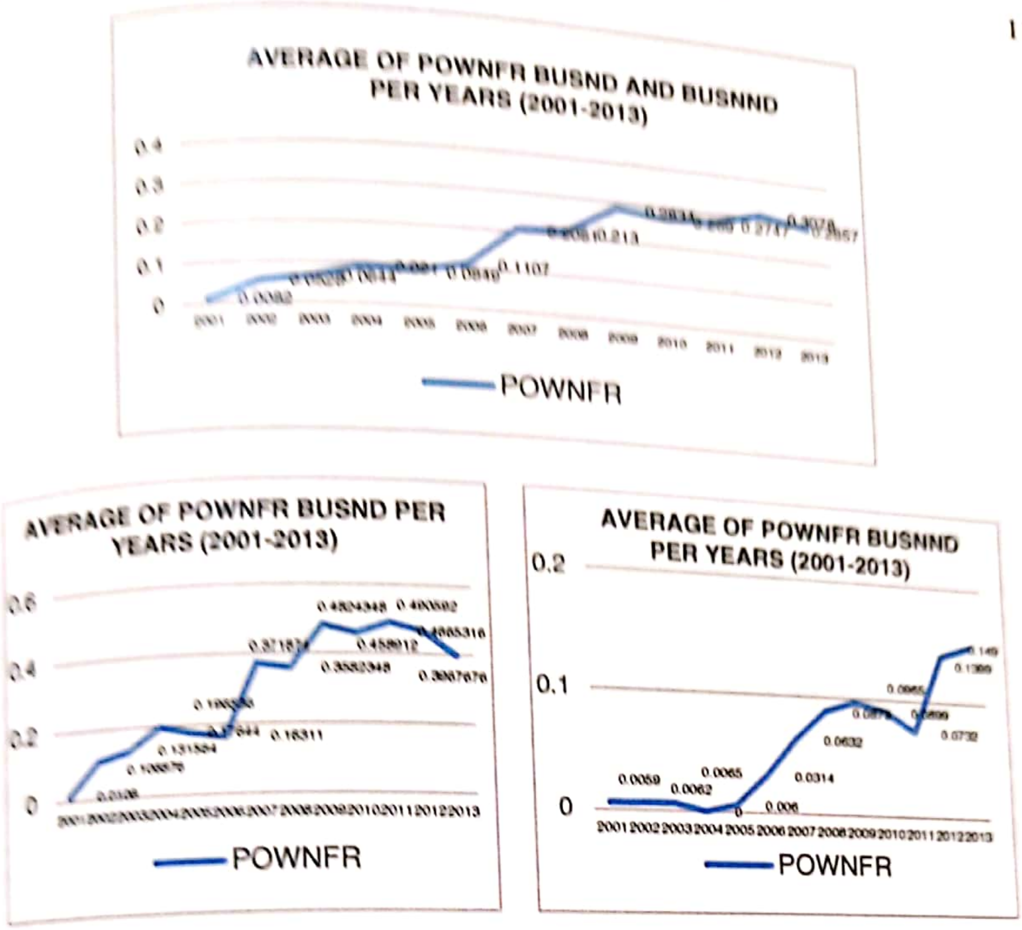


Fig. 1 Overview of the Portion of Foreign Ownership in BUSND and BUSNND Banks in Indonesia in 2001–2013

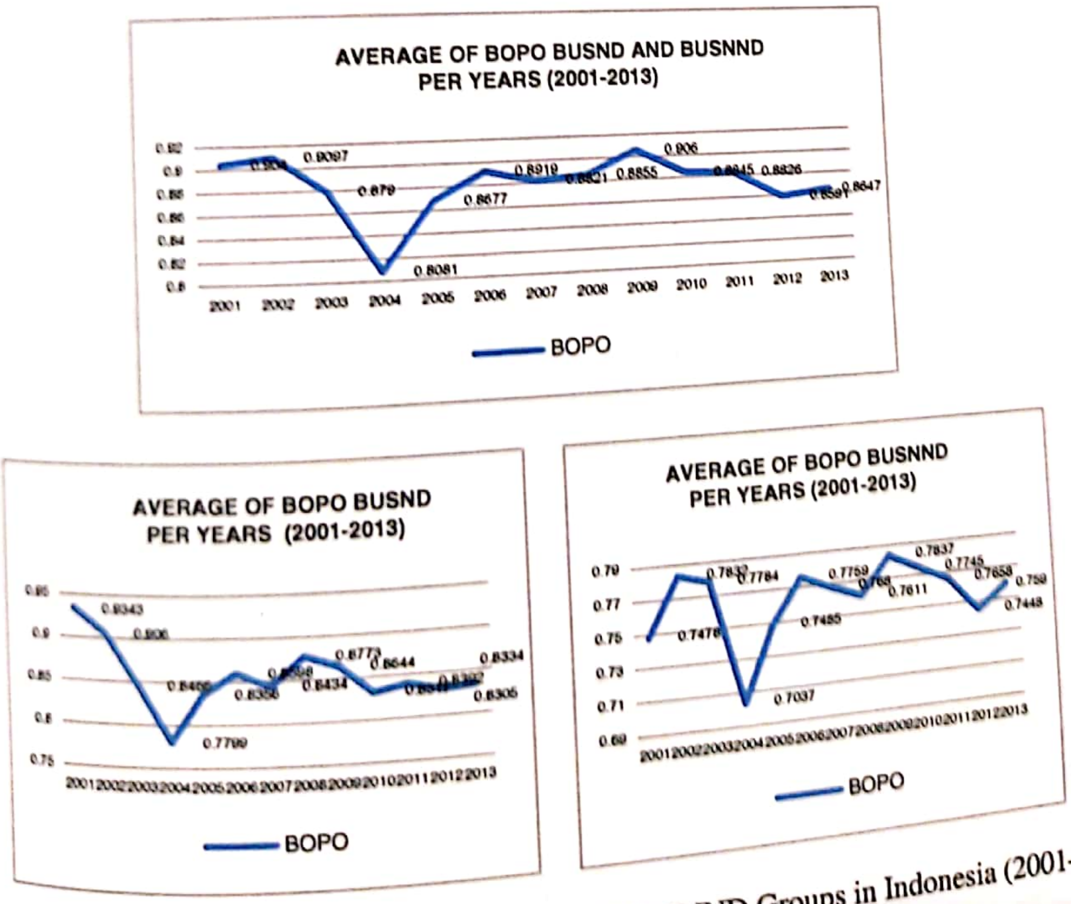


Fig. 2 Picture of efficiency in banking. BUSND and BUSNND Groups in Indonesia (2001–2013)

## 4.4 Results of Regression Equation

Regression results using the Fixed-Effect Model with OLS equations using panel data after the Chow test and Housman test are listed in Table 4. OLS regression results using fixed-effect panel data (see the output results attached) show that the portion of the effect of foreign ownership, or a significant positive BOPO, significantly reduces the level of bank efficiency. The higher the share of foreign ownership, the more inefficient the BUSNND and BUSND group banks become. The size of the banks in both groups negatively affects the BOPO: The bigger the bank, the more efficient the bank. The effect of foreign ownership on bank efficiency is not significantly different between the two groups. This is evident from the significance of the group dummy variable, which is not significant at alpha 5%. The ability of independent variables to explain the variation of changes in BOPO or the adjusted $R^2$ is 59.66% (Table 4).

**Table 4** Regression equation result with fixed-effect balance data panel-dependent variable BOPO method: pooled least squares white cross-section depicts SEs and covariance (no d.f correction)

| Variable | Coefficient<br>SE | Student $t$-statistic<br>$p$ | Description |
|---|---|---|---|
| C | 0.774852<br>0.136278 | 5.685818***<br>0.0000 | |
| BOPO(−1) | 0.400277<br>0.054089 | 7.400352***<br>0.0000 | + |
| POWNFR | 0.060855<br>0.024503 | 2.483538***<br>0.0133 | + |
| LNASSET | −0.019012<br>0.008777 | −2.166225***<br>0.0307 | − |
| DSTATUS<br>$R^2$ | 0.033437<br>0.025345 | 1.319275<br>0.1876 | |
| Adjusted $R^2$ | 0.632097 | | |
| $F$-statistic | 0.596554 | | |
| probability | 17.78395 | | |
| Durbin–Watson statistic | 0.000000*** | | |
| Cross-sections included: | 1.957036 | | |
| Total pool of (balanced) observations: | 54 | | |
| | 648 | | |

*Source* Processed by the statistical program
*Significant at alpha 10%; **Significant at alpha 5%; ***Significant at alpha 1%

*Table 5* Correlation between the variable research

| | BOPO | POWNFR | TASSET | LNASSET | DSATUS |
|---|---|---|---|---|---|
| BOPO | 1 | – | – | – | – |
| POWNFR | 0.05487 | 1 | – | – | – |
| TASSET | −0.22643 | 0.3201 | 1 | – | – |
| LNASSET | −0.22456 | 0.4411 | 0.63691 | 1 | – |
| DSATUS | −0.14760 | 0.33228 | 0.32127 | 0.63578 | 1 |

*Source* Processed by the statistical program

Assuming a central limit theorem where the research number of 648 exceeds the 30 observational data, the residual normality test is not required in this study (Wooldrige 2005). It is assumed that the data are 648, so the data are normally distributed.

Multicollinearity symptoms can be seen by using the correlation between the independent variables. Table 5 lists the correlation between variables, which is still far below 0.8. Therefore, there are no signs of multicollinearity in previous regression results.

Test symptoms underwent autocorrelation using Durbin–Watson (DW) test. Based on Table 4, the statistic number of DW is 1.957036; therefore, there are no signs of autocorrelation in the previous regression results.

Heteroscedasticity test was not performed in this research because the white cross-section SEs and covariance panel data equation regression were used. By using the white cross-section, heteroscedasticity on SE and covariance occurring in the previous regression equation can be avoided (Woodrige 2005).

Based on the regression results listed in Table 4, the Ha1 hypothesis is unacceptable at a positive level of significance at alpha = 0.0133. The coefficient parameter of POWNFR was 0.061. This means that a change of one unit of foreign ownership will increase the BOPO level by 0.061 or decrease the level of BUNND and BUND efficiency. The Ha2 hypothesis can be accepted at a negative significance level of alpha = 0.0307, and the parameter of the variable LNSIZE was −2.166. This means that increasing LNSIZE by one unit will decrease the BOPO level of 2166 or will increase the level of BUSND bank efficiency to 2166. The unacceptable Ha3 hypothesis means that the influence of foreign ownership on bank efficiency is no difference compared between the two groups of banks.

## 4.5 *Analysis of the Effect of Proportion of Foreign Ownership on Bank Efficiency*

The results of this study prove empirically that the proportion of foreign ownership has a significant positive influence on the inefficiency of BUSND and BUSNND banks. The results of the study support the results of research performed by Beck and Hesse (2006) and DeYoung and Nolle (1996), i.e., that foreign ownership is not able to improve the efficiency of banks. Foreign banks in the USA are less efficient than local banks (DeYoung and Nolle 1996) because foreign banks have more expensive input value compared with local banks. Foreign banks are not able to attract and maintain customers in the country, so the cost of funding is more expensive. This condition also occurs in Indonesia. Indonesia's banks with a higher level of foreign ownership were not able to increase their efficiency because the government and the national bank customers prefer to make transactions with locally owned banks. The same thing is true regarding the research Sans et al. (2011) in Malaysia, who suggest that banks with increased foreign ownership are less efficient compared with locally owned banks.

The results of this study differ from the those of Berger et al. (2008), Laurenceson and Qin (2008). Awdeh and El Moussawi (2009); in Shaher et al. (2011), Rajput and Gupta (2011), Mardanugraha (2005), and Abidin (2007). Study results from Berger et al. (2008) proved that an increase in the proportion of minority interest of foreign ownership in China increases the level of efficiency of the banks. Foreign banks in China have a higher level of efficiency than state-owned banks included in the Big Four banks. Mardanugraha (2005) proved during 1993–2003 that joint-venture banks (foreign and national ownership) are more efficient than national banks. Differences in the research results of Mardanugraha with those of research performed empirically are due to differences in the time period and the study sample. The research period of Mardanugraha was 1993–2003, whereas this study covered 2001–2013. The study period of 1993 and 2003 include the periods before and after the financial crisis of 1998, at which time nearly all national bank experienced a decrease in performance due to problem loans.

Associated with Agency Theory, the results of this study show that the performance and efficiency of banks are still affected by foreign ownership. Foreign owners still intervene in bank operations. Banks managers, as agents, are not free to mange their banks. Agency Theory does not apply to national private foreign-exchange banks and national private non-foreign exchange banks.

## 4.6 *Analysis of the Effect of Bank Size on Bank Efficiency*

This study proves that bank size can have a negative impact on bank ROA ratio or a positive impact on bank efficiency. Large banks tend to be more efficient than smaller banks because large banks have the opportunity to diversify their products, posses an extensive network, and have a high-enough level of public confidence to be able to obtain cheaper funds (third-party funds as saving and deposit) compared with small banks. This argument is according to McAllister and McManus (1993; in Iannotta et al. [2006]). In terms of credit management, large banks have a large credit volume with a fewer number of debtors, so the cost of credit management is not much different from the management of small credit (Ramli 2005). This also shows that BUNSD and BUSNND-group banks have the condition of increasing to scale. Increasing the volume of banking operations could still improve acceleration results. Regarding input and output, conditions of increasing to scale showed that the change rate of the input is twice to increase output more than double that efficiency has increased higher (Pindyck and Rubinfield 1995).

## 4.7 Differential Analysis of the Effect of the Proportion of Foreign Ownership on Bank Efficiency in National Private Foreign-Exchange and Non-foreign Exchange Banks

This study proves that there is no difference in linking efficiency to foreign ownership in the two groups of banks that were examined during 2001–2013. That is, the negative impact of foreign ownership on the efficiency of the banks does not distinguish itself in BUSND versus BUSNND-group banks. Thus, the impact of foreign ownership on bank efficiency for both groups is either the same or not significantly different.

The increase in foreign ownership in the banks studied during the period 2001–2013 (13-year period) increased from 0.82% in 2001 to 28.57% in 2013. This increase would also decrease the efficiency of the two groups of banks in general.

## 4.8 Managerial-Implications Research

The negative impact of foreign ownership on the efficiency of BUSNND and BUSND-group banks has negative implications for management. The authorities should take into consideration a policy to restrict foreign ownership in banking in Indonesia. Foreign ownership has consistently increased from 2001 to 2013 and provides a potential decline in the performance of Indonesian banks. Putting restrictions on foreign ownership has been debated in the revision of the Banking Law Commission XI DPRI RI. These empirical results prove that foreign-ownership restrictions should be limited to neighboring countries such as Malaysia, Thailand, Philippines, China, India, and other countries. Restrictions on 40% foreign ownership is desirable in some quarters in the revision of the Banking Act are still a strong proposal (www.sinarharapan.com/news/read/150612075/-ownership of foreign-bank-in-so-debate).

The research proves that large banks tend to be more efficient than small banks. These results have implications for banking authorities to institute a policy of merging smaller banks into big banks so as to ready to compete with ASEAN countries in dealing with the Asean Economic Community (AEC) in 2020. If mergers are not performed, then when the AEC is applied to the banking sector in

2020. Banks in Indonesia will find it difficult to compete because the other ASEAN countries have fewer banks yet greater assets than Indonesia's banks.

## 5 Conclusions, Limitations, and Suggestions

In summary, the current research proves the following:

- The greater the portion of foreign ownership, the more inefficient the bank.
- Increasing in the bank's assets will increase more than ever before.
- There is no difference in the effect of proportion of foreign ownership on efficiency of BUSND versus BUSNND-group banks.

The implication of the results of this study is the need for policies restricting foreign ownership in national banks. Revisions to the Banking Act are being processed in the Commission XI, one of which is to limit the proportion of foreign ownership in national banks. The results of this study can be considered in the revision of the Banking Law, particularly regarding foreign ownership, because of increased foreign ownership tends to reduce the efficiency of banks in Indonesia.

The measure of efficiency used is BOPO, which incidentally is derived from bank accounting data. Different accounting practices used in each bank caused BOPO figures to not be comparable from one bank to another. There is a need to measure efficiency using a stochastic approach. This measurement approach is capable to produce equal-size efficiency among banks.

This study examined only two independent variables; in the next study, we expect have more independent variables. Other independent variables that can be considered are risk of banking, capital, and macroeconomic indicators.

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# Study of Green Banking Practices in the Sri Lankan Context: A Critical Review

P.M.P. Fernando and K.S.D. Fernando

**Abstract** In Sri Lanka, the banking industry can be considered as a monopolistic competitive market. Therefore, both public and private sector banks are following a range of non-price competitive strategies in order to win the market. In this context, the concept of green banking is becoming a novel technology-oriented strategic initiative for Sri Lankan banks to achieve triple-bottom line business results. Under these circumstances, banks are basically introducing paperless and information technology-oriented banking services to their existing and prospective customers while promoting the bank's role as a responsible corporate citizen toward achieving sustainable development. The core strategy used in this scenario is the use of the term "green banking" as a brand-positioning factor where the above-mentioned set of paperless and information technology-oriented banking services are introduced to its customers. Through this innovation, banks are able to gain cost-effective advantages rather than contributing to environmental sustainability. Therefore, this paper critically reviews the above scenario by using a case-study approach while addressing to the basic question of whether or not the current green-banking initiatives used by the Sri Lankan banking sector are truly contributing to environmental sustainability. The authors explore the above phenomena through a conceptual model and suggest realistic solutions to convert green-banking strategies to achieve long-term sustainable development of both the banking sector and the environment.

**Keywords** Green banking · Strategic initiative · Branding · Environmental sustainability · Triple-bottom line

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