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# The impact of earnings management on the performance of ASEAN banks

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ABSTRACT

Southeast Asian financial liberalization policies have enthused both performance evaluation (a pro) and earnings management (a con). Using a sample of ASEAN commercial banks for the period 2007–2014, this study decomposes their banking performance into managerial and profitability efficiencies. An efficiency analysis reveals that Singaporean banks obtained the highest overall and profitability efficiencies, while Bruneian banks had the lowest rates of banking performance. In the stage of managerial efficiency, the most inefficient banks are those of the Philippines, whereas the greatest level is related to Malaysian banks. A frontier projection analysis suggests that Singaporean banks and Malaysian banks are generally more efficient in managing their expenditures and long-term assets in generating income in the long run. With respect to the con, a regression analysis indicates that loan loss provisions are negatively related to banking performance. Overall, it is advisable that policy makers with oversight function should promote performance evaluation from a multidimensional perspective, and keep an eye on estimates of loan loss provisions at banks over years because increases/decreases in loan loss provisions mean decreases/increases in net income or return on assets.

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## 1. Introduction

According to a report by the ADB (2011), Asian emerging economies hold approximately half of the world's total exchange reserves, and the whole region is also the major exporter and importer of capitals. This phenomenon attests the underdeveloped intra-regional financial system to efficiently channel surplus funds. Consequently, effective regional coalition and cooperation are needful in dealing with this immaturity. Among all, the Association of Southeast Asian Nations (ASEAN)[1] has succeeded to create a strong integration among its members of Southeast Asian nations. Since the 1970s, many emerging countries in Asia have experienced substantial rectifications in their financial liberalization policies. Specifically, developing countries in Southeast Asia have experienced various forms of financial liberalizations in promoting efficient allocation of resources to achieve greater economic growth during the last few decades. Subsequently, a number of institutional reforms occurred following Asian financial crisis and global financial crisis erupted in 1997 and 2007–2008, respectively, to strengthen the regulatory and supervisory frameworks. As a result of financial liberalization policies, the international capital mobility has increased between partner countries through different international agreements such as ASEAN (Lim, 2005). However, it might be a blessing in disguise or a curse.

On the one hand, substantial capital flows into the host countries. In addition, the increased competition as the consequence of liberalization policies stimulates firms to put more cautions on their activities such as cost management, risk monitoring, and resource allocation (Gardener et al., 2011). That is, opening up the economy to international investors leads to higher efficiency of firms by means of intensifying the competition within a domestic market. According to the seminal works of McKinnon (1973) and Shaw (1973), financial liberalization yields higher economic growth through increasing interest rate level, which enhances the competition among the market players, while the allocation of resources are well realized. Therefore, financial liberalization is likely to increase higher savings, which eventually nurtures economic growth by ameliorating the investment quantity and quality, i.e. efficient allocation of resources (Reinhart and Tokatlidis, 2003). This is the reason why evaluating efficiency becomes very important in recent

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[1] The ASEAN was established on August 1967 by the signing agreement of five countries, namely, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Since then, membership has expanded to include Brunei, Cambodia, Laos, Myanmar, and Vietnam, constituting the ten Member States of ASEAN.

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years where many of the emerging countries have undergone full liberalization policies or are under the process of being liberalized, i.e. partial liberalization.

On the other hand, liberalization enhances competition, which dampens firms' profitability. Therefore, underperforming firms will be expelled from the marketplace because lower profitability increases the risk of bankruptcy (Baik et al., 2011; Becchetti and Sierra, 2003; Bolt et al., 2012). Put differently, this will create an incentive for managers to sham their corporate performance in order to attract investors. In fact, past studies prove that pressurized firms with high chance of bankruptcy are more inclined towards engaging "earnings management[2] (EM)" practices (Beneish et al., 2012; García Lara et al., 2009). Therefore, the dramatic shift in liberalization policies in emerging countries has predisposed market players to manipulate the information about financial reporting. It has been repeatedly reported that the intensified competition, as the result of liberalization and government deregulation, brings new opportunities for economic prosperity.

However, the flip side of the coin tells a different story. Internal managers are more prone towards hyperbolizing the firm's performance to market participants within a competitive environment. Therefore, firms may report higher earnings compared to other rivals to attract investors. In a comprehensive review of the EM literature, Healy and Wahlen (1999) conclude that "the evidence is consistent with firms managing earnings to window-dress financial statements prior to public securities' offerings, to increase corporate managers' compensation and job security, to avoid violating lending contracts, or to reduce regulatory costs or to increase regulatory benefits" (p. 368). In their review, Healy and Wahlen (1999) emphasize that past studies have focused on whether EM exists and why, yet the empirical issue about the effect of earnings management practices on efficiency has not been well explored (p. 380).

In this vein, the banking sector has been the centerpiece in the eyes of policy makers due to its invaluable importance to the economic development; hence, the sound and well-functioning banking sector is a potent engine of economic growth. Given the above discussion, this study aims to estimate the performance of ASEAN banking institutions and address the relationship between EM practices and banking performance. To measure banking performance, frontier efficiency analysis, which has received considerable attention from researchers, is more appropriate than a single-dimensional ratio analysis. Data envelopment analysis (DEA), introduced by the influential work of Charnes et al. (1978), has been coined as the most frequent frontier efficiency approach used by researchers, particularly among banking studies (Liu et al., 2013). The value of DEA lies in its ability to transform various performance aspects into a single efficiency score (Yeh, 1996) through evaluating the relative performance of a decision-making unit (DMU) compared to its peers or competitors operating within the same group (Liu et al., 2013). However, the traditional DEA models are not sufficient to measure the banks' complex production process because these models assume the system as a single black box that converts inputs to outputs (Chiu and Chen, 2009; Dong et al., 2014; Moradi-Motlagh and Babacan, 2015; Wang et al., 2014). Accordingly, the detailed sources of inefficiency could not be identified when applying the traditional DEA models. Therefore, we adopt dynamic network DEA (DN-DEA) to deal with inefficiencies of interacting divisions that are embedded inside the banks' production process.

The purpose of this study is twofold. First, we apply the newly developed DN-DEA model called dynamic network slacks-based measure (DNSBM), formulated by Tone and Tsutsui (2014), which deals with multiple divisions connected by links of network structure within each period vertically and also combines the network structure by means of carry-over activities between two succeeding periods horizontally. The second important objective of the study is to investigate the influence of controversial EM practices on the divisional efficiency scores of ASEAN banking institutions. To measure EM practices, we follow Adams et al. (2009) to use the ratio of loan loss provisions to loans. As a robustness check, we also include the ratio of loan loss reserves to loans as another measure of EM practices. To the best of the authors' knowledge, this study makes an early attempt by examining the effect of EM on the efficiency of ASEAN banking institutions.

To articulate the contributions of our study, we would like to highlight two points. First, efficiency has become a contemporary major issue to finance sectors due to the increment of competition, globalization, technological innovation and increased deregulation (Dang-Thanh, 2012). According to Quiggin (2011), the global financial crisis in 2007–2008 had a major impact on the financial systems of many countries. Therefore, it is crucial for banking sectors to evaluate their efficiency level in order to compare competitiveness and further enhance their productivity. As a result, this paper provides a direct economic contribution by estimating the managerial and profitability efficiencies of ASEAN commercial banks in order to speed up countries' financial development and economic growth. Banks with well-functioning and efficient financial systems are less likely to be suffering financially during financial crises (Moradi-Motlagh and Babacan, 2015). In contrast, it calls for countries with banks' low efficiency scores to increase banks' financial autonomy in order to face economy challenges. We hope to bridge the gap and shed some light on the literature, specifically in the ASEAN context.

Second, banking institutions are not exempted from EM practices, rather they are also more susceptible to this upshot compared to non-financial organizations (Grougiou et al., 2014) due to their wide-ranging financial products and complicated operation which lead to information opacity (Levine, 2004) and asymmetry (Mülbert, 2009). Moreover, as highlighted by Greenawalt and Sinkey (1988), the higher chance of earnings manipulation in banking institutions might be attributed to the subjective judgment that managers have to make in regard to expected reserves for losses. Specifically, during the period of high profit, banks' managers incline to smooth the earnings by recording more loan losses and vice versa (Cornett et al., 2009). While the theoretical and empirical literature supports the amplification in both firm efficiency and EM practices followed by liberalization, the question remains that how EM could be observed from testing its relation to efficiency of banks. Hence, this study makes another contribution by examining the effects of earnings management on bank efficiency, which is lacking in the literature.

The remainder of this paper unfolds as follows: Section 2 reviews the extant literature on banking efficiency studies. Section 3 describes the data collection and the methodology used. Section 4 presents the empirical findings and the discussion, and Section 5 concludes the paper.

## 2. Literature review

### 2.1. Efficiency studies in the ASEAN banking sector

In this section, we try to map out the studies addressing the efficiency analysis of banking institutions in the ASEAN alliance. We note that the application of efficiency evaluation in ASEAN economies is very scant at the moment. Hence, we also focus our attention to East Asian studies of banking efficiency, where necessary, in order to provide a befitting background of the subject matter.

Laeven (1999) estimates the technical efficiency of East Asian banks for the period from 1992 to 1996. The input variables include interest expenses, labor expenses, other operating expenses and the output variables including loans and securities. The efficiency results were surprising since the scores were increasing or constant during the pre-crisis

[2] Earnings management is defined as the use of managerial judgment to manipulate the financial reporting with the purpose of either influencing contractual outcomes which depend on the financial reports or misleading the stakeholders (and investors) about the company's performance (Healy and Wahlen, 1999).

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