

## OWNERSHIP STRUCTURES AND BANK PERFORMANCE: A STUDY OF INDONESIAN LISTED BANKS <sup>1</sup>

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### **ABSTRAK**

*Krisis moneter 1997–1998 merupakan titik tolak perubahan mendasar dari struktur kepemilikan bank di Indonesia. Divestasi perbankan yang dilakukan pascarestrukturisasi perbankan telah mengubah peta struktur perbankan di Indonesia. Mayoritas kepemilikan bank-bank di Indonesia kini dikuasai oleh pihak asing. Sementara itu, mengingat mayoritas kepemilikan saham perbankan dimiliki asing, sebagian besar bank tersebut cenderung mengganti direktur utama (chief executive officer) dengan bankir asing. Penelitian ini bertujuan untuk melihat pengaruh struktur kepemilikan dengan performa bank, berdasarkan pendekatan profitabilitas dan penilaian pasar (accounting-based measures and market-based measures).*

*Dengan menggunakan data panel untuk 12 bank listed di Indonesia selama 2004–2007 dan metode generalized least square fixed effect model, penelitian ini menemukan bahwa terdapat hubungan yang signifikan antara struktur kepemilikan dan latar belakang CEO dengan performa bank.*

**Kata kunci:** Restrukturisasi perbankan, struktur kepemilikan, dan performa bank

### **INTRODUCTION**

Banking institutions have played a major role in Indonesian economy for decades. History showed that even Indonesian economy is thriving in a row with the banking development. Instead of being an intermediary financial institution, banking has been holding the national transaction payment and functioning as a monetary policy transmitter. Therefore, when the country was hit by an enormous economic crisis, the first step taken by the government and the central bank was restructuring the banking sector to restore the national banking system.

The currency turmoil and economic shock in mid 1997 has forced the government and

the central bank to liquidate 16 banks, which affected the society trustiness to banking sector. The decision to liquidate several banks finally got response; many banks could not survive in a heavy bank rush. Seen how insufficient the bank's capitalization, the government and the central bank focused on recapping banks and taking over the capital insufficient banks through Indonesian Bank Restructuring Agency (IBRA).

Afterwards, in 2002, IBRA decided to divesture a number of shares in several banks and Bank Central Asia (BCA) went to be the first bank being divestured. After BCA divestment, IBRA continued the divestment process to many recaps banks. The majorities of all investors interested in buying those banks are foreign investors. The decision made a significant change in Indonesian banking structure, especially in ownership

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structure. Several largest players in the market, such as Bank Central Asia, Bank Danamon Indonesia, Bank Lippo, Bank Niaga, and Bank Internasional Indonesia, has been taken by foreign investors. Not only the bank ownership that has been changed, but also many banks prefer to change the director or the chief executive officer (CEO) of the banks. Actually, do ownership structure and the CEO background affect banking performance? Do foreign-owned banks perform better than domestic one, or vice versa?

This paper intends to contribute to a better understanding of the effects of ownership on bank performance by looking closely at the experience of one country, Indonesia. Recent papers have studied on the role of ownership structure to bank performance on large cross-countries. In fact, it is important to focus on individual country experiences so that it would not be easy to disentangle the effects of ownership structure on bank performance from those of other concurrent financial reforms (Majnoni, et. al., 2003). As a transitory economy country, it is important to examine whether foreign ownership affects banking performance in Indonesia or not, or maybe the domestic ownership performs better. Meanwhile, two years on average after the banking divestment possibly the best time to see the relationship between ownership structure to bank performance in Indonesia.

The first part of this paper (section 2 and 3) provides an overview of the Indonesian banking sector pre and post economic crisis, 1998–1999. Specifically, this paper discusses the economic and banking condition before crisis, the banking crisis, the bank restructuring and the role of foreign banks after the programs. The second part (section 4) explained the relationship between ownership structure and bank performance in several countries and regions.

The third part (section 5 and 6) verifies the actual condition based on a statistical significance and can withstand econometric

test. Over the sample of 12 listed banks in 2004–2007, this paper examines whether foreign ownership has significantly affected bank performance. In addition, this paper also tests whether foreign CEO has significantly affected bank performance either. The last part is the conclusion and policy implication.

## **THE INDONESIAN BANKING DEVELOPMENT AND POST CRISIS RESTRUCTURING**

### **Banking Sector on Preeconomic Crisis**

Until the first half of 1997, Indonesian economy has been in a rapid development. Since the 1970s, Indonesia had a consistently high economic growth, with gross domestic product (GDP) growth at average 7–8 percent per annum. Inflation was contained consistently at a single digit level. The dynamic private sector was supported by a high savings rate and domestic investment, and it almost reached 30 percent of GDP in 1996 (Halim, 2000). At the same time, a large amount of capital was in flown from foreign investors. Moreover, Indonesia became one of the emerging countries, the ‘Asian Tigers’, for its sustained economic growth and strong economic fundamentals. Nevertheless, until the currency turmoil in July 1997, Indonesia’s economy turned to be ultimately devastated.

For decades, banking sector has been a prominent element in the financial sector. It constituted a large portion of total assets in financial sector. Although other non-bank financial institutions, such as multi-financing, securities, insurance, and investment funds, had emerged, the banking sector still held about 65 percent of all financial sector total assets in 1997 (Halim, 2000). Thus, the condition of the banking sector generally reflects the financial sector as a whole.

Unfortunately, the weakness in Indonesian banking sector fundamentals at the end became resilience to the economy. It was exposed by an unsound financial and ill-regulated banking sector saddled with

extremely high non-performing loans in the property sector. So that, when external shock from a regional financial panic happened to hit Indonesian currency market, it could not preserve the economy. Then as the contagious process developed, the shock spread to become a financial crisis, and soon after the economic crisis.

The income of the banking system declined significantly by 300 percent in 1997, while that of the property sector fell by 660 percent. Banks became incapable of performing their financial intermediary functions. The rupiah depreciation caused investors, who had borrowed in US dollars (accounting for about 30 per cent of bank loans), to default as their collateral was very much below the value of their loans. High interest rates also encouraged defaults, eroding the bank's assets.

### **The Collapse of Banking Sector and Financial Crisis**

The currency turmoil in mid-August 1997 and subsequent policies have turned the economy around. Before floating the currency, the central bank tried to hold the moving band system from speculative attack by widening the band from 8 to 12 percent and selling dollars in both spot and swap markets. Bank Indonesia Certificate (SBI) rated several times from 12 to 30 percent in December 1997, and even reached 80 percent in August 1998.

At first, the government expected high interest rates to stem the capital flight and prevent further depreciation, but then they turned out to be ineffective. After the float, the government pursued a tight money policy by absorbing more than Rp10 trillion (US\$3.8 billion) of public sector funds from commercial banks to discourage people from buying dollars with rupiahs. But, this policy measure proved ineffective and the rupiah continued to weaken against the US dollar.

The banking crisis was preceded by a short period of distress when, due to a process

of erosion of confidence, banks lost their deposit bases. In addition, the inter-bank money market functioned poorly, in that it suffered from compartmentalization. Weak banks had to system. Individually, a bank confronted with a problem of mismatched liquidity could easily rely on Bank Indonesia to keep afloat. Confidence was completely lost, and a substantial number of banks were confronted with bank-runs within a short period. Strangely, in the recent Indonesian experience, these phenomena happened following the closure of the 16 banks in early November 1997, which was originally designed to boost confidence in the banking become insolvent. For the banking sector, the problem changed from distress to crisis (Djiwandono, 1998).

### **Bank Restructuring**

The main objectives of the restructuring non-viable bank program were to overhaul the banking system and to enable banks to function as financial intermediation as efficiently and quickly as possible. The sequencing of resolving financial crises usually comprises of three main steps: (i) a diagnostic review; (ii) a resolution of non-viable institutions and recapitalization of viable ones; and (iii) a resolution of non-performing loans. Essentially, bank restructuring consists of two elements, including financial restructuring including capital injection and loan restructuring and operational restructuring comprising of improvement of a bank's internal organization such as its operational efficiency, governance, risk management and control (Batunanggar, 2002).

When the currency crisis spread to inflict the national economy, the government's efforts to address the banking problems were combined with other policies and treated as part of the adjustment policies for stability and sustainable growth. This treatment was more explicit in the IMF supported programs, from the first Letter of Intent in November 1997 to

the most recent (the fourth) in June 1998. Basically, the IMF supported program was comprised of a comprehensive policy package to deal with insolvent and weak banks, and to overcome structural rigidities in the economy, supported by prudent fiscal and monetary policy (Djiwandono, 1998).

Under pressure from the IMF, non-viable banks were closed, others were recapitalized. Bank restructuring included changes to bank management and ownership, as well as the settlement of outstanding loans. The government launched a series of reforms in the banking sector, including the closure of ailing banks, took-over of troubled but viable banks, and the recapitalization of relatively healthy banks. In November 1997, the licenses of insolvent 16 banks were revoked and the banks were liquidated. Financial panic ensued, interest rates shot up, and more banks were frozen and taken-over in 1998. Since then, the country's ailing banking sector has been suffering negative spreads, which occurs when the interest on deposits (expenses) was higher than interest on credits (income).

Specifically, there are several steps taken by the government in order to resound the banking sector. In 1998, nine troubled banks were taken over by IBRA, in addition to the seven banks already under IBRA management. Some other 54 weak banks were put under its close supervision. Minimum capital requirements were reduced from Rp1 trillion to Rp250 billion (after loan loss provisions). Sweeping reforms of the banking system in March 1999 resulted in the closure of 38 banks and the took-over of 7 banks, leaving 73 banks that were considered healthy (Halim, 2000).

### **Postbanking Crisis and The Divestment Program**

Table 1 provides an overview of structural changes in the banking sector around the time of the crisis. The total number of commercial banks declined by 37 percent from 239 at the

end of 1996 to 151 at the end of 2000, as the closure of banks ran its course. While the size of assets in the banking sector (relative to GDP) rose marginally during the same period, the balance of outstanding loans dwindled to 21 from 55 percent of GDP, following the transfer of nonperforming loans to IBRA. The ratio of lending to total assets also declined significantly, while claims on the central government, or government bonds injected by the government into the banking sector, increased to around 40 percent of total assets.

As a result of a public capital injection (recapitalization) worth 658 trillion rupiahs (52 percent of GDP in 2000), the ratio of capital to total assets turned positive by 2000. The nonperforming loan ratio declined to a normal level by 2002. The banking sector climbed out of its critical state thanks to the emergency treatment, but the pace of the recovery of financial intermediation has been slow since 2002 in terms of lending activity, due in part to more stringent risk management by banks after the reform. The banking sector remained healthier than pre-financial crisis, 1998–1999.

After several years holding recapped banks, the government decided to sell the shares of those banks because of the necessary condition in order to fulfill the income budgets (*InfoBank*, 2006:15). The first divestment is the divestiture of Bank Central Asia (BCA) on March 14, 2002. The government divested 51 percent of BCA shares to Farallon Capital, under Farindo Investment (Mauritus) Ltd qq, Singapore. At the same year, Bank Niaga got divested by Bumiputera-Commerce Holdings Berhad, Malay. Then by the following years several banks became divested, such as Bank Danamon, Bank Internasional Indonesia, Bank NISP, Bank Permata, etc (Table 2). Since several largest banks in Indonesia were divested, a significant change happened to the banking sector.

**Table 1.** Main Indicators for the Banking Sector around the Economic Crisis, 1996–2003

	1996	1997	1998	1999	2000	2001	2002	2003
(%)								
Total assets (ratio to nominal GDP)	72.8	84.3	79.8	71.8	77.8	70.9	65.8	63.9
Total loans (ratio to nominal GDP)	55	60.2	51	20.5	21.3	21	22.7	26.6
Loan to deposit ratio	104	105.7	85	36	37.3	38	43.2	54.3
Loan to total assets	75.6	71.5	63.9	28.5	27.3	29.6	34.5	41.6
Net interest income	n.a	n.a	-61.2	-3.6	22.8	37.8	42.9	46.3
Capital adequacy ratio	n.a	n.a	-15.7	-8.1	2.5	20.5	22.5	20.7
Nonperforming loan ratio (gross)	9.3	19.8	58.7	32.8	18.8	12.1	8.3	8.1
Nonperforming loan ratio (nett)	n.a	n.a	34.7	7.3	5.8	3.6	2.9	1.8
Number of commercial banks	239	222	208	164	151	145	142	138

Source: Bank Indonesia, *Statistik Perbankan Indonesia*, 2000–2004.

**Table 2.** The History of Divestment Process of Indonesian Banks, 1993–2005

Period	Notes
March 14, 2002	The first divestment, the government divested 51 percent of BCA shares to Farallon Capital, under Farindo Investment (Mauritus) Ltd qq.
November, 2002	The Bank Niaga divestment of 61 percent shares to Commerce Asset Holding Bhd.
Mei 5, 2003	IBRA decided the Asia Finance Indonesia (AFI) dan Deutsche Bank as the new majority shareholder of Bank Danamon as much share as 51 percent of all shares. In a month, AFI increased the shares from 51 to 62 percent.
November 2003	The Bank Internasional Indonesia divestment of 51 percent shares to Sorak Financial Holding Pte, Ltd.
Februari 24, 2004	The Bank Lippo divestment to Santubong Investments B.V.
April, 2004	The divestment of Bank NISP to OCBC Overseas Investments, Pte., Ltd, as much share as 22,5 percent.
May 17, 2004	The divestment of 57,91 percent shares of Bank Bumiputera to ICB Financial Holdings.
October, 2004	The divestment of Bank Permata to Standart Chartered Plc and PT Astra International Tbk.
February 14, 2005	The OCBC Overseas Investments increased the share their held from 22,5 to 51 percent and they became the majority owner of the bank.
June 2, 2005	OCBC Overseas Investments made another increasing in the ownership shares in bank NISP, from 51 to 70,62 percent.
Agust, 2005	The Bank Lippo acquisitioned by Khazanah Nasional Bhd. Of lippo's 52,05 percent shares.
October 14, 2005	The UOB International Investments Private became the majority owner of Bank Buana with 53 percent shares.

Source: compiled from each bank annual report.

As in Sato (2005), comparing the situation before the crisis to that after bank restructuring, the weight of private and state banks was reversed (Table 3). State banks fell in number from seven to five, but their composition ratio in terms of assets rose from 36 percent in 1996 to 50 percent in 2000. On the other hand, the number of private banks was halved, as 67 banks accounting for 16 percent of assets (as of 1996) closed, and their asset composition declined from 52 to 35 percent in the same period. Some were subject to reconstruction and temporarily became government-owned banks, accounting for 27 percent of total assets (or 78 percent of private bank assets). As the government's shares in those banks were latter sold off, in all cases to consortiums of foreign investors, foreign-owned private banks emerged as a new category, accounting for 21 percent of total bank assets in 2002. Combined with foreign bank branches and foreign-joint banks, the composition of foreign-affiliated banks reached 31 percent of bank assets as a whole, up substantially from 9 percent before the crisis.

### THE ROLE OF FOREIGN BANKS IN INDONESIA

Since the enactment of the 1998 Banking Act, the maximum limit of foreign ownership in domestic banks was raised from 51 percent to 99 percent. Although in addition to the banking act, foreign banks has been allowed to open branches in any location throughout Indonesia for ten cities maximum, it is more attractive for foreign parties to acquire shares in existing domestic banks than to establish new branches. This preference is an evident as indicated by the recent increasing number of banks coming under ownership of foreign parties as the controlling shareholders. Liberalization has boosted the role of foreign banks in Indonesia (Goeltom, 2005).

Compare to other Asian countries, Indonesia was one of the most liberalized country in opening the banking sector to

foreign investors. Even in Thailand, foreign ownership restriction was limited until maximum 49 percent. That policy was added several other rules that should must be followed by foreign investors such as the forbidden neither not to sale back the shares nor increased the shares (Coppel and Davis, 2003). Meanwhile in Malaysia, foreign ownership restriction was limited until maximum 30 percent and 51 percent in Philippine. Besides Indonesia, the most liberalized country in opening the banking sector for foreign investors is South Korea (Table 4).

Since the enactment of the 1999 Banking Act<sup>2</sup>, the structure of the banking sector changed significantly, especially in banking assets share. Before banking divestment, 1997, government banks took control over 45.38 percent of banking total assets shares, and only 10.76 percent banking assets shares taken control by foreign and joint venture banks. Until many banks have been divested, banking assets shares taken control by foreign and joint venture banks changed significantly to 43 percent in 2006 and the rest was taken controlled by national private and government's banks (*InfoBank*, 2005: 15–16).

Foreign openness in banking sector have several impact to the banking sector itself and the economy in general. First, as the aim of bank restructuring, foreign investor was hoped to be the catalyst in reforming the financial industries by foreign direct investment. Second of all, the entry of foreign investor in several largest banks could force in increasing the competition in financial market especially banking sector, so it might force the banks to increase their efficiency. The third, it is hoped that it could expand new innovations in financial instruments, such as risk management, information technology, corporate banking, and wealth management, which might be useful to develop the banking industries.

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<sup>2</sup> Peraturan Pemerintah Nomor 29 Tahun 1999 [Government Regulation Number 29, 1999]

Table 3. Changes in Ownership Structures in the Banking Sector

Classification by ownership	1996 Pre-crisis			2000 Post-restructuring			2002 Post-sale of government held shares				
	Number of banks	Total assets (trillion Rupiahs)	Assets composition (%)	Post-crisis restructuring measures	Number of banks	Total assets (trillion Rupiahs)	Assets composition (%)	Sale of government held shares	Number of banks	Total assets (trillion Rupiahs)	Assets composition (%)
State banks	7	141	36.4		5	505	50.3		5	496	45.6
Private banks	165	201	51.7	Private banks total	81	350	34.9	Private banks total	76	423	38.9
				Reconstructed banks subtotal	11	274	27.3	Reconstructed banks subtotal	7	291	26.7
				• Nationalization	4	205a	20.4a	• Sales to foreign investors	4	223	20.5
				• Recapitalization	7	69	6.9	• Yet to be sold/not for sale	3	67	6.2
				Banks without reconstruction measures	70	76	7.6	Banks without reconstruction measures	69	132	12.2
Foreign banks branches/joint banks	41	36	9.2	Foreign banks branches/joint banks	39	123	12.2	Foreign banks branches/joint banks	31	112	10.3
Regional development banks	27	11	2.8	Regional development banks	26	25	2.5	Regional development banks	26	57	5.3
Total	239	389	100.0	Total	151	1,004	100.0	Total	138	1,088	100.0

Sources: Sato, Yuri. 2005. *Bank Restructuring and Financial Institution reform in Indonesia*. The Developing Economies, XLIII-1, March.

**Table 4.** Limitations on Foreign Bank Commercial Presence in East Asian Economies

Country	Ownership restriction	Management and Operational restriction
Indonesia	None listed for new licenses. For existing Banks, foreign owned equity is limited to 49 per cent. Local incorporation is required	Higher paid up capital is required for foreign service suppliers than for domestic service suppliers. Branch offices allowed only in 10 cities. Managers or technical experts granted 3 year extendable visas, but require 2. Equivalent Indonesian staff for each foreigner.
Malaysia	In 1998 most restrictions were removed to increase commercial presence. Currently, only representative offices or branches of foreign banks are permitted. Branches may only be opened one year after the establishment of a representative office.	Restrictions on foreign currency loans and deposits and foreign exchange services. No restrictions on expatriate staff. Korean banks can recruit foreign Nationals as directors since May 1998.
Korea	Foreign shareholdings in existing local commercial banks are not to exceed 30 per cent. The 13 wholly foreign owned banks are permitted to remain. No new licenses are allowed.	An institution owned or controlled by a foreign government is not allowed to control a commercial or merchant bank. Expatriate staff are not granted visas except for temporary presence of senior staff and specialists.
Thailand	No restrictions for existing foreign bank branches. Foreign shareholdings in commercial banks are not to exceed 49 per cent. Limitations on individual ownership.	Managerial, executive and specialist staff granted visa for a 1 year period, which is extendable for no more than 3 years. Existing banks with a branch before 1995 limited to 2 new branches.
Philippines	Local incorporation required. Foreign shareholding Or acquisition in a new investment limited to 51. per cent. The foreign share of total assets is limited to a maximum of 30 per cent.	10 new branches allowed between 1995 and 2000, with a limit of 6 from a single bank.

Sources: Based on Mattoo (2003), Kim (2002) and Hardin and Holmes (1997) in Coppel, J. and Davies, M. 2003. *Foreign Participation in East Asia's Banking Sector*. International Department Reserve Bank of Australia.

**Table 5.** Main Indicators for The Banking Sector Post Bank Divestment, 2001–2006

	2001	2002	2003	2004	2005	2006
Total Deposits (trillion rupiah)	797	836	889	963	1128	1287
Total loans (trillion rupiah)	316	371	440	559	696	792
Loan to deposit ratio (%)	33.01	38.24	43.52	49.95	59.66	61.56
Capital adequacy ratio (%)	19.93	22.44	19.43	19.42	19.30	21.20
Net interest margin (%)	3.60	4.14	4.64	5.88	5.63	5.77
Nonperforming loan ratio gross (%)	12.23	7.50	6.78	4.50	7.56	6.07
Cost to operating income (%)	98.41	94.76	88.10	76.64	89.50	97.65

Source: Bank Indonesia, *Statistik Perbankan Indonesia*, 2003–2007.

Meanwhile, not only the ownership that changed into foreign, but also many banks changed a part of the management into foreigners. In several cases, the owner decided to change the head of management or the chief executive officer (CEO) so that they would represent their importance of the bank controlling.

Several years after bank restructuring showed a significant improvement in the banking sector. It is shown by the improving fundamental banking indicators, such as total deposits, total loans, loan to deposit ratio, capital adequacy ratio, net interest margin, nonperforming loan ratio, and cost to operating income ratio (Table 5). It becomes interesting to examine whether there is a significant relationship between ownership structure and bank performance. Does these improvement related to the ownership structure changing of the banks? Does the foreign CEO influence the bank performance significantly in order to improve it?

## **OWNERSHIP STRUCTURE AND BANK PERFORMANCE**

Evidence across many countries indicates that foreign banks are on average less efficient than domestic bank (DeYoung & Nolle, 1996; Hasan & Hunter, 1996; Mahajan et.al, 1996; Chang et. al, 1998 in Kobeissi, 2004). Studies that have not used the U.S. as the host nation in the analysis, have found that foreign banks have almost the same average efficiency as domestic banks (Vander, 1996; Hasan & Lozano-Vivas, 1998 in Kobeissi, 2004). Claessens et al. (2002) reported that in many developing countries (for example Egypt, Indonesia, Argentina and Venezuela) foreign banks in fact report significantly higher net interest margins than domestic banks and in Asia and in Latin America foreign banks achieve significantly higher net profitability than domestic banks.

Several studies examined that there are significant relationships between ownership

structure and bank performance especially in developing countries (Aydin, et al., 2007; Kobeissi, 2004; Laeven, 2005; Micco, et al., 2004). Kobeissi's research (2004) found that in Afrika, private banks moreover foreign banks performed significantly better than any other group of sample banks. Meanwhile, Laeven's research (2005) found that foreign banks in East Asia also had a significant better performance than domestic banks.

Both Sarkar et.al. (1998) and De (2003) studied about ownership structure and bank performance in India with a different period of samples. With the same indicators of performance, those studies proved that there are no significant relationships between ownership structure and bank performance.

Even the central bank of Indonesia, Bank Indonesia, had made a research on the relationship between ownership structure and bank performance in Indonesia. Using only a cross-section data with only one period of time, December 2002, this study use the statistical test to examine whether there is a relationship or not. It defined ownership structure into several criteria, neither there are: corporation nor individual, listed nor unlisted banks, government's nor private, and neither foreign owned nor domestic owned based on the ownership concentration. This study concluded that there is no relationship between ownership structure and bank performance, but in some case there could be a little relation between them (Hadad, et al., 2003).

## **RESEARCH METHODOLOGY**

### **Performance Measurements**

Measures of bank performance can broadly be broken down in two categories: those based on accounting information and those based on market information. Most recent researches used accounting information approach in measuring bank performance (Aydin, et.al., 2007; Claessens, et.al., 2000; Micco, et.al., 2004; De, 2003; Sarkar, et.al., 1998). The most common use of accounting-

based measurements of bank performance indicators are return on assets (ROA), return on equity (ROE), and operating profit ratio (OPR), reflecting the profitability of the banks. Some of them used the efficiency ratio such as net interest margin (NIM), operating cost ratio, and X-efficiency. Both profitability and efficiency ratios are to show that a highly profitable bank must have a better financial stability; therefore, the bank performs better (Laeven, 2005).

Meanwhile, some researches reconsidered using accounting based measures as the bank performance indicators (Beck, 1986; Horvath, 2005; Miranti, 1990; Verbeeten, 2005; Wet, 2005). Horvath (2005) doubted the accuracy and ability of accounting-based measurements to show the real existing condition of the bank, moreover to use it as the basic evaluation in measuring the real value of a company. Accounting information approach is inclined to measure performance based on earnings, whereas there are other factors that should be considered in measuring bank performance (Horvath, 2005). Furthermore, accounting information only reflects a temporary condition and it could not reflect the continuity of existing competitiveness between banks in long terms. In fact, market measures performance based on what already happened in the past and what market expects to happen in the future. According to efficient market hypothesis (EMH)<sup>3</sup>, financial market has the most symmetric information of all markets. Consequently, whenever new information appears market responses based on rational expectations. Indeed, market based

approach might be a better alternative in performance measuring, because it could capture the whole performance of a company.

There are various indicators to be used in measuring performance by market-based approach. Beck (1986) used share price as a performance indicator of a company. Share price is a resultant of all factors measuring performance, such as profitability, efficiency, management performance, and any external factors that not shown in accounting-based measures only. Furthermore, share price reflects not only the potential value of a company, but also company's ability to handle risk in long and short-terms.

This paper use both accounting and market-based approach to measure bank performance. Profitability measures are used to evaluate bank performance and take the return associated with bank's portfolio into account. The two profitability measures used in our analysis are *return on assets* (ROA) and *return on equity* (ROE). ROA is defined as the net profits of the banks divided by the average bank assets. Thus, this measure summarizes the ability of the management to produce net earnings from bank assets. Meanwhile, ROE is defined as the net profits of the banks divided by bank's total equity. this measure summarizes corporation's profitability that reveals how much profit a company generates with the money shareholders have invested. ROE is useful for comparing the profitability of a company to that of other firms in the same industry.

For market-based approach in the analysis, this paper uses the market capitalization into account. Market capitalization (market cap or capitalized value) is a measurement of corporate or economic size equal to the share price times the number of shares outstanding of a public company. As owning stock represents owning the company, including all its assets, capitalization could represent the public opinion of a company's net worth and is a determining factor in stock valuation.

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<sup>3</sup> In finance, the efficient market hypothesis (EMH) asserts that financial markets are "informationally efficient", or that price on traded assets, e.g., stocks, bonds, or property, already reflect all known information and therefore are unbiased in the sense that they reflect the collective beliefs of all investors about future prospects. The efficient market hypothesis was first expressed by Louis Bachelier, a French mathematician, in his 1900 dissertation, "The Theory of Speculation" that developed by Eugene Fama (1965) in "The Behavior of Stock Market Prices". *Journal of Business* 38: 34-105.

Likewise, the capitalization of stock markets or economic regions may be compared to other economic indicators. This paper use the deflator of market cap as an indicator of market-based measures in order to reduce the possibility of different outstanding stock as an effect of stock split<sup>4</sup> between banks.

### The Empirical Model Specification

The model that is used in this paper in testing for the presence of foreign ownership effects on bank performance is the following:

$PERFORMANCE_{it} =$

$$\beta_0 + \beta_1 FOREIGN_{it} + \beta_2 DCEO_{it} + \beta_3 CONTROL_{it} + \varepsilon_{it}$$

where  $PERFORMANCE_{it}$  and other variables capture the banks and time specific effects;  $i$  denotes bank, and  $t$  denotes time quarterly each year.

The dependent variables that had been outlined in previous section as the bank performance indicators are return on asset (ROA), return on equity (ROE), and market capitalization deflator (Marketcapdef). Those indicators are represented the accounting and market based measures from profitability and market perspectives.

There are two dummy variables in order to describe foreign ownership and foreign head management's effect to bank performance. The dummy variable that indicates foreign ownership feature is FOREIGN. The dummy FOREIGN takes a value one if the bank in question is foreign owned bank and zero elsewhere or domestic owned bank. The definition of ownership is defined by the

majority ownership of a bank, which could be foreign owners or domestic owners. This paper does not separate between domestic privates and government ownership. Both are mentioned as domestic owned banks.

The other dummy variable is used in order to describe head management's effect on bank performance. The dummy variable that indicates whether the head management or the chief executive officer is foreigners or domestic civelst is CEO. The dummy CEO takes a value one if the chief executive officer of the bank is foreigners and zero if otherwise.

The control variable includes the set of variables other than ownership and head management presence that might affect the performance of banks. The set of independent variables are logarithm of total assets (LOGASET), loan to deposit ratio (LDR), net interest margin (NIM), capital adequacy ratio (CAR), and the economic growth (ECGROWTH). LOGASET is introduced into the regression in order to account any scale effects in bank operations. Meanwhile, LDR and NIM are included to control for differences in the bank performance that may arise due to the ability of bank in functioning as financial intermediaries and taking profit from collecting and distributing fund. Then, CAR is included to control for differences in the bank performance that may arise due to the bank capital sufficiency. The last control variable is included as a macro economic indicator that might affect bank performance. The variable is economic growth (ECGROWTH).

### Data

The following empirical model is estimated for each performance indicator by pooled data in quarter sample period starts in first quarter of 2004 until the third quarter of 2007. Two years in average after massive banking devastation in 2002 seems to be the best starting time to see the affect of changing ownership of Indonesian banking structure.

<sup>4</sup> Stock split is a decision made by company's board of directors to increase the number of shares that are outstanding by issuing more shares to current shareholders. For example, in a 2-for-1 stock split, every shareholder with one stock is given an additional stock. The price is adjusted such that the before and after market capitalization of the company remains the same and dilution does not occur.

Using 12 commercial listed banks that cover about 70 percent of total Indonesian-banking assets, this paper uses 143 unbalanced panel data observations. The 12 commercial listed banks are PT Bank Mandiri Tbk, PT Bank Rakyat Indonesia Tbk, PT Bank Negara Indonesia Tbk, PT Bank Central Asia Tbk, PT Bank Niaga Tbk, PT Bank Internasional Indonesia Tbk, PT Bank Lippo Tbk, PT Bank UOB Buana Tbk, PT Bank NISP Tbk, PT Bank Permata, PT Bank Panin Tbk, and PT Bank Mega Tbk.

The accounting data are obtained from various financial consolidation reports published by each bank quarterly and it is calculated from the balance sheet, consolidated of incomes, and notes to consolidated financial statements. The accounting based measures for performance indicators and several control variables have been calculated base on Bank Indonesia regulatory for financial statement reports and bank financial ratios<sup>5</sup>. The banks annual and quarterly reports are downloaded from Indonesia Stock Exchange, <http://www.idx.co.id>.

Meanwhile, the market data used in this paper is market capitalization, which is the multiplied between share price and the number of shares issued and paid fully. In estimating the bank performance using market-based measures, the using share price is the average of daily share price in a month after the end of quarter period. It is assumed that this period is the time market responded to the bank performance. The historical share price data and the number of shares issued information is downloaded from <http://finance.yahoo.com>.

### Estimation Procedure

In estimating panel data, there are several possible methods, two most popular methods are fixed effects model (FEM) and random effects model or error correction model (ECM). The reason for choosing FEM over ECM is primarily driven by data and sometimes the significances over the variables in explaining the aim of the research. Gudjarati (2003: 650–651) explained that this choosing between FEM and ECM is depends on the correlations between the error components and the regressors. If it is assumed that the error components and the regressors are uncorrelated, so ECM might be appropriate, whereas if the error components and the regressors are correlated, FEM might be appropriate. Taken from Judge (1980: 489–491), Gudjarati (2003) also explained that it could use the information of the number of time series data and cross-sectional units to decide whether to use FEM or ECM. If the number of time series data is larger than the number of cross-sectional units, there is likely to be a little difference in the values of the parameters estimated by FEM and ECM. Hence, the choice here is based on computational convenience. On this case, FEM might preferable.

The model will be estimated using the technique of Generalized Least Square (GLS). This method of panel regression will take care of the endogen problem to a certain extent. Besides that, since the regression technique uses data for several time-periods, any past period performance affecting future ownership, if at all any such effect is present, will be taken care of and thus, the problem will be reduced (De, 2003). As in Gudjarati (2003: 395–397), GLS method is able to turn the variance of the transformed disturbance term into homoscedastic. So that the model could fulfill the least square standard, which had a best linear unbiased estimators (BLUE). Using GLS, EVIEWS program could help to

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<sup>5</sup> Surat Edaran Bank Indonesia Nomor 7/56/DPBS Desember 9, 2005, perihal Laporan Keuangan Publikasi Triwulanan dan Bulanan Bank Umum serta Laporan tertentu yang disampaikan kepada Bank Indonesia [Bank Indonesia's Publicity Letter 7/56/DPBS Desember 9, 2005, about Quarter and Monthly Annual Report and some Special Report to be submitted to bank Indonesia].

reduce the autocorrelation problems by doing iteration.

### THE ESTIMATION RESULT

Table 6 and 7 provide descriptive statistics of all relevant variables by each bank and by ownership structure. From table 6, it can be said that in the sample period of time Bank Rakyat Indonesia (BBRI) had the best performance between sample banks. Based on

profitability, BBRI had the highest return on assets (ROA)—5.04 percent and a high return on equity (ROE)—37.38 percent. In addition, based on market performance using market capitalization deflator, it can be inferred from the table that BBRI also had a high growth in market capitalization since the beginning of year 2004 (Table 6).

**Table 6.** Descriptive Statistics by Bank Cross-sections

Name of banks used in the sample	Return on Assets	Return on Equity	Market Capitalization Deflator	Loan to Deposit Ratio	Net Interest Margin	Capital Adequacy Ratio
BBCA	3.40% (0.002)	27.47% (0.014)	270.87 (35.08)	35.38% (0.057)	6.27%	23.54% (0.014)
BMRI	2.03% (0.012)	14.75% (0.091)	219.36 (58.086)	53.10% (0.036)	4.96% (0.007)	24.73% (0.013)
BBNI	1.93% (0.005)	20.74% (0.061)	185.82 (50.106)	51.49% (0.036)	6.57% (0.016)	16.73% (0.016)
BBRI	5.04% (0.007)	37.38% (0.061)	312.16 (47.155)	74.82% (0.039)	11.88% (0.012)	18.48% (0.023)
BBIA	3.29% (0.004)	18.73% (0.030)	201.58 (18.713)	73.22% (0.157)	8.78% (0.029)	27.48% (0.050)
BNLI	1.71% (0.005)	17.69% (0.088)	90.12 (10.946)	85.59% (0.307)	8.56% (0.030)	11.58% (0.020)
MEGA	2.24% (0.011)	52.62% (0.960)	342.84 (90.962)	48.80% (0.031)	9.89% (0.029)	15.13% (0.027)
NISP	1.77% (0.005)	15.13% (0.064)	201.20 (21.497)	80.32% (0.055)	6.43% (0.003)	17.34% (0.021)
PNBN	3.28% (0.010)	15.04% (0.032)	241.81 (70.675)	123.17% (0.388)	11.53% (0.026)	27.33% (0.061)
BNGA	2.66% (0.005)	22.93% (0.060)	412.60 (93.257)	87.71% (0.063)	3.69% (0.018)	17.57% (0.006)
LPBN	2.18% (0.008)	19.60% (0.093)	286.42 (68.288)	53.35% (0.826)	9.39% (0.022)	21.19% (0.035)
BNII	2.33% (0.010)	16.76% (0.049)	135.73 (34.538)	55.68% (0.088)	7.55% (0.012)	23.44% (0.016)

Note. 1. Numbers in parentheses are standard deviations.

2. All numbers are in percentages except for market capitalization deflator and assets.

**Table 7.** Descriptive Statistics by Ownership Structure

	Foreign	Domestic	All
<i>Explained variables</i>			
Return on assets (ROA)	2.32 (0.33)	2.58 (0.43)	2.39 (0.35)
return on equity (ROE)	19.87 (3.12)	23.06 (6.07)	20.67 (3.86)
Market Capitalization Deflator (MARKETCAPDEF)	241.13 (58.21)	224.17 (67.83)	236.89 (60.62)
<i>Explanatory variables</i>			
Loan to deposit ratio (LDR)	77.28 (11.13)	60.39 (2.68)	73.06 (9.02)
Net interest margin (NIM)	8.61 (1.06)	7.58 (1.94)	8.35 (1.28)
Capital adequacy ratio (CAR)	20.39 (2.46)	19.63 (1.65)	20.20 (2.26)
Economic growth (ECGROWTH)	5.59	5.59	5.59

Note. 1. Numbers in parentheses are standard deviations.

2. All numbers are in percentages except for market capitalization deflator and assets.

Meanwhile, when the sample divided based on ownership structure, it is shown at table 7 that the average return on assets (ROA) of foreign bank was 2.32 percent and for domestic bank was 2.58 percent. Beside that, the average return on equity (ROE) of foreign banks was 19.87 percent and for domestic bank was 23.06 percent. It means that based on accounting measurements domestic bank performance was better than foreign banks. However, the standard deviation of both ROA and ROE of domestic banks is higher than foreign bank's. It suggested that they should be heterogenic in terms of their profitability performance compared with both foreign and domestic bank.

In terms of market approach, foreign bank seemed to have a higher growth than domestic bank. Foreign bank average market capitalization deflator was 241.13 and for domestic bank were 224.17. It can be inferred that in mean foreign bank had a better performance than domestic bank. Meanwhile, the standard deviation of foreign bank was lower than domestic ones, suggesting that they

were more homogenous in terms of market performance. For the explanatory variables, foreign bank tended to have a higher loan to deposit ratio, net interest margin, and capital adequacy ratio, and the standard deviation of loan to deposit ratio and capital adequacy ratio remained larger than domestic bank.

The set of regressions that have been described appear to provide a qualified support to the descriptive evidence discussed in the first part of the paper. Although it is evident that our results should not be generalized to countries with different financial and regulatory structures, they detect behaviors often obscured by the higher noise that plagues data of multi-country panels. The estimation followed two methods of panel data regression, which are Generalized Least Square fixed effects model, and Generalized Least Square random effects model. After comparing some indicators such as adjusted least square, F-test, sum square residuals, and other indicators, this paper used Generalized Least Square fixed effects model in estimating the model.

**Table 8.** Regression Result Generalized Least Square Fixed Effect Model

Explanatory variables	Explained variables		
	(1) Return on Asset (ROA)	(2) Return on Equity (ROE)	(3) Market Capitalization Deflator
LOGASET	-0.001** (-2.19)	0.006*** (3.56)	1.40 (0.93)
LDR	0.001 (0.73)	-0.034*** (-2.86)	13.30 (0.73)
NIM	0.117*** (6.03)	0.371*** (3.34)	-470.70*** (-2.86)
CAR	0.005 (0.79)	0.069 (1.40)	311.77*** (4.14)
ECGROWTH	0.181*** (5.24)	0.99*** (3.10)	3556.81*** (12.78)
FOREIGN	-0.006*** (-3.83)	-0.097*** (-5.50)	24.61*** (6.66)
CEO	-0.004*** (-4.21)	-0.051*** (-6.61)	26.73 (2.49)
Observation	151	151	143
Adj. R-squared	0.92	0.90	0.90

Note. t-statistics in parentheses.

\*\*\* value significant at 1% level.

\*\* value significant at 5 % level.

Each regression equation is estimated by using the generalized least square fixed effect model.

Referred to the results of the estimation in table 8 column 1 and 2, the coefficient of FOREIGN dummy is negative and significant at 1 percent significance level in ROA and ROE regressions. These results indicated that foreign banks are significantly less profitable than domestic banks after controlling for several structural differences. On average, foreign banks have ROA that is 0.6 percent lesser than domestic banks and ROE, which is 9.7 lesser than domestic banks. However, as had discussed before, the standard deviation between groups was high (table 7). So that, the groups of either foreign or domestic banks do not reflect banks individually. It might happen because there are few of domestic banks whose ROA remained a lot higher than the average performance between samples

(table 6), such as Bank BRI (BBRI) and Bank Panin (PNBN). The estimation of ROE also has been followed by a high standard deviation between samples. There are few of domestic banks whose ROE remained a lot higher than the average performance between samples, such as Bank BRI (BBRI) and Bank Mega (MEGA). So that, the groups was limped in order to be concluded that all domestic banks had a better performance.

Based on market approach, it is inferred from the estimation that referred to the results of the estimation in table 8 column 1 and 2, the coefficient of FOREIGN dummy is positive and significant at 1 percent significance level in market capitalization deflator regression. This result indicated that foreign banks are significantly performed better than

domestic banks, in this case with a lower standard deviation between samples (table 7). It can be inferred from the means of sample banks that many foreign banks had a higher growth (indicated from the market capitalization deflator) than any banks in the sample, even though two of domestic banks had an above average market capitalization deflator, Bank BRI (BBRI) and Bank Panin (PNBN). This might happen because possibly there should be a difference between fundamental indicators of accounting-based and market-based performance, which made the conclusion, went into a different way. It might arise from the different market strategy between groups of ownership structure. The domestic banks tend to have a wider infrastructure in banking channeling, so they tend to have larger market shares, which might influence a higher return. At the same time, in the mid sample period of time few of the domestic banks—Bank mandiri (BMRI) and Bank Negara Indonesia (BBNI)— have had a serious problem in controlling nonperforming loans. In this case, it might influence the domestic banks performance in financial market.

Meanwhile, in line with the FOREIGN dummy, the results of the estimation also indicated that the coefficient of CEO dummy is negatively significant at 1 percent significance level in ROA and ROE regressions, and positively significant at 1 percent significance level in the regression of market capitalization deflator (table 8 columns 1, 2, and 3). Those estimations indicated that a bank with foreign CEO is less profitable than banks with domestic CEO. Beside that, they did not perform better than banks with domestic CEO leadings. Therefore, it can be inferred from the estimations that domestic CEO might have a better management and strategy facing the domestic market in compare to foreign CEO.

As in table 8 columns 1, 2, and 3, among the control variables, logarithm of total assets (LOGASET) had a negative significant effect

in the ROA regression, while it had a positive significant effect in the ROE regression. This condition might arise when the assets of the banks went into an expansion and the equity remained steady or the increase is much slower than the growth of bank assets. Then, the ROE could increase when the ROA get lower. Meanwhile, LOGASET did not have any significant effect to market capitalization growth.

Meanwhile, loan to deposit ratio (LDR) tended not to have any significant effect on ROA and the regression of market capitalization deflator, but there is a negative significant effect between LDR and the ROE. This might be a robust indication, because it is in contrast with the expectation that it has been hoped the increasing LDR in terms of the increasing of bank role in fund intermediaries would increase the bank earnings. Then, net interest margin (NIM) tended to have a positive significant effect in bank profitability. Higher NIM would increase the bank's earnings. However, there is a negative significant effect in the regression of market capitalization deflator. It can be inferred that the decreasing NIM should not indicate that the lower earnings would preserve. Higher the NIM is one of the bank strategies in order to increase the bank's earnings. However, lowering the NIM might increase the earnings if the bank succeeded in expanding the volume of transactions. Beside that, the average NIM in Indonesia is still above world's average on NIM, so in the following years the NIM tend to decrease. Capital adequacy ratio (CAR) had no significant effect to bank profitability, but it had a positive significant effect to the regression of market capitalization deflator. It is indicated the bank sufficiency in capital, in terms of bank ability in backing up the credit and market risk, influenced the market trustiness of the bank.

The last control variable is economic growth (ECGROWTH), which represented the external factor might influenced bank

performance. Referred to all of the regressions, ECGROWTH had a positive significant effect in bank performance. It is indicated that the macro economic condition is a significant factors in bank performance. It might be the main indicators that would influence the performance of the bank as a whole.

## CONCLUSION

Enormous banking crisis has made a big hit in the economy. Started from the currency turmoil, the unsound and ill-regulated banks have turned the currency turmoil into a banking crisis, until the contagious effect spread into financial crisis and finally the economic crisis. Because of the importance of banking sector to the economy, the government and the central bank have made several restructuring program in order to cure the banking illness, such as bank recapitalization. After the recapping program was over, the government and the central bank decided to divesture the shares of several banks. Since the banking divestment, a significant changed in banking structure especially ownership structure, occurred. Not only the changed ownership structures, but also several banks decided to change the head of management or the chief executive officer to represent the owner's importance to the bank. Since the bank restructured and being devastated, many improvements happened in several fundamentals banking indicators.

This paper has examined the relationship between ownership structures to bank performance of Indonesian listed banks. The performance indicators are return on asset (ROA), return on equity (ROE), and market capitalization deflator, in order to represent the accounting-based measures and market-based measures. The results of the regression analysis have shown that with respect to profitability indicators, there are positive significant foreign ownership structure effects. It is indicated that foreign banks are

significantly less profitable than domestic banks after controlling for several structural differences. Meanwhile, in respect to market based approach, there are a negative significant foreign ownership structure effect. It is indicated that foreign banks are significantly performed better than domestic banks. The ownership structure and bank performance relationship was in contrast with other studies in several developing countries (Aydin, et al., 2007; Kobeissi, 2004; Laeven, 2005; Micco, et al., 2004).

In addition to the study, this paper examined the relationship between bank with foreign CEO and domestic ones. The results of the regression analysis have shown that foreign CEO dummy is negatively significant to bank performance. It is indicated that a bank with foreign CEO is less profitable than banks with domestic CEO. Beside that, banks with foreign CEO did not perform better than banks with domestic CEO leadings.

From this paper it could conclude that even after the banking divestment, the foreign banks did not prove to have a better performance than domestic banks. Moreover, domestic banks perform better than foreign banks significantly, in terms of profitability. Beside that, a foreign CEO ought not to influence better than domestic CEO.

Perhaps it could be the best time to consider whether the banking openness is necessary in the next long term, before this country runs out of domestic banks in the middle of the rapid development in banking sectors. But this is not the main purpose of this paper, because there are several obstacles in restricting the ownership limitation. However, not only in limitations of banking sector that should be the concern of banking issues, but also the banking monitoring should be improved and the competition among banks would be the next considering issues. Beside that, the government should force the economic growth to remain stable, because of the significant effect on banking performance.

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